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SURFACE WATER SUPPLY *of the* UNITED STATES 1933

PART 11 PACIFIC SLOPE BASINS IN CALIFORNIA

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ILLUSTRATION

FIGURE 1. Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

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SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN CALIFORNIA, 1933

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the year ending September 30, 1933.

The data presented in these reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat. L., p. 394):

Provided, That this officer [the Director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

The work was begun in 1888 in connection with special studies relating to irrigation. Since the fiscal year ending June 30, 1895, successive appropriation bills passed by Congress have carried the following items:

For gaging the streams and determining the water supply of the United States and for the investigation of underground currents and artesian wells, and for the preparation of reports upon the best methods of utilizing the water resources.

Annual appropriations for the fiscal years ending June 30, 1895-1934

1895-----	\$12, 500. 00	1911-17---	\$150, 000. 00	1928-----	\$147, 000. 00
1896-----	24, 500. 00	1918-----	175, 000. 00	1929-----	270, 500. 00
1897-99---	50, 000. 00	1919-----	148, 244. 10	1930-----	275, 000. 00
1900-----	70, 000. 00	1920-----	175, 000. 00	1931-----	565, 000. 00
1901-2-----	100, 000. 00	1921-23---	180, 000. 00	1932-----	711, 000. 00
1903-6-----	200, 000. 00	1924-25---	170, 000. 00	1933-----	600, 000. 00
1907-----	150, 000. 00	1926-----	165, 000. 00	1934-----	¹ 540, 000. 00
1908-10---	100, 000. 00	1927-----	151, 000. 00		

In the execution of the work many private and State organizations have cooperated, either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

Measurements of stream flow have been made at about 6,680 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1933, 2,800 gaging stations were being maintained by the Geological Survey and the cooperating organiza-

¹ Only \$340,000 available for expenditure.

tions. Many miscellaneous discharge measurements were made at other points. In connection with this work data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles, and water power in many sections of the country and will be made available in water-supply papers from time to time.

DEFINITION OF TERMS

The volume of water flowing in a stream—the “run-off” or “discharge”—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-foot, gallons per minute, miner’s inches, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet, and millions of cubic feet. The principal terms used in this series of reports are second-foot, second-foot per square mile, run-off in inches, and acre-feet. They may be defined as follows:

“Second-foot” is an abbreviation for “cubic feet per second.” A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

“Second-foot per square mile” is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

“Run-off in inches” is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

An “acre-foot,” equivalent to 43,560 cubic feet, is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

The following terms not in common use are here defined:

“Stage-discharge relation,” an abbreviation for the term “relation of gage height to discharge.”

“Control,” a term used to designate the natural section or stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report covers the year beginning October 1, 1932, and ending September 30, 1933. At the beginning of January in most parts of the United States much of the precipitation in the preceding 3 months is stored in the form of snow or ice, or in

ponds, lakes, and swamps, or as underground water, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore the run-off for the year beginning October 1 is practically all derived from the precipitation within that year.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a staff or chain gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in figure 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage heights to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report comprise a description of the station and a table showing the daily discharge of the stream and the monthly and yearly discharge and run-off.

The description of the station gives information in regard to the location and type of gage, diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Information under "Discharge" gives the maximum and minimum recorded discharges and the average discharge. The maximum does not represent the crest discharge unless a water-stage recorder was in operation or a nonrecording gage was read at the time of the crest. Likewise, the minimum may not represent the lowest discharge. The average discharge is the average of the mean annual discharges for the years indicated. It is given only for stations for which there are 10 or more complete years of record.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be a once-daily reading or the mean of twice-daily readings of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation, the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge for intervals of the

day or by using the discharge integrator, an instrument for obtaining mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge and not the discharge when the

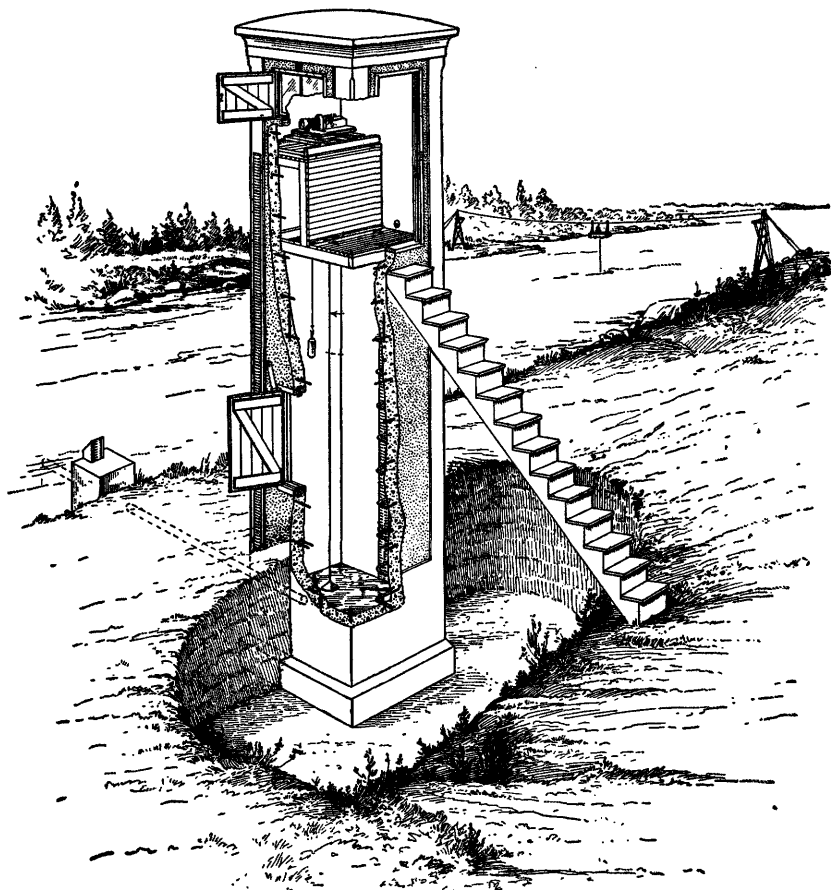


FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 2.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of records. "Excellent" indicates that in general the daily records are accurate within 5 percent; "good", within 10 percent; "fair", within 15 percent; and "poor", within 20 percent or more.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the stations must first be satisfied.

PUBLICATIONS

Investigation of water resources by the United States Geological Survey has consisted in large part of measurements of the volume of flow of streams and studies of the conditions affecting that flow, but it has comprised also investigation of such closely allied subjects as irrigation, water storage, water powers, underground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the bulletins, professional papers, monographs, and annual reports.

The results of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

- Part**
1. North Atlantic slope basins (St. John River to York River).
 2. South Atlantic slope and eastern Gulf of Mexico basins (James River to Mississippi River).
 3. Ohio River Basin.
 4. St. Lawrence River Basin.
 5. Hudson Bay and upper Mississippi River Basins.
 6. Missouri River Basin.
 7. Lower Mississippi River Basin.
 8. Western Gulf of Mexico basins.
 9. Colorado River Basin.
 10. The Great Basin.
 11. Pacific slope basins in California.
 12. North Pacific slope basins, in three parts:
 - A, Pacific slope basins in Washington and upper Columbia River Basin.
 - B, Snake River Basin.
 - C, Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D.C., who will, on application, furnish lists giving prices.

2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Augusta, Maine, State House.
 Boston, Mass., 945 Post Office Building.
 Hartford, Conn., 203 Federal Building.
 Albany, N.Y., 353 Broadway.
 Trenton, N.J., 228 Federal Building.
 Harrisburg, Pa., 492 Education Building.
 Charlottesville, Va., University of Virginia.
 South Charleston, W.Va., Naval Ordnance Plant.
 Asheville, N.C., 220 Post Office Building.
 Columbia, S.C., 801 National Loan & Exchange Bank Building.
 Ocala, Fla., Post Office Building.
 Montgomery, Ala., Post Office Building.
 Chattanooga, Tenn., 217 Post Office Building.
 Columbus, Ohio, Engineering Experiment Station, Ohio State University.
 Indianapolis, Ind., 319 Federal Building.
 Urbana, Ill., 302 University New Agricultural Building.
 Madison, Wis., 337N State Capitol.
 St. Paul, Minn., 632 State Office Building.
 Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
 St. Louis, Mo., 3 Customhouse.

Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
 Topeka, Kans., 305 Federal Building.
 Fort Smith, Ark., Post Office Building.
 Austin, Tex., State Highway Building.
 Santa Fe, N.Mex., State Capitol.
 Tucson, Ariz., 210 Post Office Building.
 Denver, Colo., 403 Post Office Building.
 Salt Lake City, Utah, 303 Federal Building.
 Idaho Falls, Idaho, 228 Federal Building.
 Boise, Idaho, 429 Federal Building.
 Helena, Mont., 421 Federal Building.
 Tacoma, Wash., 406 Federal Building.
 Portland, Oreg., 606 Post Office Building.
 San Francisco, Calif., 303 Customhouse.
 Los Angeles, Calif., 510 Eighth and Figueroa Building.
 Honolulu, Hawaii, 225 Federal Building.

A list of the Geological Survey publications may be obtained by applying to the Director, United States Geological Survey, Washington, D.C.

Stream-flow records have been obtained at about 6,680 points in the United States, and the data obtained have been published in the reports tabulated below.

Stream-flow data in reports of the United States Geological Survey

[A = Annual Report; B = Bulletin; W = Water-Supply Paper]

Report	Character of data	Year
10th A, pt. 2.....	Descriptive information only.	
11th A, pt. 2.....	Monthly discharge and descriptive information.....	1884 to Sept. 1890.
12th A, pt. 2.....	do.....	1884 to June 30, 1891.
13th A, pt. 3.....	Mean discharge in second-feet.....	1884 to Dec. 31, 1892.
14th A, pt. 2.....	Monthly discharge (long-time records, 1871 to 1893).....	1888 to Dec. 31, 1893.
B 131.....	Descriptions, measurements, gage heights, and ratings.....	1893-94.
16th A, pt. 2.....	Descriptive information only.	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).....	1895.
W 11.....	Gage heights (also gage heights for earlier years).....	1896.
18th A, pt. 4.....	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).....	1895-96.
W 15.....	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States.	1897.
19th A, pt. 4.....	Descriptions, measurements, ratings, and monthly discharge (also some long time-records).....	1897.
W 27.....	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28.....	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4.....	Monthly discharge (also for many earlier years).....	1898.
W 35 to 39.....	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4.....	Monthly discharge.....	1899.
W 47 to 52.....	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.....	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.....	1901.
W 75.....	Monthly discharge.....	1901.
W 82 to 85.....	Complete data.....	1902.
W 97 to 100.....	do.....	1903.
W 124 to 135.....	do.....	1904.
W 165 to 178.....	do.....	1905.
W 201 to 214.....	do.....	1906.

Stream-flow data in reports of the United States Geological Survey—Continued

Report	Character of data	Year
W 241 to 252.....	Complete data.....	1907-8
W 261 to 272.....	do.....	1909.
W 281 to 292.....	do.....	1910.
W 301 to 312.....	do.....	1911.
W 321 to 332.....	do.....	1912.
W 351 to 362.....	do.....	1913.
W 381 to 394.....	do.....	1914.
W 401 to 414.....	do.....	1915.
W 431 to 444.....	do.....	1916.
W 451 to 464.....	do.....	1917.
W 471 to 484.....	do.....	1918.
W 501 to 514.....	do.....	1919-20.
W 521 to 534.....	do.....	1921.
W 541 to 554.....	do.....	1922.
W 561 to 574.....	do.....	1923.
W 581 to 594.....	do.....	1924.
W 601 to 614.....	do.....	1925.
W 621 to 634.....	do.....	1926.
W 641 to 654.....	do.....	1927.
W 661 to 674.....	do.....	1928.
W 681 to 694.....	do.....	1929.
W 696 to 709.....	do.....	1930.
W 711 to 724.....	do.....	1931.
W 726 to 739.....	do.....	1932.
W 741 to 754.....	do.....	1933.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year, and are published under "Miscellaneous discharge measurements" at the end of each report in the same relative order as the regular gaging stations. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1933. The data for any particular station will, as a rule, be found in the reports covering the years during which the station was maintained. For example, data from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

Numbers of water-supply papers containing results of stream measurements, 1899-1933

[For basins included, see p. 6.]

Year	1	2	3	4	5	6	7	8	9	10	11	12-A	12-B	12-C
1899 a	35	35, 36	36	36	36	36, 37	37	37	37, 38	38, 39	38, 39	38	38	38
1900 a	47, 48	47, 48	48, 49	49	49	49, 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	65, 75	65, 75	65, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83	82, 83
1903	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98	97, 98
1904	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126
1905	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167
1906	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202	201, 202
1907-8	261	261	261	261	261	261	261	261	261	261	261	261	261	261
1909	281	281	281	281	281	281	281	281	281	281	281	281	281	281
1910	301	301	301	301	301	301	301	301	301	301	301	301	301	301
1911	321	321	321	321	321	321	321	321	321	321	321	321	321	321
1912	341	341	341	341	341	341	341	341	341	341	341	341	341	341
1913	351	351	351	351	351	351	351	351	351	351	351	351	351	351
1914	381	381	381	381	381	381	381	381	381	381	381	381	381	381
1915	401	401	401	401	401	401	401	401	401	401	401	401	401	401
1916	431	431	431	431	431	431	431	431	431	431	431	431	431	431
1917	451	451	451	451	451	451	451	451	451	451	451	451	451	451
1918	471	471	471	471	471	471	471	471	471	471	471	471	471	471
1919-20	501	501	501	501	501	501	501	501	501	501	501	501	501	501
1921	521	521	521	521	521	521	521	521	521	521	521	521	521	521
1922	541	541	541	541	541	541	541	541	541	541	541	541	541	541
1923	561	561	561	561	561	561	561	561	561	561	561	561	561	561
1924	581	581	581	581	581	581	581	581	581	581	581	581	581	581
1925	601	601	601	601	601	601	601	601	601	601	601	601	601	601
1926	621	621	621	621	621	621	621	621	621	621	621	621	621	621
1927	641	641	641	641	641	641	641	641	641	641	641	641	641	641
1928	661	661	661	661	661	661	661	661	661	661	661	661	661	661
1929	681	681	681	681	681	681	681	681	681	681	681	681	681	681
1930	698	698	698	698	698	698	698	698	698	698	698	698	698	698
1931	711	711	711	711	711	711	711	711	711	711	711	711	711	711
1932	728	728	728	728	728	728	728	728	728	728	728	728	728	728
1933	741	741	741	741	741	741	741	741	741	741	741	741	741	741

• Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in Twenty-first Annual Report, part 4.
 • James River only.
 • Galatin River only.
 • Green and Gunnison Rivers and Colorado River above Gunnison River.
 • Yonave River only.
 • Kings and Kern River and South Pacific slope basins.
 • Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, walls, and irrigation in Oregon and Utah contained in Water-Supply Paper 52. Tables of monthly discharge for 1900 in Twenty-second Annual Report, part 4.
 • Wisconsin and Schuykill Rivers to James River.
 • Salado River.
 • Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte River of Mississippi River from east.
 • Tributaries of Mississippi River proper.
 • Lake Ontario and tributaries to St. Lawrence River proper.
 • Hudson Bay only.
 • New England rivers only.
 • Hudson River to Delaware River, inclusive.
 • Susquehanna River to Yadin River, inclusive.
 • Platte and Kansas Rivers.
 • The Great Basin in California except Truckee and Carson River Basins.
 • Below junction with Gila.
 • Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

In California the work was done under cooperative agreement with the California Department of Public Works, Earl Lee Kelly, director, and Edward Hyatt, State engineer. Work was also done under cooperative agreement with the East Bay Municipal Utility District, Stanford University, Oroville-Wyandotte Irrigation District, Santa Clara Valley Water Conservation District, Leroy Anderson, secretary, and M. W. H. Williams, county treasurer, San Bernardino County. In Oregon the work was done under cooperative agreement with the State of Oregon, Chas. E. Stricklin, State engineer.

The entire expense of the stream-flow investigations in the Tuolumne River Basin in California for the Hetch Hetchy project was paid by the city and county of San Francisco.

Assistance in collecting records was also rendered by the United States Forest Service, United States Bureau of Reclamation, National Park Service, and the following organizations: In California, by the Southern California Edison Co., Ltd., San Joaquin Light & Power Corporation, Pacific Gas & Electric Co., city of Sacramento, Merced Irrigation District, Emma Rose & Hobart Estate Co., Thermalito and Table Mountain Irrigation Districts, Turlock and Modesto Irrigation Districts, all of which are permittees and licensees of the Federal Power Commission, and by the San Francisco Water Department; in Oregon by The California Oregon Power Co.

DIVISION OF WORK

The data for stations in California, except for the stations on Klamath River and Fall Creek near Copco, were collected and prepared for publication under the direction of H. D. McGlashan, district engineer, assisted by F. C. Ebert, R. C. Briggs, Charles Leidl, C. J. Emerson, Jesse Arnold, H. C. Troxell, D. A. Dudley, Jarrett Oliver, K. M. Kelley, M. T. Wilson, H. C. Pritchett, A. C. Swanson, C. D. Bue, H. M. Orem, K. F. Schumacher, F. A. Johnson, H. C. McCreery, K. R. Melin, L. E. Bossen, B. C. Colby, R. S. Lord, H. J. Tompkins, Miss Helen C. Smith, Miss Marguerite A. Tynan, and Miss Nettie Braverman.

The data for stations in Oregon, except for stations in Goose Lake, Fourmile Lake, and Keene Creek Basins, and for stations on Klamath River and Fall Creek near Copco, Calif., were collected and prepared for publication under the direction of G. H. Canfield, district engineer, assisted by K. N. Phillips, B. S. Barnes, A. H. Williams, A. B.

Goodwin, C. A. Young, W. T. Miller, and A. R. Peracca, and by hydrographers of the United States Bureau of Reclamation. Data for stations in Goose Lake, Fourmile Lake, and Keene Creek Basins were collected and computed by the State of Oregon under the supervision of C. E. Stricklin, State engineer, and were checked and prepared for publication by G. H. Canfield, district engineer, assisted by K. N. Phillips and A. H. Williams.

The records were reviewed and the manuscript assembled by David S. Jenkins.

GAGING-STATION RECORDS

SAN DIEGO RIVER BASIN

SAN DIEGO RIVER NEAR SANTEE, CALIF.

LOCATION.—Water-stage recorder in the Ex Mission San Diego grant, in Mission Gorge, 6 miles west of Santee, San Diego County. Altitude, about 205 feet.

DRAINAGE AREA.—380 square miles.

RECORDS AVAILABLE.—May 1912 to September 1933 (incomplete).

DISCHARGE.—Maximum during year, 1,230 second-feet Jan. 30 (gage height, 2.95 feet); no flow at times during summer.

1912-33: Maximum, 70,200 second-feet Jan. 27, 1916 (gage height, 25.1 feet); practically no flow for several months each year except for a small amount of ground water being forced to surface. Average, 18 years (1912-15; 1917-19; 1920-33), 42.6 second-feet.

REMARKS.—Records good except those estimated, Oct. 1 to Jan. 16, Mar. 24-28, Apr. 6-27, May 27, 28, and June 3 to Sept. 30. Diversions for irrigation above station. Gage-height record and results of several discharge measurements furnished by La Mesa, Lemon Grove, and Spring Valley Irrigation District and city of San Diego.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	Day	Jan.	Feb.	Mar.	Apr.	May	June
1	0.2	266	34	2.1	180	7.5	16	0.2	56	17	0.6	46	0.8
2	.2	262	30	1.5	88	3.2	17	14	52	21	.6	37	.7
3	.2	180	29	1.5	73	3.1	18	52	51	22	.6	32	.6
4	.2	129	27	1.7	57	3.0	19	32	45	21	.6	28	.5
5	.2	113	24	1.9	50	2.5	20	558	41	14	.6	24	.4
6	.2	108	22	1.7	41	2.0	21	368	38	14	.6	26	.3
7	.2	95	19	1.5	37	1.8	22	155	38	12	.6	28	.2
8	.2	88	19	1.1	34	1.6	23	198	37	10	.7	33	.1
9	.2	77	20	1.0	32	1.4	24	386	38	10	.7	21	.1
10	.2	75	19	.8	45	1.4	25	206	37	9	.8	16	.1
11	.2	73	19	.6	77	1.3	26	149	38	8	.8	6	.1
12	.2	63	16	.6	116	1.2	27	140	38	7	.8	3.8	.1
13	.2	75	16	.6	98	1.1	28	135	38	6	.28	3.5	.1
14	.2	79	17	.6	73	1.0	29	210	---	5	149	7.5	.1
15	.2	59	17	.6	57	.9	30	870	---	3.8	346	9	.1
							31	506	---	3.8	---	7.5	---
Month						Maximum	Minimum	Mean		Run-off in acre-feet			
October						---	---	0.1		6.1			
November						---	---	.1		6.0			
December						---	---	.3		18.4			
January						870	0.2	128		7,870			
February						266	37	81.8		4,540			
March						34	3.8	16.5		1,010			
April						346	.6	18.3		1,090			
May						180	3.5	44.7		2,750			
June						7.5	.1	1.24		73.8			
July						---	---	.1		6.1			
August						---	---	.05		3.1			
September						---	---	.05		3.0			
The year						870	---	24.0		17,400			

SAN DIEGUITO RIVER BASIN

SAN DIEGUITO RIVER AT LAKE HODGES, CALIF.

LOCATION.—In NW¼ sec. 18, T. 13 S., R. 2 W., at Lake Hodges Dam, 5½ miles southwest of Escondido.

DRAINAGE AREA.—299 square miles.

RECORDS AVAILABLE.—January 1916 to September 1933.

REMARKS.—Irrigation diversions in San Pasqual Valley above Lake Hodges, also pumping from wells along the river. Lake Hodges Dam completed in 1919, and gaging station formerly maintained at dam site was abandoned. Discharge in second-feet and run-off in acre-feet computed by the city of San Diego from records of storage, draft, leakage and spill, and evaporation.

Discharge, in second-feet, 1932-33

Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet
October.....	1.43	88	May.....	43.1	2,649
November.....	.69	41	June.....	1.90	113
December.....	20.5	1,261	July.....	0	0
January.....	120	7,375	August.....	0	0
February.....	68.8	3,821	September.....	0	0
March.....	11.4	702			
April.....	20.7	1,231	The year.....	24.0	17,281

SAN LUIS REY RIVER BASIN

SAN LUIS REY RIVER AT LAKE HENSHAW, NEAR MESA GRANDE, CALIF.

LOCATION.—In NW¼ sec. 10, T. 11 S., R. 2 E., at Henshaw Dam, 5 miles north of Mesa Grande.

DRAINAGE AREA.—209 square miles at former gaging station 1 mile below dam.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Average, 22 years (1911-33), 44.6 second-feet.

REMARKS.—No diversions above station. Lake Henshaw Reservoir was completed in 1923, and the gaging station formerly maintained 1 mile below the dam was abandoned. Discharge in second-feet computed by the United States Geological Survey from records in acre-feet as furnished by San Diego County Water Co.

Discharge, in second-feet, 1932-33

Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet
October.....	2.56	157.2	May.....	27.0	1,658.6
November.....	7.95	472.8	June.....	10.5	625.5
December.....	12.6	772.7	July.....	10.3	633.1
January.....	44.1	2,712.3	August.....	6.85	421
February.....	29.3	1,629.3	September.....	7.89	469.6
March.....	19.3	1,187.8			
April.....	21.0	1,247	The year.....	16.6	11,986.9

SAN LUIS REY RIVER NEAR BONSALE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 1, T. 11 S., R. 4 W., three-quarters of a mile below highway bridge on Fallbrook-Escondido road 3 miles southwest of Bonsall. Altitude, about 120 feet.

DRAINAGE AREA.—514 square miles.

RECORDS AVAILABLE. April 1912 to September 1918, December 1929 to September 1933.

DISCHARGE.—Maximum during year, 214 second-feet Jan. 20 (gage height, 2.36 feet); no flow part of year.

1912-18, 1929-33: Maximum, 9,000 second-feet Feb. 11, 1915; maximum stage for 1916 not known, as all equipment was destroyed by flood of January 1916; no flow part of each year.

REMARKS.—Records good. Regulation at Lake Henshaw. Numerous diversions above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	16	77	25	18	49	6.5
2.....	0	16	65	25	18	41	6
3.....	0	16	56	26	18	34	5.5
4.....	0	16	52	26	17	30	4.6
5.....	0	17	48	26	16	28	4.2
6.....	0	17	46	26	15	24	4.6
7.....	0	17	43	24	13	23	4.6
8.....	0	17	41	24	13	22	5
9.....	0	17	38	22	13	21	4.6
10.....	2.4	17	38	22	12	23	4.2
11.....	7	16	37	24	10	26	3.8
12.....	21	16	37	23	8.5	24	3.4
13.....	33	15	35	25	7.5	24	2.8
14.....	29	15	33	26	6	24	2.3
15.....	24	15	32	26	6	23	1.8
16.....	21	22	32	26	5.5	21	1.6
17.....	16	52	32	29	4.6	20	1.4
18.....	15	43	32	29	6	18	.7
19.....	15	37	32	26	7	17	.7
20.....	15	124	30	24	7	16	.6
21.....	15	113	30	23	7	16	.6
22.....	15	75	29	22	6	18	.6
23.....	17	65	29	21	6	16	.6
24.....	20	65	28	20	6	13	.6
25.....	18	56	28	20	6.5	11	.4
26.....	18	51	28	18	6	11	.3
27.....	20	44	26	17	6	9	.1
28.....	18	44	25	17	11	8.5	.1
29.....	16	52	-----	17	23	7.5	0
30.....	16	138	-----	18	54	6.5	0
31.....	16	108	-----	18	-----	6.5	-----

Month	Maximum	Minimum	Mean	Run off in acre-feet
December.....	33	0	12.5	769
January.....	138	15	43.0	2,640
February.....	77	25	37.8	2,100
March.....	29	17	23.1	1,420
April.....	54	4.6	11.8	702
May.....	49	6.5	20.4	1,250
June.....	6.5	0	2.41	143
The year.....	138	0	12.5	9,020

NOTE.—No flow during months omitted.

SAN LUIS REY RIVER AT OCEANSIDE, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 23, T. 11 S., R. 5 W., three-eighths of a mile above State highway bridge at Oceanside. Altitude, about 20 feet.
RECORDS AVAILABLE.—April 1912 to September 1914, January 1916, December 1929 to September 1933.

DISCHARGE.—Maximum during year, 146 second-feet Jan. 30 (gage height, 4.97 feet); no flow for several months.

1912-14, 1916, 1929-33: Maximum, 95,600 second-feet Jan. 12, 1916; no flow for several months.

REMARKS.—Records good. Regulation at Lake Henshaw. Numerous diversions above station.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	Day	Jan.	Feb.	Mar.	Apr.	May
1-----	0	74	18	10	37	16-----	0	27	17	0	14
2-----	0	58	18	9.5	30	17-----	0	26	18	0	11
3-----	0	49	18	9.5	25	18-----	0	25	18	0	9
4-----	0	45	17	10	20	19-----	0	24	17	0	8
5-----	0	42	16	8.5	18	20-----	31	24	17	0	7
6-----	0	40	16	7.5	16	21-----	74	23	16	0	6.5
7-----	0	36	16	6.5	15	22-----	44	22	14	0	7.5
8-----	0	34	15	6	15	23-----	41	21	12	0	6
9-----	0	34	15	4.8	12	24-----	41	21	12	0	5.5
10-----	0	32	15	3.6	14	25-----	40	19	12	0	3
11-----	0	29	15	2.3	15	26-----	40	20	10	0	1.3
12-----	0	29	15	1.4	16	27-----	37	19	11	0	.6
13-----	0	28	14	.8	14	28-----	34	19	9.5	0	0
14-----	0	27	16	0	14	29-----	36	-----	9.5	.7	0
15-----	0	27	16	0	16	30-----	104	-----	10	15	0
						31-----	111	-----	10	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	111	0	20.4	1,250
February-----	74	19	31.2	1,730
March-----	18	9.5	14.6	898
April-----	15	0	3.20	190
May-----	37	0	11.5	707
The year-----	111	0	6.61	4,780

NOTE.—No flow during months omitted.

SANTA MARGARITA RIVER BASIN

TEMECULA CREEK AT NIGGER CANYON, NEAR TEMECULA, CALIF.

LOCATION.—Water-stage recorder in the Pauba grant, at upper end of Nigger Canyon, a quarter of a mile below junction with Arroyo Seco and 10 miles east of Temecula, Riverside County. Altitude, about 1,350 feet.

DRAINAGE AREA.—319 square miles.

RECORDS AVAILABLE.—January 1923 to September 1933.

DISCHARGE.—Maximum during year, 76 second-feet Jan. 29 (gage height, 2.40 feet); minimum, 0.7 second-foot Aug. 13 (gage height, 0.69 foot).
1923-33: Maximum, 17,100 second-feet Feb. 16, 1927 (gage height, 19.5 feet); minimum, 0.8 second-foot Sept. 30, 1924. Average, 10 years (1923-33), 13.2 second-feet.

REMARKS.—Records fair. Discharge estimated Jan. 1-16, Mar. 3-7. No diversions above station. Results of discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.0	3.5	4.7	4.8	23	8	7	12	3.8	2.2	1.4	1.4
2.....	2.0	3.4	4.7	4.8	21	8.5	6	11	3.6	2.1	1.6	1.4
3.....	2.1	3.2	4.5	4.5	20	9	6	9.5	3.6	2.1	1.7	1.2
4.....	2.1	3.4	4.4	4.5	19	9	6.5	8	3.8	2.1	1.7	1.2
5.....	2.3	3.5	4.3	4.8	18	9	6.5	7.5	4.1	2.1	1.6	1.2
6.....	2.1	3.4	4.5	4.8	17	8.5	6	7.5	4.1	1.9	1.6	1.2
7.....	2.3	3.5	4.7	5	16	9	6	7.5	3.8	2.1	1.6	1.2
8.....	2.3	3.5	4.5	5	14	8.5	6	7	3.6	2.1	1.6	1.2
9.....	5.5	3.6	4.4	5.5	14	8	5.5	7	3.4	2.1	1.6	1.4
10.....	5	3.6	6.5	5.5	13	8	6	9	3.1	2.1	1.6	1.4
11.....	4.7	3.6	7	5.5	14	8.5	6	10	2.9	2.1	1.6	1.4
12.....	4.3	3.5	18	5	13	8.5	5.5	9	2.9	2.1	1.6	1.2
13.....	4.0	3.5	12	5	13	8	5.5	8	2.4	2.1	1.4	1.2
14.....	3.9	3.5	7.5	5	12	8	5	7	2.4	2.1	1.6	1.2
15.....	3.6	3.6	5.5	5	12	8	5	6.5	2.4	1.9	1.6	1.2
16.....	3.5	3.5	5	10	12	8.5	5	6.5	2.2	1.9	1.6	1.2
17.....	3.4	3.6	4.7	29	10	8.5	6	6	2.2	1.9	1.4	1.2
18.....	3.4	3.8	4.1	20	10	8.5	10	5.5	2.4	1.9	1.4	1.2
19.....	3.2	3.9	4.1	19	9.5	8.5	9.5	5.5	2.4	1.9	1.2	1.4
20.....	3.2	4.0	4.1	38	9	8	9	4.6	2.4	1.9	1.2	1.4
21.....	3.1	4.0	4.4	28	9	8	8	4.8	2.2	1.9	1.2	1.4
22.....	3.0	4.1	4.7	25	9	7	7	6	2.2	1.7	1.2	1.4
23.....	3.0	4.3	5.5	31	8.5	7	6.5	5	2.2	1.7	1.2	1.4
24.....	3.0	4.4	5.5	26	8	7	6.5	4.6	2.1	1.7	1.4	1.4
25.....	3.0	4.8	5.5	20	8	7	6.5	3.8	1.9	1.7	1.4	1.6
26.....	3.0	5	5.5	20	7.5	7	6	3.8	2.1	1.7	1.6	1.6
27.....	3.0	5	5.5	18	7.5	7	6	3.4	2.2	1.7	1.6	1.6
28.....	2.7	4.5	5.5	18	8	7	9	3.1	2.2	1.7	1.4	1.7
29.....	3.1	3.9	5.5	18	-----	7	14	3.1	2.4	1.6	1.4	1.7
30.....	3.2	4.4	5.5	41	-----	7	17	3.1	2.4	1.4	1.4	1.9
31.....	3.2	-----	5	26	-----	7.5	-----	3.4	-----	1.4	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	5.5	2.0	3.17	195
November.....	5	3.2	3.85	229
December.....	18	4.1	5.72	352
January.....	41	4.5	14.9	916
February.....	23	7.5	12.7	705
March.....	9	7	7.97	490
April.....	17	5	7.15	425
May.....	12	3.1	6.41	394
June.....	4.1	1.9	2.78	165
July.....	2.2	1.4	1.90	117
August.....	1.7	1.2	1.48	91.0
September.....	1.9	1.2	1.37	81.5
The year.....	41	1.2	5.74	4,160

TEMECULA CREEK AT RAILROAD CANYON, NEAR TEMECULA, CALIF.

LOCATION.—Water-stage recorder in the Temecula grant, an eighth of a mile below junction with Murrieta Creek at upper end of Temecula or Railroad Canyon and $1\frac{1}{2}$ miles south of Temecula, Riverside County. Altitude, about 950 feet.

DRAINAGE AREA.—592 square miles.

RECORDS AVAILABLE.—January 1923 to September 1933.

DISCHARGE.—Maximum during year, 290 second-feet Jan. 20 (gage height, 1.98 feet); minimum, 3.7 second-feet July 20 (gage height, 0.57 foot).

1923-33: Maximum, about 27,600 second-feet Feb. 16, 1927 (gage height, 15.00 feet); minimum, 0.4 second-foot July 16, 1925. Average, 10 years (1923-33), 21.4 second-feet.

REMARKS.—Records good. Pumping diversions regulate flow to a considerable extent during irrigation season. Gage-height record and results of discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	7	8	10	26	11	9	9	7	4.5	4.0	5
2	6.5	8	8	10	17	11	9	9	7	4.5	4.0	5
3	7	7.5	8.5	10	14	11	9.5	8.5	6.5	4.5	4.0	4.8
4	6.5	7	8.5	10	13	10	9	8.5	7	4.4	4.0	4.6
5	6.5	7	8.5	10	13	10	8.5	8.5	7	4.2	4.1	4.5
6	7	7	8	10	13	10	8	8.5	7	4.2	4.1	4.4
7	7	7	8.5	10	12	10	8.5	8.5	7	4.4	4.0	4.4
8	7	7	9	10	12	10	8.5	9	6.5	4.4	4.0	4.8
9	16	7	11	10	11	10	8	8.5	6	4.4	3.9	5
10	11	7	12	10	11	10	8	10	6	4.4	3.9	5
11	8.5	7.5	13	10	11	11	8	10	6	4.1	3.9	5.5
12	8.5	7.5	26	10	12	10	8	10	5.5	3.9	3.9	5.5
13	8.5	8	19	10	12	10	8	9	5.5	4.0	4.0	5.5
14	8	8.5	16	10	11	10	7	8.5	5.5	4.0	4.0	5.5
15	7.5	8	13	11	11	10	7.5	8.5	5	4.2	4.1	5
16	7.5	8	11	14	11	10	7.5	8.5	4.6	4.0	4.1	4.8
17	7.5	7.5	11	27	12	10	8	8.5	4.6	3.9	4.2	4.8
18	7	7.5	11	15	11	10	11	8	4.4	3.9	4.1	4.6
19	7	7	11	15	11	10	10	8	4.4	3.9	4.1	4.6
20	7	7.5	10	129	10	10	9	7.5	4.4	3.9	4.2	4.4
21	7	7.5	11	71	11	9.5	9	7.5	4.5	3.9	4.4	4.5
22	7	7.5	10	22	11	9.5	8	8.5	4.5	4.0	4.2	4.8
23	6.5	7	11	27	11	9	8	8	4.5	4.1	4.1	5
24	6.5	7	11	26	11	9	8.5	7	4.6	4.1	4.2	5
25	6	7	10	16	11	9	8.5	7	4.5	4.0	4.4	5
26	6.5	7.5	10	16	12	9	8	6.5	4.5	4.2	4.5	5
27	7	7.5	10	14	12	9.5	8.5	6.5	4.5	4.2	4.6	5
28	6.5	8	10	15	12	10	11	6.5	4.5	4.2	4.8	5.5
29	7	7.5	10	38	-----	9.5	14	6.5	4.4	4.1	4.8	5.5
30	7	8	10	126	-----	9.5	10	7	4.5	4.0	4.6	5.5
31	7	-----	10	36	-----	9	-----	7	-----	4.1	4.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	6	7.47	459
November	8.5	7	7.43	442
December	26	8	11.1	682
January	129	10	24.5	1,510
February	26	10	12.3	683
March	11	9	9.89	608
April	14	7	8.80	524
May	10	6.5	8.13	500
June	7	4.4	5.40	321
July	4.5	3.9	4.15	255
August	4.8	3.9	4.19	268
September	5.5	4.4	4.95	295
The year	129	3.9	9.02	6,540

SANTA MARGARITA RIVER NEAR FALL BROOK, CALIF.

LOCATION.—Water-stage recorder in sec. 12, T. 9 S., R. 4 W., 2 miles north of Fall Brook. Altitude, about 350 feet.

DRAINAGE AREA.—645 square miles.

RECORDS AVAILABLE.—November 1924 to September 1933.

DISCHARGE.—Maximum during year, 304 second-feet Jan. 21 (gage height, 1.90 feet); minimum, 1.8 second-feet July 26 (gage height, 2.61 feet).

1924-33: Maximum, about 33,100 second-feet Feb. 16, 1927 (gage height, 15.6 feet); minimum, 0.1 second-foot Aug. 30, 1925, Sept. 4, 1926, Sept. 6, 1928, and July 22-26, Aug. 4, 5, and 8-14, 1929.

REMARKS.—Records good. Discharge estimated Oct. 10, 11, Dec. 19, 22, 23. Considerable diversions from streams in Temecula Valley and pumping above station. Results of numerous discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	6	8	9.5	11	27	12	10	11	7	3.6	2.6	3.6
2.....	6	8.5	9	11	23	12	9.5	10	6.5	3.6	2.6	3.8
3.....	6	9	9	11	21	12	9.5	9	6	3.6	2.6	3.8
4.....	6	8.5	9	11	20	11	10	8.5	6	3.4	2.6	3.8
5.....	6	8	9	12	20	11	10	8.5	6	3.2	2.6	3.6
6.....	6	7.5	9	12	18	10	10	8.5	6	3.0	2.6	3.2
7.....	6	7.5	10	12	16	11	10	8	6	3.0	2.8	3.4
8.....	6.5	7	10	11	15	11	10	7	6	3.2	2.8	3.6
9.....	10	7	11	12	13	11	9.5	8	5.5	3.2	2.8	3.8
10.....	24	8	14	12	13	11	9	9.5	5	3.0	2.6	4.0
11.....	10	8	13	11	13	11	8	11	4.6	2.8	2.6	4.2
12.....	9	8	22	10	14	11	8	10	4.6	2.8	2.6	4.4
13.....	9	8	23	11	14	11	8	9	4.2	2.8	2.6	4.4
14.....	8.5	8	20	11	14	11	8	8	4.2	2.6	2.5	4.4
15.....	8	7.5	15	12	12	11	7.5	8	4.2	2.6	2.5	4.4
16.....	8	7	14	15	13	12	8	8	3.8	2.8	2.6	4.4
17.....	7.5	8	13	40	13	13	8.5	8	3.8	2.8	2.6	4.2
18.....	7	8	12	30	13	12	11	8	3.6	2.8	2.5	4.2
19.....	7	8.5	12	30	13	10	13	7.5	3.2	2.8	2.8	4.0
20.....	7	8.5	12	110	13	9.5	10	7	3.0	2.6	2.8	4.0
21.....	7	8	12	136	12	9	9	7.5	3.2	2.6	3.0	4.0
22.....	7	7.5	12	81	12	8.5	8.5	8	3.6	2.5	2.9	4.0
23.....	7	8	12	28	12	8.5	7.5	7	3.6	2.5	2.8	4.0
24.....	7	8	14	81	13	9	7.5	6	3.6	2.5	2.8	4.0
25.....	6.5	8	13	23	13	9.5	8	6	3.6	2.4	2.9	4.2
26.....	6	8.5	12	21	12	10	8	5.5	3.6	2.4	3.0	4.4
27.....	7	8.5	12	20	12	10	8	6	3.4	2.6	3.2	4.6
28.....	7	8.5	11	20	12	11	11	6	3.4	2.8	3.4	4.8
29.....	7	8.5	11	24	-----	10	16	6.5	3.4	3.0	3.4	4.8
30.....	7.5	9	11	153	-----	10	15	7	3.4	2.8	3.4	4.8
31.....	7.5	-----	11	39	-----	10	-----	7.5	-----	2.6	3.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	24	6	7.74	476
November.....	9	7	8.03	478
December.....	23	9	12.5	769
January.....	153	10	29.7	1,830
February.....	27	12	14.9	828
March.....	13	8.5	10.6	652
April.....	16	7.5	9.53	587
May.....	11	5.5	7.92	487
June.....	7	3.0	4.47	266
July.....	3.6	2.4	2.87	176
August.....	3.4	2.5	2.80	172
September.....	4.8	3.2	4.09	243
The year.....	153	2.4	9.58	6,940

SANTA MARGARITA RIVER AT YSIDORA, CALIF.

LOCATION.—Water-stage recorder in Santa Margarita y Las Flores grant, about 2 miles above mouth and 1 mile below Ysidora, San Diego County. Altitude, about 15 feet.

DRAINAGE AREA.—740 square miles.

RECORDS AVAILABLE.—February 1923 to September 1929, October 1930 to September 1933.

DISCHARGE.—Maximum, 381 second-feet Jan. 30 (gage height, 2.25 feet); minimum, 0.6 second-foot Oct. 1.

1923-29, 1930-33: Maximum, about 33,600 second-feet Feb. 16, 1927; no flow part of most years.

REMARKS.—Record good. Considerable water diverted above for irrigation by the Pauba and Santa Margarita ranches. Gage-height record and results of numerous discharge measurements furnished by the Santa Margarita ranch.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.6	1.4	2.1	11	97	16	3.6	4.2	1.6	0.8	1.1	0.9
2.....	.7	1.5	2.1	10	67	16	4.5	4.2	1.6	.8	1.0	.9
3.....	.7	1.5	2.0	10	51	16	5.5	3.9	1.8	.8	.9	.9
4.....	.7	1.6	1.8	10	42	16	5.5	3.6	1.6	.9	.9	1.0
5.....	.7	1.6	1.8	9.5	36	15	6	3.9	1.8	.9	.8	1.0
6.....	.7	1.8	1.8	10	32	15	5.5	3.6	1.4	1.0	.8	1.1
7.....	.7	1.8	1.8	10	31	15	5.5	3.9	1.3	1.0	.9	1.1
8.....	.7	1.8	1.8	10	29	15	6	3.9	1.3	1.0	.8	1.1
9.....	3.7	1.5	2.1	11	29	14	6	3.6	1.2	1.1	.7	1.1
10.....	7.5	1.4	2.8	12	27	14	6	4.2	1.0	1.1	.7	1.1
11.....	3.3	1.2	3.1	11	25	15	5.5	3.6	1.1	1.1	.8	1.2
12.....	2.4	1.2	9.5	9.5	24	14	5.5	3.3	1.0	1.2	.9	1.2
13.....	2.2	1.0	28	9	24	14	5.5	2.9	.9	1.2	.8	1.1
14.....	2.4	1.0	35	9	23	14	5.5	2.7	1.0	1.3	.8	1.1
15.....	2.2	1.0	23	9.7	22	12	5.5	2.7	1.0	1.3	.8	1.1
16.....	2.1	1.0	15	13	22	9.5	5.5	2.7	1.1	1.3	.8	1.1
17.....	2.0	1.2	12	51	22	9	5.5	2.4	1.1	1.2	.8	1.0
18.....	1.8	1.5	12	44	20	8.5	6	2.4	1.0	1.2	.8	1.0
19.....	1.6	1.8	12	33	18	8	5.5	2.4	1.0	1.1	1.1	1.1
20.....	1.4	1.8	12	89	18	7.5	5.5	2.5	1.0	1.0	1.1	1.2
21.....	1.2	2.0	12	165	18	7	5	2.9	1.0	.9	1.2	1.3
22.....	1.2	2.0	12	93	18	6	5	2.9	1.1	.9	1.2	1.3
23.....	1.2	1.8	13	63	18	5.5	4.8	2.2	1.1	.9	1.2	1.3
24.....	.8	1.6	15	72	18	5	4.5	2.0	1.0	.9	1.2	1.3
25.....	.8	1.6	14	61	17	4.8	4.5	1.8	1.0	.9	1.2	1.3
26.....	.8	1.6	12	48	16	4.2	4.2	1.8	1.0	.9	1.2	1.3
27.....	.9	1.8	10	41	16	4.2	3.9	1.8	.9	.9	1.1	1.2
28.....	.9	1.8	9.5	37	16	4.5	4.8	1.6	.9	.9	1.1	1.3
29.....	1.0	1.8	9.5	48	-----	4.2	4.8	1.6	.9	1.0	1.0	1.3
30.....	1.0	1.8	9.5	228	-----	3.6	4.5	1.8	.9	1.0	.8	1.3
31.....	1.2	-----	10	163	-----	3.6	-----	1.6	-----	1.0	.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7.5	0.6	1.58	97.2
November.....	2.0	1.0	1.55	92.2
December.....	35	1.8	9.79	602
January.....	228	9.5	45.2	2,780
February.....	97	16	28.4	1,580
March.....	16	3.6	10.2	627
April.....	6	3.6	5.19	309
May.....	4.2	1.6	2.86	176
June.....	1.8	.9	1.15	68.4
July.....	1.3	.8	1.02	62.7
August.....	1.2	.7	.94	58.1
September.....	1.3	.9	1.14	67.8
The year.....	228	.6	9.00	6,520

MURRIETA CREEK AT TEMECULA, CALIF.

LOCATION.—Water-stage recorder on Temecula grant, 100 feet above junction with Temecula Creek and 1 mile south of Temecula, Riverside County. Altitude, about 1,050 feet. High-water station a quarter of a mile upstream.

DRAINAGE AREA.—220 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 274 second-feet Jan. 20 (gage height, 2.63 feet); minimum, 0.2 second-foot Aug. 11 to Sept. 30.

1930-33: Maximum, 7,500 second-feet Feb. 16, 1932 (gage height, 7.76 feet); minimum, 0.2 second-foot during summers of 1931 and 1933.

REMARKS.—Records good. Gage-height record and several discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.3	0.5	0.8	* 6.5	1.2	0.7	1.0	0.3	0.3	0.3	0.2
2	.3	.3	.5	.8	* 4.2	1.1	.7	.8	.3	.3	.3	.2
3	.3	.3	.5	.8	* 3.2	1.0	.7	.8	.3	.3	.3	.2
4	.3	.3	.5	.8	* 2.3	1.0	.7	.6	.3	.3	.3	.2
5	.3	.3	.5	.9	2.0	1.0	.7	.6	.3	.3	.3	.2
6	.3	.3	.5	.9	1.8	1.0	.7	.6	.3	.3	.3	.2
7	.3	.3	.5	.9	1.7	.9	.7	.6	.3	.3	.3	.2
8	*.3	.3	.5	.9	1.6	.9	.7	.6	.3	.3	.3	.2
9	*.5	.3	.6	.9	1.4	.9	.7	.5	.3	.3	.3	.2
10	.5	.3	.7	.9	1.3	.9	.7	.5	.3	.3	.3	.2
11	.4	.3	.9	.9	1.3	.9	.6	.6	.3	.3	.2	.2
12	.4	.3	* 3.2	.8	1.3	.9	.6	.7	.3	.3	.2	.2
13	.3	.3	* 3.4	.8	1.4	.9	.6	.7	.3	.3	.2	.2
14	.3	.5	* 2.2	.8	1.4	.9	.6	.6	.3	.3	.2	.2
15	.3	.4	1.6	.9	1.3	1.0	.5	.5	.3	.3	.2	.2
16	.3	.4	* 1.3	2.8	1.3	1.0	.5	.5	.3	.3	.2	.2
17	.3	.4	1.0	7.5	1.3	1.0	.5	.5	.3	.3	.2	.2
18	.3	.4	.9	2.6	1.3	1.0	.7	.5	.3	.3	.2	.2
19	.3	.4	.9	3.6	1.3	.9	.8	.4	.3	.3	.2	.2
20	.3	.4	.9	* 100	1.2	.9	.7	.4	.3	.3	.2	.2
21	.3	.4	.9	* 35	1.2	.9	.7	.4	.3	.3	.2	.2
22	.3	.4	.9	* 5	1.2	.9	.7	.4	.3	.3	.2	.2
23	.3	.3	.9	6.5	1.1	.9	.6	.4	.3	.3	.2	.2
24	.3	.3	1.0	14	1.1	.8	.6	.4	.3	.3	.2	.2
25	.3	.3	.9	5.5	1.1	.8	.6	.4	.3	.3	.2	.2
26	.3	.3	.9	4.0	1.1	.8	.6	.3	.3	.3	.2	.2
27	.3	.3	.9	3.3	1.2	.8	.7	.3	.3	.3	.2	.2
28	.3	.4	.9	3.0	1.2	.8	.8	.3	.3	.3	.2	.2
29	.3	.4	.8	7.5		.8	* 1.2	.3	.3	.3	.2	.2
30	.3	.5	.8	76		.8	1.2	.3	.3	.3	.2	.2
31	.3		.8	13		.8		.3		.3	.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.5	0.3	0.32	19.6
November	.5	.3	.35	20.6
December	3.4	.5	1.01	62.1
January	100	.8	9.75	600
February	6.5	1.1	1.72	95.5
March	1.2	.8	.92	56.3
April	1.2	.5	.69	41.2
May	1.0	.3	.51	31.4
June	.3	.3	.30	17.9
July	.3	.3	.30	18.4
August	.3	.2	.23	14.3
September	.2	.2	.20	11.9
The year	100	.2	1.37	989

* Estimated.

O'NEILL DITCH NEAR YSIDORA, CALIF.

LOCATION.—Water-stage recorder 100 feet above outlet into O'Neill Reservoir and 6 miles northeast of Ysidora.

RECORDS AVAILABLE.—October 1930 to September 1933.

REMARKS.—Records fair. Discharge estimated Dec. 2-5, Mar. 14-20, Aug. 24-26, Sept. 26-30. Gage-height record and numerous discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	4.5	3.6	4.3	0	9.3	11.0	5.4	1.3	0.4	1.2
2-----	4.5	4.0	4.3	0	9.1	9.3	4.9	1.3	.5	1.4
3-----	4.9	4.1	4.3	0	9.3	7.7	4.7	1.2	.4	1.5
4-----	5.0	3.8	4.2	0	10.0	7.7	4.6	1.1	.6	1.5
5-----	4.8	3.6	4.2	0	9.9	7.9	4.8	1.0	.6	1.2
6-----	4.8	3.3	4.1	0	9.1	7.6	5.1	1.0	.6	1.0
7-----	4.9	3.0	4.1	0	8.9	6.9	4.7	1.0	1.0	1.0
8-----	5.0	2.9	4.3	0	9.1	7.1	4.7	1.1	.9	1.5
9-----	7.8	2.9	5.4	0	8.6	6.7	3.8	1.3	.8	1.7
10-----	8.8	3.1	6.2	0	7.8	7.9	3.5	1.0	.4	1.6
11-----	5.5	3.1	5.9	0	7.2	9.3	3.1	.6	.4	1.8
12-----	4.1	2.9	3.6	0	7.0	9.0	3.0	.4	.3	2.0
13-----	3.8	2.9	0	0	7.0	8.2	2.7	.5	.2	2.1
14-----	3.7	2.8	0	5.0	6.5	7.5	2.3	.5	.1	2.3
15-----	3.5	2.7	0	10.4	6.1	6.9	2.3	.4	.1	2.3
16-----	3.4	2.8	0	10.4	6.7	6.7	1.7	.4	.1	2.2
17-----	3.4	3.2	0	10.3	7.2	6.3	1.8	.6	.1	2.0
18-----	3.4	3.4	0	10.2	9.5	6.1	1.6	.6	.1	2.0
19-----	3.3	3.5	0	10.2	10.8	5.8	1.1	.6	.1	1.7
20-----	3.2	3.5	0	10.2	9.7	5.5	1.0	.5	.3	1.8
21-----	3.3	3.5	0	10.1	8.4	6.3	1.1	.4	.3	1.7
22-----	3.3	3.6	0	10.4	7.7	6.9	1.3	.4	.5	1.6
23-----	3.4	3.6	0	10.1	7.2	6.6	1.4	.5	.5	1.9
24-----	3.3	3.4	0	10.0	7.4	5.2	1.3	.5	.5	1.9
25-----	3.1	3.4	0	10.1	8.0	4.7	1.3	.3	.6	2.0
26-----	2.9	3.6	0	10.1	7.9	4.3	1.3	.2	.6	2.2
27-----	3.0	3.7	0	10.4	8.2	4.2	1.3	.2	.6	2.3
28-----	3.3	3.7	0	11.0	10.6	4.3	1.3	.4	.9	2.4
29-----	3.3	4.0	0	10.9	14.4	4.7	1.2	.5	1.0	2.5
30-----	3.5	4.1	0	10.4	14.5	5.0	1.3	.3	1.1	2.5
31-----	3.5	0	0	9.9	-----	5.4	-----	.2	1.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	8.8	2.9	4.14	255
November-----	4.1	2.7	3.39	202
December-----	6.2	0	1.77	109
March-----	11.0	0	5.81	357
April-----	14.5	6.1	8.77	522
May-----	11.0	4.2	6.73	414
June-----	5.4	1.0	2.65	158
July-----	1.3	.2	.66	40.3
August-----	1.1	.1	.51	31.1
September-----	2.5	1.0	1.83	109
The year-----	14.5	0	3.08	2,200

NOTE.—No flow during months omitted.

SAN JUAN CREEK BASIN

SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 12, T. 8 S., R. 8 W., 300 feet upstream from State highway bridge half a mile south of San Juan Capistrano. Altitude, about 80 feet.

DRAINAGE AREA.—117 square miles.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum during year, 199 second-feet Jan. 19 (gage height, 2.18 feet); no flow for several months.

1929-33: Maximum, about 1,230 second-feet Mar. 16, 1930; no flow during each summer.

REMARKS.—Records fair. Discharge estimated Oct. 4-10, Nov. 25, 26, Dec. 22 to Jan. 10, Jan. 13-15, Feb. 1-6, 19-27, Mar. 1 to Apr. 9, May 16-23. Irrigation diversion above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1.....	0	0	0	1.0	15	2.5	0.2	0
2.....	0	0	0	1.0	12	2.4	.2	0
3.....	0	0	0	1.0	12	2.3	.2	0
4.....	.1	0	0	1.0	10	2.3	.1	0
5.....	.1	0	0	1.0	9	2.2	.1	0
6.....	.1	0	0	.9	8	2.1	.1	0
7.....	.1	0	0	.9	7	2.0	.1	0
8.....	.1	0	0	.8	7	2.0	.1	0
9.....	.1	0	0	.8	7	1.9	.1	0
10.....	.1	0	0	.8	7	1.9	0	0
11.....	0	0	0	.8	6.5	1.8	0	0
12.....	0	0	0	.9	6	1.7	0	0
13.....	0	0	0	.9	5.5	1.6	0	0
14.....	0	0	0	1.0	5	1.5	0	0
15.....	0	0	0	1.0	5	1.5	0	0
16.....	0	0	0	3.8	5	1.4	0	.5
17.....	0	0	0	13	5	1.3	0	2.0
18.....	0	0	0	7.5	4.8	1.2	0	2.0
19.....	0	0	0	24	4.8	1.1	0	1.5
20.....	0	0	0	58	4.5	1.1	0	1.2
21.....	0	0	0	21	4.2	1.0	0	1.0
22.....	0	0	1.0	18	4.2	1.0	0	.5
23.....	0	0	1.0	27	4.0	.9	0	.1
24.....	0	0	1.0	21	4.0	.8	0	0
25.....	0	.1	1.0	15	3.5	.7	0	0
26.....	0	.1	1.0	13	3.2	.6	0	0
27.....	0	0	1.0	14	3.0	.5	0	0
28.....	0	0	1.0	14	2.5	.4	0	0
29.....	0	0	1.0	38	-----	.4	0	0
30.....	0	0	1.0	66	-----	.3	0	0
31.....	0	-----	1.0	29	-----	.3	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.1	0	0.02	1.4
November.....	.1	0	.007	.4
December.....	1.0	0	.32	19.9
January.....	66	.8	12.8	787
February.....	15	2.5	6.24	347
March.....	2.5	.3	1.38	84.8
April.....	.2	0	.04	2.4
May.....	2.0	0	.28	17.5
The year.....	66	0	1.74	1,260

NOTE.—No flow during months omitted.

TRABUCO CREEK NEAR SAN JUAN CAPISTRANO, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 25, T. 7 S., R. 8 W., on State highway bridge 1½ miles north of San Juan Capistrano.

DRAINAGE AREA.—36.5 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 39 second-feet Jan. 19 (gage height, 3.07 feet); no flow part of year.

1930-33: Maximum, 381 second-feet Feb. 8, 1932; no flow part of each year.

REMARKS.—Record furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1932-33

Jan. 19.....	5	Jan. 23.....	0.3	Jan. 30.....	24
Jan. 20.....	12	Jan. 24.....	.1	Jan. 31.....	4
Jan. 21.....	.1	Jan. 29.....	8		

NOTE.—No flow during year except for days given above. Mean discharge for January, 1.73 second-feet; for the year, 0.15 second-foot. Total run-off for January and the year, 106 acre-feet.

ALISO CREEK BASIN

ALISO CREEK AT EL TORO, CALIF.

LOCATION.—Water-stage recorder in the Canada de Los Alisos grant on Second Street Bridge, at El Toro, Orange County.

DRAINAGE AREA.—8.5 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 352 second-feet Jan. 19 (gage height, 4.39 feet); no flow most of year.

1930-33: Maximum, 508 second-feet Feb. 1, 1932; no flow most of each year.

REMARKS.—Records furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1932-33

Jan. 16.....	4.8	Jan. 22.....	0.2	Jan. 29.....	26
Jan. 17.....	.4	Jan. 23.....	2.3	Jan. 30.....	5.5
Jan. 19.....	38	Jan. 24.....	.2	Jan. 31.....	.2
Jan. 20.....	5.5	Jan. 25.....	.1		

NOTE.—No flow during year except for days given above. Mean discharge for January, 2.68 second-feet; for the year, 0.23 second-foot. Total run-off for January and the year, 165 acre-feet.

SANTA ANA RIVER BASIN

SANTA ANA RIVER NEAR MENTONE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 4, T. 1 S., R. 2 W., near mouth of canyon, a quarter of a mile above Southern California Edison Co.'s Mentone power plant and 3½ miles northeast of Mentone. Altitude, about 1,900 feet.

DRAINAGE AREA.—189 square miles.

RECORDS AVAILABLE.—July 1896 to September 1933.

DISCHARGE.—Maximum during year, 73 second-feet Jan. 29 (gage height, 2.18 feet); no flow during part of November, December, August, and September.

1896-1933: Maximum, 29,100 second-feet Jan. 27, 1916; no flow during part of November and December 1932 and August and September 1933. Average, 31 years (1896-1901, 1905-9, 1910-15, 1916-33), 37.8 second-feet.

REMARKS.—Records good except those estimated, Oct. 22-24, 26, 27, Nov. 2-12, 14-20, Feb. 5-9, July 7-11, which are fair. Diversions and regulation above station. The sum of the discharge in the river, the Mentone power plant tailrace, and the Greenspot pipe line is given in the table of combined discharge (p. 25); average combined discharge, 32 years (1896-98, 1902-15, 1916-33), 91.3 second-feet.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	0.2	0.1	0	0.1	12	2.7	1.0	16	1.0	0.4	0.1
2	.2	.1	0	.2	8	2.7	1.0	42	1.0	.4	.1
3	.2	.1	0	.3	6	2.7	1.0	40	1.0	.4	.1
4	.2	.1	0	.6	5.5	2.7	1.1	39	1.0	.3	.1
5	.1	.1	0	1.0	5	2.6	1.1	41	1.0	.3	.1
6	.1	.1	0	1.2	5	2.6	1.1	24	.9	.3	.1
7	.1	.1	0	1.4	4.5	2.7	1.1	3.2	.8	.3	.1
8	.2	.1	0	1.6	4.0	2.7	1.1	2.8	.8	.2	.1
9	.2	.1	0	1.6	4.0	2.7	1.0	2.8	.6	.2	.1
10	.2	.1	0	1.6	3.8	2.7	1.0	3.3	.6	.2	.1
11	.2	.1	0	1.6	3.8	2.7	1.0	4.4	.6	.2	.1
12	.2	.1	.2	1.6	3.8	2.7	1.0	3.2	.6	.2	.1
13	.2	.1	0	1.6	4.6	2.7	1.0	2.8	.6	.2	.1
14	.2	.1	0	1.6	3.8	2.7	1.0	2.6	.6	.2	.1
15	.1	.1	0	1.6	3.8	2.7	1.0	2.4	.5	.2	.1
16	.1	.1	0	8	3.6	2.7	1.0	2.6	.5	.2	.1
17	.1	.1	0	18	3.6	2.4	1.1	2.6	.5	.2	.1
18	.1	.1	0	8.5	3.6	2.0	1.2	2.4	.5	.2	.1
19	.1	.1	0	7	3.3	1.8	1.2	2.0	.5	.1	.1
20	.1	.1	0	16	3.2	1.5	1.2	1.6	.5	.1	.1
21	.1	0	0	8.5	3.2	1.5	1.2	1.6	.5	.1	0
22	.1	0	0	8.5	2.8	1.4	1.2	3.3	.4	.1	0
23	.1	0	0	10	2.8	1.4	1.1	1.6	.5	.1	0
24	.1	0	0	9	3.0	1.3	1.2	1.3	.5	.1	0
25	.1	0	0	8	2.8	1.2	1.2	1.2	.4	.1	0
26	.1	0	0	7.5	2.8	1.2	1.1	1.1	.4	.1	0
27	.1	0	0	6.5	2.7	1.2	1.2	1.0	.4	.1	0
28	.1	0	0	8	2.7	1.1	1.7	1.0	.4	.1	0
29	.1	0	0	22	-----	1.1	1.4	1.0	.4	.1	0
30	.1	0	.1	33	-----	1.0	1.7	1.0	.4	.1	0
31	.1	-----	.1	20	-----	1.0	-----	1.0	-----	.1	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.14	8.3
November	.1	0	.07	4.0
December	.2	0	.01	8
January	33	.1	6.97	429
February	12	2.7	4.20	233
March	2.7	1.0	2.07	127
April	1.7	1.0	1.14	67.8
May	42	1.0	8.25	507
June	1.0	.4	.61	36.5
July	.4	.1	.19	11.7
August	.1	0	.64	4.0
The year	42	0	1.97	1,430

NOTE.—No flow during September.

Combined discharge, in second-feet, of Santa Ana River and canals near Mentone, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	47	45	40	33	55	42	50	39	55	52	61	54
2.....	45	43	36	31	51	42	50	42	53	52	59	56
3.....	47	43	36	33	49	44	48	40	53	54	59	56
4.....	49	43	36	33	44	44	52	39	49	52	59	56
5.....	51	43	42	34	44	46	52	41	49	54	59	59
6.....	51	43	38	34	46	44	52	41	49	54	59	56
7.....	51	43	38	34	48	46	48	37	49	54	59	56
8.....	55	43	38	34	41	46	48	37	51	54	59	60
9.....	55	43	42	36	41	46	46	37	49	56	59	61
10.....	49	43	38	34	41	48	44	37	53	56	59	61
11.....	49	43	30	34	39	48	43	42	53	54	61	59
12.....	49	43	29	32	41	46	46	44	53	54	61	56
13.....	47	43	28	32	48	46	46	44	55	56	61	56
14.....	47	43	34	30	43	44	46	44	55	56	65	56
15.....	47	43	34	32	41	44	44	41	54	56	61	56
16.....	47	43	34	38	43	46	46	41	54	56	65	56
17.....	47	43	34	46	43	49	46	41	54	56	65	56
18.....	51	43	34	37	43	49	46	40	56	56	61	59
19.....	51	43	34	38	42	49	44	40	56	56	61	56
20.....	50	41	36	56	40	46	44	40	54	54	61	56
21.....	51	43	36	48	40	48	44	40	52	54	61	54
22.....	51	42	32	44	42	48	46	46	52	54	59	54
23.....	49	44	28	51	42	48	46	45	52	54	59	54
24.....	49	44	32	46	42	46	48	42	52	56	59	56
25.....	49	44	28	45	42	44	46	50	54	56	56	56
26.....	49	44	28	46	40	47	48	50	54	56	56	59
27.....	49	42	32	44	40	47	48	53	54	56	59	59
28.....	47	42	34	49	42	47	49	55	52	59	59	54
29.....	47	40	30	59	-----	49	52	55	54	59	59	54
30.....	45	40	31	53	-----	49	49	55	52	61	56	52
31.....	45	-----	33	63	-----	50	-----	53	-----	61	54	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	55	45	48.9	3,010
November.....	45	40	42.8	2,550
December.....	42	28	34.0	2,090
January.....	83	30	41.6	2,560
February.....	55	39	43.3	2,400
March.....	50	42	46.4	2,550
April.....	52	43	47.2	2,810
May.....	55	37	43.6	2,680
June.....	56	49	52.7	3,140
July.....	61	52	55.4	3,410
August.....	65	54	59.7	3,670
September.....	61	52	56.4	3,360
The year.....	83	28	47.7	34,500

SANTA ANA RIVER NEAR SAN BERNARDINO, CALIF.

LOCATION.—Water-stage recorder in the San Bernardino grant, a quarter of a mile upstream from Tippecanoe Street Bridge and 2½ miles southeast of San Bernardino, San Bernardino County. Altitude, about 1,040 feet.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum during year, about 2 second-feet Jan. 17; no flow most of year.

1928-33: Maximum, 2,400 second-feet Feb. 9, 1932 (gage height, 4.15 feet); no flow most of each year.

REMARKS.—Records fair. Mean daily discharge during year, 0.5 second-foot Jan. 17; no flow during remainder of year. Run-off for year, 1 acre-foot. Numerous water companies divert water from main river and tributaries above station. Partly regulated by storage at Bear Valley Reservoir, on Bear Creek.

SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF.

LOCATION.—Water-stage recorder in Jurupa grant, half a mile below Union Pacific Railroad bridge and 3 miles north of Arlington, Riverside County.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum during year, estimated, 1,100 second-feet Jan. 20; minimum, 25 second-feet July 13, Aug. 22, 23, 28–30, Sept. 7.

1929–33: Maximum, 4,740 second-feet Dec. 29, 1931; minimum, 24 second-feet July 28–29, 1932.

REMARKS.—Records good. Numerous diversions. Regulation at Bear Valley Reservoir. Discharge estimated Oct. 31 to Nov. 5, Dec. 27 to Jan. 3, Jan. 15–17.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	26	28	43	45	58	45	36	42	30	31	27	27
2.....	34	29	36	45	50	46	35	40	30	31	27	26
3.....	26	29	35	46	48	45	35	40	30	30	28	26
4.....	26	29	34	46	49	44	34	40	31	30	28	26
5.....	27	29	32	45	50	40	35	39	30	29	27	26
6.....	28	29	35	44	51	41	34	38	31	28	27	26
7.....	29	29	38	44	51	45	34	37	32	28	27	25
8.....	29	29	37	43	57	43	32	36	32	28	27	26
9.....	33	29	42	44	55	43	31	36	32	26	26	26
10.....	30	30	47	45	51	40	31	39	31	26	26	26
11.....	29	30	50	45	50	39	30	36	31	26	26	26
12.....	30	29	68	45	49	39	31	36	30	26	26	26
13.....	29	30	62	40	52	48	31	36	30	25	26	26
14.....	29	32	61	38	49	42	32	36	29	26	26	27
15.....	30	30	57	40	44	41	32	36	30	26	26	27
16.....	30	30	57	40	44	40	34	36	30	26	26	27
17.....	29	29	57	120	42	43	34	34	30	26	26	28
18.....	29	29	60	64	41	41	34	34	30	26	26	28
19.....	27	30	58	72	39	37	34	33	29	26	26	28
20.....	27	30	47	368	38	38	35	33	30	26	26	27
21.....	28	31	59	80	38	38	35	33	29	26	26	27
22.....	28	33	52	59	38	39	34	33	29	27	25	27
23.....	27	33	58	69	37	41	34	32	29	27	25	27
24.....	27	33	54	67	38	39	34	31	29	27	26	28
25.....	27	34	43	56	39	38	34	30	30	27	26	28
26.....	27	34	41	57	40	38	34	30	30	26	26	28
27.....	27	34	41	62	41	47	34	30	30	27	26	28
28.....	27	34	42	64	43	41	36	29	33	28	25	28
29.....	27	34	43	93	-----	36	44	30	33	27	25	29
30.....	27	36	43	164	-----	38	44	30	32	27	25	29
31.....	28	-----	44	62	-----	37	-----	30	-----	27	26	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	34	26	28.3	1,740
November.....	36	28	30.8	1,830
December.....	68	32	47.6	2,930
January.....	368	38	69.4	4,270
February.....	58	37	45.8	2,540
March.....	48	36	41.0	2,520
April.....	44	30	34.2	2,040
May.....	42	29	34.7	2,130
June.....	33	29	30.4	1,810
July.....	31	25	27.2	1,670
August.....	28	25	26.2	1,610
September.....	29	25	27.0	1,610
The year.....	368	25	36.9	26,700

SANTA ANA RIVER AT HAMNER AVENUE, NEAR CORONA, CALIF.

LOCATION.—Water-stage recorder in Jurupa grant, 1 mile above Hamner Avenue and 5 miles north of Corona.

RECORDS AVAILABLE.—May 1930 to November 1933, irrigation seasons only.

REMARKS.—Record good. Discharge estimated May 1-4, Nov. 29, 30.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	May	June	July	Aug.	Sept.	Oct.	Nov.
1.....	27	34	47	27	24	22	23	25	26
2.....	37	35	46	25	25	20	25	23	26
3.....	33	34	47	29	23	20	25	21	29
4.....	32	35	46	29	25	21	23	18	29
5.....	32	35	44	30	25	20	21	20	27
6.....	33	35	42	30	24	21	21	21	29
7.....	34	35	39	30	24	21	21	24	29
8.....	33	35	40	29	24	21	23	22	30
9.....	37	35	37	27	25	20	23	24	29
10.....	36	36	39	30	23	18	23	24	30
11.....	35	36	39	29	21	19	23	23	30
12.....	35	35	39	26	21	21	22	22	29
13.....	36	35	39	27	21	20	20	22	27
14.....	36	38	37	26	23	18	21	22	30
15.....	36	37	30	25	23	20	20	24	30
16.....	36	36	33	24	22	19	21	23	27
17.....	37	36	30	24	21	19	21	23	29
18.....	35	37	32	23	22	19	21	21	27
19.....	35	37	30	23	21	18	22	23	30
20.....	35	38	29	23	21	20	21	23	32
21.....	35	38	30	25	22	19	21	24	32
22.....	36	38	29	24	21	20	21	24	32
23.....	36	38	30	25	22	20	21	25	35
24.....	35	38	29	25	21	20	24	26	33
25.....	34	38	27	26	20	19	24	26	35
26.....	35	38	29	25	19	20	24	25	37
27.....	32	39	27	26	17	19	23	29	39
28.....	33	39	29	24	19	21	24	27	39
29.....	34	41	30	24	17	21	24	27	37
30.....	34	41	29	24	18	23	23	27	36
31.....	35		27		18	22		29	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932				
October.....	37	27	34.5	2,120
November.....	41	34	36.7	2,190
1933				
May.....	47	27	34.9	2,150
June.....	30	23	26.1	1,550
July.....	25	17	21.7	1,330
August.....	23	18	20.0	1,230
September.....	25	20	22.3	1,330
October.....	29	18	23.8	1,460
November.....	39	26	31.0	1,840
The period.....				10,900

SANTA ANA RIVER AT AUBURNDALE BRIDGE, NEAR CORONA, CALIF.

LOCATION.—Water-stage recorder in the Jurupa grant, at Auburndale Bridge, 4 miles northwest of Corona, Riverside County.

RECORDS AVAILABLE.—May 1930 to November 1933, irrigation seasons only.

REMARKS.—Records good.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	May	June	July	Aug.	Sept.	Oct.	Nov.
1.....	42	50	60	43	40	32	35	42	45
2.....	54	51	60	42	38	33	35	41	43
3.....	46	50	62	45	39	33	35	39	43
4.....	46	52	61	45	39	35	35	36	46
5.....	41	51	57	47	41	32	32	34	43
6.....	43	52	57	50	40	33	32	35	45
7.....	45	51	56	45	38	32	32	36	45
8.....	42	48	57	44	40	33	34	39	46
9.....	51	50	57	45	39	30	37	39	46
10.....	52	51	60	44	37	30	36	38	47
11.....	47	47	60	47	33	30	38	39	45
12.....	46	47	58	44	32	31	37	38	47
13.....	47	48	56	43	33	29	36	38	45
14.....	47	50	55	39	33	29	36	39	44
15.....	48	48	53	40	35	29	36	40	46
16.....	47	48	53	40	35	29	35	39	46
17.....	48	46	47	38	32	29	36	37	46
18.....	45	48	47	37	31	29	34	38	45
19.....	43	50	49	38	33	29	35	38	47
20.....	41	48	49	37	31	32	34	40	46
21.....	46	51	44	40	32	30	33	41	49
22.....	47	50	47	37	31	32	34	41	46
23.....	47	48	47	40	33	31	36	44	50
24.....	43	51	47	40	33	32	36	42	47
25.....	42	50	43	38	33	31	40	45	50
26.....	42	51	44	41	30	32	40	42	50
27.....	43	51	45	40	28	31	41	44	50
28.....	45	51	46	41	29	33	41	45	56
29.....	47	56	45	39	30	32	44	44	53
30.....	50	53	45	40	30	35	43	45	52
31.....	48	-----	44	-----	30	33	-----	46	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet		
1932									
October.....	54		41		45.8		2,820		
November.....	56		46		49.9		2,970		
1933									
May.....	62		43		52.0		3,200		
June.....	50		37		41.6		2,480		
July.....	41		28		34.1		2,100		
August.....	35		29		31.3		1,920		
September.....	44		32		36.3		2,160		
October.....	46		34		40.1		2,470		
November.....	56		43		47.0		2,800		
The period.....							17,100		

SANTA ANA RIVER AT ATCHISON, TOPEKA & SANTA FE RAILWAY BRIDGE NEAR PRADO, CALIF.

LOCATION.—Water-stage recorder in La Sierra grant, half a mile below Atchison, Topeka & Santa Fe Railway bridge and 1½ miles southwest of Prado, Riverside County.

RECORDS AVAILABLE.—May 1930 to November 1933, irrigation seasons only. REMARKS.—Records good. Discharge estimated Nov. 17, 1932, Sept. 20, Oct. 19–25, Nov. 10, 11, 19–22, 25–29, 1933.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	May	June	July	Aug.	Sept.	Oct.	Nov.
1.....	62	71	79	70	56	50	50	58	64
2.....	76	72	75	70	56	50	52	56	62
3.....	66	74	82	70	53	52	50	55	62
4.....	59	74	77	75	55	52	50	52	67
5.....	54	75	75	75	55	52	47	47	64
6.....	56	74	70	80	56	52	46	47	64
7.....	57	72	72	75	55	52	43	49	66
8.....	56	69	74	70	56	52	47	52	66
9.....	65	71	70	70	58	49	47	55	67
10.....	69	72	77	72	56	45	52	55	67
11.....	62	72	80	72	50	46	52	56	66
12.....	62	72	77	68	50	47	53	55	67
13.....	62	74	77	61	49	47	52	55	64
14.....	65	75	77	61	50	46	50	56	64
15.....	65	75	75	61	53	43	50	55	66
16.....	65	77	75	58	52	45	47	56	67
17.....	65	76	72	59	52	45	50	53	67
18.....	62	74	66	56	49	45	52	55	67
19.....	59	74	66	53	47	42	49	56	67
20.....	56	75	62	55	49	46	48	53	68
21.....	59	77	64	55	52	46	46	57	69
22.....	62	75	64	55	50	46	49	61	70
23.....	71	65	66	52	52	46	49	58	70
24.....	69	65	61	58	53	50	52	60	70
25.....	65	66	56	59	52	49	55	61	70
26.....	66	66	56	59	47	49	56	62	72
27.....	65	65	58	58	46	49	58	64	70
28.....	65	68	58	56	47	49	59	64	72
29.....	68	71	67	55	47	47	59	66	70
30.....	71	74	70	56	46	49	61	64	72
31.....	71	-----	68	-----	46	49	-----	68	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October..... 1932	76	54	63.7	3,920
November.....	77	65	72.0	4,280
May..... 1933	82	56	69.9	4,300
June.....	80	52	63.1	3,750
July.....	58	46	51.5	3,170
August.....	52	42	48.0	2,950
September.....	61	43	51.0	3,080
October.....	68	47	56.8	3,490
November.....	72	62	67.2	4,000
The period.....	-----	-----	-----	24,700

SANTA ANA RIVER NEAR PRADO, CALIF.

LOCATION.—Water-stage recorder in Canyon of Santa Ana grant, at Riverside-Orange County line in lower Santa Ana Canyon, 3 miles below Rincon Bridge and 3 miles southwest of Prado, Riverside County.

RECORDS AVAILABLE.—January 1919 to September 1933.

DISCHARGE.—Maximum during year, 1,540 second-feet Jan. 20 (gage height, 5.23 feet); minimum, 33 second-feet Aug. 14 (gage height, 1.79 feet).

1919-33: Maximum, about 18,000 second-feet Feb. 16, 1927 (gage height, 11.5 feet); minimum, 25 second-feet Aug. 18, 1929. Average, 14 years (1919-33), 155 second-feet.

REMARKS.—Records good. Discharge estimated Sept. 20, 21. Diversions and regulation above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	66	75	104	174	117	81	86	60	54	45	45
2	70	69	78	102	140	121	83	90	66	56	49	50
3	67	69	72	100	128	121	81	88	64	49	46	47
4	59	73	75	96	126	121	77	88	66	53	49	46
5	58	73	70	96	123	112	81	88	70	50	50	47
6	57	75	70	96	126	114	76	76	70	49	49	43
7	57	73	75	96	128	119	77	78	72	52	47	43
8	60	69	75	98	128	121	77	76	66	54	50	43
9	66	72	83	98	128	123	76	76	66	54	45	49
10	75	73	89	100	121	121	76	80	63	53	42	49
11	66	72	98	106	121	117	72	78	70	52	45	49
12	70	70	138	102	131	106	74	76	64	50	42	49
13	69	70	112	102	135	110	72	74	60	46	43	49
14	67	72	108	102	140	101	70	78	61	45	38	49
15	66	72	102	108	140	95	69	74	61	50	39	50
16	67	73	98	126	138	89	69	76	54	53	38	47
17	63	70	102	258	133	93	70	68	53	47	38	46
18	60	69	104	171	128	93	70	64	58	49	42	49
19	55	72	108	182	114	91	76	58	53	49	38	45
20	53	70	106	534	108	89	70	58	49	45	41	44
21	53	75	108	225	106	93	72	63	54	47	46	46
22	55	70	114	209	103	93	77	60	53	47	42	47
23	63	64	112	195	97	95	77	60	46	46	39	46
24	64	64	117	217	108	93	79	61	58	52	45	49
25	58	64	112	174	108	89	85	52	56	47	45	50
26	57	63	104	168	108	87	77	52	58	43	43	54
27	55	66	102	158	114	87	81	58	58	42	46	54
28	55	67	102	158	117	89	87	53	53	46	47	58
29	59	67	102	212	-----	87	91	56	54	42	45	53
30	64	73	104	356	-----	83	89	66	53	42	47	60
31	60	-----	102	217	-----	83	-----	66	-----	42	47	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	75	53	61.6	3,790
November	75	63	69.8	4,150
December	138	70	97.3	5,980
January	534	96	163	10,000
February	174	97	124	6,890
March	123	83	102	6,270
April	91	69	77.1	4,590
May	90	52	70.2	4,320
June	72	46	59.6	3,550
July	50	42	48.6	2,990
August	50	38	44.1	2,710
September	60	43	48.5	2,890
The year	534	38	80.3	58,100

SANTA ANA RIVER AT SANTA ANA, CALIF.

LOCATION.—Water-stage recorder in Las Bolsas grant, an eighth of a mile above Fifth Street Bridge, Santa Ana, Orange County, and 2 miles below junction with Santiago Creek. Altitude about 80 feet.

RECORDS AVAILABLE.—January 1923 to September 1933.

DISCHARGE.—Maximum during year, 470 second-feet Jan. 20 (gage height, 1.68 feet); no flow for several months.

1923-33: Maximum, about 25,000 second-feet Feb. 16, 1927; no flow several months each year. Average, 10 years (1923-33), 14.1 second-feet.

REMARKS.—Records fair. Discharge estimated Jan. 29, Feb. 11-13. Considerable diversion for irrigation above station.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Day	Jan.	Feb.	Day	Jan.	Feb.
1.....	0	0	11.....	0	9	21.....	6	0
2.....	0	0	12.....	0	12	22.....	1.0	0
3.....	0	0	13.....	0	12	23.....	0	0
4.....	0	0	14.....	0	13	24.....	0	0
5.....	0	0	15.....	0	0	25.....	0	0
6.....	0	0	16.....	0	0	26.....	0	0
7.....	0	0	17.....	0	0	27.....	0	0
8.....	0	0	18.....	0	0	28.....	0	0
9.....	0	0	19.....	0	0	29.....	10	-----
10.....	0	0	20.....	148	0	30.....	36	-----
						31.....	3.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	148	0	6.58	405
February.....	13	0	1.64	91
The year.....	148	0	.68	496

NOTE.—No flow during months omitted.

SOUTHERN CALIFORNIA EDISON CO.'S CANAL AND GREENSPOT PIPE LINE NEAR MENTONE, CALIF.

LOCATION.—In SW¼ sec. 4, T. 1 S., R. 2 W., at Southern California Edison Co.'s power plant at mouth of canyon, 3 miles northeast of Mentone.

RECORDS AVAILABLE.—1896 to September 1933.

DISCHARGE.—1896-1933: Maximum mean daily canal discharge, 97 second-feet Mar. 16, 1905; no flow during short periods nearly every year. Average (canal only), 31 years (1896-98, 1904-33), 52.2 second-feet.

REMARKS.—The intake of this canal is at Southern California Edison Co.'s power plant no. 2, 2¼ miles above the Mentone plant. Water is diverted from forebay of Mentone plant by Greenspot pipe line. Canal discharge below forebay is computed from record of kilowatt output of power plant. Pipe-line discharge is computed from weir record at forebay, average, 22 years (1911-33), 5.41 second-feet. Sum of records of discharge of canal and pipe line in the following tables gives total flow of canal above forebay.

Canal discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	39	39	35	28	43	39	41	19.1	45	43	52	45
2.....	37	37	32	26	43	39	41	0	43	43	50	47
3.....	39	37	32	28	43	41	39	0	43	45	50	47
4.....	41	37	32	28	39	41	43	0	39	43	50	47
5.....	43	37	37	28	39	41	43	0	39	45	50	50
6.....	43	37	34	28	41	37	43	14.8	39	45	50	47
7.....	43	37	34	28	43	39	39	30	39	45	50	47
8.....	47	37	34	28	37	39	39	30	41	45	50	51
9.....	47	37	37	30	37	39	37	30	39	47	50	52
10.....	41	37	34	28	37	41	35	30	43	47	50	52
11.....	41	37	26	28	35	41	34	34	43	45	52	50
12.....	41	37	24	26	37	39	37	37	43	45	52	47
13.....	39	37	24	26	43	39	37	37	45	47	52	47
14.....	39	37	30	24	39	37	35	37	45	47	56	47
15.....	39	37	30	26	37	37	35	35	45	47	52	47
16.....	39	37	30	26	39	39	37	34	45	47	56	47
17.....	39	37	30	24	39	43	37	34	45	47	56	47
18.....	43	37	30	24	39	43	37	34	47	47	52	50
19.....	43	37	30	26	39	43	35	34	47	47	52	47
20.....	43	35	32	35	37	41	35	34	45	45	52	47
21.....	45	37	32	35	37	43	35	34	43	45	52	45
22.....	45	37	28	35	39	43	37	39	43	45	50	45
23.....	43	39	24	41	39	43	37	39	43	45	50	45
24.....	43	39	28	37	39	41	39	37	43	47	50	47
25.....	43	39	24	37	39	39	37	41	45	47	47	47
26.....	43	39	24	39	37	41	39	41	45	47	47	50
27.....	43	37	28	37	37	39	39	43	45	47	50	50
28.....	41	37	30	41	39	39	39	45	43	50	50	45
29.....	41	35	26	37	-----	41	43	45	45	50	50	45
30.....	39	35	26	50	-----	41	39	45	43	52	47	43
31.....	39	-----	28	43	-----	41	-----	43	-----	52	45	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	47	37	41.6	2,560
November.....	39	35	37.1	2,210
December.....	37	24	29.8	1,830
January.....	50	24	31.5	1,940
February.....	43	35	39.0	2,170
March.....	43	37	40.3	2,480
April.....	43	34	38.1	2,270
May.....	45	0	30.8	1,890
June.....	47	39	43.3	2,580
July.....	52	43	46.4	2,850
August.....	56	45	50.7	3,120
September.....	52	43	47.4	2,820
The year.....	56	0	39.7	28,700

Discharge, in second-feet, of Greenspot pipe line near Mentone, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	8.0	6.0	4.5	4.5	0	8.0	4.3	9.0	9.0	9.0	9.0
2-----	8.0	6.0	4.5	4.5	0	8.0	0	9.0	9.0	9.0	9.0
3-----	8.0	6.0	4.5	4.5	0	8.0	0	9.0	9.0	9.0	9.0
4-----	8.0	6.0	4.5	4.5	0	8.0	0	9.0	9.0	9.0	9.0
5-----	8.0	6.0	4.5	4.5	2.0	8.0	0	9.0	9.0	9.0	9.0
6-----	8.0	6.0	4.5	4.5	4.0	8.0	2.0	9.0	9.0	9.0	9.0
7-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
8-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
9-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
10-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
11-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
12-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
13-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
14-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
15-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
16-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
17-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
18-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
19-----	8.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
20-----	7.3	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
21-----	6.0	6.0	4.5	4.5	4.0	8.0	4.0	9.0	9.0	9.0	9.0
22-----	6.0	5.4	4.5	0	4.0	8.0	4.0	9.0	9.0	9.0	9.0
23-----	6.0	4.5	4.5	0	4.0	8.0	4.0	9.0	9.0	9.0	9.0
24-----	6.0	4.5	4.5	0	4.0	8.0	4.0	9.0	9.0	9.0	9.0
25-----	6.0	4.5	4.5	0	4.0	8.0	8.0	9.0	9.0	9.0	9.0
26-----	6.0	4.5	4.5	0	4.9	8.0	8.0	9.0	9.0	9.0	9.0
27-----	6.0	4.5	4.5	0	7.0	8.0	9.0	9.0	9.0	9.0	9.0
28-----	6.0	4.5	4.5	0	7.0	8.0	9.0	9.0	9.0	9.0	9.0
29-----	6.0	4.5	4.5	0	7.0	8.0	9.0	9.0	9.0	9.0	9.0
30-----	6.0	4.5	4.5	0	7.3	8.0	9.0	9.0	9.0	9.0	9.0
31-----	6.0	-----	4.5	0	8.0	-----	9.0	-----	9.0	9.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	8.0	6.0	7.27	447
November-----	6.0	4.5	5.58	332
December-----	4.5	4.5	4.50	277
January-----	4.5	0	3.05	188
March-----	8.0	0	3.97	244
April-----	8.0	8.0	8.00	476
May-----	9.0	0	4.49	276
June-----	9.0	9.0	9.00	536
July-----	9.0	9.0	9.00	553
August-----	9.0	9.0	9.00	553
September-----	9.0	9.0	9.00	536
The year-----	9.0	0	6.10	4,420

NOTE.—No flow during February.

MILL CREEK NEAR CRAFTONVILLE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 13, T. 1 S., R. 2 W., at mouth of canyon, below bridge on Redlands-Bear Valley Highway 5¼ miles northeast of Craftonville.

RECORDS AVAILABLE.—January 1919 to September 1933.

DISCHARGE.—Maximum during year, 12 second-feet Jan. 29 (gage height, 1.27 feet); no flow for several months.

1919-33: Maximum, about 4,500 second-feet Feb. 16, 1927 (gage height, 5.5 feet); all water diverted into Mill Creek power canal no. 1 at times.

Average discharge, 14 years (1919-33), 11.4 second-feet.

REMARKS.—Records fair. Discharge estimated Oct. 25, 26, Jan. 20, 22-24, Apr. 6, 7, 28, May 10, June 17-21, July 24 to Aug. 5, Aug. 21-24. Mill Creek power canals nos. 1, 2, and 3 divert water from points just above, 3 miles above, and 6 miles above station. Combined discharge is the sum of flow in creek and the three canals; average combined discharge, 14 years (1919-33), 35.1 second-feet.

Discharge, in second-feet, 1932-33

Day	Oct.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.
1	0	0	0	0	0	0	0	0	0.1
2	0	0	0	0	0	0	0	0	.1
3	0	0	0	0	0	0	0	0	.1
4	0	0	0	0	0	0	0	0	.1
5	0	0	0	0	0	0	0	0	.1
6	0	0	0	0	.1	0	0	0	0
7	0	0	0	0	.1	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	.1	0	0	0
11	0	0	0	0	.1	0	0	0	0
12	0	.1	0	0	.3	0	0	0	0
13	0	0	0	0	.2	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	.9	0	0	0	0	0	0
17	0	0	.5	0	0	0	.1	0	0
18	0	0	0	0	0	0	.1	0	0
19	0	0	0	0	0	0	.1	0	0
20	0	0	.1	0	0	0	.1	0	0
21	0	0	0	0	0	0	.1	0	.1
22	0	0	.1	0	0	0	0	0	.1
23	0	0	.1	0	0	0	0	0	.1
24	0	0	.1	0	0	0	0	.1	.1
25	.1	0	0	0	0	0	0	.1	0
26	.1	0	0	.1	0	0	0	.1	0
27	.1	0	0	.2	0	0	0	.1	0
28	.2	0	0	.1	.1	0	0	.1	0
29	.2	0	1.9	.1	0	0	0	.1	0
30	.1	0	2.7	0	0	0	0	.1	0
31	0	0	.1	0	-----	0	-----	.1	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0	0.03	1.6
December	.1	0	.003	.2
January	2.7	0	.21	12.9
March	.2	0	.02	1.0
April	.3	0	.03	1.8
May	.1	0	.003	.2
June	.1	0	.02	1.0
July	.1	0	.03	1.6
August	.1	0	.03	1.8
The year	2.7	0	.03	22.1

NOTE.—No flow during months omitted.

Combined discharge, in second-feet, of Mill Creek and canals near Craftonville, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	22	22	23	17.7	23	22	27	22	26	21	16.0	11.2
2.....	25	26	23	17.6	23	22	29	22	25	20	16.1	11.4
3.....	25	26	23	17.5	23	24	28	21	25	20	16.1	10.8
4.....	25	25	23	17.0	23	24	31	20	25	20	15.7	10.8
5.....	23	25	23	17.3	22	22	29	21	26	19.3	15.4	10.6
6.....	24	25	22	17.4	23	22	28	21	26	20	14.8	11.0
7.....	24	24	22	17.6	22	24	25	21	25	20	14.8	10.3
8.....	24	24	22	17.9	22	24	25	20	25	18.6	15.2	10.5
9.....	28	24	22	18.3	22	22	25	21	25	19.6	14.7	13.3
10.....	25	24	22	18.2	22	22	25	22	24	19.0	15.0	13.9
11.....	25	24	19.6	18.1	22	24	25	22	23	18.4	15.3	14.1
12.....	24	24	16.0	18.1	22	24	25	23	23	18.0	14.3	13.1
13.....	24	23	15.5	17.9	22	22	24	22	24	18.4	14.4	12.9
14.....	23	23	15.8	18.0	22	22	25	22	24	18.7	13.9	13.1
15.....	23	24	15.9	18.0	22	22	25	21	24	18.4	14.1	11.7
16.....	22	23	15.9	19.5	23	22	25	22	22	17.7	14.4	12.4
17.....	22	22	16.0	22	23	24	24	22	22	17.7	14.0	13.5
18.....	22	22	16.5	16.9	22	22	24	22	22	17.5	13.8	12.6
19.....	23	23	16.6	21	22	22	24	22	21	17.3	14.0	12.8
20.....	23	23	17.5	23	22	22	24	22	23	17.2	14.0	11.9
21.....	23	23	17.3	19.7	22	22	24	23	24	16.9	14.0	10.3
22.....	22	23	17.1	20	22	22	23	23	24	16.6	13.6	11.5
23.....	22	23	17.5	21	22	22	23	24	23	16.5	12.6	13.1
24.....	22	23	18.5	21	22	22	23	23	23	16.1	12.4	12.9
25.....	22	23	17.8	21	22	22	25	26	22	16.4	12.4	13.1
26.....	22	23	17.9	21	22	21	24	27	23	16.3	11.8	13.0
27.....	22	23	17.4	22	22	22	24	27	22	16.2	11.9	12.5
28.....	21	23	17.9	22	22	25	26	27	22	16.2	12.0	12.5
29.....	21	23	17.5	25	-----	25	28	25	22	15.5	11.6	12.7
30.....	21	23	17.7	28	-----	25	25	25	23	14.2	11.1	12.5
31.....	22	-----	17.7	24	-----	24	-----	26	-----	15.3	10.9	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October.....	28					21			23.1		1,420	
November.....	26					22			23.5		1,400	
December.....	23					15.5			18.9		1,160	
January.....	28					17.0			19.8		1,220	
February.....	23					22			22.2		1,230	
March.....	25					21			22.8		1,400	
April.....	31					23			25.4		1,510	
May.....	27					20			22.8		1,400	
June.....	26					21			23.6		1,400	
July.....	21					14.2			17.8		1,090	
August.....	16.1					10.9			13.9		855	
September.....	14.1					10.3			12.2		726	
The year.....	31					10.3			20.5		14,800	

MILL CREEK POWER CANALS NOS. 2 AND 3 NEAR CRAFTONVILLE, CALIF.

LOCATION.—In NE¼ sec. 13, T. 1 S., R. 2 W., at Southern California Edison Co.'s power plant near Redlands-Bear Valley highway, 5 miles northeast of Craftonville.

RECORDS AVAILABLE.—January 1919 to September 1933.

DISCHARGE.—1919-33: Maximum mean daily, 36 second-feet Nov. 19, 1923, and June 7, 1924; no flow May 27, 1923. Average, 14 years (1919-33), 21.3 second-feet.

REMARKS.—Discharge computed from weir records at tailrace of power plant. Mill Creek power canal no. 2 diverts from Mill Creek in sec. 8, T. 1 S., R. 1 W. Headworks of canal no. 3 are in sec. 13, T. 1 S., R. 1 W., about 3 miles above the intake for no. 2. The canals serve power plants nos. 2 and 3, which discharge into a common tailrace. Records furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	21	20	21	16.8	18.2	20	24	19.4	25	19.8	15.3	10.7
2.....	24	22	21	16.7	18.5	20	25	19.2	24	18.7	15.4	10.9
3.....	24	22	21	16.6	18.8	21	24	18.9	24	19.0	15.5	10.4
4.....	24	22	21	16.1	18.6	21	27	18.2	24	18.9	15.1	10.4
5.....	22	22	21	16.4	18.6	20	25	19.1	25	17.9	14.8	10.2
6.....	23	22	21	16.4	18.9	20	25	18.9	25	18.6	14.3	10.6
7.....	23	21	21	16.4	18.9	21	23	18.6	24	19.0	14.3	9.9
8.....	23	21	21	16.7	18.3	22	23	18.3	24	17.3	14.7	10.2
9.....	27	21	21	17.0	18.1	19.8	23	18.7	24	18.4	14.2	13.1
10.....	24	21	21	16.8	18.2	20	23	19.4	23	17.8	14.5	13.7
11.....	24	21	18.7	16.6	18.2	21	23	19.7	22	17.4	14.8	13.9
12.....	23	21	15.5	16.4	18.2	21	23	20	22	17.0	13.8	12.9
13.....	23	21	15.2	16.2	18.5	20	22	20	22	17.4	13.8	12.8
14.....	22	21	15.5	16.2	19.0	19.9	23	19.4	21	17.8	13.4	13.0
15.....	22	22	15.6	16.2	18.8	19.9	23	19.3	21	17.5	13.6	11.6
16.....	21	22	15.6	16.4	19.6	20	23	20	19.9	16.8	13.9	12.3
17.....	21	21	15.7	17.6	19.6	21	22	20	19.8	16.8	13.5	13.4
18.....	21	21	16.2	13.8	19.6	20	22	19.6	20	16.6	13.3	12.5
19.....	22	21	16.3	17.2	19.2	19.7	22	20	18.9	16.4	13.5	12.7
20.....	22	21	17.2	18.6	19.0	19.8	22	20	21	16.4	13.5	11.8
21.....	22	21	17.0	16.1	19.2	20	22	21	22	16.1	13.5	10.2
22.....	21	21	16.8	16.6	19.4	20	21	21	22	15.8	13.1	11.3
23.....	21	21	17.1	17.0	20	19.9	21	22	21	15.7	12.1	12.9
24.....	21	21	17.6	17.0	19.8	19.5	21	21	21	15.4	11.8	12.7
25.....	21	21	17.1	17.2	19.5	19.2	23	24	20	15.8	11.9	12.9
26.....	21	21	17.3	17.2	19.2	18.6	22	26	21	15.7	11.3	12.8
27.....	21	21	16.8	18.2	19.0	20	22	26	20	15.6	11.4	12.3
28.....	19.9	21	17.1	18.6	20	22	23	26	20	15.6	11.5	12.3
29.....	19.7	21	16.6	18.9	-----	22	25	24	21	14.8	11.1	12.6
30.....	19.7	21	16.8	18.9	-----	22	22	24	21	13.5	10.6	12.3
31.....	21	-----	16.8	18.2	-----	21	-----	25	-----	14.6	10.4	-----
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October.....	27	19.7	22.1	1,360								
November.....	22	20	21.2	1,260								
December.....	21	15.2	18.0	1,110								
January.....	19.9	13.8	17.0	1,050								
February.....	20	18.1	19.0	1,060								
March.....	22	18.6	20.4	1,250								
April.....	27	21	23.0	1,370								
May.....	26	18.2	20.9	1,290								
June.....	25	18.9	22.0	1,310								
July.....	19.8	13.5	16.9	1,040								
August.....	15.5	10.4	13.4	824								
September.....	13.9	9.9	12.0	714								
The year.....	27	9.9	18.8	13,600								

MILL CREEK POWER CANAL NO. 1 NEAR CRAFTONVILLE, CALIF.

LOCATION.—Water-stage recorder just above weir in NE¼ sec. 13, T. 1 S., R. 2 W., a quarter of a mile below intake on Mill Creek and 4 miles northeast of Craftonville.

RECORDS AVAILABLE.—January 1919 to September 1933.

DISCHARGE.—Average, 14 years (1919–33), 2.68 second-feet.

REMARKS.—Records good. Discharge determined from weir formula. Discharge estimated Dec. 16–26. This canal diverts from Mill Creek in NE¼ sec. 13, T. 1 S., R. 2 W., at gaging station on Mill Creek near Craftonville. After going through Mill Creek power house no. 1 water is distributed for irrigation.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	2.5	1.9	0.9	4.7	2.5	3.4	2.3	1.2	1.5	0.6	0.5
2	.8	4.0	1.8	.9	4.5	2.5	4.1	2.3	1.2	1.5	.6	.5
3	.7	3.6	1.8	.9	4.1	2.5	3.8	2.3	1.2	1.5	.5	.4
4	.7	3.1	1.8	.9	4.0	2.5	3.8	2.2	1.2	1.4	.5	.4
5	.7	3.0	1.7	.9	3.8	2.5	3.6	2.2	1.3	1.4	.5	.4
6	.8	2.8	1.5	1.0	3.8	2.5	2.5	2.3	1.2	1.4	.5	.4
7	.9	2.8	1.5	1.2	3.6	2.5	1.9	2.2	1.0	1.4	.5	.4
8	.9	2.6	1.5	1.2	3.6	2.5	1.9	2.2	1.0	1.3	.5	.3
9	1.0	2.6	1.5	1.3	3.4	2.5	1.8	2.2	.9	1.2	.5	.2
10	.9	2.5	1.5	1.4	3.4	2.5	1.8	2.8	.9	1.2	.5	.2
11	.9	2.5	.9	1.5	3.3	2.5	1.7	2.8	.9	1.0	.5	.2
12	.9	2.5	.4	1.7	3.3	2.5	1.5	2.6	.9	1.0	.5	.2
13	.9	2.3	.3	1.7	3.4	2.5	1.5	2.3	1.5	1.0	.6	.1
14	1.0	2.3	.3	1.8	3.1	2.5	1.8	2.2	2.6	.9	.5	.1
15	.9	2.3	.3	1.8	3.0	2.5	1.8	2.1	2.6	.9	.5	.1
16	.9	1.2	.3	2.2	3.0	2.5	1.9	2.1	2.2	.9	.5	.1
17	1.0	.5	.3	3.6	3.0	2.5	1.9	2.1	2.5	.9	.5	.1
18	1.2	1.5	.3	3.1	2.8	2.3	2.1	2.1	2.3	.9	.5	.1
19	1.2	2.3	.3	3.8	2.8	2.2	2.1	2.1	2.3	.9	.5	.1
20	1.2	2.2	.3	4.7	2.8	2.2	2.1	1.9	2.3	.8	.5	.1
21	1.2	2.2	.3	3.6	2.6	2.2	1.8	2.2	2.2	.8	.4	.1
22	1.2	2.2	.3	3.6	2.6	2.2	1.7	2.2	2.2	.8	.4	.2
23	1.3	2.2	.4	4.0	2.5	2.3	1.7	2.1	2.1	.8	.4	.2
24	1.3	2.1	.9	3.6	2.6	2.3	1.9	1.8	2.1	.6	.5	.2
25	1.3	2.1	.7	3.6	2.6	2.3	1.9	1.7	1.9	.5	.5	.2
26	1.4	2.1	.6	3.4	2.5	2.2	1.8	1.3	1.8	.5	.5	.2
27	1.4	2.1	.6	3.4	2.5	2.3	1.9	1.2	1.8	.5	.5	.2
28	1.3	2.1	.8	3.6	2.5	2.8	3.1	1.2	1.7	.5	.5	.2
29	1.3	1.9	.9	4.1		2.8	3.3	1.0	1.5	.6	.5	.2
30	1.5	1.9	.9	5.6		2.8	2.6	1.2	1.7	.6	.5	.2
31	1.5		.9	5.6		3.4		1.2		.6	.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.5	0.7	1.07	65.8
November	4.0	.5	2.33	139
December	1.9	.3	.887	54.5
January	4.7	.9	2.60	160
February	4.7	2.5	3.21	178
March	3.4	2.2	2.43	152
April	4.1	1.5	2.29	136
May	2.8	1.0	2.01	124
June	2.6	.9	1.67	99.4
July	1.5	.5	.96	59.1
August	.6	.4	.50	30.7
September	.5		.23	13.5
The year	4.7	.1	1.67	1,210

PLUNGE CREEK NEAR EAST HIGHLANDS, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 1, T. 1 S., R. 3 W., at mouth of canyon at crossing of North Fork Ditch siphon, 2 miles northeast of East Highlands. Altitude, about 1,625 feet.

DRAINAGE AREA.—16.9 square miles.

RECORDS AVAILABLE.—January 1919 to September 1933.

DISCHARGE.—Maximum during year, 80 second-feet Jan. 29 (gage height, 1.77 feet); no flow for several months during year.

1919-33: Maximum, 1,420 second-feet Feb. 16, 1927 (gage height, 3.80 feet); no flow for several months during each year. Average, 14 years (1919-33), 5.60 second-feet.

REMARKS.—Records good. Irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1-----	0.1	1.1	15	3.3	0.1	0.7	16-----	1.0	0.5	6	0.1	0	0.8
2-----	.1	1.0	12	2.9	.1	0	17-----	.9	10	6	.3	0	.4
3-----	.1	1.1	11	2.3	.1	0	18-----	.9	4.7	6	.1	.2	.2
4-----	.1	1.1	9	1.8	.1	0	19-----	.9	4.7	6	.1	.3	.1
5-----	.1	1.1	7.5	1.3	.1	.2	20-----	.9	11	5.5	.1	.2	0
6-----	.1	1.1	7.5	1.0	.1	.6	21-----	.3	7	5.5	.1	.1	.1
7-----	.1	1.3	7.5	1.0	.1	.6	22-----	.4	7.5	6	.1	0	.2
8-----	.2	1.0	6.5	1.0	.1	.7	23-----	.2	11	6	.1	0	2
9-----	.2	1.0	6	1.0	.1	.6	24-----	1.3	8	6	.1	0	0
10-----	.2	.9	5.5	1.0	0	1.4	25-----	.5	7	5.5	.1	0	0
11-----	.3	1.0	5.5	.9	0	2.1	26-----	.3	7	5.5	.1	0	0
12-----	3.3	1.1	5.5	.9	0	1.6	27-----	.6	7	5.5	.1	0	0
13-----	1.8	1.0	7.5	.9	0	1.3	28-----	.9	11	4.2	.1	2.1	0
14-----	1.6	.4	6.5	.3	0	1.0	29-----	1.1	23	-----	.1	3.8	0
15-----	1.3	.1	6	.1	0	.9	30-----	1.1	42	-----	.1	2.6	0
							31-----	1.1	20	-----	.1	-----	0
Month							Maximum	Minimum	Mean		Run-off in acre-feet		
December-----							3.3	0.1	0.71		43.7		
January-----							42	.1	6.31		388		
February-----							15	4.2	6.86		381		
March-----							3.3	.1	.69		42.7		
April-----							3.8	0	.34		20.2		
May-----							2.1	0	.44		26.7		
The year-----							42	0	1.25		902		

NOTE.—No flow during months omitted.

SAN TIMOTEO CREEK NEAR REDLANDS, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 10, T. 2 S., R. 3 W., 2½ miles south of Redlands. Altitude, about 1,425 feet.

DRAINAGE AREA.—118 square miles.

RECORDS AVAILABLE.—October 1926 to September 1933.

DISCHARGE.—Maximum during year not determined; no flow several months. 1926-33: Maximum, about 3,000 second-feet Feb. 16, 1927; no flow several months each year.

REMARKS.—Record poor. Discharge estimated Oct. 1-6, 10-12, 27, 30, Nov. 4, 5, 7, 8, Dec. 1, 9-11, 13, 14, 22, 24-29, 31, Jan. 1-3, 5-8, 13-15, 18, 19, 22, 24-26, 28-31, Feb. 2, 4, 5, 7, 9-12, 14-17, 19-23, 25-28, Mar. 1, 3, and 9-13. Except during high water the entire flow is diverted above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1.....	12	0	0.1	0.2	0.6	0.6	0
2.....	.5	0	0	.1	.6	1.0	0
3.....	.2	0	0	.1	1.2	.2	0
4.....	.1	.1	0	.1	1.0	0	0
5.....	.1	.1	0	.1	.9	0	0
6.....	.1	0	0	.1	.8	0	.1
7.....	0	.1	0	.1	.9	0	.1
8.....	0	.1	0	.1	1.1	0	.1
9.....	0	0	.1	0	.9	.1	0
10.....	.1	0	.1	0	.8	.1	0
11.....	.1	0	.3	0	.5	.1	0
12.....	.1	0	.8	.3	.4	.1	0
13.....	0	0	.1	.2	.3	.1	0
14.....	0	0	.1	.2	.3	0	0
15.....	0	0	0	.2	.4	0	0
16.....	0	0	0	.6	.5	(^a)	0
17.....	0	0	0	.8	.5	(^a)	0
18.....	0	0	0	.3	.6	(^a)	0
19.....	0	0	0	1.0	.6	(^a)	0
20.....	0	0	0	18	.5	(^a)	0
21.....	0	0	.2	2.6	.5	(^a)	0
22.....	0	0	.1	2.0	.4	(^a)	0
23.....	0	0	0	10	.4	0	0
24.....	0	0	.3	2.5	.3	0	0
25.....	0	0	.2	2.0	.3	0	0
26.....	0	0	.2	1.5	.3	0	0
27.....	.1	0	.2	1.3	.3	0	0
28.....	0	0	.2	1.2	.3	0	0
29.....	0	0	.2	.8	-----	0	0
30.....	.1	0	.2	10	-----	0	-----
31.....	0	-----	.2	2.0	-----	0	-----
<hr/>							
Month	Maximum		Minimum		Mean	Run-off in acre-feet	
October.....	12		0		0.44	26.7	
November.....	.1		0		.01	.8	
December.....	.8		0		.12	7.1	
January.....	18		0		2.35	144	
February.....	1.2		.3		.58	32.2	
March.....	1.0		0		.07	4.6	
April.....	.1		0		.01	.6	
The year.....	18		0		.30	216	

* Discharge less than 0.05 second-foot.

NOTE.—No flow during months omitted.

WARM CREEK NEAR COLTON, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 21, T. 1 S., R. 4 W., at Colton Avenue highway bridge $1\frac{1}{4}$ miles east of Colton.

RECORDS AVAILABLE.—August 1920 to September 1933.

DISCHARGE.—Maximum during year, 930 second-feet Jan. 19 (gage height, 5.60 feet); minimum, 7 second-feet Aug. 31 (gage height, 0.85 foot).

1920-33: Maximum, 2,780 second-feet Dec. 21, 1922; minimum, 7 second-feet Aug. 8, 1931, and Aug. 31, 1933. Average, 13 years (1920-33), 55.4 second-feet.

REMARKS.—Records good. Discharge estimated Mar. 7-10, 16, Apr. 1, 2, May 13, 14, Aug. 17-20, 22, 23. Sum of discharge in creek and Meeks & Daley Canal, which diverts half a mile above gage, is given in table of combined discharge (p. 41); average combined discharge, 13 years (1920-33), 65.3 second-feet. City of San Bernardino sewage disposal plant discharged 2,960 acre-feet into Warm Creek above station during year.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	16	15	34	48	37	35	19	17	11	9.5	8
2	14	17	14	35	47	37	33	18	17	10	9	8
3	15	17	13	36	46	37	32	18	16	11	9.5	8
4	15	17	12	36	46	36	35	16	16	10	9	8
5	15	16	14	36	45	35	31	16	18	11	9.5	8
6	15	14	18	37	45	34	23	16	18	11	10	8
7	16	17	20	37	44	27	23	17	18	11	11	8.5
8	16	16	21	36	43	29	24	22	17	12	10	9
9	18	16	21	35	43	32	24	25	16	12	10	9
10	21	17	17	34	42	32	24	32	16	11	9.5	9
11	21	15	31	38	42	34	22	30	16	10	10	9
12	21	16	50	40	42	32	21	26	16	10	10	9
13	20	16	31	36	44	31	20	18	16	10	9	9.5
14	19	16	33	34	41	30	20	18	16	10	9	9.5
15	19	16	29	31	41	28	19	20	15	10	8.5	9
16	19	17	29	50	41	26	18	24	15	10	8.5	9
17	19	17	29	70	40	24	19	25	14	9.5	8.5	8.5
18	19	17	30	42	40	19	19	24	14	10	8.5	8.5
19	16	17	31	166	40	18	18	24	15	10	8.5	9
20	11	17	32	184	42	18	21	21	14	10	8.5	8.5
21	13	17	39	47	41	26	19	19	14	10	8.5	8.5
22	13	17	32	46	41	27	19	21	14	10	8.5	8.5
23	13	17	32	56	41	27	19	21	14	10	9	8.5
24	16	17	35	48	40	27	20	19	13	10	9	8.5
25	15	18	31	46	35	27	19	19	13	9.5	8.5	9
26	17	18	31	46	37	26	20	18	13	9	8.5	9.5
27	17	14	31	48	38	26	19	18	12	9	8	9.5
28	17	13	33	48	37	27	37	17	12	10	8.5	9.5
29	17	13	34	90	-----	32	33	20	12	9	8	10
30	17	13	34	64	-----	35	19	21	12	8.5	8	10
31	17	-----	34	50	-----	33	-----	19	-----	9.5	8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	21	11	16.6	1,020
November	18	12	16.1	958
December	50	13	27.6	1,700
January	184	31	52.8	3,250
February	48	35	41.9	2,350
March	37	18	29.3	1,800
April	35	18	23.5	1,400
May	32	16	20.7	1,270
June	18	12	15.0	893
July	12	8.5	10.1	621
August	11	8	8.98	552
September	10	8	8.82	525
The year	184	8	22.5	16,300

*Combined discharge, in second-feet, of Warm Creek and Meeks & Daley Canal near
Colton, Calif., 1932-33*

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	31	33	31	36	48	43	41	36	34	28	25	26
2.....	31	34	30	37	47	44	40	34	33	27	25	25
3.....	32	34	29	38	46	44	40	34	32	28	26	25
4.....	31	34	29	38	46	43	42	33	32	27	25	26
5.....	31	33	31	39	45	42	40	33	34	28	26	26
6.....	32	30	35	40	45	43	41	33	34	28	26	26
7.....	33	33	37	40	44	43	40	34	35	28	27	29
8.....	32	33	37	38	43	45	41	40	34	28	27	27
9.....	31	33	37	39	43	47	40	42	33	29	26	27
10.....	28	33	33	40	42	48	41	50	33	28	26	26
11.....	28	31	44	42	42	50	39	47	33	27	27	26
12.....	27	32	56	40	42	49	38	42	33	27	26	26
13.....	27	32	36	39	44	48	36	34	32	27	25	27
14.....	27	32	39	40	41	47	37	35	33	27	25	27
15.....	27	33	35	39	41	46	36	36	32	26	25	26
16.....	26	33	35	57	41	44	35	41	32	25	25	26
17.....	26	33	35	76	41	41	35	41	31	26	24	26
18.....	26	33	36	47	42	36	36	40	31	27	24	26
19.....	26	34	37	174	41	35	35	41	32	26	25	26
20.....	26	34	38	184	42	35	38	39	30	26	26	26
21.....	28	34	45	47	41	43	35	37	30	26	26	26
22.....	29	34	38	46	41	44	36	39	30	27	26	26
23.....	29	35	37	56	41	44	36	38	30	26	26	26
24.....	33	35	40	48	42	44	36	36	30	26	25	26
25.....	32	35	35	46	41	44	35	36	30	27	24	26
26.....	34	35	35	46	43	43	36	35	30	26	25	26
27.....	33	31	35	48	44	43	36	35	29	26	25	26
28.....	33	30	36	48	43	44	54	34	29	26	26	26
29.....	33	30	36	90	-----	44	50	34	29	25	25	27
30.....	33	30	36	64	-----	44	36	33	28	26	25	27
31.....	33	-----	36	50	-----	42	-----	33	-----	26	26	-----
Month					Maximum	Minimum	Mean	Run-off in acre-feet				
October.....					34	26	29.9	1,840				
November.....					35	30	32.9	1,960				
December.....					56	29	36.4	2,240				
January.....					184	36	55.2	3,390				
February.....					48	41	42.9	2,380				
March.....					50	35	43.6	2,680				
April.....					54	35	38.7	2,300				
May.....					50	33	37.3	2,290				
June.....					35	28	31.6	1,880				
July.....					29	25	26.8	1,650				
August.....					27	24	25.5	1,570				
September.....					27	25	26.1	1,550				
The year.....					184	24	35.6	25,700				

STRAWBERRY CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 11, T. 1 N., R. 4 W., at the Del Rosa Water Co.'s diversion dam half a mile south of Arrowhead Springs. Altitude, about 1,650 feet.

DRAINAGE AREA.—8.6 square miles.

RECORDS AVAILABLE.—December 1919 to September 1933.

DISCHARGE.—Maximum during year, 27 second-feet Jan. 29 (gage height, 2.37 feet); practically no flow at times during July, August, and September.

1919-33: Maximum, 408 second-feet Jan. 2, 1922; practically no flow at times during 1929, 1931-33. Average, 13 years (1920-33), 3.94 second-feet.

REMARKS.—Records good except those for Oct. 1 to Nov. 30, July 1 to Sept. 30, which were estimated. Small diversion of water for domestic use above station.

During the year the Del Rosa Water Co. by-passed by the gage about 216 acre-feet.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0.1	1.4	8	3.0	1.8	3.5	1.3
2.....	.1	1.5	7.5	3.0	1.9	3.2	1.4
3.....	.1	1.4	6	2.8	1.8	2.8	1.3
4.....	.1	1.3	5	2.5	2.1	2.3	1.4
5.....	.1	1.3	4.9	2.6	2.3	2.2	1.7
6.....	.1	1.3	4.9	2.5	2.1	2.1	1.5
7.....	.1	1.2	4.9	2.5	2.1	2.0	1.5
8.....	.1	1.2	4.6	2.5	2.3	1.9	1.3
9.....	.7	1.1	4.6	2.8	2.3	1.9	.9
10.....	1.4	1.1	4.1	2.5	1.9	3.4	.9
11.....	1.9	1.1	3.8	2.4	2.6	3.5	.9
12.....	2.5	1.1	4.1	2.6	4.1	3.4	.8
13.....	1.6	1.1	5	2.6	2.5	2.9	.7
14.....	1.7	1.1	4.4	2.5	1.5	2.5	.7
15.....	1.6	1.1	4.1	2.5	1.4	2.1	.6
16.....	1.6	1.9	4.1	2.6	1.6	2.1	.5
17.....	1.8	7	4.0	3.2	1.8	2.3	.3
18.....	1.7	3.0	4.0	2.5	1.9	1.9	.1
19.....	1.9	4.9	3.8	2.4	2.2	1.8	.1
20.....	1.8	9	3.5	2.3	1.7	1.9	.1
21.....	2.0	5.5	3.7	2.5	1.6	2.0	.1
22.....	2.1	6	3.5	2.3	1.4	1.9	.1
23.....	2.4	9.5	3.4	2.4	1.4	1.7	.1
24.....	2.4	7	3.2	2.3	1.4	1.6	.1
25.....	1.8	5.5	3.2	2.2	1.6	1.4	.1
26.....	1.6	5	3.0	2.2	1.5	1.4	.1
27.....	1.5	5	2.9	1.9	1.6	1.2	.1
28.....	1.5	8	2.9	2.2	2.8	1.4	.1
29.....	1.5	9.5	-----	2.0	8.5	1.2	.1
30.....	1.4	17	-----	1.8	5	1.4	.1
31.....	1.5	9.5	-----	1.8	-----	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	-----	-----	0.04	2.5
November.....	-----	-----	.05	3.0
December.....	2.5	0.1	1.31	80.6
January.....	17	1.1	4.25	261
February.....	8	2.9	4.32	240
March.....	3.0	1.8	2.45	151
April.....	8.5	1.4	2.29	136
May.....	3.5	1.2	2.14	132
June.....	1.7	.1	.63	37.7
July.....	-----	-----	.02	1.2
August.....	-----	-----	.01	.6
September.....	-----	-----	.01	.6
The year.....	17	-----	1.44	1,050

WATERMAN CANYON CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 2, T. 1 N., R. 4 W., 600 feet above old toll house and 1 mile northwest of Arrowhead Springs. Altitude, about 1,660 feet.

DRAINAGE AREA.—4.55 square miles.

RECORDS AVAILABLE.—November 1911 to October 1914, December 1919 to September 1933.

DISCHARGE.—Maximum during year, 15 second-feet Jan. 16 (gage height, 2.95 feet); minimum, 0.1 second-foot July 6 to Sept. 30.

1920-33: Maximum, 164 second-feet Jan. 2, 1922; no flow at times during summer in 1924, 1925, 1926, 1928, 1929, 1931. Average, 15 years (1912-14, 1920-33), 2.66 second-feet.

REMARKS.—Records good. Small diversion for domestic use above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.3	0.2	0.4	0.4	3.0	1.6	0.8	1.9	0.8	0.2	0.1	0.1
2.....	.3	.2	.4	.4	2.8	1.5	.9	1.4	.8	.2	.1	.1
3.....	.3	.3	.3	.3	2.5	1.5	1.0	1.2	.8	.2	.1	.1
4.....	.3	.2	.3	.3	2.6	1.5	1.2	1.0	.8	.2	.1	.1
5.....	.2	.2	.3	.3	2.5	1.4	1.3	.9	1.2	.2	.1	.1
6.....	.2	.2	.3	.3	2.6	1.3	1.1	.9	.9	.1	.1	.1
7.....	.3	.2	.3	.3	2.5	1.2	1.1	.9	.8	.1	.1	.1
8.....	.4	.2	.3	.4	2.5	1.2	1.1	.7	.6	.1	.1	.1
9.....	.5	.2	1.3	.4	2.4	1.2	1.2	.8	.6	.1	.1	.1
10.....	.4	.2	.8	.4	2.2	1.2	1.1	2.4	.6	.1	.1	.1
11.....	.3	.3	.8	.4	2.2	1.1	1.0	1.9	.5	.1	.1	.1
12.....	.3	.2	.8	.4	2.4	1.1	.9	1.5	.5	.1	.1	.1
13.....	.3	.3	.6	.4	2.7	1.0	.8	1.3	.4	.1	.1	.1
14.....	.3	.3	.6	.5	2.4	.9	.7	1.2	.4	.1	.1	.1
15.....	.2	.2	.6	.5	2.2	.9	.7	1.1	.3	.1	.1	.1
16.....	.2	.2	.6	3.0	2.2	1.1	.8	1.0	.3	.1	.1	.1
17.....	.2	.2	.7	3.6	2.1	1.4	.8	.9	.4	.1	.1	.1
18.....	.2	.2	.7	1.7	2.0	1.0	.8	1.0	.4	.1	.1	.1
19.....	.2	.3	.5	3.6	1.9	.9	.8	.9	.3	.1	.1	.1
20.....	.3	.3	.5	3.2	1.8	.8	.8	.8	.3	.1	.1	.1
21.....	.3	.2	.5	2.3	1.8	.8	.7	1.0	.3	.1	.1	.1
22.....	.2	.2	.6	3.4	1.8	.8	.7	1.1	.2	.1	.1	.1
23.....	.2	.2	.9	4.1	1.7	.9	.6	.9	.2	.1	.1	.1
24.....	.2	.2	.9	2.8	1.7	.9	.7	.8	.2	.1	.1	.1
25.....	.2	.2	.7	2.4	1.7	.9	.8	.8	.3	.1	.1	.1
26.....	.2	.3	.5	2.0	1.5	.9	.8	.8	.2	.1	.1	.1
27.....	.2	.4	.3	1.9	1.5	.8	.8	.7	.2	.1	.1	.1
28.....	.2	.4	.3	2.0	1.6	.9	1.9	.7	.2	.1	.1	.1
29.....	.2	.3	.3	4.3	-----	.9	4.7	.6	.2	.1	.1	.1
30.....	.3	.3	.3	4.5	-----	.8	2.7	.8	.2	.1	.1	.1
31.....	.3	-----	.3	3.1	-----	.8	-----	.8	-----	.1	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.5	0.2	0.26	16.3
November.....	.4	.2	.24	14.5
December.....	1.3	.3	.54	33.1
January.....	4.5	.3	1.73	106
February.....	3.0	1.5	2.17	121
March.....	1.6	.8	1.07	65.8
April.....	4.7	.6	1.11	66.0
May.....	2.4	.6	1.05	64.6
June.....	1.2	.2	.46	27.6
July.....	.2	.1	.12	7.1
August.....	.1	.1	.10	6.1
September.....	.1	.1	.10	6.0
The year.....	4.7	.1	.74	534

CITY CREEK NEAR HIGHLAND, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 27, T. 1 N., R. 3 W., 1¼ miles northeast of Highland. Altitude, about 1,520 feet.

DRAINAGE AREA.—19.8 square miles.

RECORDS AVAILABLE.—October 1919 to September 1933.

DISCHARGE.—Maximum during year, 62 second-feet Jan. 29 (gage height, 6.30 feet); no flow for several months.

1919-33: Maximum, 2,360 second-feet Apr. 5, 1926; no flow for several months during each year except 1923. Average, 14 years (1919-33), 8.02 second-feet.

REMARKS.—Records good. Diversion of City Creek Water Co. above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1-----	0	2.8	14	7.5	0.5	7	16-----	4.4	3.6	9.5	1.4	0.2	0.2
2-----	0	2.8	13	7.5	.6	5	17-----	4.4	18	8.5	3.6	.1	.2
3-----	0	2.8	10	7.5	.6	4.4	18-----	4.4	9.5	8	2.5	.2	.2
4-----	0	2.8	8	7	.7	3.8	19-----	4.4	12	7.5	1.5	.2	.3
5-----	0	2.5	7.5	6	.8	3.8	20-----	4.2	19	6.5	.9	.2	.2
6-----	0	2.5	8	5	.7	3.6	21-----	4.6	11	7	.9	.2	.3
7-----	0	2.4	8.5	5	.8	2.4	22-----	5	10	7	.8	.1	.4
8-----	0	2.4	7.5	5	.8	.6	23-----	5	13	7.5	.8	.1	.2
9-----	.2	2.4	7.5	3.3	.8	.3	24-----	6	9.5	7.5	.8	.1	.1
10-----	.4	2.4	7	1.8	.6	.9	25-----	4.8	8.5	6.5	.6	.1	.1
11-----	.6	2.4	7	1.4	.5	1.3	26-----	4.4	8.5	6.5	.5	.1	.1
12-----	5.5	2.4	7.5	1.3	.4	.8	27-----	4.4	12	7	.5	.1	0
13-----	4.2	2.0	10	1.2	.3	.5	28-----	4.4	13	7.5	.7	4.8	0
14-----	4.2	1.6	9.5	.9	.3	.3	29-----	4.2	16	-----	.8	14	0
15-----	4.2	1.8	9	.8	.3	.2	30-----	4.0	32	-----	.5	11	0
							31-----	3.0	18	-----	.5	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December-----	6	0	2.93	180
January-----	32	1.6	8.05	495
February-----	14	6.5	8.23	457
March-----	7.5	.5	2.53	156
April-----	14	.1	1.34	79.7
May-----	7	0	1.20	73.8
The year-----	32	0	1.99	1,440

NOTE.—No flow during months omitted.

CITY CREEK WATER CO.'S CANAL NEAR HIGHLAND, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 27, T. 1 N., R. 3 W., 1½ miles northeast of Highland.

RECORDS AVAILABLE.—May 1924 to September 1933.

DISCHARGE.—Maximum during year, 8 second-feet May 10 (gage height, 8.48 feet); no flow at various times.

1924-33: Maximum, 10 second-feet May 30, 1927; no flow at various times.

REMARKS.—Records good. Discharge estimated, Jan. 13-17, June 14, 15, July 13-16, 23, 24, Aug. 7-21, 24, Sept. 10-13, 23, 27, 28. This canal diverts from City Creek a quarter of a mile above gage.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	1.4	1.9	0.1	0.1	1.9	4.8	0.9	3.4	1.2	0.1	0.1
2	1.5	1.7	1.8	.2	.1	1.9	4.9	1.5	3.3	1.0	.1	.1
3	1.3	1.9	1.7	.8	.3	1.9	4.8	1.4	3.3	1.0	.1	.1
4	1.2	1.7	1.7	.9	1.2	2.4	4.9	1.3	3.5	.8	.1	.1
5	1.0	1.5	1.7	.9	1.1	2.8	4.8	1.4	4.7	.7	.1	.1
6	.9	1.4	1.7	.9	1.1	3.2	4.5	1.3	4.6	.6	.1	.1
7	1.1	1.3	1.7	.9	1.2	3.6	4.6	2.2	4.1	.6	.1	.1
8	1.6	1.3	1.8	.8	1.1	3.7	4.7	4.1	3.3	.6	.1	.1
9	1.7	1.3	3.0	.8	1.0	4.9	4.6	4.5	2.9	.6	.1	.1
10	1.7	1.3	2.9	.8	1.0	5.6	4.1	5.9	2.6	.5	.1	.1
11	1.0	1.4	1.6	.7	1.0	5.7	3.9	6.6	2.4	.4	.1	.1
12	1.0	1.4	0	.7	1.0	5.7	3.8	6.3	2.1	.3	.1	.1
13	1.0	1.4	0	1.1	1.2	5.7	3.7	6.1	1.9	.3	.1	.1
14	1.0	1.5	0	1.5	1.1	5.7	3.5	5.7	1.8	.3	.1	.1
15	.8	1.5	0	1.3	1.1	5.7	3.7	5.2	1.8	.3	.1	.1
16	.8	1.5	0	0	1.1	5.5	3.7	5	1.7	.3	.1	.1
17	1.0	1.4	0	.1	2.3	5.7	4.0	4.9	1.7	.3	.1	.1
18	1.4	1.5	0	.3	2.9	5.4	4.3	4.7	1.5	.3	.1	.1
19	1.3	1.5	0	.3	2.8	5.6	4.7	4.4	1.5	.2	.1	.1
20	1.3	1.7	0	.1	2.8	5.7	4.5	4.3	1.3	.2	.1	.1
21	1.3	1.7	0	.1	2.7	5.7	4.1	4.5	1.3	.2	.1	.1
22	1.4	1.7	0	.1	2.9	5.7	3.8	4.9	1.2	.2	.1	.1
23	1.3	1.7	0	.1	2.9	5.6	3.7	4.4	1.2	.2	.1	.1
24	1.3	1.7	0	0	2.9	5.5	3.8	3.8	1.3	.2	.1	.1
25	1.1	1.7	0	0	2.3	5.4	4.0	3.5	1.2	.1	.1	.1
26	1.3	1.7	0	0	2.1	5.3	4.2	3.3	1.0	.1	.1	.2
27	1.2	1.7	0	0	1.9	5	4.1	3.1	1.0	.1	.1	.2
28	1.2	1.8	0	.2	1.9	5.3	4.0	3.1	1.2	.1	.1	.2
29	1.3	1.8	0	.2	---	5.6	2.0	3.1	1.2	.1	.1	.1
30	1.4	1.9	0	0	---	5.2	1.2	3.2	1.4	.1	.1	.2
31	1.3	---	0	.1	---	5	---	3.4	---	.1	---	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.7	0.8	1.22	75.0
November	1.9	1.3	1.57	93.4
December	3.0	0	.69	42.7
January	1.5	0	.45	27.8
February	2.9	0	1.61	59.4
March	5.7	1.9	4.76	293
April	4.9	1.2	4.05	241
May	6.6	.9	3.81	234
June	1.0	4.7	2.18	130
July	1.2	.1	.39	23.8
August	.1	.1	.10	6.1
September	.2	.1	.11	6.7
The year	6.6	0	1.74	1,260

DEVIL CANYON CREEK NEAR SAN BERNARDINO, CALIF .

LOCATION.—Water-stage recorder in NE¼ sec. 6, T. 1 N., R. 4 W., 7.3 miles northwest of San Bernardino. Altitude, about 1,800 feet.

DRAINAGE AREA.—6.16 square miles.

RECORDS AVAILABLE.—November 1911 to October 1914, December 1919 to September 1933.

DISCHARGE.—Maximum during year, 5.5 second-feet Jan. 30 (gage height 1.98 feet); no flow during several months.

1919-33: Maximum, 220 second-feet Apr. 7, 1926; no flow several months during summers of 1924 to 1933. Average, 14 years (1913-14, 1920-33), 2.31 second-feet.

REMARKS.—Records good. Discharge estimated May 1 to July 31. Water diverted above gage by city of San Bernardino for city water supply and for spreading over canyon floor to increase absorption.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1-----	0	3.5	0.2	0.1	16-----	0.1	0.3	0.2	0.1
2-----	0	2.3	.2	.1	17-----	.2	.2	.2	.1
3-----	0	.9	.2	.1	18-----	.1	.2	.2	.1
4-----	0	.7	.2	.1	19-----	.6	.2	.2	.1
5-----	0	.4	.2	.1	20-----	3.0	.2	.1	.1
6-----	0	.3	.2	.1	21-----	1.0	.2	.1	.1
7-----	0	.3	.2	.1	22-----	.7	.2	.1	.1
8-----	0	.3	.2	.1	23-----	1.8	.2	.1	.1
9-----	0	.3	.2	.1	24-----	1.8	.2	.1	.1
10-----	0	.3	.2	.1	25-----	1.3	.2	.1	.1
11-----	0	.3	.2	.1	26-----	.9	.2	.1	.1
12-----	0	.3	.2	.1	27-----	.7	.2	.1	.1
13-----	0	.3	.2	.1	28-----	.6	.2	.1	.1
14-----	0	.3	.2	.1	29-----	1.0	-----	.1	.1
15-----	0	.3	.2	.1	30-----	5.5	-----	.1	.1
					31-----	4.7	-----	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	5.5	0	0.77	47.6
February-----	3.5	.2	.48	26.8
March-----	.2	.1	.16	9.9
April-----	.1	.1	.10	6.0
May-----	-----	-----	.07	4.3
June-----	-----	-----	.05	3.0
July-----	-----	-----	.02	1.2
The year-----	5.5	0	.14	98.8

NOTE.—No flow during months omitted.

LYTLE CREEK NEAR FONTANA, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 6, T. 1 N., R. 5 W., unsurveyed, a quarter of a mile below Lytle Creek power plant of Southern California Edison Co. and 7½ miles north of Fontana.

DRAINAGE AREA.—47.9 square miles.

RECORDS AVAILABLE.—October 1918 to September 1921, October 1922 to September 1933.

DISCHARGE.—Maximum during year, about 100 second-feet Jan. 19 (gage height, 3.14 feet); no flow most of the year.

1918-33: Maximum, about 5,300 second-feet Feb. 16, 1927 (gage height, 5.40 feet); no flow during most of each year.

REMARKS.—Records poor. Water is diverted about 3 miles above gage for Lytle Creek power plant and is then carried across creek to headworks of Fontana pipe line, which serves Fontana power plant 4½ miles downstream. No flow during year except as follows: Mean daily discharge Jan. 16, 1 second-foot (estimated); Jan. 19, 11 second-feet; Jan. 20, 7.5 second-feet; Jan. 29, 3 second-feet (estimated); mean discharge for year, 0.062 second-foot; run-off in acre-feet during year, 44.6.

Combined discharge, in second-feet, of Lytle Creek and Fontana pipe line near Fontana, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	40	34	27	20	33	26	26	24	27	21	15.6	12.0
2.....	38	33	28	20	33	26	25	24	27	21	15.8	11.0
3.....	38	34	28	20	32	26	25	23	27	21	15.7	12.4
4.....	38	32	29	20	32	27	27	22	27	20	15.6	12.4
5.....	38	33	28	19.7	31	27	27	22	27	20	15.6	11.9
6.....	37	32	31	20	31	24	30	22	28	20	15.1	13.8
7.....	37	30	27	19.5	31	27	30	22	27	19.8	15.0	13.3
8.....	37	30	28	19.5	29	26	30	22	25	19.5	14.7	14.7
9.....	37	29	29	19.4	30	26	29	22	26	19.5	14.0	14.6
10.....	37	32	26	19.2	29	27	29	24	25	18.7	14.4	14.6
11.....	36	32	26	17.3	29	27	28	24	24	18.8	14.1	15.0
12.....	36	32	26	20	28	27	28	23	24	18.5	14.4	15.3
13.....	36	30	26	20	29	27	27	23	23	18.6	14.3	15.0
14.....	35	27	25	19.3	28	27	26	22	23	17.8	13.8	14.2
15.....	33	27	25	19.8	28	27	26	21	24	17.5	14.2	13.9
16.....	32	31	26	22	27	27	26	22	23	17.6	14.1	14.0
17.....	33	31	26	27	27	27	26	21	23	17.8	14.3	14.2
18.....	31	31	26	25	27	28	24	21	23	17.7	13.6	13.8
19.....	32	26	26	55	26	28	26	21	23	17.4	13.8	14.0
20.....	32	30	26	52	26	28	26	24	23	17.2	14.6	13.8
21.....	31	29	23	36	26	28	26	21	23	17.2	14.1	14.3
22.....	31	29	20	34	26	28	25	24	23	16.5	14.1	13.8
23.....	31	27	20	32	26	28	25	24	22	16.7	14.4	13.4
24.....	31	29	20	30	26	28	26	24	22	16.6	13.6	14.4
25.....	32	29	20	28	26	27	26	24	22	17.0	14.0	15.5
26.....	35	29	20	27	26	26	25	28	22	16.2	13.8	15.1
27.....	33	28	20	27	26	27	25	27	22	16.5	14.1	15.2
28.....	37	26	20	27	26	27	26	26	22	15.4	13.6	13.0
29.....	36	26	21	37	-----	27	25	26	22	16.1	13.5	14.1
30.....	35	26	21	38	-----	26	24	27	21	15.5	14.0	13.8
31.....	34	-----	20	34	-----	26	-----	27	-----	15.6	14.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	40	31	34.7	2,130
November.....	34	26	29.8	1,770
December.....	31	20	24.6	1,510
January.....	55	17.3	26.6	1,640
February.....	33	26	28.4	1,580
March.....	28	24	26.9	1,650
April.....	30	24	26.5	1,580
May.....	28	21	23.5	1,440
June.....	28	21	24.0	1,430
July.....	21	15.4	18.0	1,110
August.....	15.8	13.5	14.4	885
September.....	15.5	11	13.9	827
The year.....	55	11	24.2	17,600

FONTANA PIPE LINE NEAR FONTANA, CALIF.

LOCATION.—In sec. 6, T. 1 N., R. 5 W., at Southern California Edison Co.'s power house 8 miles north of Fontana.

RECORDS AVAILABLE.—October 1918 to September 1933.

DISCHARGE.—1918-33: Maximum mean daily, 62 second-feet Mar. 25-31, Apr. 5-8, 1920; minimum, 6.3 second-feet Aug. 26, 1925. Average, 14 years (1918-21, 1922-33), 25.2 second-feet.

REMARKS.—Canal diverts practically the entire flow of Lytle Creek in sec. 26, T. 2 N., R. 6 W. This water is carried across creek to headworks of Fontana pipe line, which serves Fontana power plant about 5 miles downstream. Records of daily discharge of Fontana pipe line determined from kilowatt output of power plant, furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	34	27	20	33	26	26	24	27	21	15.6	12.0
2	38	33	28	20	33	26	25	24	27	21	15.8	11.0
3	38	34	28	20	32	26	25	23	27	21	15.7	12.4
4	38	32	29	20	32	27	27	22	27	20	15.6	12.4
5	38	33	28	19.7	31	27	27	22	27	20	15.6	11.9
6	37	32	31	20	31	24	30	22	28	20	15.1	13.8
7	37	30	27	19.5	31	27	30	22	27	19.8	15.0	13.3
8	37	30	28	19.5	29	26	30	22	25	19.5	14.7	14.7
9	37	29	29	19.4	30	26	29	22	26	19.5	14.0	14.6
10	37	32	26	19.2	29	27	29	24	25	18.7	14.4	14.6
11	36	32	26	17.3	29	27	28	24	24	17.8	14.1	15.0
12	36	32	26	20	28	27	28	23	24	18.5	14.4	15.3
13	36	30	26	20	29	27	27	23	23	18.6	14.3	15.0
14	35	27	25	19.3	28	27	26	22	23	17.8	13.8	14.2
15	33	27	25	19.8	28	27	26	21	24	17.5	14.2	13.9
16	32	31	26	21	27	27	26	22	23	17.6	14.1	14.0
17	33	31	26	27	27	27	26	21	23	17.8	14.3	14.2
18	31	31	26	25	27	28	24	21	23	17.7	13.6	13.8
19	32	26	26	44	26	28	26	21	23	17.4	13.8	14.0
20	32	30	26	44	26	28	26	24	23	17.2	14.6	13.8
21	31	29	23	36	26	28	26	21	23	17.2	14.1	14.3
22	31	29	20	34	26	28	25	24	23	16.5	14.1	13.8
23	31	27	20	32	26	28	25	24	22	16.7	14.4	13.4
24	31	29	20	30	26	28	26	24	22	16.6	13.6	14.4
25	32	29	20	28	26	27	26	24	22	17.0	14.0	15.5
26	35	29	20	27	26	26	25	28	22	16.2	13.8	15.1
27	33	28	20	27	26	27	25	27	22	16.5	14.1	15.2
28	37	26	20	27	26	27	26	26	22	15.4	13.6	13.0
29	36	26	21	34	-----	27	25	26	22	16.1	13.5	14.1
30	33	26	21	38	-----	26	24	27	21	15.5	14.0	13.8
31	34	-----	20	34	-----	26	-----	27	-----	15.6	14.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	40	31	34.7	2,130
November	34	26	29.8	1,770
December	31	20	24.6	1,510
January	44	17.3	25.9	1,590
February	33	26	28.4	1,580
March	28	24	26.9	1,650
April	30	24	26.5	1,580
May	28	21	23.5	1,440
June	28	21	24.0	1,430
July	21	15.4	18.0	1,110
August	15.8	13.5	14.4	885
September	15.5	11.0	13.9	827
The year	44	11.0	24.2	17,500

LYTLE CREEK (EAST CHANNEL) AT SAN BERNARDINO, CALIF.

LOCATION.—Water-stage recorder in San Bernardino grant, near Atchison, Topeka & Santa Fe Railway bridge a quarter of a mile upstream from Mount Vernon Street Bridge, at San Bernardino. Altitude, about 1,050 feet.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum during year, 610 second-feet Jan. 19 (gage height, 6.6 feet); no flow most of year.

1929–33: Maximum, about 700 second-feet Feb. 9, 1932; no flow most of each year.

REMARKS.—Records fair. Water diverted above station by Fontana pipe line and for spreading on gravel cone. The only flow at this station during year consisted of a mean daily discharge of 62 second-feet on Jan. 19 and 34 second-feet on Jan. 20. Run-off during year was 191 acre-feet.

LYTLE CREEK (WEST CHANNEL) AT COLTON, CALIF.

LOCATION.—Water-stage recorder in San Bernardino grant, on F Street near Colton Avenue at Colton. Altitude, about 980 feet.

RECORDS AVAILABLE.—January 1929 to September 1933.

REMARKS.—No flow during entire period of record. Water diverted by Fontana pipe line (see p. 48) and for spreading on gravel cone above Foothill Boulevard.

CAJON CREEK NEAR KEENBROOK, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 12, T. 2 N., R. 6 W., 300 feet above mouth of Lone Pine Creek and 1 mile north of Keenbrook. Altitude, about 2,620 feet.

DRAINAGE AREA.—40.9 square miles.

RECORDS AVAILABLE.—December 1919 to September 1933.

DISCHARGE.—Maximum during year, 610 second-feet Jan. 19 (gage height, 7.25 feet); minimum, 1.5 second-feet Oct. 14, 15.

1919-33: Maximum, about 5,000 second-feet Dec. 20, 1921; minimum, 0.05 second-foot June 25, 1920. Average, 13 years (1920-33), 7.40 second-feet.

REMARKS.—Records good. Discharge estimated Jan. 25-28. No diversions or regulation above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	1.8	2.5	2.9	20	12	9.5	5.5	3.6	2.8	1.9	2.3
2	2.0	2.0	2.3	2.9	18	12	9	5.5	3.6	2.6	1.9	2.3
3	2.0	2.0	2.3	3.0	16	12	9	5.5	3.4	2.5	1.9	2.3
4	2.0	1.9	2.3	3.1	15	12	9.5	5.5	3.8	2.5	1.9	2.2
5	2.0	1.9	2.4	3.2	14	12	9	5	4.2	2.4	1.9	2.0
6	1.9	1.9	2.4	3.2	14	11	8.5	5	4.5	2.3	1.9	2.0
7	1.9	1.8	2.4	3.3	13	12	8.5	5	4.0	2.3	1.9	2.0
8	1.9	1.8	2.5	3.2	12	12	8	5	3.6	2.2	1.9	2.2
9	1.9	1.9	2.7	3.2	12	13	7.5	5	3.3	2.3	1.8	2.2
10	1.8	2.0	2.7	3.2	11	14	7	6	3.3	2.3	1.8	2.2
11	1.7	2.0	3.2	3.2	11	13	6	5.5	3.0	2.3	1.8	2.2
12	1.7	2.1	3.2	3.1	11	12	6	4.9	3.0	2.3	1.7	2.3
13	1.6	2.1	3.0	3.1	12	12	6	4.8	2.9	2.3	1.7	2.3
14	1.5	2.1	2.9	3.1	12	11	6	4.5	2.6	2.3	1.7	2.3
15	1.5	2.0	2.9	3.2	12	10	6	4.5	2.5	2.4	1.7	2.2
16	1.6	2.0	3.0	87	12	10	6	4.5	2.6	2.4	1.7	2.2
17	1.7	2.0	3.1	21	12	10	6	4.5	2.5	2.4	1.7	2.3
18	1.8	2.0	3.2	9.5	12	10	6.5	4.5	2.6	2.3	1.7	2.3
19	1.8	2.0	3.2	180	10	10	6.5	4.5	2.9	2.3	1.8	2.3
20	2.0	2.2	3.2	74	10	11	6.5	4.5	3.0	2.2	1.8	2.2
21	2.1	2.2	3.4	33	11	12	6	4.5	3.2	2.2	1.9	2.3
22	2.1	2.1	3.4	27	11	12	6	4.5	3.3	2.2	2.0	2.3
23	2.0	2.1	3.5	31	11	11	6	4.4	3.3	2.2	1.9	2.3
24	2.0	2.2	2.7	38	11	11	6.5	4.2	3.3	2.0	1.9	2.3
25	2.0	2.2	2.7	26	11	10	6.5	4.0	3.2	2.0	2.0	2.4
26	1.9	2.2	2.7	20	10	10	6.5	4.0	3.2	2.0	2.0	2.3
27	1.8	2.3	2.8	16	11	10	6	3.9	2.9	2.0	2.0	2.2
28	1.8	2.3	2.8	16	11	9.5	6	3.9	2.9	2.0	2.2	2.3
29	1.8	2.4	2.8	64	-----	9.5	6.5	3.8	2.9	1.9	2.2	2.3
30	1.8	2.6	2.8	37	-----	9.5	6	3.9	2.9	1.9	2.2	2.3
31	1.8	-----	2.8	20	-----	9.5	-----	3.9	-----	1.9	2.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.1	1.5	1.85	114
November	2.6	1.8	2.07	123
December	3.5	2.3	2.83	174
January	180	2.9	24.1	1,480
February	20	10	12.4	689
March	14	9.5	11.1	682
April	9.5	6	6.97	415
May	6	3.8	4.67	287
June	4.5	2.5	3.20	190
July	2.8	1.9	2.25	138
August	2.3	1.7	1.89	116
September	2.4	2.0	2.24	133
The year	180	1.5	6.27	4,540

LONE PINE CREEK NEAR KEENBROOK, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 12, T. 2 N., R. 6 W., 50 feet above Atchison, Topeka & Santa Fe Railway bridge 1 mile north of Keenbrook. Altitude, about 2,630 feet.

DRAINAGE AREA.—15.3 square miles.

RECORDS AVAILABLE.—December 1919 to September 1933.

DISCHARGE.—Maximum stage during year, 3.98 feet Jan. 19 (discharge not determined); minimum, 0.2 second-foot Aug. 9.

1919-33: Maximum, about 810 second-feet Dec. 19, 1922; minimum, 0.1 second-foot at various times during 1926-32. Average, 13 years (1920-33), 1.11 second-feet.

REMARKS.—Records good. Discharge estimated Jan. 5, Jan. 31 to Feb. 3. No diversions or regulation above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.4	0.5	0.5	0.9	0.7	0.7	0.7	0.5	0.5	0.3	0.4
2	.4	.4	.5	.5	.9	.7	.7	.6	.5	.5	.3	.4
3	.4	.4	.5	.5	.8	.8	.7	.5	.5	.5	.3	.4
4	.4	.4	.5	.4	.8	.8	.8	.6	.5	.5	.3	.3
5	.4	.4	.4	.4	.8	.8	.8	.6	.5	.4	.3	.3
6	.4	.4	.4	.5	.8	.8	.8	.6	.5	.5	.3	.3
7	.5	.4	.4	.5	.7	.8	.8	.6	.5	.5	.3	.3
8	.5	.5	.4	.5	.7	.8	.8	.6	.5	.5	.3	.3
9	.5	.5	.5	.5	.7	.8	.8	.6	.5	.5	.2	.3
10	.5	.5	.5	.5	.7	.8	.7	.7	.5	.4	.3	.3
11	.4	.5	.5	.5	.7	.8	.7	.7	.5	.4	.3	.3
12	.4	.5	.5	.5	.7	.8	.7	.6	.5	.5	.3	.3
13	.4	.5	.5	.5	.7	.8	.6	.6	.5	.5	.3	.3
14	.4	.5	.5	.5	.7	.7	.6	.5	.5	.4	.3	.3
15	.4	.5	.5	.6	.8	.7	.7	.5	.5	.4	.3	.3
16	.4	.5	.5	11	.8	.8	.7	.5	.5	.4	.4	.3
17	.4	.5	.5	1.3	.8	.8	.7	.5	.5	.4	.4	.3
18	.4	.5	.5	.8	.8	.8	.8	.5	.5	.4	.4	.5
19	.4	.5	.5	28	.8	.7	.8	.5	.5	.4	.4	.3
20	.3	.5	.4	3.6	.8	.7	.8	.5	.5	.4	.4	.3
21	.3	.5	.4	1.1	.7	.8	.7	.6	.5	.4	.4	.3
22	.3	.5	.4	1.2	.7	.8	.7	.6	.5	.4	.3	.3
23	.4	.5	.5	.8	.8	.8	.7	.5	.5	.3	.3	.4
24	.4	.5	.5	.9	.8	.8	.7	.5	.5	.3	.4	.4
25	.4	.5	.5	.9	.8	.8	.7	.5	.5	.3	.3	.5
26	.4	.4	.5	.9	.8	.7	.7	.5	.4	.3	.3	.4
27	.4	.4	.5	.8	.8	.7	.7	.5	.4	.3	.4	.4
28	.4	.5	.5	.8	.7	.8	.7	.5	.4	.3	.4	.4
29	.4	.5	.5	2.6	-----	.8	.8	.5	.5	.4	.3	.4
30	.4	.5	.5	1.2	-----	.8	.8	.5	.5	.3	.3	.4
31	.4	-----	.5	1.0	-----	.8	-----	.5	-----	.3	.3	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	0.5					0.3			0.40		24.8	
November	.5					.4			.47		28.0	
December	.5					.4			.48		29.3	
January	28					.4			2.07		127	
February	.9					.7			.77		42.7	
March	.8					.7			.77		47.6	
April	.8					.6			.73		43.4	
May	.7					.5			.56		34.1	
June	.5					.4			.49		29.2	
July	.5					.3			.41		25.0	
August	.4					.2			.33		20.0	
September	.5					.3			.34		20.2	
The year	28					.2			.65		471	

MEEKS & DALEY CANAL NEAR COLTON, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 21, T. 1 S., R. 4 W., on Colton Avenue, 1 mile below point of diversion from Warm Creek and 1 mile east of Colton.

RECORDS AVAILABLE.—September 1920 to September 1933.

DISCHARGE.—Maximum mean daily during year, 18.1 second-feet May 22; no flow Jan. 20–22, 24, 25, 27, 28, Feb. 5–16, 20–23.

1920–33: Maximum mean daily, 21 second-feet June 16 and July 6, 1926; no flow at numerous times. Average, 13 years (1920–33), 9.86 second-feet.

REMARKS.—Records good except those estimated, Nov. 3, 4, 14–28, Dec. 2–4, Jan. 19, which are fair. Canal diverts from right bank of Warm Creek 1½ miles northeast of Colton. Water used for irrigation in vicinity of Colton, Riverside, and Corona.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	16.8	16.7	16.1	2.5	0.2	6.1	6.4	16.8	17.0	17.0	15.3	17.6
2.....	16.8	16.7	16.0	2.4	.1	6.7	7.1	16.4	16.2	17.2	16.1	17.1
3.....	16.8	16.7	16.0	2.0	.1	6.8	7.5	16.4	15.7	17.1	16.3	17.2
4.....	16.4	16.7	17.0	2.3	.1	7.0	7.0	17.1	15.7	17.1	16.4	17.8
5.....	15.8	16.7	17.1	2.9	0	6.6	8.7	17.2	15.7	17.0	16.7	18.0
6.....	16.6	16.1	17.4	3.0	0	8.9	18.0	17.1	16.4	17.4	15.9	17.8
7.....	16.7	16.4	17.4	2.7	0	15.7	17.4	17.2	16.6	16.6	15.7	17.5
8.....	16.3	16.7	16.4	2.3	0	15.9	17.2	17.6	16.6	15.8	16.7	17.8
9.....	12.7	17.0	16.3	3.8	0	15.4	16.4	17.1	16.7	17.0	16.2	17.9
10.....	7.0	16.3	15.7	5.9	0	15.8	17.4	17.6	16.7	17.2	17.0	17.2
11.....	6.7	16.2	13.2	4.5	0	16.4	17.1	17.2	17.2	17.4	17.0	17.0
12.....	5.9	16.1	6.1	.5	0	17.1	16.8	16.4	17.4	17.1	16.3	17.4
13.....	6.7	16.3	4.9	2.8	0	17.1	16.3	16.3	16.3	17.2	16.3	17.6
14.....	8.4	16.0	6.2	5.9	0	17.1	16.8	16.7	17.0	16.7	16.4	17.5
15.....	8.0	17.0	5.7	7.8	0	17.5	16.7	16.2	16.8	15.7	16.4	17.1
16.....	7.5	16.0	5.6	6.7	0	17.5	16.8	16.6	16.8	15.2	16.2	17.1
17.....	7.4	16.0	5.8	5.9	.9	17.0	16.2	16.3	16.8	16.4	15.9	17.8
18.....	7.5	16.0	5.9	4.9	2.0	17.2	16.6	16.4	16.8	16.6	15.9	17.5
19.....	10.5	16.9	6.2	8.0	.7	17.2	16.8	16.6	16.7	16.4	16.4	16.6
20.....	14.9	17.0	6.3	0	0	17.1	16.7	18.0	16.4	16.4	17.0	17.2
21.....	14.9	17.0	6.4	0	0	16.7	16.3	18.0	15.8	16.3	17.1	17.4
22.....	15.7	17.0	5.8	0	0	16.6	17.0	18.1	16.3	16.7	17.2	17.1
23.....	15.9	18.0	5.2	.1	0	17.0	16.7	17.5	16.4	16.3	16.8	17.5
24.....	16.6	18.0	4.5	0	1.6	17.0	16.4	17.4	16.7	15.5	16.4	17.6
25.....	16.7	17.0	4.2	0	6.1	17.0	15.7	17.4	17.0	17.2	15.8	17.2
26.....	16.6	16.8	4.1	.1	6.0	17.0	15.8	17.1	17.1	16.8	16.1	17.0
27.....	16.1	17.0	4.1	0	6.1	17.1	16.8	17.2	17.1	17.0	17.1	16.4
28.....	16.2	17.0	3.3	0	5.9	16.8	17.1	16.8	16.8	16.1	17.1	16.8
29.....	15.7	16.6	1.5	.2	-----	12.5	16.6	13.8	17.0	16.3	17.0	16.7
30.....	16.4	17.0	1.6	.4	-----	8.6	17.0	11.8	16.4	17.1	16.8	16.8
31.....	16.4	-----	2.5	.3	-----	8.5	-----	13.8	-----	16.2	17.5	-----
Month					Maximum	Minimum	Mean	Run-off in acre-feet				
October.....					16.8	5.9	13.3	818				
November.....					18.0	16.0	16.7	994				
December.....					17.4	1.5	8.85	544				
January.....					8.0	0	2.51	154				
February.....					6.1	0	1.06	58.9				
March.....					17.5	6.1	14.2	873				
April.....					18.0	6.4	15.2	904				
May.....					18.1	11.8	16.6	1,020				
June.....					17.4	15.7	16.6	988				
July.....					17.4	15.2	16.6	1,020				
August.....					17.5	15.3	16.5	1,010				
September.....					18.0	16.4	17.3	1,030				
The year.....					18.1	0	13.0	9,410				

DAY CREEK NEAR ETIWANDA, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 8, T. 1 N., R. 6 W., a quarter of a mile below junction of two main forks and 6 miles north of Etiwanda. Altitude, about 2,940 feet.

DRAINAGE AREA.—4.8 square miles.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum during year, 20 second-feet Jan. 19 (gage height, 1.66 feet); minimum, 0.2 second-foot Dec. 19–20 (gage height, 0.50 foot).

1929–33: Maximum, 118 second-feet Apr. 26, 1931; minimum, that of Dec. 19–20, 1932.

REMARKS.—Record good. Etiwanda Water Co. diverted about 495 acre-feet for spreading above station during period Dec. 18 to Apr. 7.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.9	1.8	0.3	0.9	2.4	0.7	3.4	3.0	1.8	1.2	0.9
2	1.5	1.9	1.7	.3	.8	2.5	.7	3.4	2.8	1.8	1.2	.9
3	1.5	1.9	1.6	.3	.8	2.5	1.2	3.2	2.7	1.7	1.2	.8
4	1.4	1.8	1.6	.3	.6	2.8	1.9	3.1	2.7	1.6	1.2	.8
5	1.4	1.8	1.6	.3	.6	2.2	1.8	3.1	2.8	1.5	1.2	.8
6	1.4	1.7	1.6	.3	.6	1.9	2.0	3.1	2.7	1.5	1.1	.8
7	1.8	1.7	1.7	.3	.6	2.0	3.6	3.7	2.4	1.5	1.0	.8
8	1.8	1.6	1.7	.3	.6	2.0	4.8	3.3	2.4	1.6	1.0	.9
9	2.0	1.7	2.0	.3	.6	2.0	4.3	3.2	2.3	1.6	1.0	.9
10	1.7	1.7	1.9	.3	.6	2.0	4.2	3.6	2.3	1.6	.9	.9
11	1.4	1.7	2.1	.4	.6	2.0	3.9	3.5	2.2	1.5	.9	.9
12	1.4	1.6	2.2	.6	.6	2.0	3.8	3.4	2.2	1.5	.8	.9
13	1.4	1.7	2.0	.6	.6	1.9	3.8	2.2	2.2	1.5	.8	.9
14	1.4	1.7	2.0	.4	.6	1.7	3.8	3.1	2.1	1.5	.8	.9
15	1.4	1.6	2.0	.4	.7	1.8	3.8	3.0	2.1	1.4	.9	.9
16	1.4	1.5	2.0	3.2	.8	1.4	4.1	3.0	2.1	1.4	.9	.9
17	1.8	1.5	2.0	4.3	.9	1.2	4.3	3.1	2.2	1.4	.9	.8
18	1.7	1.5	.9	3.2	.9	1.1	4.3	3.1	2.2	1.4	.9	.8
19	1.7	1.6	.2	11	.9	1.0	4.2	3.1	2.2	1.4	.9	.8
20	1.7	1.6	.2	9	.9	.9	3.8	3.1	2.1	1.4	.9	.8
21	1.7	1.7	.3	4.1	.9	1.1	3.5	3.2	2.1	1.4	.9	.8
22	1.7	1.6	.3	2.0	2.5	.9	3.3	3.2	2.1	1.4	.9	.8
23	1.7	1.6	.3	1.5	3.6	.8	3.2	3.0	2.0	1.3	.9	.8
24	1.6	1.6	.3	1.2	3.9	.8	3.3	2.7	2.0	1.3	1.0	.9
25	1.5	1.6	.3	1.0	3.9	.7	3.4	2.7	2.0	1.2	1.0	1.2
26	1.5	1.6	.3	1.0	2.8	.6	3.4	2.7	2.0	1.2	.9	1.0
27	1.7	1.7	.3	1.0	2.3	.6	3.3	2.7	2.0	1.2	.9	.9
28	1.9	1.7	.4	.9	2.3	.6	3.4	2.7	2.0	1.2	.9	.9
29	2.0	1.7	.4	1.2	-----	.6	4.2	2.7	1.9	1.2	.9	.9
30	2.0	1.7	.4	1.2	-----	.6	3.5	3.0	1.9	1.2	.9	.9
31	2.0	-----	.3	.9	-----	.6	-----	3.0	-----	1.2	.9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.0	1.4	1.63	100
November	1.9	1.5	1.67	99.4
December	2.2	.2	1.17	71.9
January	11	.3	1.68	103
February	3.9	.6	1.30	72.2
March	2.8	.6	1.46	89.8
April	4.8	.7	3.32	198
May	3.6	2.7	3.09	190
June	3.0	1.9	2.26	134
July	1.8	1.2	1.43	87.9
August	1.2	.8	.96	59.1
September	1.2	.8	.87	51.9
The year	11	.2	1.74	1,260

CUCAMONGA CREEK NEAR UPLAND, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 17, T. 1 N., R. 7 W., 6 miles north of Upland. Altitude, about 2,550 feet.

DRAINAGE AREA.—10.1 square miles.

RECORDS AVAILABLE.—December 1928 to September 1933.

EXTREMES.—Maximum discharge during year, 110 second-feet Jan. 19 (gage height, 1.55 feet); minimum, 1.3 second-feet Aug. 14-16, Sept. 2-7.

1928-33: Maximum discharge, 340 second-feet Feb. 9, 1932; minimum, 1.0 second-foot July 22-27, 1929.

REMARKS.—Records good. Oct. 1 to Dec. 19, June 15 to Sept. 30 entire flow was diverted around gage; daily discharge interpolated between weekly measurements made in by-pass flume. Discharge estimated Jan. 21, 22, Apr. 14, 15, 22.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3.1	3.0	3.2	2.6	7.5	7.5	6	4.8	3.2	2.9	1.7	1.4
2.....	3.1	3.0	3.2	2.6	8	7.5	6	4.5	3.2	2.9	1.7	1.3
3.....	3.1	3.0	3.2	2.6	8	7.5	6.5	4.5	3.4	2.8	1.7	1.3
4.....	3.1	3.0	3.2	2.6	7.5	8	6.5	4.1	3.7	2.7	1.8	1.3
5.....	3.1	3.0	3.2	3.0	6.5	8	6.5	4.3	3.9	2.6	1.8	1.3
6.....	3.0	2.9	3.2	3.0	6.5	8.5	6	4.3	3.9	2.5	1.8	1.3
7.....	3.0	2.9	3.2	3.0	6.5	9	6	4.3	3.0	2.4	1.8	1.3
8.....	3.0	2.9	3.3	3.0	6.5	9	5.5	4.3	2.8	2.3	1.7	1.4
9.....	3.0	2.9	3.7	3.0	6	9	5.5	4.3	2.8	2.2	1.6	1.4
10.....	3.0	2.9	3.7	3.0	6	9	5	4.5	2.8	2.0	1.5	1.4
11.....	3.0	2.8	3.7	3.0	5.5	8.5	4.5	4.5	2.4	2.0	1.5	1.4
12.....	3.0	2.8	3.7	3.0	6	8	4.3	4.3	2.6	2.0	1.4	1.4
13.....	3.0	2.8	3.7	3.0	6	7.5	4.1	4.1	2.4	2.0	1.4	1.4
14.....	3.0	2.8	3.6	3.0	6	7	4.0	3.7	2.4	2.1	1.3	1.4
15.....	3.0	2.8	3.5	3.0	6.5	6.5	4.2	3.7	2.4	2.1	1.3	1.4
16.....	3.0	2.9	3.4	7	6.5	6.5	4.3	3.7	2.6	2.1	1.3	1.4
17.....	3.0	2.9	3.3	8	6.5	6.5	5	3.7	2.8	2.1	1.4	1.4
18.....	3.0	2.9	3.2	3.4	7	6	5	3.4	3.0	2.1	1.4	1.4
19.....	3.0	2.9	3.0	38	7	6	5	3.7	3.2	2.0	1.4	1.4
20.....	3.0	3.0	2.8	12	7	6	5	3.9	3.2	2.0	1.5	1.4
21.....	3.1	3.0	3.0	9	7	6	4.1	4.3	3.2	1.9	1.5	1.4
22.....	3.1	3.0	3.2	8	7	6	4.0	4.3	3.2	1.8	1.5	1.4
23.....	3.1	3.0	3.4	10	7	6	4.1	4.1	3.1	1.8	1.5	1.4
24.....	3.1	3.0	3.2	7.5	6.5	6	4.5	3.7	3.1	1.7	1.5	1.4
25.....	3.1	3.0	3.2	6.5	6.5	6	4.5	3.2	3.1	1.7	1.4	1.4
26.....	3.1	3.0	3.2	6	6.5	6	4.5	3.0	3.0	1.7	1.4	1.4
27.....	3.1	3.0	3.2	6	6.5	6	4.3	3.0	3.0	1.7	1.4	1.4
28.....	3.1	3.1	3.2	6.5	7	6	4.5	3.0	3.0	1.7	1.4	1.4
29.....	3.0	3.1	3.2	8	-----	6	4.8	3.0	3.0	1.7	1.4	1.4
30.....	3.0	3.2	3.0	8.5	-----	6	4.5	3.2	3.0	1.7	1.4	1.4
31.....	3.0	-----	2.8	7.5	-----	6	-----	3.4	-----	1.7	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	3.1	3.0	3.04	187
November.....	3.2	2.8	2.95	176
December.....	3.7	2.8	3.28	202
January.....	38	2.6	6.30	387
February.....	8	5.5	6.68	371
March.....	9	6	7.02	432
April.....	6.5	4.0	4.96	295
May.....	4.8	3.0	3.90	240
June.....	3.9	2.4	3.01	179
July.....	2.9	1.7	2.09	129
August.....	1.8	1.3	1.51	92.8
September.....	1.4	1.3	1.38	82.1
The year.....	38	1.3	3.83	2,770

SAN JACINTO RIVER NEAR SAN JACINTO, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 13, T. 5 S., R. 1 E., at highway bridge 8¼ miles southeast of San Jacinto. Altitude, about 1,980 feet.

DRAINAGE AREA.—140 square miles.

RECORDS AVAILABLE.—October 1920 to September 1933.

DISCHARGE.—Maximum during year, 94 second-feet Apr. 29 (gage height, 2.76 feet); no flow during several long periods.

1920-33: Maximum, about 45,000 second-feet Feb. 16, 1927; usually no flow several months each year.

REMARKS.—Records good. Discharge estimated Dec. 10, 11. Several diversions above gage. Storage at Lake Hemet.

Discharge, in second-feet, 1932-33

Day	Oct.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	0	0	0.7	10	17	5	20
2	0	0	.8	11	16	6	14
3	0	0	.8	10	9	7	10
4	0	0	.9	8	9	8	7
5	0	0	.9	8	9	7	2.3
6	0	0	1.0	9.5	8.5	5.5	0
7	0	0	1.3	12	11	4.4	0
8	0	0	1.4	9	16	3.7	0
9	7	0	1.4	8	16	3.1	3.6
10	20	.1	1.9	8	14	2.2	7
11	5.5	.3	2.1	8	12	2.0	8
12	3.0	4.6	1.8	9	11	1.9	9
13	.6	4.6	1.6	12	9	1.7	8
14	0	3.7	1.6	11	8	.9	9
15	0	2.8	1.9	11	8	0	7
16	0	2.0	2.5	11	8	0	5.5
17	0	1.4	10	12	14	0	2.2
18	0	1.1	6	13	12	0	0
19	0	1.0	5	12	10	0	0
20	0	.9	9	11	9	0	0
21	0	.9	7	13	9.5	0	0
22	0	1.1	6	13	9	0	0
23	0	1.1	8.5	14	7.5	0	0
24	0	1.4	7.5	15	6	0	0
25	0	1.2	7.5	13	5	0	0
26	0	1.0	7	13	4.6	0	0
27	0	.8	8	13	4.0	0	0
28	0	.7	9	16	4.4	1.0	0
29	0	.8	9	-----	4.6	56	0
30	0	.8	13	-----	4.2	46	0
31	0	.7	11	-----	4.2	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	20	0	1.16	71.3
December	4.6	0	1.06	65.2
January	13	.7	4.71	290
February	16	8	11.2	622
March	17	4.0	9.34	574
April	56	0	5.38	320
May	20	0	3.63	223
The year	56	0	2.99	2,170

NOTE.—No flow during months omitted.

SAN JACINTO RIVER NEAR ELSINORE, CALIF.

LOCATION.—Water-stage recorder near east line of sec. 9, T. 6 S., R. 4 W., 2½ miles above juncton with Elsinore Lake (low-water stage) and 2 miles south-east of Elsinore. Altitude, about 1,270 feet.

DRAINAGE AREA.—717 square miles.

RECORDS AVAILABLE.—January 1916 to September 1933.

DISCHARGE.—Maximum during year, 20 second-feet Jan. 20 (gage height, 2.93 feet); no flow most of year.

1916-33: Maximum, about 16,000 second-feet Feb. 17, 1927 (gage height, 11.8 feet); no flow for several months each year.

REMARKS.—Record good. Discharge estimated Apr. 13-19, May 4-21. Storage and diversions for irrigation above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1.....	0	0.1	0.3	0.2	0.1	0.1	16.....	0	0.2	0.2	0.2	0.1	0.1
2.....	0	.2	.3	.2	.1	.1	17.....	0	1.3	.2	.2	.1	.1
3.....	0	.2	.3	.2	.1	.1	18.....	0	.6	.2	.2	.1	.1
4.....	0	.2	.3	.2	.1	.1	19.....	0	.9	.2	.2	.1	.1
5.....	0	.2	.3	.2	.2	.1	20.....	0	5	.2	.2	.1	.1
6.....	0	.1	.3	.2	.2	.1	21.....	0	1.9	.2	.2	.1	.1
7.....	0	.1	.3	.2	.2	.1	22.....	0	1.0	.2	.2	.1	0
8.....	0	.1	.3	.2	.2	.1	23.....	0	.9	.2	.1	.1	0
9.....	0	.1	.3	.2	.2	.1	24.....	0	.7	.2	.1	.1	0
10.....	0	.1	.3	.2	.1	.1	25.....	0	.6	.2	.1	.1	0
11.....	0	.1	.3	.2	.1	.1	26.....	.1	.5	.2	.1	.1	0
12.....	0	.1	.2	.2	.1	.1	27.....	.1	.4	.2	.1	.1	0
13.....	0	.1	.2	.2	.1	.1	28.....	.1	.4	.2	.1	.1	0
14.....	0	.1	.2	.2	.1	.1	29.....	.1	.4	-----	.1	.1	0
15.....	0	.1	.2	.2	.1	.1	30.....	.1	.4	-----	.1	.1	0
							31.....	.1	.4	-----	.1	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	0.1	0	0.02	1.2
January.....	5	.1	.56	34.7
February.....	.3	.2	.24	13.3
March.....	.2	.1	.17	10.5
April.....	.2	.1	.12	7.0
May.....	.1	0	.07	4.2
The year.....	5	0	.10	71

NOTE.—No flow during months omitted.

ELSINORE LAKE AT ELSINORE, CALIF.

LOCATION.—Staff gage fastened to pier on northeast shore at Aloha Beach Club, Elsinore, Riverside County.

RECORDS AVAILABLE.—December 1915 to September 1933.

REMARKS.—Elsinore Lake overflows only during and after years of heavy rainfall. Temescal Creek is the high-water outlet. The heavy rains during 1916 filled the lake, and there was flow in Temescal Creek during 1916 and until July 1917. Surface of lake has been below outlet since the later date. History of the lake is published in United States Geological Survey Water-Supply Papers 426, 429, and 441.

Gage height, in feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.		40.4				40.6	40.4			38.8		
2.					40.8			40.0			38.2	
3.	40.6		40.2	40.3					39.5			
4.					40.8	40.6						
5.		40.4					40.3					
6.								39.9		38.8		37.5
7.				40.3								
8.	40.6						40.3					
9.					40.8	40.6					38.1	
10.	40.7		40.2						39.4			
11.					40.8	40.6	40.2					
12.	40.7	40.3						39.8				
13.				40.2								37.4
14.			40.4	40.2	40.8	40.5					38.0	
15.	40.7						40.2				38.0	
16.		40.2										
17.			40.4	40.4					39.3			
18.					40.7	40.5						
19.		40.2										
20.			40.4	40.6	40.7			39.7		38.5		37.3
21.				40.7			40.1					
22.	40.5	40.2				40.5	40.1		39.1			
23.											37.8	
24.			40.4	40.7					39.1	38.4		
25.				40.8	40.6	40.4	40.0					
26.		40.2						39.6				37.2
27.			40.3					39.6		38.4		
28.				40.8		40.4						
29.	40.4	40.2					40.0					
30.											37.6	
31.			40.3	40.8								

TEMESCAL CREEK NEAR CORONA, CALIF.

LOCATION.—Water-stage recorder in El Sobrante de San Jacinto grant, half a mile upstream from Blue Diamond Quarry and 4 miles southeast of Corona, Riverside County.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—1929-33: Maximum not determined; no flow most of each year.

REMARKS.—No flow during year. Numerous diversions and three storage reservoirs above station.

CHINO CREEK NEAR PRADO, CALIF.

LOCATION.—Water-stage recorder in El Rincon grant, on Chino-Rincon road 1 mile west of Prado, Riverside County.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum during year, 250 second-feet Jan. 30 (gage height, 6.00 feet); minimum, 0.2 second-feet Aug. 5-26.

1929-33: Maximum, 580 second-feet Feb. 8, 1932; minimum, 0.2 second-foot Aug. 5-26, 1933.

REMARKS.—Records fair. Discharge partly estimated May 8 to Sept. 30. Numerous irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	0.6	0.9	3.6	8	22	8.5	4.6	3.8	1.9	0.5	0.3	0.3
2-----	.6	1.0	3.2	8.5	19	8.5	4.3	2.6	1.8	.5	.3	.3
3-----	.6	1.1	3.8	8	18	8.5	4.8	2.3	1.6	.4	.3	.3
4-----	.6	1.2	4.3	7.5	16	8.5	5	1.8	1.5	.4	.3	.4
5-----	.5	.9	4.8	7.5	14	8	4.9	1.8	1.4	.4	.3	.4
6-----	.5	1.2	4.8	7	14	8	4.4	1.8	1.2	.3	.2	.4
7-----	.6	1.0	5	8	13	8.5	3.6	2.1	1.1	.3	.2	.4
8-----	.6	1.3	5	8	13	8.5	3.4	2.1	1.0	.3	.2	.5
9-----	.6	1.2	5.5	8	13	9	3.7	2.2	1.0	.3	.2	.5
10-----	.6	1.4	5.5	8	13	8.5	3.6	2.2	1.0	.3	.2	.5
11-----	.6	1.5	6.5	11	13	8.5	2.8	2.2	.9	.3	.2	.5
12-----	.7	1.6	10	6	13	8.5	2.6	2.3	.9	.3	.2	.6
13-----	.7	1.7	8.5	6.5	14	8	2.3	2.3	.9	.3	.2	.6
14-----	.7	1.9	8	7.5	12	7.5	2.1	2.3	.9	.3	.2	.6
15-----	.6	2.3	7	8	12	7	2.0	2.4	.9	.3	.2	.6
16-----	.6	4.5	6	12	12	6.5	1.4	2.4	.8	.3	.2	.5
17-----	.6	4.8	6	36	12	7	1.3	2.4	.8	.3	.2	.5
18-----	.6	4.5	6	16	12	7	1.2	2.4	.8	.3	.2	.5
19-----	.6	3.0	6	18	11	6.5	1.2	2.4	.8	.3	.2	.5
20-----	.6	2.8	6	80	11	6	1.2	2.4	.8	.3	.2	.4
21-----	.6	3.2	6.5	27	12	6	1.2	2.4	.7	.3	.2	.4
22-----	.6	3.0	6.5	23	12	6	1.2	2.5	.7	.3	.2	.4
23-----	.6	3.0	6.5	32	12	6	1.2	2.5	.7	.3	.2	.4
24-----	.6	2.4	7	36	12	5.5	1.2	2.5	.6	.3	.2	.4
25-----	.6	2.0	6.5	20	10	5.5	1.2	2.5	.6	.3	.2	.4
26-----	.6	1.9	7	18	9.5	5.5	1.8	2.4	.6	.3	.2	.4
27-----	.6	2.2	6.5	16	9	5.5	1.6	2.4	.6	.3	.3	.4
28-----	.6	2.9	7	15	9	5.5	2.5	2.3	.5	.3	.3	.4
29-----	.6	4.1	6.5	30	-----	6	2.8	2.2	.5	.3	.3	.4
30-----	.7	3.9	6	99	-----	5.5	3.5	2.2	.5	.3	.3	.4
31-----	.7	-----	6.5	27	-----	4.7	-----	2.1	-----	.3	.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	0.7	0.5	0.61	37.5
November-----	4.8	.9	2.28	136
December-----	10	3.2	6.06	373
January-----	99	6	20.1	1,240
February-----	22	9	12.9	716
March-----	9	4.7	7.05	433
April-----	5	1.2	2.62	156
May-----	3.8	1.8	2.33	143
June-----	1.9	.5	.93	55.5
July-----	.5	.3	.32	19.9
August-----	.3	.2	.23	14.3
September-----	.6	.3	.44	26.4
The year-----	99	.2	4.63	3,350

SAN ANTONIO CREEK NEAR CLAREMONT, CALIF.

LOCATION.—Water-stage recorder in NW¼SE¼ sec. 36, T. 2 N., R. 8 W., at highway bridge half a mile above Southern California Edison Co.'s Sierra power plant and 8 miles northeast of Claremont. Altitude, about 3,400 feet.

DRAINAGE AREA.—16.9 square miles.

RECORDS AVAILABLE.—January 1917 to September 1933.

DISCHARGE.—Maximum during year, 6.5 second-feet Feb. 9 (gage height, 2.62 feet); minimum, 0.2 second-foot Aug. 15 to Sept. 14.

1917-33: Maximum, 1,020 second-feet Dec. 19, 1921 (gage height, 8.20 feet); minimum (estimated), 0.1 second-foot in August and September 1919 and September and October 1925. Average, 16 years (1917-33), 7.37 second-feet.

REMARKS.—Records fair. Discharge estimated Nov. 26 to Dec. 5, Apr. 1-5. Sum of discharge of creek and Southern California Edison Co.'s Canal, which diverts water for power development above station, is given in table of combined discharge (p. 60); average combined discharge, 16 years (1917-33), 20.5 second-feet. Southern California Edison Co. diverts water for power development above station (see p. 61).

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.5	0.7	0.8	1.0	1.5	1.6	1.4	1.3	0.6	0.4	0.2
2	.7	.5	.7	.8	1.0	1.5	1.6	1.4	1.2	.6	.4	.2
3	.7	.5	.7	.8	1.1	1.5	1.7	1.4	1.2	.6	.4	.2
4	.6	.5	.8	.8	1.0	1.5	1.8	1.4	1.2	.6	.4	.2
5	.6	.5	.8	.8	1.2	1.5	1.8	1.4	1.2	.6	.4	.2
6	.6	.5	.8	.8	1.4	1.5	1.9	1.4	1.2	.6	.4	.2
7	.6	.5	.8	.8	1.4	1.5	1.9	1.4	1.1	.6	.4	.2
8	.7	.5	.7	.8	1.4	1.6	1.8	1.4	1.0	.6	.5	.2
9	.7	.5	.8	.8	1.4	1.7	1.7	1.4	1.0	.5	.3	.2
10	.7	.5	.8	.8	1.4	1.6	1.6	1.4	1.0	.5	.3	.2
11	.7	.6	.9	.8	1.4	1.6	1.6	1.4	1.0	.4	.3	.2
12	.7	.6	1.0	.8	1.4	1.6	1.6	1.3	.9	.4	.3	.2
13	.7	.6	1.0	.8	1.4	1.6	1.5	1.2	.9	.5	.3	.2
14	.7	.6	1.0	.8	1.4	1.6	1.5	1.1	.8	.5	.3	.2
15	.7	.6	.9	.8	1.4	1.6	1.5	1.0	.8	.5	.2	.3
16	.7	.6	.9	1.6	1.4	1.5	1.6	1.0	.8	.5	.2	.3
17	.7	.6	.9	1.2	1.4	1.5	1.6	1.1	.8	.5	.2	.3
18	.6	.6	.9	1.1	1.4	1.5	1.6	1.1	.8	.5	.2	.3
19	.6	.6	.9	3.0	1.4	1.5	1.5	1.2	.8	.5	.2	.3
20	.6	.6	.9	2.0	1.5	1.5	1.5	1.2	.8	.5	.2	.3
21	.6	.6	.9	1.4	1.5	1.5	1.5	1.2	.7	.5	.2	.3
22	.6	.6	.9	1.4	1.5	1.5	1.5	1.2	.7	.5	.2	.3
23	.6	.6	.9	1.6	1.5	1.5	1.5	1.2	.7	.5	.2	.3
24	.6	.6	.9	1.6	1.5	1.5	1.5	1.2	.7	.4	.2	.3
25	.6	.6	.9	1.4	1.6	1.5	1.6	1.2	.7	.4	.2	.3
26	.5	.6	.9	1.4	1.6	1.4	1.6	1.3	.7	.4	.2	.3
27	.5	.6	.8	1.4	1.5	1.4	1.5	1.4	.7	.4	.2	.3
28	.5	.6	.8	1.3	1.5	1.5	1.5	1.4	.7	.4	.2	.3
29	.5	.7	.9	1.3	-----	1.5	1.5	1.4	.7	.4	.2	.3
30	.5	.7	.9	1.2	-----	1.5	1.5	1.3	.7	.4	.2	.3
31	.5	-----	.8	1.1	-----	1.5	-----	1.3	-----	.4	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0.5	0.62	38.3
November	.7	.5	.57	34.1
December	1.0	.7	.86	52.6
January	3.0	.8	1.16	71.3
February	1.6	1.0	1.38	76.6
March	1.7	1.4	1.52	93.5
April	1.9	1.5	1.60	95.2
May	1.4	1.0	1.28	78.7
June	1.3	.7	.89	53.1
July	.6	.4	.49	30.4
August	.4	.2	.27	16.7
September	.3	.2	.25	15.1
The year	3.0	.2	.91	656

Combined discharge, in second-feet, of San Antonio Creek and Southern California Edison Co.'s canal near Claremont, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11.9	10.2	9.7	9.9	10.5	13.1	16.8	16.2	14.2	10.2	8.0	6.1
2	12.0	10.3	9.8	9.4	10.8	13.3	16.3	16.4	14.2	10.0	7.6	6.0
3	12.0	10.3	9.7	9.8	10.7	13.7	16.8	16.0	14.2	10.2	7.6	5.9
4	11.5	9.9	9.9	9.8	10.8	13.9	16.9	15.8	14.4	10.0	7.4	6.2
5	11.3	10.2	10.0	9.6	11.0	14.1	17.0	15.8	14.4	9.8	7.0	6.2
6	11.4	10.1	9.9	9.5	11.3	13.9	17.3	15.6	14.3	9.8	7.7	5.4
7	12.0	9.3	9.7	9.7	10.8	14.1	18.0	15.6	14.0	9.6	7.6	6.0
8	11.6	9.9	9.5	9.6	10.1	14.3	17.7	16.0	13.4	9.6	7.4	6.1
9	10.7	9.5	10.0	9.6	11.5	14.8	17.7	15.8	13.4	9.5	7.1	6.0
10	10.5	9.6	9.8	9.0	11.4	14.7	17.3	16.4	13.4	9.5	6.7	5.5
11	10.7	10.2	10.6	8.5	11.6	16.0	17.7	16.7	12.8	9.4	7.1	6.0
12	11.1	10.2	10.4	9.0	11.6	16.0	17.6	16.1	12.3	8.8	6.7	6.0
13	11.1	10.1	10.7	9.2	11.6	16.2	17.9	15.3	12.3	9.0	6.7	5.6
14	11.2	10.4	12.4	9.4	12.0	16.2	18.1	14.7	12.0	8.7	6.3	6.0
15	10.5	9.8	10.3	9.4	12.0	16.0	17.8	14.3	11.8	8.8	6.8	5.9
16	10.7	10.0	10.5	10.8	12.0	16.3	18.0	14.6	11.9	8.5	6.8	5.9
17	11.0	9.9	10.4	10.2	12.0	16.0	18.2	14.5	11.8	9.2	6.1	5.9
18	10.8	9.4	10.1	9.4	12.1	16.5	18.0	14.2	12.2	8.7	6.1	6.0
19	10.4	9.2	10.2	14.3	12.0	16.3	18.1	13.9	11.8	9.1	6.4	6.1
20	9.8	9.3	9.9	12.1	12.1	16.7	17.7	14.2	11.8	8.6	6.6	5.9
21	10.6	9.5	10.2	9.7	12.5	16.7	17.8	15.2	10.9	8.7	6.6	5.7
22	10.4	9.9	10.9	10.5	12.3	16.7	17.3	14.6	11.3	9.1	6.2	5.9
23	10.4	9.5	10.3	10.7	12.5	16.9	16.6	14.4	10.9	9.1	6.0	5.7
24	10.4	9.8	10.6	11.0	12.4	17.1	16.9	13.6	10.7	8.8	6.0	5.9
25	10.2	9.8	9.9	10.4	12.6	16.8	16.5	13.8	11.1	8.7	6.6	5.7
26	10.1	9.2	9.5	11.3	12.8	16.6	16.7	13.9	10.7	8.8	6.2	5.5
27	10.1	9.7	10.0	11.2	12.6	16.6	16.4	14.2	11.1	8.7	6.2	5.7
28	10.1	9.2	9.9	10.6	13.1	16.8	16.9	14.1	10.8	8.3	6.7	5.7
29	10.1	9.9	9.9	10.9	-----	16.7	17.1	14.3	10.3	8.4	6.4	5.7
30	10.5	9.9	10.1	11.1	-----	16.9	16.7	13.8	10.5	8.4	6.1	5.7
31	10.3	-----	10.0	10.8	-----	17.1	-----	14.3	-----	8.4	6.6	-----
Month						Maximum	Minimum	Mean		Run-off in acre-feet		
October						12.0	9.8	10.8		664		
November						10.4	9.2	9.81		584		
December						12.4	9.5	10.2		627		
January						14.3	8.5	10.2		627		
February						13.1	10.1	11.7		650		
March						17.1	13.1	15.7		965		
April						18.2	16.3	17.3		1,030		
May						16.7	13.6	15.0		922		
June						14.4	10.3	12.3		732		
July						10.2	8.3	9.11		560		
August						8.0	6.0	6.75		415		
September						6.2	5.4	5.86		349		
The year						18.2	5.4	11.2		8,120		

SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR CLAREMONT, CALIF.

LOCATION.—Hook gage in NW¼ sec. 1, T. 1 N., R. 8 W., at weir in tailrace of Sierra power house on San Antonio Creek, 1½ miles below intake and 8 miles northeast of Claremont.

RECORDS AVAILABLE.—January 1917 to September 1933.

DISCHARGE.—Average, 16 years (1917-33), 13.1 second-feet.

REMARKS.—This canal diverts water from San Antonio Creek in SE¼ sec. 25, T. 2 N., R. 8 W., 1 mile above gaging station on San Antonio Creek, near Claremont. Water is used for power development at Sierra power house and then returned to creek. Record furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	11.2	9.7	9.0	9.1	9.5	11.6	15.2	14.8	12.9	9.6	7.6	5.9
2.....	11.3	9.8	9.1	8.6	9.8	11.8	14.7	15.0	13.0	9.4	7.2	5.8
3.....	11.3	9.8	9.0	9.0	9.6	12.2	15.1	14.6	13.0	9.6	7.2	5.7
4.....	10.9	9.4	9.1	9.0	9.8	12.4	15.1	14.4	13.2	9.4	7.0	6.0
5.....	10.7	9.7	9.2	8.8	9.8	12.6	15.2	14.4	13.2	9.2	6.6	6.0
6.....	10.8	9.6	9.1	8.7	9.9	12.4	15.4	14.2	13.1	9.2	7.3	5.2
7.....	11.4	8.8	8.9	8.9	9.4	12.6	16.1	14.2	12.9	9.0	7.2	5.8
8.....	10.9	9.4	8.8	8.8	8.7	12.7	15.9	14.6	12.4	9.0	7.0	5.9
9.....	10.0	9.0	9.2	8.8	10.1	13.1	16.0	14.4	12.4	9.0	6.8	5.8
10.....	9.8	9.1	9.0	8.2	10.0	13.1	15.7	15.0	12.4	9.0	6.4	5.3
11.....	10.0	9.6	9.7	7.7	10.2	14.4	16.1	15.3	11.8	9.0	6.8	5.8
12.....	10.4	9.6	9.4	8.2	10.2	14.4	16.0	14.8	11.4	8.4	6.4	5.8
13.....	10.4	9.5	9.7	8.4	10.2	14.6	16.4	14.1	11.4	8.5	6.4	5.4
14.....	10.5	9.8	11.4	8.6	10.6	14.6	16.6	13.6	11.2	8.2	6.0	5.8
15.....	9.8	9.2	9.4	8.6	10.6	14.4	16.3	13.3	11.0	8.3	6.6	5.6
16.....	10.0	9.4	9.6	9.2	10.6	14.8	16.4	13.6	11.1	8.0	6.6	5.6
17.....	10.3	9.3	9.5	9.0	10.6	14.5	16.6	13.4	11.0	8.7	5.9	5.6
18.....	10.2	8.8	9.2	8.3	10.7	15.0	16.4	13.1	11.4	8.2	5.9	5.7
19.....	9.8	8.6	9.3	11.3	10.6	14.8	16.6	12.7	11.0	7.6	6.2	5.8
20.....	9.2	8.7	9.0	10.1	10.6	15.2	16.2	13.0	11.0	8.1	6.4	5.6
21.....	10.0	8.9	9.3	8.3	11.0	15.2	16.3	14.0	10.2	8.2	6.4	5.4
22.....	9.8	9.3	10.0	9.1	10.8	15.2	15.8	13.4	10.6	8.6	6.1	5.6
23.....	9.8	8.9	9.4	9.1	11.0	15.4	15.1	13.2	10.2	8.6	5.8	5.4
24.....	9.8	9.2	9.7	9.4	10.9	15.6	15.4	12.4	10.0	8.4	5.8	5.6
25.....	9.6	9.2	9.0	9.0	11.0	15.3	14.9	12.6	10.4	8.3	6.4	5.4
26.....	9.6	8.6	8.6	9.9	11.2	15.2	15.1	12.6	10.0	8.4	6.0	5.2
27.....	9.6	9.1	9.2	9.8	11.1	15.2	14.9	12.8	10.4	8.3	6.0	5.4
28.....	9.6	8.6	9.1	9.3	11.6	15.3	15.4	12.7	10.1	7.9	6.5	5.4
29.....	9.6	9.2	9.0	9.6	-----	15.2	15.6	12.9	9.6	8.0	6.2	5.4
30.....	10.0	9.2	9.2	9.9	-----	15.4	15.2	12.5	9.8	8.0	5.9	5.4
31.....	9.8	-----	9.2	9.7	-----	15.6	-----	13.0	-----	8.0	6.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	11.4	9.2	10.2	627
November.....	9.8	8.6	9.23	549
December.....	11.4	8.6	9.30	572
January.....	11.3	7.7	9.05	556
February.....	11.6	8.7	10.4	578
March.....	15.6	11.6	14.2	873
April.....	16.6	14.7	15.7	934
May.....	15.3	12.4	13.7	842
June.....	13.2	9.6	11.4	678
July.....	9.6	7.9	8.62	530
August.....	7.6	5.8	6.48	398
September.....	6.0	5.2	5.61	334
The year.....	16.6	5.2	10.3	7,470

SANTIAGO CREEK AT SANTIAGO RESERVOIR, NEAR VILLA PARK, CALIF.

LOCATION.—Staff gage at Santiago Creek Dam in Lomas de Santiago grant, 2 miles east of Orange County Park and 5 miles east of Villa Park, Orange County.

DRAINAGE AREA.—63 square miles.

RECORDS AVAILABLE.—January 1932 to September 1933.

REMARKS.—Dam completed December 1931. Reservoir capacity 25,000 acre-feet. Flow regulated at Santiago Reservoir for irrigation. Draft measured by means of several Venturi flumes. Entire record furnished by the Serrano Irrigation District, the Carpenter Irrigation District, and the Irvine Co.

Inflow, in acre-feet, of Santiago Creek to Santiago Reservoir near Villa Park, Calif., 1932-33

Month	Storage		Draft	Inflow *
	End of month	Increase or decrease *		
October.....	5,750	-750	912	162
November.....	4,550	-1,200	1,496	296
December.....	4,442	-108	177	69
January.....	5,625	+1,183	25	1,208
February.....	6,125	+500	0	500
March.....	6,375	+250	258	508
April.....	6,225	-150	557	407
May.....	6,035	-190	556	366
June.....	5,375	-660	954	294
July.....	4,585	-790	1,026	236
August.....	3,594	-991	1,245	254
September.....	2,925	-669	832	163
The year.....				4,460

* Not corrected for evaporation.

SANTIAGO CREEK NEAR VILLA PARK, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 13, T. 4 S., R. 9 W., five-eighths of a mile below diversion dam of Serrano and Carpenter Irrigation Districts and 1¼ miles northeast of Villa Park. Altitude, about 420 feet.

DRAINAGE AREA.—83.8 square miles.

RECORDS AVAILABLE.—June 1920 to September 1933.

DISCHARGE.—Maximum during year, 144 second-feet Jan. 20 (gage height, 1.41 feet); no flow most of year.

1920-33: Maximum about 11,000 second-feet Feb. 16, 1927 (gage height, 8.4 feet); no flow several months each year. Average, 13 years (1920-33), 7.71 second-feet.

REMARKS.—Records good except those of discharge above 20 second-feet, which are poor. Discharge estimated Jan. 20-22, Feb. 6-17, Mar. 2-11. The Irvine Co. and the Serrano and Carpenter Irrigation Districts divert above gage. Flow regulated at Santiago Reservoir.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May
1	0	0	0	0	1.6	0.9	0
2	0	0	0	0	1.6	.2	0
3	0	0	0	0	1.5	.2	0
4	0	0	0	0	1.3	.1	0
5	0	.1	.1	0	1.3	.1	0
6	0	0	0	0	.7	.1	0
7	0	0	0	0	.2	.1	0
8	0	0	0	0	.2	.1	0
9	1.2	0	0	0	.2	.1	0
10	2.6	0	0	0	.2	.1	1.1
11	.8	.1	.9	0	.2	.1	1.8
12	0	.2	2.4	0	.2	0	0
13	0	0	1.8	0	.2	0	0
14	0	0	1.8	0	.2	0	0
15	0	0	.8	0	.2	0	0
16	0	0	1.0	3.3	.2	0	0
17	0	0	1.6	5.5	.2	0	0
18	0	0	1.5	1.5	.6	0	0
19	0	0	1.5	.9	1.3	9	0
20	0	0	1.5	40	1.3	0	0
21	0	0	1.5	15	1.5	0	0
22	.2	0	1.5	3	1.5	0	0
23	0	0	1.2	7.5	1.5	0	0
24	0	0	.6	2.2	1.5	0	0
25	0	0	0	2.0	1.5	0	0
26	0	0	.1	1.1	1.5	0	0
27	0	0	.1	.7	1.5	0	0
28	0	0	.1	1.8	1.5	0	0
29	0	0	.1	24	-----	0	0
30	0	0	0	6	-----	0	0
31	0	-----	0	1.8	-----	0	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.6	0	0.16	9.5
November	.2	0	.01	.8
December	2.4	0	.65	39.8
January	40	0	3.75	231
February	1.6	.2	.91	50.4
March	.9	0	.07	4.2
May	1.1	0	.06	3.8
The year	40	0	.47	340

NOTE.—No flow during months omitted.

SANTIAGO CREEK AT SANTA ANA, CALIF.

LOCATION.—Water-stage recorder in Santiago de Santa Ana grant, at the end of Baker Street, Santa Ana. Altitude, about 120 feet.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum during year, 226 second-feet Jan. 20 (gage height, 2.13 feet); no flow most of the year.

1929-33: Maximum stage, 3.02 feet Mar. 15, 1930 (discharge not determined); no flow greater part of each year.

REMARKS.—Records fair. Discharge estimated Jan. 17, Feb. 13, 15, 20. The Irvine Co. and the Serrano and Carpenter Irrigation Districts divert above gage.

Discharge, in second-feet, 1932-33

Jan. 17.....	3.0	Jan. 29.....	19	Feb. 13.....	16
Jan. 19.....	9	Jan. 30.....	27	Feb. 14.....	20
Jan. 20.....	71	Feb. 11.....	18	Feb. 15.....	1.0
Jan. 21.....	2.4	Feb. 12.....	16	Feb. 20.....	3.0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	71	0	4.24	261
February.....	20	0	2.64	147
The year.....	71	0	.56	408

NOTE.—No flow during year except as shown.

IRVINE RANCH DRAINAGE CANAL NEAR TUSTIN, CALIF.

LOCATION.—Water-stage recorder in San Joaquin grant, on Lane road bridge 5 miles south of Tustin, Orange County.

DRAINAGE AREA.—93 square miles.

RECORDS AVAILABLE.—November 1930 to September 1933.

DISCHARGE.—Maximum during year, 4,330 second-feet Jan. 19 (gage height, 12.98 feet); no flow for several periods.

1930-33: Maximum, that of Jan. 19, 1933; no flow during periods in 1932 and 1933.

REMARKS.—This canal serves to carry storm run-off from foothills across ranch and to drain the soil in a small area between Tustin and ocean. Record furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.2	0.1	2.6	0.1	0.2	0.1	0.1	0	0	0.1
2	.1	.1	.2	.1	2.4	.1	.3	.1	0	0	0	.1
3	.1	.1	.2	.1	2.3	.1	.3	.2	0	0	0	.1
4	.1	.1	.2	.1	1.6	.1	.3	.4	.1	0	0	.1
5	.1	.1	.2	.1	1.1	.1	.1	.5	.1	0	0	.1
6	.1	.1	.2	.1	1.0	.1	.1	.5	.1	0	0	.1
7	.1	.2	.2	.1	.8	.1	.2	.5	.1	0	0	.1
8	.1	.2	.2	.1	.8	.1	.1	.7	.2	0	0	.1
9	.1	.1	.1	.1	.7	.1	.1	1.1	.4	0	0	.1
10	.1	.1	.1	.1	.7	.3	.1	1.3	.1	0	0	.1
11	.1	.2	.1	.1	.6	.3	0	1.6	.1	0	0	0
12	.1	.2	.2	0	.5	.3	0	.5	0	0	0	0
13	.1	.2	.2	.1	.4	.1	0	.2	0	0	0	0
14	.1	.2	.2	.1	.3	.1	0	.4	.1	0	0	0
15	.1	.2	.1	.1	.2	.1	0	.6	.1	0	0	0
16	.1	.1	.1	15	.2	.1	.5	.5	0	0	0	0
17	.1	.1	.1	50	.2	.1	.7	.2	0	0	0	0
18	.1	.1	.1	2.7	.2	.1	.8	.1	.2	0	0	0
19	.1	.1	.1	500	.2	.1	1.0	.3	.3	.1	0	0
20	.1	.1	.1	590	.1	.1	1.1	.3	.3	.3	0	0
21	.1	.1	.1	17	.1	.1	1.0	.1	0	.3	0	0
22	.1	.1	.1	11	.1	.1	1.4	.1	0	.6	0	0
23	.1	.2	.1	129	.1	.1	1.2	.1	0	.6	0	0
24	.2	.1	.1	12	.1	.1	1.0	.1	0	.5	0	0
25	.2	.1	.1	5.5	.1	.1	1.4	.1	0	.5	0	0
26	.2	.1	.1	4.7	.1	.1	1.1	0	0	.1	0	0
27	.2	.1	.1	3.3	.1	.1	.6	0	0	0	0	0
28	.2	.1	.1	2.9	.1	.1	.4	0	0	0	0	0
29	.2	.1	.1	272	.1	.1	.3	.1	0	0	0	0
30	.1	.2	.1	95	.1	.1	.1	.1	0	0	0	0
31	.1	.1	.1	5	.1	.1	.1	.1	0	.1	.1	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.12	7.3
November	.2	.1	.13	7.7
December	.2	.1	.14	8.3
January	590	0	55.4	3,410
February	2.6	.1	.63	35.1
March	.3	.1	.12	7.3
April	1.4	0	.48	28.6
May	1.6	0	.35	21.4
June	.4	0	.08	4.6
July	.6	0	.10	6.0
August	.1	0	.003	.2
September	.1	0	.03	2.0
The year	590	0	4.88	3,540

SAN GABRIEL RIVER BASIN

SAN GABRIEL RIVER NEAR CAMP BONITA, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 22, T. 2 N., R. 9 W., above junction with Susanna Canyon and 3 miles west of Camp Bonita, Calif. Prior to October 1932 station operated about 3 miles upstream.

RECORDS AVAILABLE.—December 1932 to September 1933. October 1927 to September 1932 at station 3 miles upstream.

DISCHARGE.—Maximum during period, 335 second-feet Jan. 19 (gage height, 4.02 feet); minimum, 2.6 second-feet Sept. 21 (gage height, 1.63 feet).

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	16	15	55	52	57	47	36	19	12	7.5
2.....	16	15	51	51	61	46	36	18	12	8
3.....	16	17	46	54	65	44	36	17	11	7.5
4.....	16	17	43	57	66	44	36	15	10	7
5.....	16	17	43	61	68	44	36	15	10	7
6.....	15	17	42	64	68	43	35	16	10	7
7.....	15	15	42	66	66	42	34	16	9.5	7
8.....	15	17	42	71	65	43	34	15	9.5	7
9.....	17	17	43	71	61	43	34	14	9	7
10.....	17	16	43	71	59	43	33	14	8.5	7
11.....	16	16	46	68	57	41	32	13	8	7
12.....	24	17	47	68	54	38	31	13	8	7
13.....	22	16	44	68	52	37	29	13	8	7
14.....	20	15	44	66	51	35	28	13	8.5	6.5
15.....	18	15	44	66	52	35	27	13	8.5	6
16.....	17	47	43	65	51	35	28	11	9	6
17.....	17	35	42	65	50	35	27	11	9	6
18.....	16	32	42	64	48	36	26	11	9	6
19.....	16	163	44	64	47	36	26	11	9	6
20.....	15	105	50	62	46	36	25	12	8.5	6
21.....	17	68	51	64	46	36	24	13	8.5	6
22.....	17	59	52	62	46	36	24	13	8	6.5
23.....	18	59	55	61	44	34	23	12	7.5	6.5
24.....	18	51	57	55	48	33	23	12	7.5	7
25.....	18	46	58	54	51	35	22	12	7.5	7.5
26.....	16	44	59	54	50	38	22	11	8	7.5
27.....	16	43	58	54	48	38	21	11	8	7.5
28.....	16	46	55	57	51	38	21	12	8	7.5
29.....	18	58	---	54	51	38	20	12	8	7.5
30.....	17	65	---	54	48	38	20	12	7.5	7.5
31.....	15	61	---	55	---	38	---	12	7.5	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	24	15	17.0	1,050
January.....	163	15	39.5	2,430
February.....	59	42	47.9	2,660
March.....	71	51	61.2	3,760
April.....	68	44	54.2	3,230
May.....	47	33	38.9	2,390
June.....	36	20	28.2	1,680
July.....	19	11	13.3	818
August.....	12	7.5	8.81	542
September.....	8	6	6.88	409
The period.....	---	---	---	19,000

SAN GABRIEL RIVER NEAR AZUSA, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 23, T. 1 N., R. 10 W., 1 mile above Southern California Edison Co.'s power house and 2 miles north of Azusa.

DRAINAGE AREA.—214 square miles.

RECORDS AVAILABLE.—1894 to September 1933.

DISCHARGE.—Maximum during year, 5,820 second-feet Jan. 19 (gage height, 6.90 feet); no flow for long periods.

1894–1933: Maximum, 40,000 second-feet Jan. 18, 1916 (gage height, 12.0 feet); no flow for several months each year. Average, 37 years (1896–1933), 108 second-feet.

REMARKS.—Records good. Power canal of Southern California Edison Co. diverts about 5 miles above station. For canal record see p. 73. For combined record see p. 68; average combined discharge, 38 years (1895–1933), 153 second-feet. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, 1932–33

Day	Jan.	Feb.	Mar.	Apr.	May	Day	Jan.	Feb.	Mar.	Apr.	May
1.....	0	91	61	24	3.5	16.....	103	126	51	13	0.1
2.....	0	86	68	27	2.5	17.....	170	117	49	13	.1
3.....	0	73	70	31	1.5	18.....	18	107	46	14	0
4.....	0	63	73	36	.5	19.....	1,630	140	41	12	0
5.....	0	60	70	37	.4	20.....	610	133	40	7	0
6.....	0	61	65	36	.2	21.....	188	136	43	3.4	0
7.....	0	61	68	37	.8	22.....	120	91	41	2.8	0
8.....	0	58	70	37	.2	23.....	140	58	41	2.0	0
9.....	0	54	78	27	.1	24.....	97	58	37	1.0	0
10.....	0	47	73	20	.3	25.....	75	52	32	.7	0
11.....	0	44	70	20	.2	26.....	60	49	27	2.2	0
12.....	0	46	65	17	.1	27.....	60	49	25	2.2	0
13.....	0	90	63	16	.2	28.....	65	52	26	2.0	0
14.....	0	117	56	12	.2	29.....	94	-----	28	6	0
15.....	0	120	51	12	.2	30.....	149	-----	26	6.5	0
						31.....	104	-----	26	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	1,630	0	119	7,320
February.....	140	44	80.0	4,440
March.....	78	25	51.0	3,140
April.....	37	.7	15.9	946
May.....	3.5	0	.36	22.0
The year.....	1,630	0	21.9	15,900

NOTE.—No flow during months omitted.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	22	24	33	167	145	108	88	68	28	13.2	9.2
2	24	23	25	33	162	152	111	86	65	28	13.2	9.7
3	24	23	24	33	149	154	115	82	65	26	12.4	9.7
4	24	24	23	33	139	157	120	78	64	26	13.2	9.5
5	22	24	24	32	136	154	121	79	64	24	12.0	9.0
6	21	24	24	32	137	149	119	79	65	25	12.6	8.9
7	23	24	24	32	137	152	119	79	62	24	12.4	8.7
8	24	23	25	33	134	154	118	77	56	22	11.8	8.9
9	25	22	29	32	130	162	111	79	54	22	11.4	9.2
10	25	22	30	32	123	157	104	80	53	20	11.0	10.2
11	23	23	31	30	120	154	104	81	50	19.2	10.6	10.2
12	22	23	39	31	122	149	101	78	49	19.0	10.6	9.9
13	24	23	37	31	128	147	100	75	47	18.2	9.9	9.9
14	23	23	39	31	117	140	96	71	44	17.8	10.2	9.7
15	23	22	38	31	120	135	96	69	44	17.8	10.4	9.5
16	22	22	37	161	126	135	97	71	41	17.6	11.0	9.2
17	21	21	35	248	130	133	97	71	42	17.4	10.6	9.2
18	22	19.4	35	96	142	130	98	71	41	17.1	10.6	9.2
19	22	21	34	1,690	140	125	96	72	38	16.3	10.6	9.2
20	22	22	34	686	133	124	91	71	37	16.3	11.2	9.0
21	22	23	34	258	136	127	87	72	35	16.0	11.4	8.9
22	22	22	34	198	132	125	87	74	32	16.3	11.0	9.0
23	22	22	34	218	141	125	85	70	33	14.4	10.2	8.6
24	22	22	37	174	142	121	83	68	32	15.0	10.2	9.5
25	21	22	36	153	136	116	84	66	32	13.5	9.2	9.5
26	22	22	35	138	133	111	86	67	32	13.0	9.2	9.7
27	21	22	33	138	133	109	86	68	31	12.4	10.6	9.5
28	21	22	32	143	136	110	86	69	30	14.2	9.4	8.2
29	22	23	32	170	-----	112	90	68	30	13.3	9.0	9.4
30	22	23	33	225	-----	110	90	69	29	13.9	8.8	8.6
31	22	-----	32	180	-----	110	-----	70	-----	13.2	9.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	25	21	22.5	1,380
November.....	24	19.4	22.4	1,330
December.....	39	23	31.7	1,950
January.....	1,690	30	173	10,600
February.....	167	117	135	7,500
March.....	157	109	135	8,300
April.....	121	83	99.5	5,920
May.....	88	66	74.1	4,560
June.....	68	29	45.5	2,710
July.....	28	12.4	18.6	1,140
August.....	13.2	8.8	10.9	670
September.....	10.2	8.2	9.30	553
The year.....	1,690	8.2	64.4	46,600

SAN GABRIEL RIVER AT PICO, CALIF.

LOCATION.—Water-stage recorder in Paso de Bartolo grant on Whittier Boulevard bridge half a mile east of Pico, Los Angeles County.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum during year, 1,450 second-feet Jan. 29 (gage height, 2.36 feet); no flow during several months.

1928-33: Maximum, 3,830 second-feet Feb. 9, 1932; no flow for several months each year.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.
1.....	0	14	10	11.....	0	15	0	21.....	14	12	0
2.....	0	14	10	12.....	0	15	0	22.....	46	15	0
3.....	0	15	4	13.....	0	15	0	23.....	70	15	0
4.....	0	15	1	14.....	0	15	0	24.....	63	15	0
5.....	0	15	10	15.....	0	12	0	25.....	28	15	0
6.....	0	15	9	16.....	0	12	0	26.....	12	15	0
7.....	0	15	4.2	17.....	.2	12	0	27.....	12	15	0
8.....	0	14	4.2	18.....	.2	12	0	28.....	44	14	0
9.....	0	14	0	19.....	132	12	0	29.....	286		0
10.....	0	15	0	20.....	217	12	0	30.....	109		0
								31.....	23		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	286	0	34.1	2,100
February.....	15	12	14.1	783
March.....	10	0	1.70	105
The year.....	286	0	4.12	2,990

NOTE.—No flow during months omitted.

WEST FORK OF SAN GABRIEL RIVER AT CAMP RINCON, CALIF.

LOCATION.—Water-stage recorder near center of sec. 19, T. 2 N., R. 9 W., half a mile below North Fork of San Gabriel River and a quarter of a mile above Camp Rincon.

DRAINAGE AREA.—102 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum during year, 3,460 second-feet Jan. 19 (gage height, 8.42 feet); minimum, 2.5 second-feet several days.

1927-33: Maximum, 3,790 second-feet Feb. 9, 1932; no flow at times in 1928 and 1929.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	6	5.5	9.5	16	84	92	50	35	23	7	3.9	2.6
2.....	6.5	6	8.5	16	86	94	53	32	22	6.5	3.9	2.7
3.....	6.5	6	8.5	17	86	92	52	32	22	6.5	3.9	2.6
4.....	6	6	8.5	18	82	92	52	31	22	6	3.8	2.5
5.....	6	6	8.5	19	80	92	50	32	22	6	3.5	2.5
6.....	6	5.5	9	15	82	86	48	32	22	6	3.5	2.5
7.....	7	5.5	9	14	84	90	48	30	22	6.5	3.5	2.5
8.....	7.5	5.5	9	14	80	94	48	30	20	6.5	3.2	2.6
9.....	7.5	5.5	10	14	78	96	47	30	20	6	3.1	2.7
10.....	7	6	11	14	76	94	42	32	18	5.5	3.0	2.7
11.....	6	6	12	13	74	90	40	34	17	5	3.0	2.8
12.....	6	6	16	14	74	88	38	34	16	4.8	2.8	3.0
13.....	5.5	6.5	16	14	82	86	36	31	16	4.7	2.8	3.0
14.....	5.5	6.5	16	15	78	88	35	29	14	4.7	3.0	2.8
15.....	5.5	6.5	14	16	76	86	35	28	13	4.7	3.2	2.8
16.....	5.5	6.5	14	231	80	88	37	28	12	4.7	3.1	2.8
17.....	5.5	6.5	14	169	76	88	36	29	12	4.5	3.1	2.8
18.....	5.5	6.5	14	64	106	82	38	29	12	4.5	3.1	2.7
19.....	5.5	6.5	13	1,360	110	76	37	29	11	4.5	3.0	2.6
20.....	5.5	6.5	12	461	96	72	37	28	11	4.4	3.1	2.6
21.....	5.5	7	13	157	96	70	35	29	10	4.2	3.0	2.6
22.....	6	7	13	122	98	66	32	30	10	3.9	3.0	2.6
23.....	6	6.5	14	122	100	64	34	28	11	3.8	2.7	2.7
24.....	5.5	6.5	16	98	100	56	35	24	10	3.6	2.5	2.8
25.....	5.5	6.5	16	90	94	55	36	24	9.5	3.6	2.5	3.0
26.....	5.5	7	16	80	90	53	35	24	8.5	3.5	2.6	3.0
27.....	5.5	7.5	14	76	88	52	35	23	8	3.5	2.6	2.8
28.....	5.5	8	13	88	88	53	36	23	7.5	3.6	2.6	2.8
29.....	5.5	8	14	104	-----	53	37	23	7.5	3.6	2.6	2.8
30.....	5.5	8.5	14	106	-----	50	38	23	7.5	3.6	2.6	2.8
31.....	5.5	-----	15	90	-----	50	-----	24	-----	3.6	2.6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7.5	5.5	5.92	364
November.....	8.5	5.5	6.47	385
December.....	16	8.5	12.6	775
January.....	1,360	13	118	7,260
February.....	110	74	86.6	4,810
March.....	96	50	77.0	4,730
April.....	53	32	40.4	2,400
May.....	35	23	28.7	1,760
June.....	23	7.5	14.6	869
July.....	7	3.5	4.82	296
August.....	3.9	2.5	3.06	188
September.....	3.0	2.5	2.72	162
The year.....	1,360	2.5	33.1	24,000

BEAR CREEK NEAR CAMP RINCON, CALIF.

LOCATION.—Water-stage recorder near center of sec. 13, T. 2 N., R. 10 W., 1½ miles above junction with West Fork of San Gabriel River and 2 miles northwest of Camp Rincon.

DRAINAGE AREA.—26 square miles.

RECORDS AVAILABLE.—October 1929 to September 1933.

DISCHARGE.—Maximum during year, 566 second-feet Jan. 19 (gage height, 5.29 feet); minimum, 0.1 second-foot for several periods.

1929-33: Maximum, 1,510 second-feet Feb. 9, 1932; minimum, 0.01 second-foot Aug. 27, 1931.

REMARKS.—Entire record furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.9	1.0	1.9	4.5	18	29	22	12	8.5	2.2	0.6	0.1
2.....	1.0	1.2	1.9	4.7	18	29	23	12	8.5	2.2	.6	.2
3.....	1.0	1.4	1.9	4.7	18	30	25	12	8.5	1.9	.6	.1
4.....	.8	1.4	1.9	4.5	17	30	26	12	8.5	1.9	.6	.2
5.....	.6	1.4	1.9	4.5	18	31	26	13	9	1.8	.8	.2
6.....	.6	1.3	2.2	4.5	18	31	24	13	9	2.5	.6	.2
7.....	.9	1.2	2.4	4.5	20	33	23	12	8.5	2.2	.6	.1
8.....	1.4	1.3	2.5	4.5	21	35	22	13	8	1.9	.6	.2
9.....	1.6	1.3	2.7	4.5	21	36	21	13	7.5	1.8	.5	.2
10.....	1.6	1.4	3.1	4.5	20	35	20	14	7.5	1.6	.4	.2
11.....	1.1	1.4	3.3	4.2	20	34	18	14	7	1.3	.4	.3
12.....	1.0	1.4	4.5	5	21	32	18	13	6.5	1.2	.4	.3
13.....	1.0	1.6	3.7	3.3	24	29	17	12	5.5	1.1	.3	.3
14.....	1.0	1.7	3.3	3.3	23	29	17	11	5	1.1	.3	.2
15.....	.9	1.8	3.3	3.3	24	28	16	11	5	1.0	.3	.2
16.....	.8	1.8	3.3	28	25	27	16	12	5	1.0	.2	.2
17.....	.9	1.7	3.3	25	28	26	17	12	4.7	1.1	.2	.2
18.....	1.0	1.7	3.3	11	28	24	16	12	4.5	1.2	.2	.1
19.....	1.0	1.8	3.3	182	26	22	16	11	4.0	1.2	.3	.1
20.....	1.0	1.9	3.3	63	26	22	15	11	4.0	1.3	.3	.1
21.....	1.0	1.9	3.5	26	26	24	14	12	3.5	1.4	.3	.1
22.....	1.1	1.9	3.5	21	26	23	13	12	3.5	1.3	.3	.1
23.....	1.3	1.8	3.7	21	26	23	13	11	3.5	1.3	.3	.1
24.....	1.2	1.8	4.0	17	26	21	14	10	3.3	1.2	.3	.1
25.....	1.0	1.7	3.7	16	24	21	14	11	3.3	1.2	.3	.1
26.....	1.1	1.7	3.5	15	24	20	14	11	2.9	1.0	.3	.1
27.....	1.3	1.7	3.5	15	24	19	13	10	2.7	.8	.2	.1
28.....	1.3	1.8	3.5	18	26	19	13	9.5	2.5	.8	.2	.2
29.....	1.3	1.8	4.0	21	-----	18	13	9	2.5	1.1	.1	.1
30.....	1.2	1.9	4.2	22	-----	18	13	9	2.2	.9	.1	.1
31.....	1.1	-----	4.2	19	-----	20	-----	9.5	-----	.8	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1.6	0.6	1.06	65.2
November.....	1.9	1.0	1.59	94.6
December.....	4.5	1.9	3.17	195
January.....	182	3.3	18.9	1,160
February.....	28	17	22.7	1,260
March.....	36	18	26.4	1,620
April.....	26	13	17.7	1,050
May.....	14	9	11.6	713
June.....	9	2.2	5.49	327
July.....	2.5	.8	1.40	86.1
August.....	.8	.1	.36	22.4
September.....	.3	.1	.16	9.5
The year.....	182	.1	9.13	6,600

NORTH FORK OF SAN GABRIEL RIVER AT CAMP RINCON, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 19, T. 2 N., R. 9 W., 0.7 mile above junction with West Fork of San Gabriel River and 1 mile north of Camp Rincon.

DRAINAGE AREA.—18.8 square miles.

RECORDS AVAILABLE.—October 1929 to September 1933.

DISCHARGE.—Maximum during year, 126 second-feet Jan. 19 (gage height, 5.40 feet); minimum, 1.4 second-feet at various times.

1929-33: Maximum, 223 second-feet Feb. 8, 1932; minimum, 1.4 second-feet at various times during 1933.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	4.5	3.1	3.8	4.2	11	9	6.5	5.5	4.2	2.6	2.3	1.6
2.....	4.2	3.5	3.8	4.2	11	9	6.5	5.5	4.2	2.8	2.3	1.6
3.....	4.2	3.5	3.8	4.5	11	9	6.5	5.5	4.2	2.6	2.6	1.6
4.....	3.8	3.5	3.8	4.2	10	9	7	5.5	4.2	2.3	2.6	1.4
5.....	3.8	3.1	3.8	4.2	10	9	7	5.5	4.5	2.1	2.3	1.4
6.....	3.8	3.1	3.8	4.2	10	9	7	5.5	4.5	2.6	2.3	1.4
7.....	4.2	3.1	3.8	4.2	10	9	7	5.5	4.5	2.8	2.3	1.4
8.....	4.2	2.8	3.8	4.2	10	8.5	7.5	5.5	4.2	2.8	2.3	1.6
9.....	4.2	2.8	4.2	4.2	9.5	8.5	7	5.5	3.8	2.8	2.1	1.6
10.....	4.2	3.1	3.8	3.8	10	8.5	7	5.5	3.8	2.8	1.8	1.6
11.....	3.8	3.1	4.2	3.8	9.5	8.5	7.5	5.5	3.5	2.8	1.8	1.8
12.....	3.8	3.5	4.5	3.8	9	8.5	7.5	5.5	3.1	2.3	1.8	1.8
13.....	3.8	3.5	4.2	3.8	9	8.5	7.5	4.9	3.1	2.3	1.8	1.8
14.....	3.8	3.8	4.5	4.2	9	9	7	4.5	2.8	2.3	2.1	1.8
15.....	3.8	3.8	4.2	3.8	9	9	7	4.5	3.1	2.8	2.1	1.8
16.....	3.5	3.8	4.2	8.5	9	9	7.5	4.9	3.5	2.8	2.1	1.8
17.....	3.5	3.5	3.8	10	9.5	9	7.5	5.5	3.5	2.6	2.1	1.8
18.....	3.5	3.5	3.8	7	9.5	8	8	4.9	3.5	2.6	2.1	1.8
19.....	3.5	3.8	3.8	49	9.5	7	7.5	4.9	3.5	2.3	2.1	1.8
20.....	3.1	3.8	3.8	30	9.5	7	7	4.9	3.5	2.3	2.1	1.8
21.....	3.5	3.8	3.8	14	9.5	7.5	6.5	5.5	3.5	2.1	1.8	1.6
22.....	3.5	3.5	4.2	13	10	7.5	6.5	5.5	3.8	2.1	1.6	1.6
23.....	3.8	3.5	4.2	14	10	7	6	5.5	3.8	2.1	1.6	1.6
24.....	3.8	3.5	3.8	11	9.5	7	6.5	4.9	3.8	1.8	1.6	1.8
25.....	3.8	3.5	3.8	10	9.5	7.5	6	4.9	3.1	1.8	1.6	2.1
26.....	3.8	3.5	3.8	10	10	7	6	4.9	3.1	1.6	1.6	1.8
27.....	3.5	3.5	4.2	10	9.5	7	6	4.9	2.8	1.8	1.6	1.8
28.....	3.8	3.5	4.2	10	9.5	7.5	6	4.5	2.8	2.1	1.6	1.8
29.....	3.8	4.2	4.2	13	-----	7	6	4.2	2.8	2.1	1.6	1.6
30.....	3.8	4.2	4.2	14	-----	7	5.5	4.5	2.8	2.1	1.4	1.6
31.....	3.1	-----	4.2	12	-----	6.5	-----	4.2	-----	2.3	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4.5	3.1	3.79	233
November.....	4.2	2.8	3.48	207
December.....	4.5	3.8	4.0	246
January.....	49	3.8	9.57	588
February.....	11	9	9.73	540
March.....	9	6.5	8.08	497
April.....	8	5.5	6.80	405
May.....	5.5	4.2	5.11	314
June.....	4.5	2.8	3.58	213
July.....	2.8	1.6	2.38	146
August.....	2.6	1.4	1.95	120
September.....	2.1	1.4	1.68	100
The year.....	49	1.4	4.98	3,610

SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR AZUSA, CALIF.

LOCATION.—Hook gage and weirs at Southern California Edison Co.'s power house in sec. 22, T. 1 N., R. 10 W., $1\frac{1}{2}$ miles north of Azusa.

RECORDS AVAILABLE.—1896 to September 1933.

DISCHARGE.—Maximum mean daily during year, 84 second-feet for several periods.

1896-1933: Maximum mean daily, 97 second-feet Nov. 27, 1906: Usually no flow for a few days each year. Average, 37 years (1896-1933), 46.9 second-feet.

REMARKS.—Intake on San Gabriel River in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31, T. 2 N., R. 9 W., 5 miles above gage. Water is used for power development and irrigation. During rainy season part of water from power plant is wasted back into San Gabriel River below station. Records July to September furnished by city of Pasadena.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	22	24	33	76	84	84	84	68	28	13.2	9.2
2	24	23	25	33	76	84	84	83	65	28	13.2	9.7
3	24	23	24	33	76	84	84	81	65	26	12.4	9.7
4	24	24	23	33	76	84	84	78	64	26	13.2	9.5
5	22	24	24	32	76	84	84	79	64	24	12.0	9.0
6	21	24	24	32	76	84	83	79	65	25	12.6	8.9
7	23	23	24	32	76	84	82	78	62	24	12.4	8.7
8	24	23	25	33	76	84	81	77	56	22	11.8	8.9
9	25	22	29	32	76	84	84	79	54	22	11.4	9.2
10	25	22	30	32	76	84	84	80	53	20	11.0	10.2
11	23	23	31	30	76	84	84	81	50	19.2	10.6	10.2
12	22	23	39	31	76	84	84	78	49	19.0	10.6	9.9
13	24	23	37	31	38	84	84	75	47	18.2	9.9	9.9
14	23	23	39	31	0	84	84	71	44	17.8	10.2	9.7
15	23	22	38	31	0	84	84	69	44	17.8	10.4	9.5
16	22	22	37	58	0	84	84	71	41	17.6	11.0	9.2
17	21	21	35	78	13	84	84	71	42	17.4	10.6	9.2
18	22	19.4	35	78	35	84	84	71	41	17.1	10.6	9.2
19	22	21	34	61	0	84	84	72	38	16.3	10.6	9.2
20	22	22	34	76	0	84	84	71	37	16.3	11.2	9.0
21	22	23	34	70	0	84	84	72	35	16.0	11.4	8.9
22	22	22	34	78	41	84	84	74	32	16.3	11.0	9.0
23	22	22	34	78	83	84	83	70	33	14.4	10.2	8.6
24	22	22	37	77	84	84	82	68	32	15.0	10.2	9.5
25	21	22	36	78	84	84	83	66	32	13.5	9.2	9.5
26	22	22	35	78	84	84	84	67	32	13.0	9.2	9.7
27	21	22	33	78	84	84	84	68	31	12.4	10.6	9.5
28	21	22	32	78	84	84	84	69	30	14.2	9.4	8.2
29	22	23	32	76	-----	84	84	68	30	13.3	9.0	9.4
30	22	23	33	76	-----	84	84	69	29	13.9	8.8	8.6
31	22	-----	32	76	-----	84	-----	70	-----	13.2	9.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	25	21	22.5	1,380
November	24	19.4	22.4	1,330
December	39	23	31.7	1,950
January	78	30	54.0	3,320
February	84	0	55.1	3,060
March	84	84	84.0	5,160
April	84	81	83.7	4,980
May	84	66	73.8	4,540
June	68	29	45.5	2,710
July	28	12.4	18.6	1,140
August	13.2	8.8	10.9	670
September	10.2	8.2	9.30	553
The year	84	0	42.6	30,800

ROGERS CREEK NEAR AZUSA, CALIF.

LOCATION.—Water-stage recorder in NW¼NW¼ sec. 23, T. 1 N., R. 10 W., half a mile above mouth of creek and 2½ miles north of Azusa. Altitude, about 800 feet.

DRAINAGE AREA.—6.4 square miles.

RECORDS AVAILABLE.—October 1917 to September 1933. May 1916 to June 1917, discharge measurements only.

DISCHARGE.—Maximum during year, 200 second-feet Jan. 19 (gage height, 4.61 feet); no flow for large part of year.

1917-33: Maximum, about 2,600 second-feet Apr. 7, 1926; no flow several months each year. Average, 16 years (1917-33), 2.43 second-feet.

REMARKS.—Records good. Discharge estimated Dec. 10, 11, Jan. 9-11, Mar. 27, 28, Apr. 18, May 14-23. Two small diversions above station diverted all the water at times. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1-----	0	0.1	7	0.9	0.1	0.4	16-----	0.2	5.5	2.0	0.2	0	0.2
2-----	0	.1	6	.8	0	.3	17-----	.1	6	1.7	.2	0	.2
3-----	0	.1	5.5	.8	0	.3	18-----	.1	2.1	1.7	.2	.1	.2
4-----	0	.1	4.8	.8	0	.3	19-----	.1	97	1.7	.2	0	.1
5-----	0	.1	4.2	.6	0	.3	20-----	.1	26	1.7	.2	0	.1
6-----	0	.1	3.8	.5	0	.3	21-----	.1	8.5	1.6	.2	0	.3
7-----	0	.1	3.5	.4	0	.3	22-----	.1	8	1.4	.1	0	.3
8-----	0	.1	3.2	.4	0	.3	23-----	.1	13	1.4	.2	0	.1
9-----	0	.1	2.9	.3	0	.3	24-----	.2	11	1.2	.2	0	0
10-----	0.1	.1	2.8	.2	0	.4	25-----	.1	8	1.1	.2	0	0
11-----	.3	.1	2.6	.4	0	.5	26-----	.1	6.5	1.1	.1	0	0
12-----	.6	.1	2.6	.4	0	.4	27-----	.1	6	1.0	.1	0	0
13-----	.6	.1	2.4	.3	0	.4	28-----	.1	5	1.0	.1	.1	0
14-----	.4	.1	2.3	.4	0	.3	29-----	.1	9.5	-----	.3	.5	0
15-----	.2	.1	2.1	.3	0	.2	30-----	.2	11	-----	.3	.5	0
							31-----	.1	8.5	-----	.2	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December-----	0.6	0	0.13	8.1
January-----	97	.1	7.52	462
February-----	7	1.0	2.65	147
March-----	.9	.1	.34	20.8
April-----	.5	0	.04	2.6
May-----	.5	0	.21	12.9
The year-----	97	0	.90	653

NOTE.—No flow during months omitted.

FISH CREEK NEAR DUARTE, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T. 1 N., R. 10 W., three-quarters of a mile above mouth of canyon and 3 miles northeast of Duarte.

DRAINAGE AREA.—6.5 square miles.

RECORDS AVAILABLE.—July to September 1916; and July 1917 to September 1933.

DISCHARGE.—Maximum during year, 299 second-feet Jan. 19 (gage height, 4.22 feet); minimum, less than 0.1 second-foot in July, August, September.

1916-33: Maximum, about 2,180 second-feet Apr. 4, 1925 (gage height, 8.0 feet); no flow during periods in 1919, 1920, 1921, 1924, 1929, 1930. Average, 16 years (1917-33), 3.27 second-feet.

REMARKS.—Records good. Discharge estimated Dec. 23, 25-28, Apr. 16-20. No diversions or regulation above station. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0.3	0.2	0.4	0.6	10	2.3	1.6	1.2	0.7	0.2
2.....	.3	.3	.4	.6	8.5	2.1	1.5	1.0	.7	.2
3.....	.3	.4	.3	.6	8	1.9	1.5	1.0	.7	.1
4.....	.3	.3	.3	.6	7	1.9	1.5	.9	.7	.1
5.....	.2	.3	.3	.6	6.5	1.8	1.4	1.0	1.0	.1
6.....	.2	.2	.3	.6	6	1.9	1.4	1.0	1.0	.1
7.....	.2	.2	.3	.6	5.5	2.0	1.3	1.0	.8	.1
8.....	.4	.2	.4	.6	5	1.8	1.3	1.0	.7	.1
9.....	.4	.2	.6	.6	4.6	1.8	1.2	1.0	.6	-----
10.....	.4	.2	.6	.6	4.3	1.7	1.2	1.3	.5	-----
11.....	.3	.2	1.0	.6	4.0	1.6	1.0	1.3	.5	-----
12.....	.2	.2	1.9	.6	3.9	1.6	1.0	1.1	.5	-----
13.....	.2	.2	1.7	.6	3.7	1.7	1.1	1.0	.4	-----
14.....	.2	.2	1.4	.5	3.6	1.7	1.0	1.0	.3	-----
15.....	.2	.2	1.1	.5	3.3	1.6	1.0	.8	.3	-----
16.....	.2	.2	.8	20	3.3	1.7	1.1	.9	.3	-----
17.....	.2	.2	.8	10	3.0	1.8	1.1	1.0	.3	-----
18.....	.2	.2	.8	3.4	2.9	1.7	1.0	.9	.3	-----
19.....	.2	.2	.8	167	2.9	1.6	1.0	.8	.2	-----
20.....	.2	.2	.8	34	2.9	1.5	.9	.8	.2	-----
21.....	.2	.2	.8	13	3.0	1.5	.8	.9	.2	-----
22.....	.2	.3	.8	13	2.9	1.5	.9	1.0	.2	-----
23.....	.2	.3	.8	17	2.7	1.5	1.0	.8	.2	-----
24.....	.2	.2	.8	14	2.4	1.5	1.0	.7	.2	-----
25.....	.2	.2	.8	11	2.4	1.5	1.0	.6	.2	-----
26.....	.2	.2	.7	9	2.6	1.5	1.1	.6	.2	-----
27.....	.2	.3	.7	7.5	2.7	1.5	1.0	.5	.2	-----
28.....	.3	.4	.6	7	2.4	1.6	1.2	.5	.2	-----
29.....	.3	.4	.6	16	-----	1.8	1.8	.5	.2	-----
30.....	.3	.4	.6	19	-----	1.8	1.4	.6	.2	-----
31.....	.3	-----	.6	14	-----	1.7	-----	.8	-----	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.4	0.2	0.25	15.2
November.....	.4	.2	.25	14.7
December.....	1.9	.3	.74	45.2
January.....	167	.5	12.4	762
February.....	10	2.4	4.29	238
March.....	2.3	1.5	1.71	105
April.....	1.8	.8	1.18	70.2
May.....	1.3	.5	.89	54.5
June.....	1.0	.2	.42	25.2
July.....	-----	-----	.054	3.4
August.....	-----	-----	.026	1.6
September.....	-----	-----	.024	1.4
The year.....	167	-----	1.84	1,340

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

SAWPIT CREEK NEAR MONROVIA, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 1 N., R. 11 W., three-eighths of a mile below junction of two main branches and 2 miles north of Monrovia.

DRAINAGE AREA.—5.3 square miles at old location three-eighths of a mile upstream. **RECORDS AVAILABLE.**—November 1916 to September 1933.

DISCHARGE.—Maximum during year, 34 second-feet Jan. 19 (gage height, 1.67 feet); no flow past gage for several months.

1916-33: Maximum, about 2,000 second-feet Apr. 7, 1926, estimated from flow of Rogers Creek; no flow several months each year. Average, 16 years (1917-33), 0.96 second-feet.

REMARKS.—Records good. Discharge estimated Jan. 31 to Feb. 3. Regulation at flood-control dam above gage and diversions by city of Monrovia. For Monrovia pipe line record see p. 78. For combined record see p. 77; average combined discharge, 16 years (1917-33), 2.18 second-feet. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Apr.	June	July	Day	Jan.	Feb.	Apr.	June	July
1	0	3.3	0	0	0.3	16	0.1	0.1	0	0	0.1
2	0	3.3	0	0	.3	17	.4	.1	0	0	.1
3	0	3.2	0	0	.3	18	.2	.1	0	0	.1
4	0	3.3	0	0	.2	19	14	0	0	.3	.1
5	0	3.0	0	0	.2	20	4.7	0	0	.7	.1
6	0	3.0	0	0	.2	21	1.2	0	0	.5	.1
7	0	2.8	0	0	.1	22	.9	0	0	.3	.1
8	0	1.2	0	0	.1	23	2.4	0	0	.3	0
9	0	.1	0	0	.1	24	7	0	0	.2	0
10	0	.1	0	0	.1	25	6	0	0	.2	0
11	0	.1	0	0	.1	26	4.1	0	0	.4	0
12	0	.2	0	0	.1	27	7.5	0	0	.4	0
13	0	.3	0	0	.1	28	7.5	0	.1	.4	0
14	0	.1	0	0	.1	29	3.8		.2	.4	0
15	0	.1	0	0	.1	30	4.1		0	.3	0
						31	3.5				0
Month						Maximum	Minimum	Mean		Run-off in acre-feet	
January						14	0	2.17		133	
February						3.3	0	.871		48.4	
April						.2	0	.01		.6	
June						.7	0	.15		8.7	
July						.3	0	.10		6.1	
The year						14	0	.27		197	

NOTE.—No flow during months omitted.

Combined discharge, in second-feet, of Sawpit Creek and Monrovia pipe line near Monrovia, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	0.8	0.6	0.8	0.8	4.2	1.3	1.1	1.0	0.9	1.1	0.6	0.6
2-----	.8	.6	.8	.8	4.5	1.3	1.1	1.0	.9	1.1	.6	.6
3-----	.8	.6	.8	.8	4.7	1.3	1.1	1.0	.9	1.1	.6	.6
4-----	.8	.6	.8	.8	5	1.3	1.1	1.0	.9	1.0	.6	.6
5-----	.8	.6	.8	.8	4.6	1.2	1.1	1.0	.9	1.0	.6	.6
6-----	.8	.6	.8	.8	4.6	1.2	1.1	1.0	.9	1.0	.6	.6
7-----	.8	.6	.8	.8	4.3	1.2	1.1	1.0	.9	.9	.6	.6
8-----	.8	.8	.8	.8	2.7	1.2	1.1	1.0	.9	.9	.6	.6
9-----	.8	.8	.8	.8	1.6	1.2	1.0	1.0	.9	.9	.6	.6
10-----	.8	.8	.8	.8	1.4	1.2	1.0	1.0	.9	.9	.6	.6
11-----	.8	.8	.9	.8	1.5	1.2	1.0	1.1	.9	.9	.6	.6
12-----	.8	.8	.9	.8	1.9	1.2	1.0	1.1	.9	.9	.6	.6
13-----	.8	.8	.9	.8	2.0	1.2	1.0	1.1	.9	.9	.6	.6
14-----	.8	.8	.8	.8	1.8	1.2	1.0	1.1	.9	.9	.6	.6
15-----	.8	.8	.8	.8	1.7	1.2	1.0	1.1	.9	.9	.6	.6
16-----	.8	.8	.8	.6	1.7	1.2	1.0	1.0	.9	.9	.6	.6
17-----	.8	.8	.8	1.3	1.7	1.2	1.0	1.0	.9	.9	.6	.6
18-----	.8	.8	.8	.8	1.6	1.2	1.0	1.0	.8	.9	.6	.6
19-----	.6	.8	.8	14.4	1.5	1.1	1.0	1.0	1.1	.9	.6	.6
20-----	.6	.8	.8	5.1	1.5	1.1	1.0	1.0	1.5	.9	.6	.6
21-----	.6	.8	.8	1.8	1.4	1.1	1.0	.9	1.3	.9	.6	.6
22-----	.6	.8	.9	1.4	1.4	1.1	1.0	.9	1.1	.9	.6	.6
23-----	.6	.8	.9	2.8	1.4	1.1	1.0	.9	1.1	.8	.6	.6
24-----	.6	.8	.9	7.8	1.3	1.1	1.0	.9	1.0	.8	.6	.6
25-----	.6	.8	.9	7.1	1.3	1.1	1.0	.9	1.0	.8	.6	.6
26-----	.6	.8	.9	5.1	1.3	1.1	1.0	.9	1.2	.8	.6	.6
27-----	.6	.8	.9	8.4	1.3	1.1	1.0	.8	1.2	.8	.6	.6
28-----	.6	.8	.9	8.6	1.3	1.1	1.0	.9	1.2	.8	.6	.6
29-----	.6	.8	.9	4.1	-----	1.1	1.0	.9	1.2	.8	.6	.6
30-----	.6	.8	.9	4.8	-----	1.1	1.0	.9	1.1	.6	.6	.6
31-----	.6	-----	.9	4.4	-----	1.1	-----	.9	-----	.6	.6	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October-----	0.8		0.6		0.72		44.0					
November-----	.8		.6		.75		44.8					
December-----	.9		.8		.84		51.8					
January-----	14.4		.6		2.92		180					
February-----	5.0		1.3		2.33		129					
March-----	1.3		1.1		1.17		71.9					
April-----	1.1		1.0		1.03		61.3					
May-----	1.1		.8		.98		60.1					
June-----	1.5		.8		1.00		59.5					
July-----	1.1		.6		.89		54.5					
August-----	.6		.6		.60		36.9					
September-----	.6		.6		.60		35.7					
The year-----	14.4		.6		1.15		830					

MONROVIA PIPE LINE NEAR MONROVIA, CALIF.

LOCATION.—Staff gage and weirs near southeast corner sec.14, T. 1 N., R. 11 W., 300 feet above settling reservoir at mouth of Sawpit Canyon and 1½ miles north of Monrovia.

RECORDS AVAILABLE.—May 1916 to September 1933.

DISCHARGE.—Maximum mean daily during year, 1.7 second-feet Feb. 4, 12-14; minimum, 0.3 second-foot Jan. 29.

1916-33: Maximum mean daily, 6.1 second-feet May 9, 1922; no flow Nov. 11, 1924, Apr. 8, 16, 1926, Feb. 16, 1927, Feb. 13, 1932. Average, 17 years (1916-33), 1.27 second-feet.

REMARKS.—Records good. Monrovia pipe line furnishes part of water supply of Monrovia. It diverts from two branches of Sawpit Creek. Most of this water is collected by tunnels driven into side of canyon. Gage-height record furnished by city of Monrovia.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.6	0.8	0.8	0.9	1.3	1.1	1.0	0.9	0.8	0.6	0.6
2	.8	.6	.8	.8	1.2	1.3	1.1	1.0	.9	.8	.6	.6
3	.8	.6	.8	.8	1.5	1.3	1.1	1.0	.9	.8	.6	.6
4	.8	.6	.8	.8	1.7	1.3	1.1	1.0	.9	.8	.6	.6
5	.8	.6	.8	.8	1.6	1.2	1.1	1.0	.9	.8	.6	.6
6	.8	.6	.8	.8	1.6	1.2	1.1	1.0	.9	.8	.6	.6
7	.8	.6	.8	.8	1.5	1.2	1.1	1.0	.9	.8	.6	.6
8	.8	.8	.8	.8	1.5	1.2	1.1	1.0	.9	.8	.6	.6
9	.8	.8	.8	.8	1.5	1.2	1.0	1.0	.9	.8	.6	.6
10	.8	.8	.8	.8	1.3	1.2	1.0	1.0	.9	.8	.6	.6
11	.8	.8	.9	.8	1.4	1.2	1.0	1.1	.9	.8	.6	.6
12	.8	.8	.9	.8	1.7	1.2	1.0	1.1	.9	.9	.6	.6
13	.8	.8	.9	.8	1.7	1.2	1.0	1.1	.9	.8	.6	.6
14	.8	.8	.8	.8	1.7	1.2	1.0	1.1	.9	.8	.6	.6
15	.8	.8	.8	.8	1.6	1.2	1.0	1.1	.9	.8	.6	.6
16	.8	.8	.8	.5	1.6	1.2	1.0	1.0	.9	.8	.6	.6
17	.8	.8	.8	.9	1.6	1.2	1.0	1.0	.9	.8	.6	.6
18	.8	.8	.8	.6	1.5	1.2	1.0	1.0	.8	.8	.6	.6
19	.6	.8	.8	.4	1.5	1.1	1.0	1.0	.8	.8	.6	.6
20	.6	.8	.8	.4	1.5	1.1	1.0	1.0	.8	.8	.8	.6
21	.6	.8	.8	.6	1.4	1.1	1.0	.9	.8	.8	.6	.6
22	.6	.8	.9	.5	1.4	1.1	1.0	.9	.8	.8	.6	.6
23	.6	.8	.9	.4	1.4	1.1	1.0	.9	.8	.8	.6	.6
24	.6	.8	.9	.8	1.3	1.1	1.0	.9	.8	.8	.6	.6
25	.6	.8	.9	1.1	1.3	1.1	1.0	.9	.8	.8	.6	.6
26	.6	.8	.9	1.0	1.3	1.1	1.0	.9	.8	.8	.6	.6
27	.6	.8	.9	.9	1.3	1.1	1.0	.8	.8	.8	.6	.6
28	.6	.8	.9	1.1	1.3	1.1	.9	.9	.8	.8	.6	.6
29	.6	.8	.9	.3	---	1.1	.8	.9	.8	.8	.6	.6
30	.6	.8	.9	.7	---	1.1	1.0	.9	.8	.6	.6	.6
31	.6	---	.9	.9	---	1.1	---	.9	---	.6	.6	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.8	0.6	0.72	44.0
November	.8	.6	.75	44.8
December	.9	.8	.84	51.8
January	1.1	.3	.74	45.8
February	1.7	.9	1.46	81.1
March	1.3	1.1	1.17	71.9
April	1.1	.8	1.02	60.7
May	1.1	.8	.98	60.1
June	.9	.8	.86	51.0
July	.8	.6	.79	48.4
August	.6	.6	.60	36.9
September	.6	.6	.60	35.7
The year	1.7	.3	.87	632

SAN DIMAS CREEK NEAR SAN DIMAS, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 1 N., R. 9 W., at mouth of San Dimas Canyon, 3 miles northeast of San Dimas. Altitude, about 1,245 feet.

DRAINAGE AREA.—18.3 square miles.

RECORDS AVAILABLE.—December 1916 to September 1933. April to September 1916, discharge measurements only.

DISCHARGE.—Maximum during year, 16 second-feet Jan. 23 (gage height, 1.51 feet); minimum, less than 0.1 second-foot at various times.

1916-33: Maximum, 1,140 second-feet Feb. 9, 1922; no flow for several months during several years. Average, 16 years (1917-33), 3.60 second-feet.

REMARKS.—Records good. Discharge estimated Oct. 17-19, 21, Nov. 12-14. Flood-control dam above gage regulates flow. San Dimas Water Co. diverts just below gage for irrigation. Some measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0.4	0.3	0.2	0.1	6.5	0.8	3.2	0.3	0.4
2.....	.4	.3	.1	.1	6	1.0	3.2	.3	.4
3.....	.4	.3	.1	.1	5.5	1.1	3.3	.2	.3
4.....	.4	.3	.1	.1	5.5	1.1	3.3	.2	.3
5.....	.4	.2	.1	.1	5.5	1.1	3.3	.2	.3
6.....	.4	.2	.1	.1	5.5	1.0	3.3	.2	.2
7.....	.4	.2	.1	.1	5	1.0	3.3	.2	.2
8.....	.4	.1	.1	.1	5.5	1.0	3.4	.2	.1
9.....	.5	.1	.1	.1	5	1.0	3.4	.2	.1
10.....	.5	.1	.1	.1	3.1	1.0	3.2	.2	.1
11.....	.4	.1	.1	.2	5.5	1.0	3.1	.2	.1
12.....	.4	.1	.1	.2	2.3	.9	3.0	.2	.1
13.....	.5	.1	.1	.2	2.0	1.4	3.1	.2	.....
14.....	.4	.1	.1	.1	3.6	1.9	3.6	.2	.....
15.....	.3	.1	.1	.1	4.3	1.9	5.5	.6	.....
16.....	.3	.1	.1	.3	4.2	2.0	4.4	2.0	.....
17.....	.3	.1	.1	.2	4.2	1.9	4.3	2.0	.....
18.....	.3	.1	.1	.2	3.3	1.7	4.3	2.0	.....
19.....	.4	.1	.1	1.7	2.5	1.9	4.2	1.8	.....
20.....	.4	.1	.1	1.6	2.4	2.3	4.1	1.8	.....
21.....	.4	.1	.1	.6	1.9	2.4	4.0	1.8	.....
22.....	.3	.1	.1	.4	.4	2.6	3.6	2.4	.....
23.....	.3	.1	.1	6.7	.4	3.2	3.4	2.7	.....
24.....	.3	.1	.1	14	.4	3.2	3.3	3.0	.....
25.....	.3	.1	.1	14	.5	3.1	3.3	3.7	.....
26.....	.3	.1	.1	13	.9	3.2	2.9	3.7	.....
27.....	.3	.1	.1	11	.9	3.2	1.4	3.4	.....
28.....	.3	.2	.1	7.5	.9	3.3	1.5	.9	.....
29.....	.3	.2	.1	8	.....	3.4	1.2	.8	.....
30.....	.4	.2	.1	8.5	.....	3.3	.4	.7	.....
31.....	.4	.....	.1	7	.....	3.2	.....	.5	.....

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.5	0.3	0.37	22.8
November.....	.3	.1	.15	8.7
December.....	.2	.1	.10	6.3
January.....	14	.1	3.11	191
February.....	6.5	.4	3.35	186
March.....	3.4	.8	1.97	121
April.....	5.5	.4	3.25	193
May.....	3.7	.2	1.19	73.2
June.....	.4	.....	.125	7.4
July.....	.....	.....	.055	3.4
August.....	.....	.....	.034	2.1
September.....	.....	.....	.041	2.4
The year.....	14	.....	1.13	817

NOTE.—Discharge, less than 0.1 second-foot June 13 to Sept. 30.

DALTON CREEK NEAR GLENDORA, CALIF.

LOCATION.—Water-stage recorder at center of sec. 21, T. 1. N., R. 9 W., at Glendora Irrigation Co.'s dam a quarter of a mile above mouth and $2\frac{1}{4}$ miles northeast of Glendora. Altitude, about 1,250 feet.

DRAINAGE AREA.—7.5 square miles.

RECORDS AVAILABLE.—December 1919 to September 1933.

DISCHARGE.—Maximum during year, 2.3 second-feet Jan. 19 (gage height, 1.15 feet); no flow for several months.

1919-33: Maximum, 660 second-feet Feb. 16, 1927 (gage height, 3.30 feet); no flow for several months each year. Average, 13 years (1920-33), 1.08 second feet.

REMARKS.—Records good. Glendora Irrigation Co. diverts water half a mile and $1\frac{1}{2}$ miles above gage through a 10-inch pipe line. A 12-inch pipe line diverts water just below gage. Flow regulated by flood-control dam about 1 mile upstream. Results of several discharge measurements furnished by Los Angeles Flood Control District.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1-----	0	1.1	0.6	0.1	16-----	0	0.6	0.4	0
2-----	0	1.2	.6	.1	17-----	0	.5	.4	0
3-----	0	1.1	.6	.1	18-----	0	.5	.4	0
4-----	0	1.0	.6	.1	19-----	0.4	.5	.3	0
5-----	0	.9	.6	.1	20-----	1.2	.6	.3	0
6-----	0	.8	.6	.1	21-----	.6	.7	.3	0
7-----	0	.8	.7	.1	22-----	.4	.7	.4	0
8-----	0	.8	.6	.1	23-----	.6	.8	.4	0
9-----	0	.8	.7	0	24-----	.7	.8	.3	0
10-----	0	.8	.6	0	25-----	.5	.8	.2	0
11-----	0	.7	.5	0	26-----	.4	.8	.2	0
12-----	0	.7	.6	0	27-----	.4	.8	.2	0
13-----	0	.6	.6	0	28-----	.4	.7	.2	0
14-----	0	.6	.5	0	29-----	1.0	-----	.1	0
15-----	0	.6	.4	0	30-----	1.2	-----	.1	0
					31-----	1.2	-----	.1	-----
Month					Maximum	Minimum	Mean	Run-off in acre-feet	
January-----					1.2	0	0.29	17.8	
February-----					1.2	.5	.76	42.3	
March-----					.7	.1	.42	26.0	
April-----					.1	0	.03	1.6	
The year-----					1.2	0	.12	87.7	

NOTE.—No flow during months omitted.

LITTLE DALTON CREEK NEAR GLENDORA, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 21, T. 1 N., R. 9 W., 500 feet above junction with Dalton Creek and 2 miles northeast of Glendora.

DRAINAGE AREA.—3.3 square miles.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum for year, 25 second-feet Jan. 19 (gage height, 0.62 foot); no flow for several months.

1929-33: Maximum, 72 second-feet Jan. 31, 1932; no flow for several months each year.

REMARKS.—Entire record furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.
1-----	0.0	0.9	0.1	11-----	0	0.3	0.1	21-----	0.9	0.2	0
2-----	0	.8	.1	12-----	0	.2	.1	22-----	1.2	.1	0
3-----	0	.6	.1	13-----	0	.2	0.1	23-----	2.6	.1	.1
4-----	0	.6	.1	14-----	0	.2	0	24-----	1.4	.1	.1
5-----	0	.6	.1	15-----	0	.2	.1	25-----	.8	.1	0
6-----	0	.6	.1	16-----	.3	.3	.1	26-----	.8	.1	0
7-----	0	.5	.1	17-----	.1	.2	.1	27-----	.6	.1	0
8-----	0	.4	.1	18-----	0	.2	.1	28-----	1.0	.1	0
9-----	0	.3	.1	19-----	7.5	.2	.1	29-----	2.6	-----	0
10-----	0	.3	.1	20-----	3.4	.2	0	30-----	1.8	-----	0
								31-----	1.4	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	7.5	0	0.85	52.4
February-----	.9	.1	.31	17.3
March-----	.1	0	.06	4.0
April-----	-----	-----	.01	.6
The year-----	7.5	0	.102	74.3

* Estimated.

NOTE.—No flow during months omitted.

SAN JOSE CREEK NEAR WHITTIER, CALIF.

LOCATION.—Water-stage recorder on Workman-Mill road bridge in Paso de Bartolo grant about 3 miles north of Whittier.

DRAINAGE AREA.—85.2 square miles.

RECORDS AVAILABLE.—January 1929 to September 1933.

DISCHARGE.—Maximum during year, 825 second-feet Jan. 29 (gage height, 3.99 feet); minimum, 0.01 second-foot at various times.

1929-33: Maximum, 1,540 second-feet Feb. 9, 1932; no flow at times during 1929 and 1930.

REMARKS.—Entire record furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.1	0.2	0.2	0.2	0.5	0.4	0.1	0.2	0.1			0.1
2.....	.1	.2	.2	.2	.4	.2	.2	.2	.1			.1
3.....	.2	.2	.2	.2	.4	.2	.1	.1	.1			.1
4.....	.2	.2	.2	.1	.4	.3	.1		.1			
5.....	.1	.2	.1	.2	.4	.2	.1		.2			
6.....	.1	.1	.1	.3	.3	.2	.2	.2	.1			
7.....	.2	.2	.1	.2	.2	.2	.2	.3	.1	0.1		
8.....	.1	.2	.2	.2	.3	.2	.4	.2		.1		
9.....	.2	.2	.5	.1	.4	.2	.4	.2				.1
10.....	.2	.2	.4	.1	.4	.2	.1	.2				
11.....	.1	.2	.4	.2	.3	.3	.1	.2				
12.....	.2	.6	.5	.2	.3	.2	.1	.2	.1			
13.....	.1	.4	.4	.2	.2	.2	.2	.1				.2
14.....	.2	.2	.3	.5	.2	.1	.1					
15.....	.2	.2	.2	.7	.2	.2	.1					.2
16.....	.3	.2	.3	.6	.2	.2	.1		.2			.4
17.....	.2	.2	.3	5.5	.2	.1	.1		.4			.3
18.....	.2	.1	.3	6	.2	.1		.2	.2			.2
19.....	.1	.1	.4	79	.2	.1		.4	.2			.2
20.....	.1	.2	.4	49	.2	.1	.2	.2	.1			.2
21.....	.1	.2	.4	2.0	.2	.1	.4	.1			0.2	
22.....	.2	.2	.3	7.5	.2	.1	.3		.2		.1	
23.....	.2	.2	.2	58	.3	.1			.2			
24.....	.1	.3	.3	8	.2	.1	.2		.2	.1		
25.....	.1	.2	.2	.7	.1	.1	.4	.2				
26.....	.2	.2	.2	.4	.2	.1	.4	.1	.2			
27.....	.2	.1	.2	.3	.2	.1	.2	.1	.2			
28.....	.2	.1	.2	.2	.2	.2	.1	.2				
29.....	.2	.2	.2	192		.2	.1	.2				.1
30.....	.2	.2	.2	70		.2	.2	.2				.2
31.....	.2		.1	1.8		.2		.2				

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.3	0.1	0.16	10.1
November.....	.6	.1	.21	12.3
December.....	.5	.1	.26	16.3
January.....	192	.1	15.6	959
February.....	.5	.1	.27	14.9
March.....	.4	.1	.17	10.7
April.....	.4		.18	10.5
May.....	.4		.154	9.5
June.....	.4		.143	8.5
July.....	.1		.068	4.2
August.....	.2		.046	2.8
September.....	.4		.122	7.3
The year.....	192		1.48	1,070

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

BREA CREEK AT FULLERTON, CALIF.

LOCATION.—Water-stage recorder in San Juan Cajon de Santa Ana grant, in Fullerton City Park, at Fullerton, Orange County.

DRAINAGE AREA.—27.5 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 150 second-feet Jan. 19 (gage height, 3.78 feet); no flow most of year.

1930–33: Maximum, 427 second-feet Feb. 9, 1932; no flow most of each year.

REMARKS.—Records furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1932–33

Jan. 16.....	0.2	Jan. 21.....	0.3	Jan. 24.....	0.3
Jan. 19.....	17	Jan. 22.....	2.5	Jan. 29.....	15
Jan. 20.....	8.5	Jan. 23.....	2.9	Jan. 30.....	4.1

NOTE.—No flow during year except for days given above. Mean discharge for January, 1.64 second-feet; for year, 0.14 second-foot. Total run-off for January and year, 101 acre-feet.

CARBON CREEK AT OLINDA, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 17, T. 3 S., R. 9 W., on Rose Drive bridge half a mile south of Olinda.

DRAINAGE AREA.—19.1 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum discharge during year, 186 second-feet Jan. 29 (gage height, 3.70 feet); no flow most of year.

1930–33: Maximum discharge, 279 second-feet Feb. 8, 1932; no flow most of each year.

REMARKS.—Records furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1932–33

Jan. 16.....	1.6	Jan. 21.....	0.4	Jan. 29.....	29
Jan. 17.....	.5	Jan. 22.....	3.6	Jan. 30.....	0.9
Jan. 19.....	18	Jan. 23.....	2.5	Jan. 31.....	.9
Jan. 20.....	6				

NOTE.—No flow during year except for days given above. Mean discharge for January, 2.05 second-feet; for year, 0.17 second-foot. Total run-off for January and year, 126 acre-feet.

LOS ANGELES RIVER BASIN

LOS ANGELES RIVER AT LOS ANGELES, CALIF.

LOCATION.—Water-stage recorder on Figueroa Street Bridge (formerly Dayton Avenue), Los Angeles, 0.1 mile above junction with Arroyo Seco.

DRAINAGE AREA.—510 square miles.

RECORDS AVAILABLE.—December 1929 to September 1933.

DISCHARGE.—Maximum during year, 5,780 second-feet Jan. 19 (gage height, 7.71 feet); no flow for several periods.

1929-33: Maximum, that of Jan. 19, 1933; no flow for several periods each year.

REMARKS.—Entire record furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	14	1.0	0.3	2.3	0	0.1	0.4	0.4
2	0	0	5.5	1.0	.2	1.4	0	.2	.7	.4
3	0	.4	2.1	1.0	.1	1.4	0	.2	.8	.4
4	0	0	1.7	1.0	0	.4	0	0	.8	.6
5	0	0	1.0	.9	0	.2	.4	.2	.8	.4
6	0	3.0	.9	.9	.1	.1	0	.4	.8	.8
7	0	0	.8	.8	.3	0	0	.6	.7	.4
8	1.6	0	1.0	1.2	.4	0	0	.7	.7	1.0
9	5	0	1.2	1.7	.4	.1	0	.4	.7	1.4
10	.9	.1	1.4	1.6	.8	.8	.1	.8	.4	1.7
11	1.4	0	1.6	1.7	1.4	.2	0	1.0	.4	1.6
12	10	0	1.6	1.6	1.4	.1	0	1.4	.4	1.4
13	1.4	.2	1.7	.6	1.0	.6	0	1.4	.4	1.7
14	.2	0	1.7	.1	.9	.7	0	.8	.4	1.7
15	1.0	0	1.7	.4	.7	.2	0	.6	.4	1.4
16	0	475	1.9	.6	.3	.1	.3	.4	.4	.9
17	0	127	.9	.1	.3	.1	.7	.3	.6	.9
18	.6	1.6	.9	.1	.3	.4	.6	.3	.8	.9
19	6.5	2,330	0	.8	.2	.2	.4	.4	.9	1.9
20	3.9	891	0	.9	0	.1	.6	.4	.7	2.1
21	1.9	92	.7	1.7	.3	.2	.9	.6	.4	2.3
22	9	120	1.6	1.9	.6	.1	.6	.7	.8	2.6
23	20	463	1.7	2.1	.3	.2	.3	.8	.8	2.6
24	3.6	141	1.0	2.1	.9	.4	.6	1.0	.7	2.6
25	1.9	34	1.0	2.1	.9	.4	.3	1.0	.8	2.1
26	6	9	1.0	2.1	3.0	.1	0	.3	.8	1.7
27	2.8	14	1.0	1.9	3.3	0	.1	.4	.4	.8
28	4.5	13	1.0	.6	3	0	.2	.4	.1	1.2
29	1.4	180	-----	.6	1.6	0	.3	.3	.2	1.4
30	.4	150	-----	.4	1.0	0	.2	.4	.1	1.2
31	.1	34	-----	.4	-----	0	-----	.4	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	20	0	2.71	167
January	2,330	0	164	10,100
February	14	0	1.81	101
March	2.1	.1	1.09	67.0
April	3.3	0	.71	42.2
May	2.3	0	.35	21.4
June	.9	0	.22	13.1
July	1.4	0	.54	33.5
August	.9	.1	.56	34.5
September	2.6	.4	1.35	80.3
The year	2,330	0	14.7	10,700

NOTE.—No flow during months omitted.

LOS ANGELES RIVER NEAR DOWNEY, CALIF.

LOCATION.—Water-stage recorder in San Antonio grant, on Stewart and Gray road bridge half a mile above junction with Rio Hondo and 2½ miles west of Downey, Los Angeles County.

DRAINAGE AREA.—614 square miles.

RECORDS AVAILABLE.—March 1928 to September 1933.

DISCHARGE.—Maximum during year, 7,070 second-feet Jan. 19 (gage height, 9.66 feet); no flow at various times.

1928-33: Maximum, that of Jan. 19, 1933; no flow during part of most years.

REMARKS.—Entire record furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1	1.4	0.8	16	12	2.9	7.5	10	3.4	1.4	2.0	0.9
2	3.2	1.4	1.5	16	6.5	2.7	5	13	2.6	1.0	2.1	.8
3	2.4	1.3		15	11	4.0	4.0	13	2.3	1.2	2.2	1.3
4	1.9	1.3	1.4	15	10	5.5	3.2	10	2.3	.7	2.1	.9
5	1.6	1.9	1.6	13	11	2.6	4.0	9.5	3.4	.6	1.9	.9
6												
7	1.4	.8	1.8	12	11	2.3	1.9	8.5	.5	1.1	1.9	1.2
8	1.4	.8	2.1	11	12	2.3	2.3	9.5	.5	1.3	2.2	1.2
9	1.3	1.1	5.5	11	14	2.9	1.5	8	.5	1.4	2.1	1.2
10	1.4	1.1	12	10	20	5	2.6	7	.7	1.1	1.8	1.0
11	1.6	1.2	22	9	10	2.7	2.5	7.5	1.0	1.0	1.9	.5
12												
13	1.3	1.3	64	8.5	7	1.4	2.1	5.5	1.2	1.2	1.9	.4
14	1.2	1.3	102	8	5	2.3	1.4	4.3	1.4	1.3	1.8	1.1
15	1.2	1.2	49	6	4.3	2.1	1.3	3.1	1.5	1.4	1.5	1.2
16	1.0	1.1	47	4.7	2.8	1.6	1.5	2.2	1.3	1.5	1.0	1.2
17	.6	1.1	46	3.4	1.8	1.2	1.4	1.4	1.3	1.8	1.5	1.2
18												
19	.3	1.0	44	1,250	.9	1.6	1.0	1.0	1.4	1.9	1.6	7
20	.1	1.1	42	223	1.2	2.0	1.4	1.9	1.4	2.0	1.5	.2
21	0	1.3	41	37	.5	1.4	1.8	1.2	1.3	2.0	1.5	.5
22	.4	1.0	39	2,900	.4	.2	1.3	1.2	1.4	2.1	1.5	.8
23	1.8	.9	37	995	.5	1.0	1.2	1.3	1.6	2.5	1.4	1.1
24												
25	1.2	.9	36	187	.5	.7	2.1	1.4	1.6	2.7	1.4	1.1
26	1.3	.8	34	258	.7	.6	2.9	1.4	1.6	2.7	1.7	1.1
27	.7	.7	32	393	.7	.8	2.7	1.5	1.8	2.4	1.8	1.2
28	.5	.8	47	96	.9	1.7	4.4	1.5	1.7	2.5	1.8	1.3
29	.5	.2	35	38	1.3	2.7	5	2.1	1.8	2.3	1.9	1.6
30												
31	.5	0	26	14	1.4	3.9	6.5	2.3	1.7	2.5	1.6	1.7
32	1.2	0	21	13	2.1	6.5	8	2.4	1.7	2.1	1.2	1.7
33	1.7	0	17	17	2.4		9	5.5	2.4	1.6	1.7	1.8
34	1.6	.2	17	211		12	8	2.7	1.5	1.6	1.7	2.7
35	1.6	.9	16	131		17	10	3.2	1.3	1.7	1.7	2.9
36	1.3		16	32		10		3.6		1.8	1.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.1	0	1.30	79.9
November	1.9	0	.94	55.8
December	102	.8	27.7	1,700
January	2,900	3.4	224	13,800
February	20	.4	5.42	301
March	17	.2	3.63	223
April	10	1.0	3.47	206
May	13	.9	4.60	283
June	3.4	.5	1.58	94.0
July	2.7	.6	1.69	104
August	2.2	1.0	1.70	105
September	2.9	.2	1.18	70.2
The year	2,900	0	23.5	17,000

LOS ANGELES RIVER AT LONG BEACH, CALIF.

LOCATION.—Water-stage recorder on State Street Bridge, Long Beach, Los Angeles County.

DRAINAGE AREA.—About 1,060 square miles.

RECORDS AVAILABLE.—December 1928 to September 1933.

DISCHARGE.—Maximum during year, 8,710 second-feet Jan. 19 (gage height, 10.14 feet); minimum, 0.3 second-feet Dec. 25, 26.

1928-33: Maximum, that of Jan. 19, 1933; no flow at times during 1929, 1930.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	3.1	5	0.5	25	6	3.8	10	4.8	2.9	4.8	3.5
2	1.8	2.7	4.6	.6	11	6.5	3.1	10	4.6	3.5	4.0	3.5
3	2.1	2.1	4.6	.9	7.5	7	3.8	10	4.0	2.9	3.8	3.8
4	2.9	2.7	4.3	1.2	8.5	11	5	7	4.0	3.1	4.0	3.8
5	3.1	3.1	4	1.6	6.5	8	3.5	5	18	3.5	3.5	4.0
6	3.5	3.3	3.8	3.1	8	5.5	5	4.3	12	3.3	3.8	4.0
7	3.8	3.5	3.5	5.5	10	4.8	7	4.3	4.8	3.1	3.5	4.3
8	3.5	3.5	3.8	6.5	12	4.3	5.5	4.3	2.5	2.7	3.5	4.3
9	4.8	3.8	5	9	14	4.6	6.5	4.0	3.1	2.1	3.5	4.3
10	4.0	3.8	4.8	8.5	10	9.5	7.5	4.0	3.3	2.5	3.5	4.3
11	4.0	3.8	6.5	10	5.5	14	6.5	2.9	2.7	2.1	3.5	4.3
12	3.5	3.5	74	12	4.6	8	4.3	3.1	2.9	2.1	3.1	4.3
13	3.5	3.5	72	7.5	3.3	3.8	3.8	2.3	3.3	1.9	2.7	4.3
14	3.8	3.5	11	5.5	3.1	5.5	3.1	2.9	2.9	3.3	2.9	4.3
15	4.0	3.5	3.8	4.3	1.9	3.1	2.9	2.7	3.3	3.8	3.3	4.3
16	3.5	3.8	1.8	785	1.4	5	4.0	2.9	3.3	4.3	3.8	4.3
17	3.3	3.8	.9	263	1.9	12	4.6	2.7	4.0	4.8	3.1	4.3
18	2.5	4.0	.9	60	2.3	9.5	4.6	3.1	3.8	5	3.5	4.3
19	2.7	3.8	1.2	3,310	2.5	8	3.5	3.3	3.3	5	3.8	4.3
20	2.9	3.8	1.8	1,860	2.9	6.5	4.0	3.3	4.3	5	4.0	4.3
21	3.5	3.8	2.3	163	3.1	7.5	3.8	3.5	3.8	5.5	3.3	4.0
22	3.5	4.0	2.9	296	3.8	5	4.0	3.3	4.0	4.6	4.0	3.8
23	3.8	4.0	4.0	669	5.5	4.3	4.3	3.3	4.0	4.3	4.8	3.8
24	3.8	4.6	2.9	178	6.5	3.8	4.3	4.0	3.5	5	4.3	4.0
25	4.3	4.6	.3	99	7	3.3	4.8	3.5	3.8	4.6	4.6	4.0
26	4.6	4.8	.3	30	7	3.5	4.8	3.5	3.8	5	3.5	4.0
27	4.3	4.6	.6	23	6.5	3.3	5.5	4.6	3.1	5.5	4.0	4.0
28	4.0	5	1.1	39	6.5	3.3	24	4.3	3.3	4.8	3.5	4.3
29	3.8	4.6	1.9	859	-----	4.3	16	4.6	2.3	4.6	3.8	3.8
30	3.3	5.5	1.6	971	-----	7	19	4.6	3.1	4.8	3.3	3.1
31	3.1	-----	1.0	89	-----	5.5	-----	4.6	-----	4.6	3.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.8	1.8	3.45	2,212
November	5.5	2.1	3.80	226
December	74	.3	7.62	469
January	3,310	1.5	315	19,400
February	25	1.4	6.71	373
March	14	3.1	6.24	384
April	24	2.9	6.08	362
May	10	2.3	4.38	269
June	18	2.3	4.32	257
July	5.5	1.9	3.88	239
August	4.8	2.7	3.68	226
September	4.3	3.1	4.05	241
The year	3,310	.3	31.3	22,700

PACOIMA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.—Water-stage recorder in SE¼NE¼ sec. 24, T. 3 N., R. 15 W., 600 feet above mouth of canyon and 4 miles northeast of San Fernando. Staff gage used Oct. 1 to Mar. 23.

DRAINAGE AREA.—27.9 square miles.

RECORDS AVAILABLE.—March 1916 to September 1933.

DISCHARGE.—Maximum mean daily during year, 81 second-feet Apr. 13; no flow for several periods.

1916-33: Maximum, about 1,860 second-feet Feb. 16, 1927; usually no flow for several months each year. Average, 16 years (1917-33), 5.46 second-feet.

REMARKS.—Entire flow regulated by flood-control dam above gage. Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	9	0.5	0.4	0.2	10	0	4.1	2.5	2.3	2.2	2.0	1.7
2.....	9	.3	.2	.2	10	0	4.1	2.4	2.3	2.2	2.2	1.7
3.....	9.5	.3	0	.2	10	2.7	4.1	2.2	2.2	2.3	2.2	1.8
4.....	8.5	.4	0	.2	10	4.0	3.9	2.2	2.3	2.3	2.0	1.8
5.....	8.5	.4	0	.2	10	4.0	.9	2.3	2.4	2.3	1.9	1.7
6.....	8	.5	0	.2	6.5	2.3	2.3	2.0	2.4	2.3	1.9	1.9
7.....	8	.5	0	.2	6.5	1.8	2.3	2.2	2.3	2.2	2.2	1.7
8.....	6.5	.5	0	.2	10	1.9	2.3	2.3	2.3	2.0	2.0	1.3
9.....	3.8	.5	0	.2	7.5	1.9	2.3	2.4	2.3	2.3	2.0	1.8
10.....	.8	.3	0	.2	5.5	1.9	2.4	2.3	2.4	2.3	2.0	1.9
11.....	0	.3	0	.2	5	3.2	4.7	2.3	2.6	2.0	1.8	1.8
12.....	5	.3	0	.2	5	3.8	24	2.3	2.6	1.7	1.9	1.8
13.....	7.5	.5	0	.2	5	3.8	28	2.2	2.6	2.0	1.8	1.5
14.....	6.5	.6	0	.2	3.5	3.8	2.4	2.3	2.5	2.0	1.8	1.8
15.....	7.5	.5	0	.2	1.7	3.8	3.6	2.3	2.5	2.0	1.8	1.8
16.....	8	.5	0	.2	0	3.8	3.8	2.3	2.5	2.0	1.7	1.8
17.....	7	.5	.4	1.0	0	3.8	3.9	2.3	2.4	2.0	1.7	1.9
18.....	2.5	.6	.5	1.5	3.3	3.8	3.8	2.3	2.5	2.0	1.8	.7
19.....	0	.4	.5	1.8	5.5	3.8	3.1	2.3	2.5	2.0	1.8	1.2
20.....	0	.4	.8	2.0	1.8	1.3	2.4	2.2	2.5	1.9	1.8	1.4
21.....	0	.3	.8	2.0	0	2.0	2.4	2.3	2.4	2.0	1.8	3.3
22.....	0	.3	.5	2.0	0	3.0	2.4	2.2	2.5	2.0	1.9	4.5
23.....	0	.3	.3	4.0	0	3.5	2.4	1.9	2.5	2.0	.2	4.4
24.....	.3	.4	.4	8.5	0	4.7	2.4	2.0	2.4	2.0	0	4.2
25.....	.6	.3	.4	10	0	2.4	2.4	2.2	2.4	2.0	1.6	3.6
26.....	.7	.4	.4	10	0	2.4	2.4	2.2	2.4	2.0	2.2	3.6
27.....	.6	.3	.3	10	0	2.4	2.4	2.2	2.3	2.0	2.2	3.6
28.....	.6	.4	.2	10	0	2.4	2.4	2.4	2.4	2.0	2.2	3.6
29.....	.5	.3	.2	10	-----	2.4	2.4	2.4	2.4	2.0	2.0	3.5
30.....	.8	.4	.2	10	-----	2.5	2.4	2.4	2.4	2.4	1.9	3.6
31.....	.5	-----	.2	10	-----	2.5	-----	2.4	-----	2.2	1.9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	9.5	0	3.88	239
November.....	.6	.3	.41	24.2
December.....	.8	0	.22	13.3
January.....	10	.2	3.10	191
February.....	10	0	4.17	232
March.....	4.7	0	2.76	170
April.....	28	.9	4.41	262
May.....	2.5	1.9	2.26	139
June.....	2.6	2.2	2.42	144
July.....	2.3	1.7	2.08	128
August.....	2.2	0	1.81	111
September.....	4.5	.2	2.36	140
The year.....	28	0	2.48	1,790

TUJUNGA CREEK NEAR COLBY RANCH, CALIF.

LOCATION.—Water-stage recorder 25 feet above Edison road crossing, 300 feet below Lucas Creek, 4 miles above Tujunga flood-control dam no. 1, and 3½ miles west of Colby ranch.

DRAINAGE AREA.—66.9 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 324 second-feet Jan. 19 (gage height, 8.67 feet); no flow for several periods.

1930-33: Maximum, 3,910 second-feet Feb. 8, 1932; no flow part of each year.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	0.2	0.6	0.9	8.5	18	8	3.8	1.5	0.1
2	0	.2	.5	.9	8	21	7.5	3.8	1.5	.1
3	0	.3	.5	.9	7.5	21	7.5	3.8	1.5	.1
4	0	.4	.5	.9	7	21	7	3.8	1.5	.1
5	0	.4	.5	.9	6.5	21	7	3.8	2.0	.1
6	0	.4	.5	.9	7	21	6	3.8	2.2	.1
7	0	.3	.6	.9	7	21	5.5	3.8	1.8	.1
8	0	.3	.7	.9	6.5	21	5.5	3.5	1.5	.1
9	0	.3	.7	1.0	6.5	21	4.9	3.5	1.3	.1
10	0	.4	.7	1.0	6.5	21	4.7	4.2	1.1	.1
11	0	.4	.9	.9	6.5	20	4.4	4.7	.9	.1
12	0	.4	1.2	.9	6.5	18	4.2	4.1	.8	.1
13	0	.4	.9	.9	7.5	16	4.1	3.8	.7	.1
14	0	.4	.8	.9	7.5	15	3.9	3.8	.6	.1
15	0	.4	.8	.9	8	14	3.8	3.5	.5	.1
16	0	.3	.8	9.5	9	15	3.6	3.1	.4	.1
17	0	.3	.9	8.5	12	14	3.6	3.1	.4	.1
18	.1	.3	.9	5	11	14	3.5	3.1	.4	0
19	.1	.4	.9	108	9.5	14	3.5	2.8	.4	0
20	.1	.4	.9	35	10	13	3.5	2.4	.4	0
21	.1	.5	.9	17	11	12	3.5	3.1	.4	0
22	.1	.6	1.0	14	12	11	3.2	3.6	.3	0
23	.1	.7	1.0	15	13	11	3.2	2.8	.3	0
24	.1	.7	1.0	9.5	13	11	3.1	2.5	.3	0
25	0	.8	1.0	7.5	11	9.5	3.1	2.2	.3	0
26	0	.9	1.0	7.5	11	9	3.2	2.0	.2	0
27	.1	1.0	.9	7.5	12	8.5	3.2	1.8	.2	0
28	.1	1.0	.9	7.5	14	8.5	3.4	1.5	.2	0
29	.1	.9	1.0	11	-----	8.5	3.4	1.5	.1	0
30	.1	1.0	.9	10	-----	8.5	3.6	1.5	.1	0
31	.1	-----	.9	9	-----	8	-----	1.5	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.1	0	0.04	2.4
November	1.0	.2	.50	29.8
December	1.2	.5	.82	50.2
January	108	.9	9.52	585
February	14	6.5	9.12	506
March	21	8	15.0	922
April	8	3.1	4.49	267
May	4.7	1.5	3.10	191
June	2.2	.1	.79	47.2
July	.1	0	.05	3.4
The year	108	0	3.60	2,600

NOTE.—No flow during months omitted.

TUJUNGA CREEK NEAR SUNLAND, CALIF.

LOCATION.—Water-stage recorder near center of sec. 32, T. 3 N., R. 13 W. (unsurveyed), a quarter of a mile downstream from a partly constructed and abandoned dam, 2 miles above mouth of canyon, and 4 miles northeast of Sunland.

DRAINAGE AREA.—106 square miles.

RECORDS AVAILABLE —October 1916 to September 1933.

DISCHARGE.—Maximum during year, 1,390 second-feet Jan. 19 (gage height, 9.09 feet); minimum, 1.1 second-feet Nov. 24–26, Jan. 11.

1916–33: Maximum, 8,500 second-feet Dec. 19, 1921 (gage height, 6.20 feet); minimum, 0.1 second-foot during summer months, in 1919, 1924, 1928, 1929, 1930, 1931. Average, 16 years (1917–33), 22.7 second-feet.

REMARKS.—Discharge regulated by flood-control dam 7 miles upstream. There are two or three small irrigation diversions above gage. Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	4.5	1.6	2.5	24	8	4.4	12	12	8	8.5	10
2	7	4.2	1.7	2.1	24	8	4.3	11	12	8	8	11
3	7	4.5	1.8	1.8	21	7	4.2	9	12	8	7.5	10
4	7	4.5	1.8	1.8	21	7	4.1	8.5	11	8	6.5	11
5	7	4.0	1.9	1.7	20	7.5	4.0	9	11	8	7	10
6	7	3.4	1.9	1.5	19	8	4.0	9	10	8	7	10
7	7	2.8	2.1	1.4	18	7	4.0	9.5	9.5	8	9	10
8	6.5	3.6	2.3	1.3	18	6	3.9	9.5	10	8	12	9.5
9	6	3.1	2.8	1.2	18	6	3.9	9.5	10	8	9.5	10
10	5.5	3.3	3.3	1.2	17	6	3.8	10	10	8.5	9	10
11	4.7	3.3	4.2	1.1	17	5.5	3.8	10	10	8	9.5	10
12	4.5	2.9	4.5	2.4	16	5	3.8	10	10	8	9	11
13	4.3	2.7	4.2	2.3	16	4.7	4.0	10	9.5	8.5	9	11
14	4.0	2.4	2.8	2.1	16	4.3	4.2	10	9	8.5	9.5	11
15	3.6	2.4	2.8	2.2	15	4.2	4.2	10	9	9.5	9.5	12
16	3.4	2.1	2.4	85	15	4.4	4.3	10	9	9.5	9.5	11
17	3.1	1.9	2.4	39	15	4.6	4.2	11	9	10	9.5	11
18	2.8	1.7	2.4	12	15	4.4	4.7	11	8.5	11	9.5	13
19	3.1	1.7	2.4	488	14	4.4	5.5	11	8	10	9.5	12
20	3.3	1.5	2.1	168	14	4.4	7.2	12	8	11	10	12
21	3.3	1.3	1.8	67	14	4.4	7.9	13	8	11	9.5	11
22	3.4	1.3	1.7	62	13	4.4	8.6	13	7	10	10	11
23	3.4	1.2	1.7	43	11	4.4	9.5	13	7	10	10	11
24	3.6	1.1	2.1	32	10	4.4	10	14	8	9.5	10	10
25	4.0	1.1	2.1	31	9.5	4.2	13	14	8	10	10	9.5
26	3.8	1.1	2.1	25	8	4.0	15	14	8	10	10	9
27	3.8	1.2	2.1	21	8	3.8	10	13	8	10	9.5	8.5
28	3.6	1.2	1.9	21	8	4.0	10	13	8	10	9.5	8.5
29	4.0	1.2	1.9	29	-----	4.2	12	13	8	9.5	9.5	8
30	9	1.2	3.6	36	-----	4.4	12	13	7.5	9.5	10	8
31	11	-----	2.8	28	-----	4.5	-----	12	-----	8.5	10	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	2.8	5.05	311
November	4.5	1.1	2.41	143
December	4.5	1.6	24.3	149
January	488	1.1	39.1	2,400
February	24	8	15.5	861
March	8	3.8	5.26	323
April	15	3.8	6.48	386
May	14	8.5	11.2	689
June	12	7	9.174	546
July	11	8	9.11	560
August	12	6.5	9.24	568
September	13	8	10.3	613
The year	488	1.1	10.4	7,550

MILL CREEK NEAR COLBY RANCH, CALIF.

LOCATION.—Water-stage recorder 200 feet below North Fork, 0.6 mile above junction with Tujunga Creek, and 2 miles northwest of Colby ranch, Los Angeles County.

DRAINAGE AREA.—21.1 square miles.

RECORDS AVAILABLE.—November 1930 to September 1933.

DISCHARGE.—Maximum during year, 20 second-feet Jan. 19 (gage height, 2.84 feet); no flow during part of year.

1930-33: Maximum, 512 second-feet Feb. 9, 1932; no flow at times each year.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	0.2	0.2	1.3	1.0	1.0	0.5	0.4	0.1
2	0	.3	.2	1.2	.9	1.0	.5	.4	.1
3	0	.3	.2	1.2	1.1	.9	.4	.4	.1
4	0	.3	.3	1.1	1.2	.9	.4	.4	.1
5	.1	.3	.3	1.0	1.1	.9	.4	.4	.1
6	.1	.3	.3	1.0	1.0	.9	.4	.4	.1
7	.1	.3	.3	1.0	1.0	.9	.4	.4	.1
8	.1	.3	.2	1.0	1.1	.9	.4	.4	.1
9	.2	.3	.3	.9	1.0	1.0	.4	.4	.1
10	.2	.3	.3	.9	1.0	1.0	.4	.4	.1
11	.2	.4	.3	.8	1.0	1.0	.5	.4	.1
12	.2	.4	.3	.7	.9	1.0	.4	.3	.1
13	.2	.4	.4	.6	.9	1.0	.5	.3	.1
14	.2	.4	.4	.6	.9	1.0	.4	.2	.1
15	.2	.5	.4	.7	.8	1.0	.4	.2	0.0
16	.2	.5	2.3	.7	.8	.9	.4	.2	0
17	.1	.5	1.2	.9	.8	.9	.4	.2	0
18	.1	.5	.8	.8	.9	.8	.4	.2	0
19	.1	.5	7	.8	.9	.8	.4	.2	0
20	.1	.5	3.1	.8	.9	.8	.4	.2	0
21	.2	.4	1.8	1.0	.9	.7	.4	.2	0
22	.2	.4	1.4	1.0	.9	.6	.4	.2	0
23	.2	.3	1.3	1.0	.8	.6	.4	.2	0
24	.2	.2	1.2	1.0	.8	.6	.4	.2	0
25	.2	.2	1.2	1.0	.8	.6	.4	.2	0
26	.2	.3	1.2	1.0	.8	.5	.4	.2	0
27	.2	.3	1.2	1.1	.8	.5	.3	.2	0
28	.2	.3	1.2	1.1	.7	.5	.3	.2	0
29	.2	.3	1.2	-----	7	.5	.3	.2	0
30	.2	.2	1.4	-----	.8	.5	.4	.2	0
31	-----	.2	1.3	-----	.8	-----	.4	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	0.2	0	0.15	8.7
December	.5	.2	.34	21.0
January	7	.2	1.07	65.8
February	1.3	.6	.94	52.0
March	1.2	.7	.90	55.5
April	1.0	.5	.81	48.0
May	.5	.3	.40	24.8
June	.4	.2	.28	16.7
July	.1	0	.05	2.8
The year	7	0	.41	295

NOTE.—No flow during months omitted.

FOX CREEK NEAR COLBY RANCH, CALIF.

LOCATION.—Water-stage recorder half a mile above junction with Tujunga Creek and 4 miles west of Colby Ranch, Los Angeles County.

DRAINAGE AREA.—9.35 square miles.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 115 second-feet Jan. 19 (gage height, 1.77 feet); minimum, 0.01 second-foot at various times.

1930-33: Maximum, 400 second-feet Feb. 8, 1932; minimum, 0.01 second-foot at various times during 1932-33.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1			0.2	0.1	3.3	2.0	1.3	1.0	0.7	0.4	0.1
2		0.1	.2	.1	2.9	1.8	1.0	1.0	.7	.4	
3			.2	.1	2.9	1.8	1.0	1.0	.7	.4	
4			.2	.1	2.7	1.9	1.0	.9	.6	.4	
5			.2	.1	2.4	2.0	1.2	.8	.6	.4	
6			.2	.1	2.2	1.9	1.2	.8	.5	.4	
7			.2	.1	2.0	1.8	1.0	.7	.4	.4	
8			.2	.1	1.9	1.6	1.0	.7	.4	.3	
9			.2	.1	1.6	1.6	1.0	.7	.4	.3	
10			.2	.1	1.6	1.6	1.0	.8	.4	.3	
11			.2	.1	1.6	1.6	1.0	.9	.4	.2	
12			.2	.1	1.6	1.8	1.0	.9	.4	.2	
13			.2	.2	1.6	1.9	1.0	.9	.4	.2	
14			.2	.2	1.8	2.0	1.0	1.0	.4	.2	
15			.2	.3	1.8	1.9	1.0	1.0	.4	.2	
16			.2	2.4	1.9	1.9	1.0	1.0	.4	.2	
17			.2	1.2	1.9	1.9	1.0	1.0	.4	.1	.1
18			.2	1.0	1.9	1.9	1.0	1.0	.4	.1	
19			.2	21	1.9	1.8	1.0	1.0	.4	.1	
20	0.1		.2	6	1.9	1.8	1.0	1.0	.4		
21		.1	.2	4.5	2.0	1.8	1.0	1.2	.4		
22		.1	.2	2.9	2.0	1.8	.9	1.0	.4	.1	
23		.1	.1	2.9	2.4	1.6	.9	1.0	.4	.1	
24		.1	.1	2.9	2.2	1.6	.9	.9	.4	.1	
25		.1	.1	2.9	2.2	1.6	1.0	.9	.4	.1	
26	.1			2.7	2.2	1.6	1.0	.8	.4	.1	
27	.2	.1		2.7	2.0	1.6	1.0	.8	.4	.1	
28	.1	.1		2.5	2.0	1.5	1.2	.7	.4	.1	
29	.1	.1	.1	4.1		1.5	1.2	.6	.4	.1	
30	.1	.1	.1	3.7		1.5	1.0	.6	.4	.1	
31	.1		.1	3.3		1.4		.6		.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2		0.074	4.5
November	.1		.047	2.8
December	.2		.151	9.3
January	21	0.1	2.21	136
February	3.3	1.6	2.09	116
March	2.0	1.4	1.74	107
April	1.3	.9	1.03	61.3
May	1.2	.6	.88	53.9
June	.7	.4	.45	26.6
July	.4		.202	12.4
August	.1		.061	3.7
September			.017	1.0
The year	21		.738	534

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

LITTLE TUJUNGA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.—Water-stage recorder on Foothill Boulevard bridge 4 miles east of San Fernando, Los Angeles County.

DRAINAGE AREA.—21.0 square miles.

RECORDS AVAILABLE.—December 1928 to September 1933.

DISCHARGE.—Maximum during year, 450 second-feet Jan. 19 (gage height, 5.10 feet); no flow most of year.

1928-33: Maximum, 660 second-feet Feb. 9, 1932; no flow most of each year.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Day	Jan.	Feb.	Day	Jan.	Feb.
1.....	0	3.3	11.....	0	0	21.....	9.5	0
2.....	0	5	12.....	0	0	22.....	10	0
3.....	0	4.2	13.....	0	0	23.....	7.5	0
4.....	0	2.1	14.....	0	0	24.....	2.6	0
5.....	0	1.2	15.....	0	0	25.....	1.5	0
6.....	0	.3	16.....	21	0	26.....	.6	0
7.....	0	.3	17.....	0	0	27.....	0	0
8.....	0	0	18.....	0	0	28.....	.5	0
9.....	0	0	19.....	118	0	29.....	9	-----
10.....	0	0	20.....	30	0	30.....	27	-----
						31.....	5.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	118	0	7.83	431
February.....	5	0	.59	32.5
The year.....	118	0	.71	514

NOTE.—No flow during months omitted.

HAINES CREEK NEAR TUJUNGA, CALIF.

LOCATION.—Water-stage recorder in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 2 N., R. 13 W., 800 feet above mouth of canyon and 1½ miles northeast of Tujunga. Altitude, about 2,200 feet.

DRAINAGE AREA.—1.2 square miles.

RECORDS AVAILABLE.—February 1917 to September 1933.

DISCHARGE.—Maximum during year, 12 second-feet Jan. 19 (gage height, 1.60 feet); no flow at times.

1917–33: Maximum, 15 second-feet Jan. 2, 1922 (gage height, 1.74 feet); no flow for periods in 1921, 1925, 1926, 1930, 1931, 1933. Average, 16 years (1917–33), 0.114 second-foot.

REMARKS.—Records fair. Discharge estimated Oct. 1 to Jan. 15, Jan. 17, 18, 21, 22, 27, Feb. 15, 16, Mar. 31 to Sept. 30. Diversion above and below station. There are several small check dams above station.

Discharge, in second-feet, 1932–33

Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.
1.....	0.01	0.06	0.05	11.....	0.01	0.06	0.04	21.....	0.07	0.07	0.04
2.....	.01	.06	.05	12.....	.01	.06	.04	22.....	.05	.06	.04
3.....	.01	.06	.05	13.....	.01	.05	.04	23.....	.07	.07	.03
4.....	.01	.05	.04	14.....	.01	.05	.04	24.....	.07	.07	.02
5.....	.01	.05	.04	15.....	.01	.05	.04	25.....	.09	.06	.02
6.....	.01	.05	.04	16.....	.04	.05	.04	26.....	.07	.05	.01
7.....	.01	.05	.04	17.....	.01	.05	.04	27.....	.07	.05	.01
8.....	.01	.05	.04	18.....	.01	.06	.04	28.....	.08	.05	.01
9.....	.01	.06	.04	19.....	4.2	.06	.04	29.....	.09	.....	.01
10.....	.01	.06	.04	20.....	.5	.07	.04	30.....	.05	.....	.01
								31.....	.06	.....	.01

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	.....	.....	0.0004	0.02
November.....	.....	.....	.0004	.02
December.....	.....	.....	.005	.31
January.....	4.2	0.01	.183	11.3
February.....	.07	.05	.057	3.17
March.....	.05	.00	.034	2.01
April.....	.....	.....	.005	.30
May.....	.....	.....	.0008	.05
June.....	.....	.....	.0003	.02
July.....	.....	.....	.0001	.01
The year.....	4.2	0	.0238	17.2

NOTE.—No flow during months omitted.

ARROYO SECO NEAR PASADENA, CALIF.

LOCATION.—Water-stage recorder near south line of sec. 30, T. 2 N., R. 12 W. (unsurveyed), $1\frac{1}{2}$ miles above mouth of Millard Canyon and $5\frac{1}{2}$ miles northwest of Pasadena. Altitude, about 1,400 feet.

DRAINAGE AREA.—16.4 square miles.

RECORDS AVAILABLE.—December 1910 to September 1933.

DISCHARGE.—Maximum during year not determined; practically no flow during August and September.

1910-33: Maximum, about 5,630 second-feet Feb. 20, 1914 (gage height, 12.5 feet); practically no flow several months each year. Average, 19 years (1913-15, 1916-33), 8.60 second-feet.

REMARKS.—Records good except those for Jan. 16, 19, 27-29, 31, Feb. 2, 4, 5, 7, 8, and July 9 to Sept. 30, which were estimated. No diversions. Results of several discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1			0.1	0.6	25	7	3.8	3.0	1.8	0.4
2		0.1	.1	.6	20	7	3.7	2.8	1.7	.4
3		.1	.1	.6	16	7	3.6	2.7	1.6	.4
4		.1	.2	.6	15	6.5	3.5	2.5	1.5	.4
5		.1	.2	.7	14	6.5	3.4	2.3	1.5	.4
6		.1	.2	.7	16	6.5	3.2	2.4	1.5	.4
7		.1	.2	.7	14	6.5	3.4	2.5	1.3	.4
8			.2	.7	13	6.5	3.5	2.7	1.3	.4
9	0.1		.2	.7	12	7	3.4	2.7	1.3	.3
10	.1		.2	.7	10	6.5	3.3	2.8	1.2	.3
11			.2	.7	10	6.5	3.2	2.8	1.1	.2
12			.3	.7	9.5	6.5	3.1	2.7	1.1	.2
13			.2	.7	10	6	3.1	2.6	1.0	.2
14			.2	.7	9.5	6	3.0	2.5	.9	.1
15			.2	.7	9.5	6	2.9	2.4	.9	.1
16	.1		.2	25.0	9	6	2.9	2.2	.9	.1
17	.1		.2	9.5	10	6	2.9	2.2	.8	.1
18			.2	6.5	9.5	6	2.9	1.8	.8	.1
19	.1		.2	290	8.5	5.5	2.9	1.7	.8	.1
20	.1		.2	65	8.5	5.5	2.9	1.7	.7	.1
21			.2	24	7.5	5	2.8	1.6	.6	-----
22			.3	26	7.5	4.9	2.8	1.6	.6	-----
23		.1	.3	30	7.5	4.6	2.9	1.5	.5	-----
24	.1	.1	.3	25	7.5	4.7	2.9	1.3	.5	-----
25		.1	.3	21	7	4.5	3.0	1.3	.5	-----
26	.1	.1	.3	18	6.5	4.5	3.0	1.3	.4	-----
27		.1	.3	16	6.5	4.3	3.1	1.3	.4	-----
28		.1	.4	14	6.5	4.3	3.0	1.5	.4	-----
29		.1	.5	12		4.2	3.0	1.5	.3	-----
30		.1	.6	69		4.2	3.1	1.6	.4	-----
31			.6	35		4.0		1.6	-----	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.1		0.073	4.5
November	.1		.085	5.1
December	.6	0.1	.25	15.7
January	290	.6	22.5	1,380
February	25	6.5	10.9	605
March	7	4.0	5.68	349
April	3.8	2.8	3.14	187
May	3.0	1.3	2.10	129
June	1.8	.4	.94	56.1
July	.4		.18	11.2
August			.02	1.2
September			.02	1.2
The year	290		3.79	2,740

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

SANTA ANITA CREEK NEAR SIERRA MADRE, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 1 N., R. 11 W., at head of Hermits Falls, 4 miles northeast of Sierra Madre. Altitude, about 1,400 feet.

DRAINAGE AREA.—10.5 square miles.

RECORDS AVAILABLE.—July 1916 to September 1933.

DISCHARGE.—Maximum during year, 390 second-feet Jan. 19 (gage height, 5.02 feet); minimum, less than 0.1 second foot during part of August and September. 1916-33: Maximum, about 1,400 second-feet Apr. 7, 1926 (gage height, 10.7 feet); practically no flow Aug. 18 to Sept. 14, 1929. Average, 17 years (1916-33), 4.37 second-feet.

REMARKS.—Records good. Discharge estimated Nov. 19-30, Jan. 16, 25-27, July 8-10, July 25 to Sept. 18. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.2	0.2	0.4	0.7	12	5	2.6	1.9	1.5	0.6	0.1	-----
2.....	.2	.2	.4	.7	11	5	2.5	1.7	1.5	.6	.1	-----
3.....	.3	.2	.4	.7	11	5	2.5	1.6	1.4	.6	.1	-----
4.....	.3	.2	.4	.7	10	5	2.5	1.7	1.4	.6	.1	-----
5.....	.3	.2	.4	.7	9	4.6	2.5	1.8	1.9	.4	.1	-----
6.....	.3	.2	.4	.7	8.5	4.4	2.3	1.8	1.8	.4	.1	-----
7.....	.3	.2	.4	.7	8.5	4.4	2.3	1.8	1.6	.4	.1	-----
8.....	.3	.2	.5	.7	8	4.4	2.3	1.9	1.4	.4	.1	-----
9.....	.3	.2	.6	.7	7.5	4.4	2.3	1.9	1.2	.3	.1	-----
10.....	.3	.2	.8	.7	7.5	4.4	2.2	2.3	1.1	.3	.1	-----
11.....	.3	.2	1.0	.7	7	4.4	1.9	2.3	1.0	.3	.1	-----
12.....	.2	.2	1.5	.7	6.5	4.4	1.8	2.2	.9	.3	.1	-----
13.....	.2	.2	1.2	.7	6.5	4.2	1.8	2.0	.8	.3	.1	-----
14.....	.2	.2	1.2	.7	6.5	4.0	1.7	1.9	.7	.3	.1	-----
15.....	.2	.2	1.0	.7	6.5	3.8	1.7	1.8	.7	.3	.1	-----
16.....	.2	.2	.9	15	6.5	4.0	1.7	1.7	.7	.3	-----	-----
17.....	.2	.2	.7	8.5	6.5	3.8	1.7	1.7	.7	.3	-----	-----
18.....	.2	.2	.7	3.6	6.5	3.6	1.8	1.7	.8	.3	-----	-----
19.....	.2	.2	.6	168	6	3.4	1.8	1.6	.7	.2	-----	-----
20.....	.2	.2	.6	36	6	3.3	1.8	1.6	.8	.2	-----	-----
21.....	.2	.2	.6	15	6	3.1	1.8	1.7	.7	.2	-----	-----
22.....	.2	.3	.6	14	6	3.1	1.7	1.6	.8	.2	-----	-----
23.....	.2	.3	.7	14	6	3.1	1.6	1.5	.7	.2	-----	0.1
24.....	.2	.3	.8	12	5.5	2.9	1.7	1.3	.7	.2	-----	.1
25.....	.2	.3	.7	11	5.5	2.9	1.8	1.2	.7	.2	-----	.1
26.....	.2	.3	.7	10	5	2.9	2.0	1.2	.7	.2	-----	.1
27.....	.2	.3	.7	9	5	2.9	1.9	1.2	.7	.2	-----	.1
28.....	.2	.4	.6	8	5	2.9	2.0	1.2	.7	.2	-----	.1
29.....	.2	.4	.6	17	-----	2.9	2.9	1.2	.7	.1	-----	.1
30.....	.2	.4	.7	17	-----	2.8	2.2	1.4	.6	.1	-----	.1
31.....	.2	-----	.7	14	-----	2.6	-----	1.5	-----	.1	-----	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.3	0.2	0.23	14.1
November.....	.4	.2	.24	14.3
December.....	1.5	.4	.69	42.7
January.....	168	.7	12.3	756
February.....	12	5	7.20	400
March.....	5	2.6	3.79	233
April.....	2.9	1.6	2.04	121
May.....	2.3	1.2	1.67	103
June.....	1.9	.6	.99	58.7
July.....	.6	.1	.30	18.4
August.....	.1	-----	.090	5.5
September.....	.1	-----	.088	5.2
The year.....	168	-----	2.45	1,770

NOTE.—Discharge less than 0.1 second-foot Aug. 16 to Sept. 22.

LITTLE SANTA ANITA CREEK NEAR SIERRA MADRE, CALIF.

LOCATION.—Water-stage recorder near center of W $\frac{1}{2}$ sec. 9, T. 1 N., R. 11 W., 2 miles northeast of Sierra Madre.

DRAINAGE AREA.—1.9 square miles.

RECORDS AVAILABLE.—April 1916 to September 1933.

DISCHARGE.—Maximum during year, 72 second-feet Jan. 19, (gage height, 2.20 feet); minimum, less than 0.1 second-foot during summer.

1916-33: Maximum stage, 11.75 feet Apr. 7, 1926 (discharge not determined); no flow during periods in 1919, 1924, 1925. Average, 16 years (1916-25, 1926-33), 0.63 second-foot.

REMARKS.—Records good. Discharge estimated Aug. 1-23. No diversions.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	-----	0.1	1.7	0.6	0.3	0.2	0.2	16	-----	1.6	0.8	0.4	0.2	0.2	0.1
2	-----	.1	1.5	.5	.3	.2	.2	17	-----	1.0	.8	.4	.2	.2	-----
3	-----	.1	1.4	.5	.3	.2	.2	18	-----	.5	.8	.4	.2	.2	-----
4	-----	.1	1.1	.4	.3	.2	.2	19	-----	27	.7	.3	.2	.2	-----
5	-----	.1	1.0	.4	.3	.2	.3	20	-----	5.6	.7	.3	.2	.2	-----
6	-----	.1	1.0	.4	.3	.2	.2	21	-----	2.0	.7	.3	.2	.2	-----
7	-----	.1	.9	.4	.3	.2	.2	22	-----	1.8	.6	.3	.2	.2	-----
8	-----	.1	.9	.4	.3	.2	.2	23	-----	1.9	.6	.3	.2	.2	-----
9	-----	.1	.9	.4	.3	.2	.2	24	-----	1.8	.6	.3	.2	.2	-----
10	-----	.1	.8	.4	.3	.3	.2	25	-----	1.7	.6	.3	.2	.2	-----
11	-----	.1	.8	.4	.2	.2	.1	26	-----	1.4	.6	.3	.2	.2	-----
12	0.2	.1	.8	.4	.2	.2	.1	27	-----	1.2	.6	.3	.2	.2	-----
13	-----	.1	.8	.4	.2	.2	.1	28	-----	1.3	.6	.3	.3	.2	-----
14	-----	.1	.8	.4	.2	.2	.1	29	-----	1.6	-----	.3	.3	.1	-----
15	-----	.1	.8	.4	.2	.2	.1	30	-----	2.2	-----	.3	.3	.2	-----
								31	-----	1.9	-----	.3	-----	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-----	-----	0.021	1.3
November	-----	-----	.031	1.9
December	-----	-----	.070	4.3
January	27	0.1	1.81	111
February	1.7	.6	.85	47.4
March	.6	.3	.37	22.8
April	.3	.2	.24	14.5
May	.3	.1	.20	12.3
June	.3	-----	.118	7.0
July	-----	-----	.045	2.8
August	-----	-----	.016	1.0
September	-----	-----	.010	.6
The year	27	-----	.31	227

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

EATON CREEK NEAR PASADENA, CALIF.

LOCATION.—Water-stage recorder near line between secs. 2 and 11, T. 1 N., R. 12 W., at mouth of canyon just above Mount Wilson toll bridge and 4 miles northeast of Pasadena.

DRAINAGE AREA.—6.5 square miles.

RECORDS AVAILABLE.—March 1918 to September 1933.

DISCHARGE.—Maximum during year, 182 second-feet Feb. 9 (gage height, 2.96 feet); no flow for several months.

1918-33: Maximum, about 1,360 second-feet Apr. 7, 1926 (gage height, 5.0 feet); no flow for periods each year. Average, 15 years (1918-33), 2.07 second-feet.

REMARKS.—Records good. City of Pasadena diverts water above station; record of diversion furnished by city.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Apr.	Day	Jan.	Feb.	Apr.	Day	Jan.	Feb.	Apr.
1-----	0	1.6	0	11-----	0	0.7	0	21-----	12	2.7	0.9
2-----	0	1.0	0	12-----	0	0	.3	22-----	3.5	.8	0
3-----	0	2.3	0	13-----	0	0	1.2	23-----	4.7	.2	0
4-----	0	1.3	0	14-----	0	0	1.4	24-----	3.5	.5	.2
5-----	0	1.0	0	15-----	0	0	1.4	25-----	2.5	.7	0
6-----	0	1.2	0	16-----	16	0	1.4	26-----	1.7	.5	0
7-----	0	.5	0	17-----	6.5	0	1.4	27-----	1.5	.4	0
8-----	0	0	0	18-----	0	0	1.4	28-----	.9	0	0
9-----	0	0	0	19-----	116	0	1.4	29-----	5	0	0
10-----	0	.6	0	20-----	37	2.8	1.9	30-----	7.5	0	0
								31-----	2.3	0	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	116	0	7.12	438
February-----	2.8	0	.67	37.3
April-----	1.9	0	.43	25.6
The year-----	116	0	.69	501

NOTE.—No flow during months omitted.

Diversion, by city of Pasadena from Eaton Creek, 1932-33

Month	Acre-feet	Month	Acre-feet
October-----	7.6	May-----	70.3
November-----	9.3	June-----	41.5
December-----	20.2	July-----	17.5
January-----	129	August-----	8.1
February-----	258	September-----	5.8
March-----	150		
April-----	72.2	The year-----	790

RIO HONDO NEAR MONTEBELLO, CALIF.

LOCATION.—Water-stage recorder in Potrero Grande grant at Montebello oil field, about 1,000 feet above Mission Bridge and 2 miles northeast of Montebello, Los Angeles County.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum during year, 4,410 second-feet Jan. 19 (gage height, 4.75 feet); minimum, 3.5 second-feet July 26 (gage height, 0.96 foot).

1928-33: Maximum, 6,320 second-feet Feb. 9, 1932; minimum, 1.7 second-feet Oct. 2, 1931.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	16	26	26	20	22	14	20	12	12	9	13
2	14	20	28	26	22	20	20	16	12	12	9	15
3	12	20	28	24	24	20	16	13	14	11	9	13
4	15	15	26	28	20	20	21	16	14	12	10	12
5	14	16	26	26	20	18	18	18	15	10	10	12
6	14	16	28	26	20	18	15	14	15	10	11	13
7	16	15	24	24	20	16	20	13	14	10	13	14
8	18	20	21	28	20	16	18	12	16	12	12	14
9	20	18	24	22	20	15	18	13	18	12	13	14
10	16	18	26	28	20	15	18	13	18	12	13	14
11	14	16	43	30	20	11	18	12	20	12	13	14
12	18	20	136	28	20	13	16	11	18	10	13	14
13	18	21	38	28	20	15	16	11	18	12	13	14
14	18	16	28	28	18	18	13	11	18	12	13	13
15	20	18	24	30	16	18	13	11	20	12	13	13
16	22	18	22	515	15	16	14	11	18	11	13	13
17	24	18	21	119	15	16	12	11	18	12	13	12
18	28	20	24	26	13	16	15	11	18	12	13	12
19	30	22	20	1,670	14	16	15	11	15	12	11	11
20	28	24	20	692	15	16	15	13	16	10	12	10
21	32	22	20	38	18	15	14	14	16	10	13	10
22	30	26	20	125	18	15	14	14	16	10	9	10
23	24	21	34	194	16	15	16	16	16	9	9	10
24	20	18	22	45	18	15	12	12	18	12	11	11
25	21	22	21	28	18	15	13	13	18	10	12	11
26	20	22	22	30	20	14	12	14	14	7.5	11	12
27	21	28	24	45	21	14	14	14	18	10	12	11
28	21	24	26	38	24	13	20	15	15	11	12	11
29	21	28	24	277	-----	13	20	13	12	9	12	11
30	21	26	26	26	-----	13	20	13	12	9	12	11
31	16	-----	26	20	-----	15	-----	13	-----	13	-----	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	32	12	20	1,230
November	28	15	20.1	1,200
December	136	20	29.0	1,780
January	1,670	20	138	8,480
February	24	13	18.8	1,040
March	22	11	15.9	978
April	21	12	16.0	952
May	20	11	13.3	818
June	20	12	16.1	958
July	13	7.5	10.9	670
August	13	9	11.6	713
September	15	10	12.3	732
The year	1,670	7.5	27.0	19,600

RIO HONDO NEAR DOWNEY, CALIF.

LOCATION.—Water-stage recorder in San Antonio grant on Stewart and Gray road bridge half a mile above junction with Los Angeles River and 1½ miles west of Downey, Los Angeles County.

DRAINAGE AREA.—374 square miles.

RECORDS AVAILABLE.—March 1928 to September 1933.

DISCHARGE.—Maximum during year, 2,730 second-feet Jan. 19 (gage height, 8.18 feet); no flow during several periods.

1928-33: Maximum, 4,610 second-feet Feb. 9, 1932; no flow part of each year.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Jan.	Mar.	Apr.	May	Day	Jan.	Mar.	Apr.	May
1.....	0	0	0	0.1	16.....	264	1.1	0	0
2.....	0	0	0	0	17.....	53	.2	0	0
3.....	0	0	.1	0	18.....	0	1.7	0	0
4.....	0	0	0	0	19.....	971	.2	0	0
5.....	0	0	0	0	20.....	673	.1	0	0
6.....	0	0	.1	0	21.....	19	.1	0	0
7.....	0	0	.4	0	22.....	14	.1	0	0
8.....	0	0	.1	0	23.....	83	0	0	0
9.....	0	.1	0	0	24.....	.1	0	0	0
10.....	0	.1	0	0	25.....	0	0	0	0
11.....	0	.1	0	0	26.....	0	.3	0	0
12.....	0	0	0	0	27.....	0	.1	0	0
13.....	0	0	0	0	28.....	0	.1	0	0
14.....	0	0	0	0	29.....	138	.2	0	0
15.....	0	1.4	0	0	30.....	21	.2	.1	0
					31.....	0	.1	-----	0
Month					Maximum	Minimum	Mean	Run-off in acre-feet	
January.....					971	0	72.1	4,430	
March.....					1.7	0	.20	12.3	
April.....					.4	0	.03	1.6	
May.....					.1	0	.03	.2	
The year.....					971	0	6.15	4,440	

NOTE.—No flow during months omitted.

RIO HONDO SLOUGH NEAR MONTEBELLO, CALIF.

LOCATION.—Water-stage recorder on San Gabriel Boulevard bridge in Paso de Bartolo grant, 2 miles northeast of Montebello, Los Angeles County.

RECORDS AVAILABLE.—October 1932 to September 1933.

DISCHARGE.—Maximum during year, 51 second-feet Jan. 29 (gage height, 2.03 feet); minimum, 11 second-feet at various times.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	16	17	18	22	19	17	17	15	14	12	12
2	16	16	17	18	20	18	17	16	16	14	12	12
3	16	17	17	18	20	19	17	16	14	14	12	12
4	16	17	17	18	20	18	18	16	15	14	12	12
5	16	16	17	18	20	18	17	16	17	14	12	12
6	16	17	17	17	20	18	17	16	16	14	12	13
7	17	17	16	18	20	18	16	16	16	14	12	12
8	16	16	17	17	20	18	16	16	17	15	12	12
9	17	16	18	18	20	18	17	16	17	14	12	12
10	18	16	18	18	20	18	17	16	18	14	12	12
11	17	16	19	18	19	18	17	16	18	13	12	12
12	17	16	20	18	19	18	17	16	18	13	13	12
13	17	17	20	18	19	18	16	16	17	13	13	12
14	17	17	19	17	19	18	16	15	17	13	13	12
15	16	16	18	17	20	18	16	15	15	12	14	11
16	16	16	18	20	20	17	17	15	14	12	14	12
17	16	16	18	20	20	18	16	15	14	12	13	12
18	16	16	18	17	20	18	16	16	15	12	13	18
19	16	17	17	26	20	18	16	16	15	13	12	13
20	16	17	17	32	20	18	16	16	15	13	14	13
21	16	18	17	23	20	18	16	16	16	12	14	13
22	16	18	18	22	20	18	16	17	15	13	12	13
23	16	18	19	25	19	17	16	16	15	13	12	13
24	16	17	19	24	19	17	16	16	14	12	13	14
25	16	17	18	22	20	17	16	15	14	12	12	14
26	16	18	17	20	19	17	17	14	14	12	13	14
27	16	18	17	20	19	17	16	14	14	11	13	13
28	16	17	17	19	20	18	17	15	14	12	13	14
29	16	17	18	31	-----	18	18	14	14	12	13	14
30	16	17	18	28	-----	18	17	15	14	12	12	14
31	16	-----	18	24	-----	18	-----	15	-----	12	12	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18	16	16.3	1,000
November	18	16	16.8	1,000
December	20	16	17.8	1,090
January	32	17	20.6	1,270
February	22	19	19.8	1,100
March	19	17	17.9	1,100
April	18	16	16.6	988
May	17	14	15.6	959
June	18	14	15.4	916
July	15	11	12.9	798
August	14	12	12.6	775
September	14	11	12.6	750
The year	32	11	16.2	11,700

BALLONA CREEK BASIN

BALLONA CREEK NEAR CULVER CITY, CALIF.

LOCATION.—Water-stage recorder in La Ballona grant on Centinela Boulevard bridge about 2½ miles southeast of Culver City, Los Angeles County.

DRAINAGE AREA.—112 square miles.

RECORDS AVAILABLE.—February 1928 to September 1933.

DISCHARGE.—Maximum during year, 7,000 second-feet Jan. 19 (gage height, 14.96 feet); no flow at various times.

1928-33: Maximum, that of Jan. 19, 1933; no flow at times each year.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	26	0.6	3.9	0.2	6.5	1.7	0	0	6.5	0	2.0	1.8
2.....	1.5	1.0	.6	0	4.7	.9	0	.2	.2	0	.8	.1
3.....	.2	.9	1.7	.6	4.3	1.2	0	0	.3	0	.3	0
4.....	.5	.4	.6	.4	4.7	1.7	0	0	0	0	0	0
5.....	.2	1.7	.9	.4	3.9	1.0	0	0	180	0	0	0
6.....	0	.4	.6	.6	4.3	1.2	0	.1	2.5	0	0	0
7.....	.6	0	2.0	.5	4.7	2.0	.5	0	.9	0	0	0
8.....	.6	.2	1.3	.8	5.5	1.0	2.2	0	1.0	0	0	0
9.....	7.5	.1	67	2.0	5	1.2	0	.1	0	0	0	0
10.....	1.2	.4	47	6.5	5.5	.8	0	23	0	0	0	0
11.....	0	1.7	199	6.5	5.5	1.0	0	1.3	0	0	0	0
12.....	0	.4	435	7.5	5	.8	0	.5	0	0	0	0
13.....	.9	.4	16	6.5	5	.2	0	.3	0	0	0	0
14.....	0	.6	26	14	4.7	.2	0	.2	0	0	0	0
15.....	.2	.8	13	14	4.3	.2	0	.9	0	0	0	0
16.....	.2	1.8	16	1,660	3.9	5	0	6.5	0	0	0	0
17.....	0	2.7	13	295	3.9	6.5	0	3.9	0	0	0	0
18.....	.1	1.8	9.5	49	4.3	1.2	0	2.4	0	0	0	0
19.....	0	3.9	7.5	1,510	3.5	1.5	0	0	0	0	0	0
20.....	.4	2.2	6.5	323	2.5	5.5	1.2	0	1.7	2.0	0	0
21.....	0	.6	6	1.5	4.3	3.1	.9	.8	0	2.0	0	0
22.....	0	2.4	2.0	265	2.7	6	0	1.7	0	.2	0	0
23.....	.2	2.0	134	408	6	2.0	0	.6	0	0	0	0
24.....	0	2.0	24	.9	2.4	.1	0	0	0	.2	0	0
25.....	0	0	14	148	1.8	0	0	0	0	1.3	0	0
26.....	0	.8	15	2.7	1.2	0	1.5	0	0	1.3	0	0
27.....	.5	.5	19	9	1.3	.3	56	.1	0	3.5	0	0
28.....	.2	1.8	13	5	2.0	1.5	.3	0	0	1.2	0	0
29.....	.1	2.0	9	1,280	-----	.6	1.5	1.8	0	2.7	0	0
30.....	.2	1.3	3.1	268	-----	.2	0	2.0	0	0	0	0
31.....	0	-----	.6	12	-----	0	-----	4.7	-----	1.5	2.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	26	0	1.33	81.3
November.....	3.9	0	1.18	70.2
December.....	435	.6	35.7	2,200
January.....	1,660	0	203	12,500
February.....	6.5	1.2	4.06	225
March.....	6.5	0	1.57	96.5
April.....	56	0	2.14	127
May.....	23	0	1.65	101
June.....	180	0	6.44	383
July.....	3.5	0	.51	31.5
August.....	2.0	0	.16	10.1
September.....	1.8	0	.06	3.8
The year.....	1,660	0	21.8	15,800

TOPANGA CREEK BASIN

TOPANGA CREEK NEAR TOPANGA BEACH, CALIF.

LOCATION.—Water-stage recorder in Boca de Santa Monica grant, on highway bridge 2 miles north of Topanga Beach, Los Angeles County.

DRAINAGE AREA.—17.9 square miles.

RECORDS AVAILABLE.—January 1930 to September 1933.

DISCHARGE.—Maximum during year, 1,430 second-feet Jan. 19 (gage height, 5.87 feet); minimum, 0.01 second-foot at various times.

1930-33: Maximum, that of Jan. 19, 1933; minimum, 0.01 second-foot at various times during 1931 and 1933.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....		11	1.0	0.5	0.4	0.1	0.1
2.....		8	1.0	.4	.3		.1
3.....		5.5	.8	.3	.2		.1
4.....		2.4	.5	.3	.2		.1
5.....		3.3	.4	.2	.2	.2	.1
6.....		3.0	.3	.2	.2	.2	.1
7.....		2.3	.3	.2	.2	.2	.1
8.....		2.2	.2	.2	.4	.2	.1
9.....		2.0	.2	.2	.4	.2	.1
10.....		2.3	.2	.2	.4	.3	.1
11.....		1.8	.5	.2	.3	.3	.1
12.....		2.0	.7	.2	.3	.3	.1
13.....		2.0	.4	.3	.3	.3	.1
14.....		1.8	.7	.3	.3	.2	.2
15.....	0.1	2.0	.8	.2	.2	.2	.2
16.....	34	2.0	.8	.2	.2	.2	.2
17.....	2.4	2.0	1.2	.3	.2	.2	.2
18.....	1.8	1.8	1.0	.4	.2	.2	.2
19.....	542	1.6	.8	.4	.2	.2	.2
20.....	91	1.4	.8	.3	.2	.2	.2
21.....	15	1.2	.6	.3	.2	.3	.2
22.....	70	1.4	.5	.3	.2	.2	.2
23.....	62	1.0	.4	.3	.2	.1	.2
24.....	16	.8	.4	.3	.2	.1	.2
25.....	11	.8	.4	.4	.1	.1	.2
26.....	7.5	.8	.4	.4	.1	.2	.2
27.....	6	1.0	.4	.3	.1	.1	.1
28.....	5	1.0	.4	.3	.1	.1	.2
29.....	110	.6	.4	.4	.1	.1	.1
30.....	23	.6	.4	.1	.1		
31.....	12	.7			.2		
Month	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....			0.01	0.6			
November.....			.018	1.1			
December.....			.061	3.1			
January.....	542		32.6	2,000			
February.....	11	0.8	2.44	136			
March.....	1.2	.2	.58	35.7			
April.....	.5	.2	.30	17.7			
May.....	.4	.1	.22	13.7			
June.....	.3		.181	10.8			
July.....	.2		.144	8.9			
August.....			.024	1.4			
September.....			.029	1.7			
The year.....	542		3.09	2,230			

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

MALIBU CREEK BASIN

MALIBU CREEK AT CRATER CAMP, NEAR CALABASAS, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 18, T. 1 S., R. 17 W., a quarter of a mile below Crater Camp and 6 miles southwest of Calabasas.

DRAINAGE AREA.—103 square miles.

RECORDS AVAILABLE.—January 1931 to September 1933.

DISCHARGE.—Maximum during year, 4,460 second-feet Jan. 19 (gage height, 10.81 feet); minimum, 0.1 second-foot for several periods.

1931-33: Maximum, that of Jan. 19, 1933; no flow for several periods in 1932.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.2	0.3	0.8	0.7	80	10	5	3.6	1.3	0.6	0.2	0.1
2.....	.2	.3	.9	.7	55	9	4.8	3.4	1.2	.5	.2	.1
3.....	.2	.3	.8	.7	55	9	4.6	3.4	1.2	.5	.2	.1
4.....	.2	.3	.8	.7	47	8.5	4.8	3.2	1.2	.5	.2	.1
5.....	.2	.3	.9	.7	39	8.5	4.9	3.2	1.6	.5	.2	.1
6.....	.2	.3	.8	.8	34	8	4.8	3.2	1.5	.5	.2	.2
7.....	.2	.3	.8	.8	30	8	4.8	3.0	1.4	.5	.2	.1
8.....	.2	.3	.8	.8	27	7.5	4.5	3.2	1.3	.4	.2	.1
9.....	.2	.2	.7	.8	25	7.5	4.4	3.0	1.3	.4	.2	.1
10.....	.2	.2	.6	.7	22	7	4.2	2.9	1.3	.4	.2	.1
11.....	.2	.2	.8	.7	21	7	3.9	2.6	1.3	.4	.2	.1
12.....	.2	.2	.7	.7	21	6.5	3.6	2.5	1.3	.4	.2	.1
13.....	.2	.8	.6	.8	21	6.5	3.6	2.5	1.3	.4	.2	.2
14.....	.2	1.8	.6	.9	21	7	3.6	2.6	1.2	.4	.2	.2
15.....	.2	.7	.5	1.0	22	6.5	3.2	2.6	1.2	.4	.2	.2
16.....	.2	.9	.5	3.6	22	6.5	3.2	2.7	1.2	.4	.2	.3
17.....	.2	1.1	.6	2.8	21	6.5	3.2	2.7	1.2	.4	.2	.3
18.....	.2	1.2	.6	2.2	16	6.5	3.0	2.4	.9	.3	.2	.3
19.....	.2	1.0	.7	1,100	14	6.5	2.9	2.6	.8	.4	.2	.3
20.....	.2	4.3	.7	271	15	6	3.0	2.5	.8	.4	.2	.3
21.....	.2	13	.7	63	16	6	3.2	2.4	.8	.4	.2	.3
22.....	.2	5	.7	83	15	5.5	3.2	2.3	.9	.4	.2	.3
23.....	.2	2.2	.7	116	15	5.5	3.2	2.1	.9	.4	.2	.2
24.....	.2	1.6	.7	77	14	5	3.0	1.9	.8	.4	.2	.2
25.....	.2	1.4	.8	48	13	5	3.0	1.9	.8	.4	.2	.2
26.....	.2	1.3	.8	47	11	4.9	3.2	1.6	.8	.3	.2	.2
27.....	.2	1.2	.8	43	11	4.9	3.2	1.6	.7	.3	.2	.2
28.....	.2	1.0	.7	39	10	4.9	3.6	1.6	.6	.3	.2	.3
29.....	.2	1.0	.7	784	-----	5	4.1	1.6	.6	.3	.2	.3
30.....	.2	1.0	.7	551	-----	5	3.7	1.6	.6	.3	.2	.3
31.....	.2	-----	.7	152	-----	5	-----	1.6	-----	.2	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.2	0.2	0.2	12.3
November.....	13	.2	1.46	86.9
December.....	.9	.5	.72	44.0
January.....	1,100	.7	109	6,700
February.....	80	10	25.5	1,420
March.....	10	4.9	6.62	407
April.....	5	2.9	3.78	225
May.....	3.6	1.6	2.52	155
June.....	1.6	.6	1.07	63.7
July.....	.6	.2	.40	24.6
August.....	.2	.1	.20	12.1
September.....	.3	.1	.20	11.7
The year.....	1,100	.1	12.7	9,160

SANTA CLARA RIVER BASIN

SANTA CLARA RIVER NEAR SAUGUS, CALIF.

LOCATION.—Water-stage recorder on old highway bridge pier in San Francisco grant, 3 miles west of Saugus, Los Angeles County.

DRAINAGE AREA.—355 square miles.

RECORDS AVAILABLE.—October 1929 to September 1933.

DISCHARGE.—Maximum during year, 618 second-feet Jan. 19 (gage height, 12.84 feet); no flow Aug. 10.

1929-33: Maximum, 2,308 second-feet Feb. 7, 1931 (gage height, 7.20 feet); no flow Aug. 10, 1933.

REMARKS.—Records furnished by Los Angeles County Flood Control District, through E. C. Eaton, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0.2	0.2	0.3	0.3	0.7	0.4	0.5	0.5	0.2
2	.2	.2	.3	.3	.6	.4	.5	.5	.2
3	.2	.2	.3	.3	.6	.4	.5	.5	.2
4	.2	.3	.3	.3	.6	.4	.5	.5	.2
5	.2	.3	.3	.3	.6	.4	.5	.4	.2
6	.2	.2	.3	.3	.6	.4	.4	.4	.2
7	.2	.2	.3	.3	.6	.4	.4	.4	.2
8	.2	.2	.3	.3	.6	.4	.4	.4	.2
9	.3	.2	.3	.3	.6	.4	.4	.4	.2
10	.2	.2	.3	.3	.6	.4	.4	.4	.2
11	.2	.2	.3	.3	.6	.4	.4	.4	.2
12	.2	.2	.4	.3	.6	.4	.4	.4	.2
13	.2	.2	.3	.3	.6	.5	.4	.4	.2
14	.2	.2	.3	.3	.6	.5	.4	.4	.2
15	.2	.2	.3	.3	.6	.7	.3	.3	.1
16	.2	.2	.3	13	.6	.8	.3	.3	.1
17	.2	.3	.3	1.6	.6	.7	.3	.3	.1
18	.2	.3	.3	.6	.6	.7	.3	.3	.1
19	.2	.3	.3	90	.5	.7	.3	.3	.1
20	.2	.3	.3	11	.5	.7	.3	.2	.1
21	.2	.3	.3	1.1	.5	.5	.3	.2	.1
22	.2	.3	.3	1.0	.5	.4	.3	.2	.1
23	.2	.3	.3	.6	.5	.4	.4	.2	.1
24	.2	.3	.3	1.6	.4	.4	.4	.2	.1
25	.2	.3	.3	1.0	.4	.4	.4	.2	.1
26	.2	.3	.3	.8	.4	.4	.4	.2	.1
27	.2	.3	.3	.7	.4	5.5	.4	.2	.1
28	.2	.3	.3	.6	.4	3.8	.4	.2	.1
29	.2	.3	.3	12	.6	.4	.4	.2	.1
30	.2	.3	.3	7.5	.5	.4	.4	.2	.1
31	.2	.3	.3	1.2	.5	.5	.4	.2	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.3	0.2	0.20	12.5
November	.3	.2	.25	15.1
December	.4	.3	.30	18.6
January	90	.3	4.97	306
February	.7	.4	.55	30.5
March	5.5	.4	.76	46.6
April	.5	.3	.39	23.2
May	.5	.2	.32	19.6
June	.2	.1	.15	8.7
July				3.0
August				1.5
September				2.6
The year	90	0	0.67	488

NOTE.—Discharge less than 0.1 second-foot on days for which no discharge is given.

SANTA CLARA RIVER AT MONTALVO, CALIF.

LOCATION.—Water-stage recorder at State highway bridge at north line of Rio de Santa Clara grant, 1 mile southeast of Montalvo, Ventura County.

DRAINAGE AREA.—1,600 square miles.

RECORDS AVAILABLE.—October 1927 to September 1932 (discontinued).

REMARKS.—Records furnished by State engineer of California.

Discharge, in second-feet, 1931-32

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1.....	0	10.9	249	3,590	234	47.2
2.....	0	1.7	285	1,710	218	45.7
3.....	0	0	211	685	204	43.2
4.....	0	0	157	435	181	39.7
5.....	0	0	118	311	156	39.6
6.....	0	0	94.5	272	150	39.7
7.....	0	0	65.2	381	121	40.0
8.....	0	0	41.3	3,950	115	40.2
9.....	0	10.4	31.1	20,300	118	38.0
10.....	0	.4	21.6	6,840	104	36.0
11.....	0	0	16.8	2,180	104	34.0
12.....	0	10.1	14.3	1,190	101	31.8
13.....	0	2.0	14.4	864	90.5	28.1
14.....	0	19.7	13.5	729	86.2	5.9
15.....	18.2	27.0	116	588	139	1.8
16.....	52.9	.4	90.2	582	123	.8
17.....	15.8	.2	43.8	562	111	.7
18.....	0	.2	21.7	487	93.8	.6
19.....	0	.2	20.2	434	91.7	.4
20.....	0	.2	18.2	387	88.2	.3
21.....	0	28.4	17.5	347	88.2	.2
22.....	0	163	16.6	333	87.7	.2
23.....	0	101	16.6	308	82.8	.2
24.....	0	65.0	15.4	280	71.8	.2
25.....	0	1,370	14.3	273	65.4	.2
26.....	0	1,500	12.1	259	60.4	.2
27.....	185	340	14.6	250	57.3	.2
28.....	154	3,290	14.8	247	52.2	.2
29.....	38.6	3,430	14.2	249	50.6	.2
30.....	21.4	734	20.4	-----	52.0	.2
31.....	-----	344	348	-----	49.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	185	0	16.2	964
December.....	3,430	0	369	22,700
January.....	348	12.1	69.3	4,260
February.....	20,300	247	1,690	97,200
March.....	234	49.1	108	6,640
April.....	47.2	.2	17.2	1,020
The year.....	20,300	0	183	133,000

NOTE.—No flow during months omitted.

PIRU CREEK AT PIRU, CALIF.

LOCATION.—Water-stage recorder in southwest corner of Temescal grant, at Southern Pacific Co.'s railroad bridge a quarter of a mile northeast of Piru, Ventura County. Altitude, about 680 feet.

DRAINAGE AREA.—432 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933; October 1911 to September 1913 at station 1½ miles above Southern Pacific Co.'s railroad bridge.

DISCHARGE.—Maximum during year, 1,200 second-feet Jan. 19 (gage height, 2.90 feet); no flow at various times.

1927-33: Maximum, 15,800 second-feet Feb. 9, 1932; no flow during part of each year.

REMARKS.—Records good. During year the Piru Water Co. diverted about 1,100 acre-feet above station. Doheny Ditch also diverts above station (see miscellaneous measurements).

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	10	0	0.8	4.8	•46	32	25	9.5	3.5	•0.5	0.3	0
2.....	20	•1	1.3	5.5	•38	33	28	8.5	4.1	1.4	0	0
3.....	16	0	2.2	6	37	35	32	8	3.3	1.4	•4	•2
4.....	12	0	4.3	6	38	37	33	7.5	3.5	1.3	•6	•4
5.....	6	0	4.7	4.8	35	36	31	7.5	4.4	•6	0	0
6.....	•4.5	0	4.8	3.7	33	35	32	8.5	6	0	0	0
7.....	4.1	0	5	2.7	30	34	32	•8.5	7	0	0	0
8.....	•5	0	5	2.7	30	42	30	•8.5	4.9	•5	0	0
9.....	•1	0	5	1.9	29	52	27	8.5	3.3	•4	0	0
10.....	•1	0	5	1.6	28	53	24	9	2.5	0	0	0
11.....	•0.1	0	6.5	4.2	28	44	20	9.5	2.9	0	0	0
12.....	0	0	7.5	2.9	26	42	17	10	2.2	0	0	0
13.....	0	0	7.5	2.7	28	48	16	10	1.5	0	0	0
14.....	0	0	6.5	2.4	28	42	16	9.5	•4	0	0	0
15.....	0	0	5.5	3.5	26	34	16	8.5	•2	0	0	0
16.....	0	0	5.5	76	25	34	15	•8.5	•2	0	0	0
17.....	0	0	5	79	26	36	15	8.5	•2	0	0	0
18.....	0	0	5	20	28	38	16	•8.5	•2	0	0	0
19.....	0	0	5.5	572	28	31	14	•8	•2	0	0	•2
20.....	0	0	5.5	•102	28	30	13	•8	•2	0	0	•5
21.....	0	0	5.5	79	29	28	12	•8	•1	0	0	0
22.....	0	0	5.5	115	29	25	12	9	•1	0	0	0
23.....	0	0	6.5	144	28	23	11	7.5	•1	0	0	0
24.....	•5	0	6.5	90	28	22	12	•6	•1	0	0	0
25.....	2.0	•3	•7	75	28	21	12	•5	•1	0	0	0
26.....	2.6	•5	8	63	28	21	13	•4.8	•6	0	0	0
27.....	1.1	•8	7.5	41	28	21	14	•4.6	•5	•2	0	0
28.....	0	•7	7.5	•46	31	21	14	•4.3	•5	0	0	0
29.....	0	•8	7.5	•86	-----	23	14	•4.0	•5	0	0	0
30.....	0	•8	6.5	•69	-----	23	12	•3.8	•5	0	0	0
31.....	0	-----	6	•56	-----	24	-----	3.5	-----	0	0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	20	0	2.57	158
November.....	•8	0	•13	7.9
December.....	8	•8	5.55	341
January.....	572	1.6	57.0	3,500
February.....	46	25	30.1	1,670
March.....	53	21	32.9	2,020
April.....	33	11	19.3	1,150
May.....	10	3.5	7.53	463
June.....	7	•1	1.79	107
July.....	1.4	0	•20	12.5
August.....	•6	0	•04	2.6
September.....	•5	0	•04	2.6
The year.....	572	0	13.0	9,340

• Estimated.

SESPE CREEK AT SESPE, CALIF.

LOCATION.—Water-stage recorder in Sespe no. 2 grant, at highway bridge half a mile southeast of Sespe, Ventura County. Altitude, about 680 feet.

DRAINAGE AREA.—257 square miles.

RECORDS AVAILABLE.—September 1911 to September 1913, October 1927 to September 1933.

DISCHARGE.—Maximum during year, about 12,000 second-feet Jan. 19 (gage height, 11.00 feet); no flow for several months.

1927-33: Maximum, 14,600 second-feet Feb. 9, 1932; no flow for several months each year.

REMARKS.—Records good. Discharge estimated Oct. 3, Oct. 5 to Dec. 2, Jan. 8-10, June 23-30. Fillmore Irrigation Co. diverts water about 4 miles above station (see miscellaneous measurements).

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	61	1.0	3.0	6.5	122	94	40	27	5
2.....	12		3.6	7.5	128	92	41	24	5.5
3.....	2.6		4.2	8	115	87	41	20	8.5
4.....	.9		3.8	9	106	87	40	18	10
5.....	.5		4.2	8	113	83	45	17	12
6.....	.5	0	3.8	6	113	78	38	17	14
7.....	.4	0	4.2	5	122	81	35	17	13
8.....	.3	0	5.5	4.0	106	83	35	18	10
9.....	.3	0	6	3.0	98	92	34	17	10
10.....	.3	0	5.5	2.0	92	87	31	16	8.5
11.....	.3	0	5.5	1.6	92	81	28	15	2
12.....	.3	0	8	1.3	108	76	23	16	9
13.....	.2	0	8	1.0	125	74	21	17	8.5
14.....	.2	0	7.5	.8	115	70	19	18	5.5
15.....	.2	0	7	1.5	106	67	18	14	4.6
16.....	.2	0	7.5	406	106	67	19	10	4.2
17.....	.2	0	8	156	130	65	19	11	2.9
18.....	.2	0	9	29	128	61	23	11	2.3
19.....	.2	0	8	4,040	108	56	23	10	2.3
20.....	.2	0	7.5	767	94	58	23	8.5	2.7
21.....	.2	.3	7	194	96	60	23	9	2.6
22.....	.2		7.5	282	101	58	21	10	2.2
23.....	.1		8	255	101	55	22	9	2.0
24.....	.1		8.5	172	94	53	23	6	1.5
25.....	.1		9	153	83	49	25	4.2	1.0
26.....	.1	1.0	8	138	81	46	29	4.2	.8
27.....	.1		7.5	120	87	42	27	4.6	.5
28.....	.1		8	125	92	41	30	4.6	.1
29.....	.1		6.5	230	-----	45	32	3.8	.1
30.....	.1		7	203	-----	41	28	2.5	.1
31.....	.1	-----	6.5	138	-----	40	-----	3.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	61	0.1	2.65	163
November.....	-----	-----	.38	22.8
December.....	9	3.0	6.56	403
January.....	4,040	.8	241	14,800
February.....	130	81	106	5,890
March.....	94	40	66.7	4,100
April.....	45	18	28.5	1,700
May.....	27	2.5	12.3	756
June.....	14	.1	5.28	314
The year.....	4,040	0	38.9	28,100

NOTE.—No flow during months omitted.

SANTA PAULA CREEK NEAR SANTA PAULA, CALIF.

LOCATION.—Water-stage recorder 50 feet upstream from Santa Paula Water Works' diversion dam, near east boundary of Ex Mission San Buenaventura grant, and about 3 miles north of Santa Paula, Ventura County. Altitude, about 650 feet.

DRAINAGE AREA.—39.8 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933; October 1927 to Feb. 20, 1931, at point 500 feet downstream and below Santa Paula water-supply diversion; April 1912 to September 1913, about 2½ miles upstream.

DISCHARGE.—Maximum during year, 2,940 second-feet Jan. 19 (gage height, 4.86 feet); minimum, 0.3 second-foot Aug. 25 (gage height, 1.02 feet).

1927-33: Maximum, 3,520 second-feet Feb. 9, 1932; minimum, 0.3 second-foot Aug. 25, 1933.

REMARKS.—Records good. About 304 acre-feet was diverted above station during year.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	3.0	3.0	3.4	3.2	31	25	10	9.5	4.6	3.2	2.3	0.6
2-----	2.8	3.2	3.4	3.8	30	25	10	9.5	4.9	3.2	2.8	1.2
3-----	2.8	3.0	3.4	4.0	29	23	10	8.5	5	3.0	1.7	1.5
4-----	3.0	2.6	3.4	3.8	27	24	10	7.5	6	3.2	1.3	1.2
5-----	2.8	2.8	3.4	3.6	27	24	10	7.5	8.5	2.8	1.7	.9
6-----	2.6	2.8	3.4	3.8	29	21	10	8	6	1.9	1.9	.6
7-----	2.4	2.8	3.4	3.8	31	22	10	8	5	1.7	2.1	1.0
8-----	2.6	2.6	3.2	3.8	29	21	10	7.5	4.9	1.9	2.1	.8
9-----	2.8	2.6	3.2	3.8	27	22	10	7.5	4.9	1.9	1.3	.8
10-----	2.8	2.6	3.4	3.4	29	19	9.5	8.5	4.9	2.1	.8	.8
11-----	2.7	2.6	4.0	3.0	30	18	9.5	8.5	4.6	1.9	.7	.9
12-----	2.6	2.4	4.2	3.6	32	17	9	7.5	4.9	1.9	.9	1.0
13-----	2.8	2.4	4.0	3.6	36	16	9	6.5	4.0	1.7	1.2	1.7
14-----	2.8	2.8	3.8	4.0	35	15	8	7	3.2	1.5	1.5	1.9
15-----	2.8	2.6	3.2	4.0	33	14	7	7	2.8	1.7	1.7	1.5
16-----	2.6	2.1	3.0	51	36	14	7	7	3.2	1.7	1.7	1.7
17-----	3.0	1.9	3.2	16	39	15	8	7	4.3	1.7	1.3	1.9
18-----	3.0	1.9	3.4	12	35	14	6.5	6.5	3.7	1.7	1.1	2.1
19-----	2.4	2.6	3.6	726	32	14	8	5.5	3.2	1.7	1.3	1.7
20-----	2.3	2.8	3.6	108	30	14	7	5	2.8	1.7	1.5	1.3
21-----	2.4	3.0	3.6	47	30	15	7	7	2.8	1.7	1.9	1.2
22-----	2.8	3.0	3.6	66	29	14	8	6.5	3.2	1.9	1.1	1.5
23-----	3.0	2.6	3.8	60	28	13	7.5	5.5	3.4	1.7	.6	1.5
24-----	2.6	2.6	3.8	35	27	12	8	4.6	3.2	1.7	.5	1.7
25-----	2.4	2.1	3.6	35	25	12	8.5	4.0	3.2	1.5	.4	1.9
26-----	2.3	1.9	3.6	29	24	12	9	3.7	3.7	1.0	.7	1.9
27-----	1.9	2.4	3.6	29	25	11	9	3.7	3.4	1.1	.8	1.9
28-----	1.9	3.4	3.4	27	25	11	9.5	3.7	3.0	1.3	.8	1.7
29-----	2.1	3.8	3.2	51	-----	11	12	4.3	2.6	2.1	.8	1.3
30-----	2.6	3.4	3.2	40	-----	11	9.5	4.6	2.6	2.3	.8	1.5
31-----	3.0	-----	3.2	33	-----	11	-----	4.9	-----	2.3	.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	3.0	1.9	2.63	162
November-----	3.8	1.9	2.68	159
December-----	4.2	3.0	3.49	215
January-----	726	3.0	45.8	2,820
February-----	39	24	30.0	1,670
March-----	25	11	16.5	1,010
April-----	12	7	8.95	533
May-----	9.5	3.7	6.52	401
June-----	8.5	2.6	4.08	243
July-----	3.2	1.0	1.96	121
August-----	2.8	.4	1.29	79.3
September-----	2.1	.6	1.37	81.5
The year-----	726	.4	10.3	7,490

VENTURA RIVER BASIN.

MATILIJIA CREEK AT MATILIJIA, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 29, T. 5 N., R. 23 W., half a mile northwest of Matilija. Altitude, about 970 feet.

DRAINAGE AREA.—55 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum during year, 4,460 second-feet Jan. 19 (gage height, 6.40 feet); minimum, 1.6 second-feet Oct. 2 (gage height, 1.56 feet).

1927-33: Maximum, 5,350 second-feet Feb. 9, 1932; minimum, 0.4 second-foot Oct. 28, 1930.

REMARKS.—Records good. Discharge estimated Aug. 24, 31, Sept. 3, 7, 14, 21.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.6	4.1	4.7	4.7	42	18	10	8.5	6	3.9	3.4	3.0
2.....	1.9	4.1	4.4	4.4	38	19	10	8.5	6.5	4.1	3.4	3.2
3.....	1.9	4.1	4.4	5	34	19	9.5	8.5	6.5	4.1	3.2	3.0
4.....	2.0	4.1	4.1	5	34	18	10	8.5	8	3.9	3.2	2.7
5.....	2.3	3.8	4.1	4.7	33	19	10	8.5	12	3.9	2.8	2.5
6.....	2.6	3.8	4.1	4.7	34	18	10	8	10	3.9	2.8	2.3
7.....	3.2	3.8	4.4	4.4	33	18	10	8	9	3.9	3.0	2.4
8.....	3.2	3.8	4.4	4.1	30	18	10	7.5	8	3.9	2.8	2.7
9.....	3.5	3.8	4.7	4.1	28	17	9.5	7.5	8	3.9	2.7	2.7
10.....	3.8	3.5	4.7	4.4	28	17	9	8	7	3.7	2.3	2.7
11.....	4.1	3.8	5	4.4	31	17	9	8	7	3.7	2.5	2.8
12.....	4.1	3.8	5	4.4	31	17	8.5	8	6	3.4	3.3	2.8
13.....	4.1	4.1	4.7	4.4	30	16	8	7	6	3.4	2.1	2.8
14.....	4.1	4.1	4.4	4.4	28	16	8	7	5.5	3.4	2.3	2.7
15.....	4.4	4.1	4.7	4.4	26	15	8	7	4.8	3.4	2.3	2.7
16.....	4.1	4.4	4.7	49	26	15	8.5	7	4.6	3.4	2.3	2.5
17.....	4.1	4.7	4.7	16	28	15	9	7	4.6	3.7	2.3	2.7
18.....	4.1	5	4.4	13	28	14	9.5	7	4.6	3.4	2.5	2.5
19.....	4.1	4.4	4.4	1,130	23	14	9	6.5	4.4	3.7	2.5	2.5
20.....	4.1	4.7	4.7	108	24	13	9	6.5	4.4	3.7	2.7	2.5
21.....	4.1	5	4.7	56	23	13	9	7	4.4	3.7	2.8	2.4
22.....	4.1	5	4.7	60	20	13	9	7	4.1	3.7	2.8	2.3
23.....	3.5	4.7	5	60	21	13	8.5	6	4.1	3.7	2.8	2.3
24.....	3.5	4.7	4.7	47	21	13	9	6	4.1	3.7	2.7	2.7
25.....	3.5	4.7	4.7	46	19	12	9	6	4.1	3.7	2.7	2.8
26.....	3.8	4.7	4.7	35	19	12	10	6	3.9	3.7	2.8	2.7
27.....	3.5	4.7	4.4	36	20	12	10	6	3.7	3.4	3.0	2.5
28.....	3.2	4.7	4.4	46	19	12	9.5	6	3.7	3.4	3.0	2.5
29.....	3.2	4.7	4.7	73	-----	12	9.5	6	3.4	3.4	3.0	2.3
30.....	3.8	4.7	4.7	48	-----	11	9	6	3.7	3.4	2.8	2.3
31.....	4.1	-----	4.7	47	-----	11	-----	6.5	-----	3.4	2.9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4.4	1.9	3.50	215
November.....	5	3.5	4.32	257
December.....	5	4.1	4.58	282
January.....	1,130	4.1	62.5	3,840
February.....	42	19	27.5	1,530
March.....	19	11	15.1	928
April.....	10	8	9.23	549
May.....	8.5	6	7.13	438
June.....	12	3.4	5.74	342
July.....	4.1	3.4	3.66	225
August.....	3.4	2.1	2.73	168
September.....	3.2	2.3	2.62	156
The year.....	1,130	1.9	12.3	8,930

* Estimated.

VENTURA RIVER NEAR VENTURA, CALIF.

LOCATION.—Water-stage recorder in southeast corner of Santa Ana grant, at highway bridge at entrance to Foster Memorial Park, a quarter of a mile below Ventura diversion dam and mouth of Coyote Creek and 5 miles north of Ventura, Ventura County.

DRAINAGE AREA.—187 square miles.

RECORDS AVAILABLE.—September 1911 to January 1914, October 1929 to September 1933.

DISCHARGE.—Maximum during year, 13,000 second-feet Jan. 19 (gage height, 12.20 feet); no flow for several months.

1929-33: Maximum, that of Jan. 19, 1933; no flow for several months each year.

REMARKS.—Records good except those estimated, Oct. 12-18, Nov. 25 to Jan. 15, May 14, May 16 to June 4, June 14-18. Water diverted for irrigation and municipal use from Ventura River and tributaries above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	2.6	0.6	0.2	0.1	75	26	8	4.0	0.1
2.....	1.9	.8	.1	.1	70	25	9	3.8	.1
3.....	1.5	.8	.1	.1	62	23	9	3.2	.1
4.....	1.2	1.1	.1	.1	60	22	10	1.9	.1
5.....	1.0	.9	.1	.1	57	22	12	1.6	3.6
6.....	.9	1.1	.2	.1	54	22	11	2.4	14
7.....	1.0	.5	.2	.1	52	22	10	2.9	13
8.....	1.0	1.0	.2	.1	50	21	11	2.6	10
9.....	.9	1.9	.2	.1	48	22	8	2.0	5
10.....	.9	1.0	.3	.1	43	21	9.5	2.6	3.5
11.....	.9	.4	.3	.1	40	21	7.5	3.5	2.4
12.....	.9	.4	.3	.1	40	21	5	2.7	1.0
13.....	.9	.3	.2	.1	42	22	5	2.2	.9
14.....	.8	.3	.1	.1	39	20	5	.1	.1
15.....	.8	.3	.1	.1	36	19	4.8	2.3	.1
16.....	.8	.3	.1	181	36	17	4.8	1.8	.1
17.....	.7	.3	.1	54	38	17	5	.4	.1
18.....	.7	.3	.1	30	36	14	4.8	.2	.1
19.....	.7	.3	.1	3,230	35	6.5	4.5	.2	0
20.....	.6	.4	.1	461	34	10	4.5	.2	0
21.....	.5	.4	.1	103	33	14	4.2	.2	0
22.....	.7	.4	.1	287	32	12	3.8	.2	0
23.....	.6	.4	.1	379	32	14	3.0	.2	0
24.....	.6	.3	.1	106	32	14	2.8	.2	0
25.....	.6	.3	.1	126	32	14	2.9	.1	0
26.....	.6	.2	.1	86	29	13	3.8	.1	0
27.....	.6	.2	.1	70	29	13	5	.1	0
28.....	.6	.2	.1	65	28	13	5	.1	0
29.....	.6	.1	.1	464	13	4.8	.1	.1	0
30.....	.6	.1	.1	158	11	4.2	.1	.1	0
31.....	.6	-----	.1	97	-----	9.5	-----	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.6	0.5	0.88	54.2
November.....	1.9	.1	.51	30.5
December.....	.3	.1	.14	8.5
January.....	3,230	.1	190	11,700
February.....	75	28	42.6	2,370
March.....	26	6.5	17.2	1,060
April.....	12	2.8	6.26	372
May.....	4.0	.1	1.36	83.6
June.....	14	0	1.81	108
The year.....	3,230	0	21.8	15,800

NOTE.—No flow during months omitted.

SANTA YNEZ RIVER BASIN**SANTA YNEZ RIVER AT JUNCAL RESERVOIR, NEAR MONTECITO, CALIF.**

LOCATION.—Water-stage recorder in sec. 28, T. 5 N., R. 25 W., at Juncal Reservoir Dam, 8.5 miles northeast of Montecito.

RECORDS AVAILABLE.—December 1930 to September 1933.

REMARKS.—Montecito County Water District diverts at dam for municipal use in city of Montecito. Records furnished by city of Santa Barbara, through R. A. Hill, consulting engineer for water department.

Discharge, in second-feet, 1932-33

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.3	0.03	0.17	10.7
November.....	1.0	.1	.39	23.2
December.....	.3	.1	.18	10.9
January.....	507	.1	20.1	1,240
February.....	5.5	1.9	2.85	158
March.....	1.9	1.3	1.68	97.2
April.....	1.4	1.0	1.22	72.8
May.....	1.1	.9	1.00	61.7
June.....	.9	.3	.60	35.5
July.....	.4	.2	.28	17.1
August.....	.2	.1	.17	10.7
September.....	.2	.1	.13	7.7
The year.....	507	.03	2.41	1,750

NOTE.—Discharge equals increase in storage plus discharge to city, plus discharge to river, plus waste over spillway, plus evaporation, and minus precipitation.

SANTA YNEZ RIVER NEAR SANTA BARBARA, CALIF.

LOCATION.—About on section line between secs. 10 and 11, T. 5 N., R. 27 W., at Gibraltar Dam, 7 miles north of Santa Barbara.

DRAINAGE AREA.—219 square miles (revised).

RECORDS AVAILABLE.—November 1903 to April 1907, October 1907 to January 1908, February 1910 to November 1918, April 1920 to September 1933.

DISCHARGE.—Average, 19 years (1904-6, 1911-14, 1916-17, 1920-33), 49.1 second-feet.

REMARKS.—Beginning April 1920, discharge at station compiled from reservoir records. City of Santa Barbara diverts at dam for municipal use. Records furnished by city of Santa Barbara, through R. A. Hill, consulting engineer for water department.

Discharge, in second-feet, 1932-33

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	1,150	0	70.1	4,310
February.....	60	24	36.4	2,020
March.....	24	11	16.2	994
April.....	11	5.8	8.20	488
May.....	6	2.1	4.05	249
June.....	7.0	.2	1.83	109
July.....	.4	.1	.19	11.9
August.....	.04	0	.01	.6
The year.....	1,150	0	11.3	8,180

NOTE.—No flow during months omitted. Discharge equals increase in storage plus discharge to city, plus discharge to river, plus waste over spillway, plus evaporation, and minus precipitation.

SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CALIF.

LOCATION.—About on section line between secs. 10 and 11, T. 5 N., R. 27 W., below Gibraltar Dam, 7 miles north of Santa Barbara.

RECORDS AVAILABLE.—April 1920 to September 1933.

REMARKS.—Regulated by storage in reservoir and diversion to city of Santa Barbara. Records furnished by city of Santa Barbara, through R. A. Hill, consulting engineer for water department.

Discharge, in second-feet, 1932-33

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.8	0.2	0.61	37.5
November.....	31	.2	1.94	116
December.....	7.6	.2	.65	39.9
January.....	132	0	18.9	1,160
February.....	63	20	33.4	1,850
March.....	19	6	11.3	692
April.....	5	0	1.15	70.6
May.....	2.8	0	.86	52.8
June.....	1.9	.7	1.44	85.7
July.....	.7	.2	.34	21.0
August.....	.5	.2	.37	23.0
September.....	.5	.5	.50	29.8
The year.....	132	0	5.78	4,180

NOTE.—Discharge equals increase in storage plus waste over spillway plus release to river.

SANTA YNEZ RIVER NEAR SANTA YNEZ, CALIF.

LOCATION.—Water-stage recorder in Canada de los Pinos grant on San Marcos Pass road bridge 4 miles southeast of Santa Ynez, Santa Barbara County.

DRAINAGE AREA.—435 square miles.

RECORDS AVAILABLE.—December 1928 to September 1931, October 1932 to September 1933.

REMARKS.—Records furnished by city of Santa Barbara, through R. A. Hill, consulting engineer for water department.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	200	28	13	7	1.2	0.4
2	0	150	28	12	6.5	1.2	.4
3	0	125	27	12	6	1.2	.3
4	0	110	27	11	5.5	1.2	.3
5	0	100	26	11	5	1.4	.3
6		73	26	11	4.7	1.4	.3
7	0	66	25	10	4.5	1.4	.3
8	0	57	24	10	4.0	1.6	.2
9	0	51	23	9	3.5	1.6	.2
10	0	49	23	9	3.0	1.7	.2
11	0	48	22	8	2.8	1.5	.1
12	0	47	22	8	2.4	1.4	.1
13	0	46	21	8	2.2	1.1	.1
14	0	44	20	7.5	2.0	1.1	0
15	0	43	20	7	1.8	.9	0
16	0	42	20	7	1.8	.9	0
17	0	41	20	7	1.5	.9	0
18	0	40	20	7	1.5	.8	0
19	640	39	20	7	1.3	.7	0
20	460	39	20	7	1.3	.7	0
21	145	38	20	7	1.3	.6	0
22	70	36	19	7	1.3	.6	0
23	130	36	19	7	1.3	.5	0
24	185	35	19	7	1.3	.5	0
25	145	35	19	7	1.4	.5	0
26	140	34	18	7	1.3	.5	0
27	100	33	17	7.5	1.4	.5	0
28	85	30	15	7.5	1.4	.4	0
29	300	-----	15	7.5	1.3	.4	0
30	465	-----	13	7.5	1.3	.4	0
31	280	-----	13	-----	1.2	-----	0
Month	Maximum		Minimum		Mean	Run-off in acre-feet	
January	640		0		101	6,210	
February	200		30		60.2	3,340	
March	28		13		20.9	1,290	
April	13		7		8.45	503	
May	7		1.2		2.67	164	
June	1.7		.4		.960	57.1	
July	.4		0		.103	6.3	
The year	640		0		16.0	11,600	

NOTE.—No flow during months omitted.

SANTA YNEZ RIVER AT SOLVANG, CALIF.

LOCATION.—Water-stage recorder on Mission Bridge, in Canada de los Pinos grant, 0.9 mile south of Solvang, Santa Barbara County.

DRAINAGE AREA.—585 square miles.

RECORDS AVAILABLE.—October 1928 to September 1933.

REMARKS.—Records furnished by city of Santa Barbara, through R. A. Hill, consulting engineer for water department.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	4.4	5.5	6	7	225	37	24	9	6	4.2	2.9	1.6
2.....	4.4	5.5	6.5	7	185	37	24	9	6.5	4.2	2.8	1.6
3.....	4.5	5.5	6.5	7	160	36	23	9	8	4.1	2.8	1.6
4.....	4.6	5.5	6.5	7	133	36	21	9	8	4.1	2.7	1.6
5.....	4.8	5.5	6.5	7	120	35	21	9	8	4.1	2.7	1.6
6.....	5	5.5	6.5	7	104	35	21	9	8	4.1	2.7	2.0
7.....	5	5.5	6.5	7.5	92	33	20	9	8	4.1	2.7	2.0
8.....	5.5	5.5	6.5	7.5	79	32	20	9	8	4.0	2.6	2.0
9.....	5.5	5.5	6.5	7	78	32	18	8.5	8	4.0	2.6	2.5
10.....	5.5	5.5	6.5	7	77	32	16	8.5	8	3.9	2.5	2.9
11.....	5.5	5.5	6.5	6.5	77	31	14	8.5	8	3.9	2.5	3.3
12.....	5.5	5.5	6.5	6.5	74	31	13	8.5	7.5	3.8	2.4	3.4
13.....	5.5	5.5	6	6	71	31	12	8	7.5	3.8	2.2	3.6
14.....	5.5	5.5	6	6	69	31	12	8	7.5	3.8	2.2	3.6
15.....	5.5	6	6	6	66	30	11	8	7	3.7	2.1	3.7
16.....	5.5	6	6	20	62	30	11	8	7	3.7	2.1	3.7
17.....	5.5	6	6	19	58	30	11	7.5	7	3.7	2.0	3.7
18.....	5.5	6	6	20	55	30	11	7.5	6.5	3.5	2.0	3.5
19.....	5	6.5	6.5	709	53	29	11	7	6	3.5	1.9	3.1
20.....	5	6.5	6.5	481	51	29	11	7	6	3.3	1.9	3.1
21.....	5	6	6.5	149	48	29	11	7	5.5	3.2	1.9	3.0
22.....	5	6	7	81	46	28	11	7	5.5	3.1	1.9	2.7
23.....	5	6	7	199	43	28	10	7	5.5	3.1	1.8	2.5
24.....	5	6	7.5	252	41	28	10	6.5	5	3.1	1.8	2.5
25.....	5	6	7.5	200	39	27	10	6.5	4.9	3.0	1.8	2.5
26.....	5	6	7	194	39	27	10	6.5	4.7	3.0	1.8	2.5
27.....	5	6	7	157	38	26	10	6	4.6	3.0	1.8	2.4
28.....	5	6	7	140	38	26	10	6	4.4	3.0	1.8	2.3
29.....	5	6	7	353	-----	25	9	6	4.4	3.0	1.7	2.3
30.....	5	6	6.5	481	-----	25	9	6	4.2	2.9	1.7	2.3
31.....	5.5	-----	6.5	310	-----	25	-----	6	-----	2.9	1.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	5.5	4.4	5.12	315
November.....	6.5	5.5	5.80	345
December.....	7.5	6	6.55	403
January.....	709	6	125	7,690
February.....	225	38	79.3	4,400
March.....	37	25	30.4	1,870
April.....	24	9	14.2	845
May.....	9	6	7.66	471
June.....	8	4.2	6.51	387
July.....	4.2	2.9	3.57	220
August.....	2.9	1.7	2.19	135
September.....	3.7	1.6	2.64	157
The year.....	709	1.6	23.8	17,200

SANTA YNEZ RIVER NEAR LOMPOC, CALIF.

LOCATION.—Water-stage recorder near east boundary of La Mision Vieja la Purisima grant, at highway bridge $1\frac{1}{2}$ miles east of Lompoc, Santa Barbara County.

DRAINAGE AREA.—790 square miles.

RECORDS AVAILABLE.—November 1906 to September 1918, April 1925 to September 1933. (Discharge not computed for 1909.)

DISCHARGE.—Maximum during year, 1,930 second-feet Jan. 20 (gage height, 13.15 feet); minimum, 0.2 second-foot Aug. 29 to Sept. 1, Sept. 20-27.

1906-18, 1925-33: Maximum, 41,800 second-feet Jan. 25, 1914 (gage height, 13.0 feet); no flow several months in 1929, 1930, 1931. Average, 17 years (1907-8, 1910-18, 1925-33), 241 second-feet.

REMARKS.—Records good. Discharge estimated Mar. 17-19, June 10, 11, 13-15. Water diverted by city of Santa Barbara at Gibraltar Dam, and some irrigation water is pumped from wells along banks of river.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.6	0.6	1.0	8	299	47	29	9	2.0	1.4	0.7	0.2
2.	.7	.6	1.2	8	223	47	26	9	1.9	1.2	.6	.3
3.	.8	.6	1.2	8	189	49	24	8	2.0	1.1	.6	.4
4.	.8	.6	1.2	8.5	166	48	25	7.5	2.0	.8	.6	.4
5.	.9	.5	1.2	9	154	44	25	6.5	4.4	.8	.6	.4
6.	.9	.5	1.3	9	143	42	25	5.5	3.8	.9	.6	.4
7.	1.0	.5	1.4	9	125	38	23	5.5	3.3	.9	.6	.4
8.	.8	.6	1.5	9	113	35	20	4.9	3.6	.9	.6	.4
9.	.8	.6	1.6	9	96	37	19	4.6	3.8	.8	.5	.4
10.	.7	.6	1.6	9	94	35	16	4.6	3.8	.8	.6	.4
11.	.7	.6	1.7	9.5	88	40	15	4.6	3.8	.8	.5	.4
12.	.7	.6	1.8	9.5	85	36	15	4.6	3.8	.7	.4	.4
13.	.7	.6	1.7	10	80	37	14	4.4	3.6	.6	.6	.4
14.	.7	.6	1.7	10	75	37	13	4.1	3.3	.6	.6	.4
15.	.7	.6	1.7	11	70	37	13	3.6	3.0	.6	.4	.4
16.	.6	.7	1.6	14	68	37	12	3.3	2.7	.6	.4	.3
17.	.6	.7	1.6	14	65	38	11	3.3	2.5	.6	.4	.3
18.	.6	.7	1.6	14	65	38	11	3.3	2.3	.6	.4	.3
19.	.5	.7	1.6	83	65	38	11	3.2	2.2	.7	.4	.3
20.	.5	.7	1.8	859	65	38	10	3.2	1.9	.7	.4	.2
21.	.5	.7	2.6	365	62	37	11	3.3	1.9	.7	.3	.2
22.	.5	.7	3.3	157	62	37	10	3.3	1.9	.6	.4	.2
23.	.5	.7	4.7	145	60	37	10	3.2	1.8	.7	.3	.2
24.	.5	.7	6	194	59	33	9.5	2.9	1.8	.6	.3	.2
25.	.5	.7	6.5	254	54	30	10	2.7	1.5	.6	.3	.2
26.	.5	.7	6.5	194	49	29	10	2.6	1.5	.7	.3	.2
27.	.5	.7	6.5	186	45	31	10	2.5	1.5	.7	.3	.2
28.	.5	.6	7	164	47	33	11	2.5	1.5	.7	.3	.3
29.	.5	.7	7	306	-----	34	10	2.3	1.5	.8	.2	.3
30.	.5	.9	7	561	-----	34	9.5	1.9	1.4	.7	.2	.4
31.	.6	-----	7.5	463	-----	33	-----	1.9	-----	.8	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.0	0.5	0.642	39.5
November	.9	.5	.643	38.3
December	7.5	1.0	3.05	188
January	859	8	133	8,180
February	299	45	98.8	5,490
March	49	29	37.6	2,310
April	29	9.5	15.3	910
May	9	1.9	4.25	261
June	4.4	1.4	2.53	151
July	1.4	.6	.76	47.0
August	.7	.2	.44	27.0
September	.4	.2	.32	18.9
The year	859	.2	24.4	17,700

SANTA MARIA RIVER BASIN

CUYAMA RIVER NEAR SANTA MARIA, CALIF.

LOCATION.—Water-stage recorder in Suey grant, at highway bridge $1\frac{1}{2}$ miles above mouth of Alamos Creek and 10 miles northeast of Santa Maria, Santa Barbara County. Altitude, about 610 feet.

DRAINAGE AREA.—576 square miles.

RECORDS AVAILABLE.—December 1929 to September 1933.

DISCHARGE.—Maximum during year, 511 second-feet Jan. 19 (gage height, 2.67 feet); minimum, 0.2 second-foot Sept. 1–30.

1929–33: Maximum, 4,480 second-feet Feb. 9, 1932 (gage height, 4.72 feet); no flow for several months during most years.

REMARKS.—Records good except those for Oct. 1–9, Mar. 29 to Apr. 3, July 8 to Sept. 5, which were estimated.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.4	0.5	4.8	10	51	16	13	9	4.4	2.0	0.3	0.2
2.	.4	.5	4.8	10	40	16	13	10	4.7	2.3	.3	.2
3.	.4	.5	4.8	10	40	16	13	9	5	2.3	.3	.2
4.	.4	.5	4.3	10	38	16	13	8	6.5	1.3	.3	.2
5.	.4	.5	5.5	10	31	15	12	7.5	15	1.0	.3	.2
6.	.4	.4	6.0	10	28	15	12	7.5	16	.6	.3	.2
7.	.4	.4	6.5	9.5	25	16	12	8	21	.5	.3	.2
8.	.4	.4	7	9.5	22	16	12	8.5	17	.5	.3	.2
9.	.4	.4	8	10	22	15	12	8	12	.6	.3	.2
10.	.5	.4	8	10	21	16	12	7.5	9	.6	.3	.2
11.	.5	.4	8.5	9	21	16	11	8	6.5	.6	.3	.2
12.	.5	.4	8.5	9.5	22	17	11	8	5.5	.6	.3	.2
13.	.5	.5	9	8.5	22	17	11	8	4.7	.6	.3	.2
14.	.5	.6	9	8.5	21	16	11	10	4.1	.6	.3	.2
15.	.4	.7	9.5	9.5	21	16	10	10	3.5	.5	.3	.2
16.	.4	.8	9.5	15	20	16	10	9.5	3.2	.5	.3	.2
17.	.4	.9	10	18	19	16	10	9	2.9	.5	.3	.2
18.	.4	1.1	11	19	18	16	9.5	8.5	2.3	.5	.3	.2
19.	.4	1.2	12	267	17	14	10	7	2.0	.5	.3	.2
20.	.4	1.4	13	222	16	14	9.5	6.5	1.8	.5	.3	.2
21.	.4	1.9	14	64	17	15	10	7.5	1.8	.5	.3	.2
22.	.4	2.6	14	43	16	15	10	8	1.7	.5	.3	.2
23.	.4	2.9	15	82	17	14	10	7	1.7	.4	.3	.2
24.	.4	3.1	15	66	16	14	9.5	7	1.8	.4	.3	.2
25.	.4	3.1	13	98	16	14	9.5	6.5	1.8	.4	.3	.2
26.	.4	3.3	12	84	15	13	10	6	1.7	.4	.3	.2
27.	.4	3.6	11	59	16	13	9.5	5	1.5	.4	.3	.2
28.	.4	3.8	10	64	16	14	9	4.7	1.3	.4	.3	.2
29.	.4	3.8	10	164	-----	14	9	4.4	1.8	.4	.3	.2
30.	.4	4.3	10	178	-----	14	9	4.4	2.3	.4	.3	.2
31.	.4	-----	10	82	-----	13	-----	4.4	-----	.4	.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.5	0.4	0.42	25.6
November	4.2	.4	1.50	89.3
December	15	4.3	9.47	582
January	267	8.5	53.8	3,310
February	51	15	23.0	1,280
March	17	13	15.1	928
April	13	9	10.8	643
May	10	4.4	7.50	461
June	21	1.3	5.48	326
July	2.3	.4	.70	43.0
August	.3	.3	.30	18.4
September	.2	.2	.20	11.9
The year	267	.2	10.7	7,720

HUASNA RIVER NEAR SANTA MARIA, CALIF.

LOCATION.—Water-stage recorder in Suey grant, half a mile above junction with Cuyama River and 8 miles northeast of Santa Maria.

DRAINAGE AREA.—119 square miles.

RECORDS AVAILABLE.—December 1929 to September 1933.

DISCHARGE.—Maximum during year, 1,240 second-feet Jan. 19 (gage height, 4.80 feet); minimum, 0.1 second-foot on numerous days.

1929-33: Maximum, 4,000 second-feet Dec. 23, 1931; no flow for part of several years.

REMARKS.—Records good. Discharge estimated July 12 to Aug. 6, Aug. 11 to Sept. 2, Sept. 10-30.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	0.4	1.6	1.6	53	5	3.1	1.9	1.3	1.0	0.1	0.1
2	1.0	.6	1.4	1.6	33	5	3.1	2.0	1.3	1.0	.1	.1
3	1.0	.6	1.4	1.6	26	4.3	3.1	1.9	1.3	1.0	.1	.1
4	.9	.6	1.3	1.7	22	4.5	3.1	1.6	2.1	.9	.1	.2
5	.8	.6	1.4	1.7	19	4.3	3.1	1.7	4.8	.8	.1	.2
6	.8	.6	1.4	1.7	16	4.1	3.1	1.6	2.6	.9	.1	.2
7	1.4	.6	1.5	1.7	13	4.0	2.9	2.1	2.1	.9	.2	.1
8	1.3	.6	1.6	1.7	12	3.8	2.7	2.3	1.7	.8	.2	.1
9	.9	.7	1.9	1.9	11	3.8	2.7	2.1	1.6	.7	.2	.2
10	.6	.8	2.1	1.9	10	3.6	2.6	2.1	1.4	.6	.2	.2
11	.4	.7	2.1	1.7	9.5	3.8	2.6	2.0	1.2	.4	.2	.2
12	.4	.9	2.0	1.7	9	4.0	2.7	1.9	1.4	.3	.2	.2
13	.6	1.1	1.9	1.7	9	4.0	2.7	1.6	1.3	.3	.2	.2
14	.4	1.3	1.6	1.7	8	3.8	2.7	1.5	1.2	.3	.1	.2
15	.2	1.2	1.5	1.9	7	3.6	2.5	1.7	1.1	.3	.1	.2
16	.1	1.1	1.6	4.0	7	4.3	2.5	2.1	1.1	.3	.1	.2
17	.1	1.1	1.7	3.1	6.5	4.1	2.5	1.4	1.0	.2	.1	.2
18	.1	1.1	1.9	2.5	6.5	3.6	2.5	1.4	1.1	.2	.1	.2
19	.1	1.1	2.0	480	5.5	3.6	2.5	1.3	1.3	.2	.1	.1
20	.1	1.1	2.1	60	5	3.6	2.3	1.3	1.2	.2	.1	.1
21	.1	1.1	2.3	14	5.5	3.6	2.2	1.6	1.2	.2	.1	.1
22	.2	1.3	2.2	18	5.5	3.6	2.3	1.5	1.3	.1	.1	.1
23	.4	1.3	2.6	98	5	3.6	2.5	1.3	1.3	.1	.1	.1
24	.2	1.4	2.7	52	5.5	3.4	2.5	1.3	1.4	.1	.1	.1
25	.2	1.3	2.1	119	5	3.4	2.5	1.2	1.4	.1	.1	.1
26	.3	1.3	1.9	77	5.5	3.2	2.5	1.0	1.4	.1	.1	.1
27	.4	1.3	1.7	50	5	3.1	2.3	1.0	1.3	.1	.1	.1
28	.4	1.3	1.7	77	4.8	3.6	2.0	1.0	1.2	.1	.1	.1
29	.4	1.4	1.6	253	-----	3.4	2.0	1.1	1.1	.1	.1	.1
30	.4	1.9	1.6	211	-----	3.1	1.9	1.1	1.1	.1	.1	.1
31	.4	-----	1.6	91	-----	3.1	-----	1.2	-----	.1	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.4	0.1	0.50	30.7
November	1.9	.4	1.01	60.1
December	2.7	1.3	1.81	111
January	480	1.6	52.8	3,250
February	53	4.8	11.8	655
March	5	3.1	3.82	235
April	3.1	1.9	2.59	154
May	2.3	1.0	1.57	96.5
June	4.8	1.0	1.49	88.7
July	1.0	.1	.40	24.8
August	.2	.1	.12	7.6
September	.2	.1	.1	8.5
The year	480	.1	6.51	4,720

SISQUOC RIVER NEAR SISQUOC, CALIF.

LOCATION.—Water-stage recorder in Sisquoc grant, 2 miles above junction with Labrea Creek and 7 miles east of Sisquoc, Santa Barbara County.

DRAINAGE AREA.—282 square miles.

RECORDS AVAILABLE.—December 1929 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 800 second-feet Jan. 19 (gage height, 3.18 feet); no flow for several months.

1929-33: Maximum, 6,240 second-feet Feb. 8, 1932 (gage height, 6.17 feet); no flow several months each year.

REMARKS.—Records good. Discharge estimated Oct. 5-9, Jan. 20-23, Jan. 31 to Feb. 1, Apr. 1-3, 8-10, 13-17, May 13-25. Low-water flow diverted by Sisquoc ranch, above station

Discharge, in second-feet, 1932-33

Day	Oct.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	0	85	17	16	8	0
2.....	0	0	72	17	17	7	0
3.....	0	0	59	16	18	6	0
4.....	0	0	48	20	18	4.7	0
5.....	8	0	44	21	18	4.1	0
6.....	5	0	39	20	17	3.8	5.5
7.....	3.0	0	35	21	16	4.1	5
8.....	2.0	0	30	24	14	6	3.8
9.....	1.0	0	29	25	9	8	1.5
10.....	0	0	27	26	8	6.5	.3
11.....	0	0	26	26	7	5	0
12.....	0	0	22	25	6	4.4	0
13.....	0	0	22	22	5	3.7	0
14.....	0	0	21	22	4.0	3.0	0
15.....	0	0	18	21	4.0	2.3	0
16.....	0	0	18	20	4.0	1.7	0
17.....	0	0	17	26	3.8	1.5	0
18.....	0	0	17	29	4.1	1.5	0
19.....	0	282	18	26	4.1	1.5	0
20.....	0	317	18	22	4.1	1.5	0
21.....	0	118	18	24	3.8	2.0	0
22.....	0	60	18	25	3.2	2.0	0
23.....	0	53	18	22	2.3	1.5	0
24.....	0	48	18	21	2.6	1.0	0
25.....	0	48	18	20	2.9	.5	0
26.....	0	69	18	17	3.2	0	0
27.....	0	48	17	16	4.1	0	0
28.....	0	53	17	17	7.5	0	0
29.....	0	102	17	17	12	0	0
30.....	0	209	17	11	11	0	0
31.....	0	120	16	16	-----	0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	8	0	0.61	37.5
January.....	317	0	49.3	3,030
February.....	85	17	28.8	1,600
March.....	29	16	12.2	1,300
April.....	18	2.3	83.2	495
May.....	8	0	2.95	181
June.....	5.5	0	.54	32.0
The year.....	317	0	9.23	6,680

NOTE.—No flow during months omitted.

SALINAS RIVER BASIN

SALINAS RIVER NEAR SANTA MARGARITA, CALIF.

LOCATION.—Water-stage recorder in N½ sec. 15, T. 29 S., R. 13 E., 250 feet below Calf Canyon highway bridge, 250 feet above Morano Creek, and 2½ miles northeast of Santa Margarita. Altitude, about 960 feet.

DRAINAGE AREA.—150 square miles.

RECORDS AVAILABLE.—April to September 1922; February 1932 to September 1933.

DISCHARGE.—Maximum during period of record, 3,580 second-feet Jan. 19, 1933 (gage height, 8.58 feet); no flow for several months.

REMARKS.—Records good except those estimated, Oct. 1 to Jan. 15, which are fair. No regulation or diversions above station.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	Day	Jan.	Feb.	Mar.	Apr.	May	June
1.-----	0.7	127	8	5.5	4.5	1.5	16.-----	1.0	13	7.5	4.5	2.4	0.4
2.-----	.7	81	8	6	5.5	1.2	17.-----	1.0	13	6	4.5	2.4	.2
3.-----	.7	64	7	6	4.0	1.2	18.-----	1.2	12	5.5	4.5	2.4	.1
4.-----	.6	55	7	5.5	3.6	2.8	19.-----	2,100	10	4.5	4.0	2.1	.1
5.-----	.6	47	6	5.5	3.2	18	20.-----	278	9	5.5	3.6	1.8	.1
6.-----	.6	40	5.5	5	3.2	13	21.-----	42	9	5	3.6	3.2	@
7.-----	.6	34	5.5	5.5	3.6	7.5	22.-----	198	11	5.5	3.6	5.5	0
8.-----	.6	26	5.5	4.5	5	4.5	23.-----	369	10	6	3.2	4.0	0
9.-----	.6	22	5.5	4.5	3.6	3.6	24.-----	162	8	7.5	3.6	3.6	0
10.-----	.5	21	5.5	4.0	3.6	2.1	25.-----	597	9	7.5	4.0	2.4	0
11.-----	.5	17	6	3.6	3.6	1.5	26.-----	308	9	7.5	4.0	2.1	@
12.-----	.5	18	6	4.0	3.6	1.2	27.-----	168	8	7.5	4.0	2.1	0
13.-----	.5	17	6	4.5	3.6	1.0	28.-----	155	8	11	4.5	1.8	.1
14.-----	.5	16	6	4.5	3.2	.8	29.-----	847	-----	9	4.5	1.5	0
15.-----	.5	13	5.5	4.5	2.4	.6	30.-----	491	-----	6	5	1.2	0
							31.-----	204	-----	6	-----	1.2	-----
Month						Maximum	Minimum	Mean		Run-off in acre-feet			
October.-----								0.2		12.3			
November.-----								.8		47.6			
December.-----								.8		49.2			
January.-----						2,100	0.5	191		11,700			
February.-----						127	8	26.0		1,440			
March.-----						11	4.5	6.47		398			
April.-----						6	3.2	4.47		266			
May.-----						5.5	1.2	3.09		190			
June.-----						18	0	2.05		122			
The year.-----						2,100	0	19.7		14,280			

NOTE.—No flow during months omitted.

SALINAS RIVER NEAR SPRECKELS, CALIF.

LOCATION.—Water-stage recorder in El Toro grant, at bridge on Salinas-Monterey highway 2 miles west of Spreckels and 4 miles south of Salinas. Monterey County. Altitude, about 50 feet.

DRAINAGE AREA.—4,180 square miles.

RECORDS AVAILABLE.—January 1900 to August 1901, December 1929 to September 1933.

DISCHARGE.—Maximum during year, 2,850 second-feet Jan. 31 (gage height, 7.61 feet); no flow at times.

1929-33: Maximum, 42,100 second-feet Dec. 29, 1931 (gage height, 20.4 feet); no flow at times each year. A previous high-water mark of 26.6 feet is indicated at oil pumping station opposite gage house; date and discharge unknown.

REMARKS.—Records good. Discharge estimated Oct. 1-5, Sept. 16-30. Discharge interpolated May 5 to July 10. Small diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1.....	6	9	11	11	2,200	8.5	5.5	2.4	1.4	1.0	0
2.....	6	9.5	11	10	1,140	8.5	5.5	2.4	1.4	.8	0
3.....	5	10	11	10	700	8	5.5	2.2	1.4	.6	0
4.....	6	9	11	10	454	8	5.5	2.2	1.4	.4	0
5.....	6	9	12	10	316	8	5	2.2	1.4	.2	0
6.....	6.5	9.5	12	10	226	8	5	2.1	1.4	.2	0
7.....	6.5	9.5	12	9.5	161	8	4.8	2.1	1.4	.2	0
8.....	6.5	9.5	12	9.5	110	8	4.8	2.0	1.3	.2	0
9.....	6.5	9.5	12	9	78	7.5	4.8	2.0	1.3	.1	0
10.....	6.5	9.5	12	9	48	7	4.6	2.0	1.3	.1	0
11.....	6.5	9.5	12	9	45	7	4.4	1.9	1.3	0	0
12.....	7	9	12	9	37	7	4.2	1.9	1.3	0	0
13.....	7	9	11	9	32	6.5	4.2	1.9	1.3	0	0
14.....	7.5	10	11	9.5	25	6.5	4.0	1.8	1.2	0	0
15.....	8	11	11	9.5	19	6.5	3.8	1.8	1.2	0	0
16.....	8	11	11	11	16	7	3.8	1.8	1.2	0	3.0
17.....	8	11	11	10	15	7	3.4	1.7	1.2	0	
18.....	8.5	11	11	9.5	13	7	3.4	1.7	1.2	0	
19.....	8.5	11	12	12	13	6.5	3.4	1.7	1.1	0	
20.....	8.5	11	12	11	12	7	3.2	1.6	1.1	0	
21.....	8.5	11	13	11	11	7	3.2	1.6	1.1	0	
22.....	8.5	11	13	11	11	7	3.2	1.6	1.1	0	
23.....	8.5	11	14	11	10	7	3.0	1.6	1.1	0	
24.....	8.5	11	13	11	10	6.5	3.0	1.6	1.1	0	
25.....	8.5	11	12	11	9.5	6.5	3.0	1.5	1.0	0	
26.....	8.5	11	12	11	8.5	6.5	2.8	1.5	1.0	0	3.0
27.....	8.5	11	12	13	8.5	6	2.6	1.5	1.0	0	
28.....	8.5	11	12	214	8.5	6	2.6	1.4	1.0	0	
29.....	8.5	11	12	243	-----	6	2.6	1.4	1.0	0	
30.....	8.5	11	11	325	-----	5.5	2.4	1.4	1.0	0	
31.....	8.5	-----	11	1,580	-----	5.5	-----	1.4	-----	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	8.5	6	7.53	463
November.....	11	9	10.2	607
December.....	14	11	11.8	726
January.....	1,580	9	85.1	5,230
February.....	2,200	8.5	205	11,400
March.....	8.5	5.5	7.00	430
April.....	5.5	2.4	3.91	233
May.....	2.4	1.4	1.80	111
June.....	1.4	1.0	1.21	72.0
July.....	1.0	0	.12	7.6
September.....	-----	0	1.50	89.3
The year.....	2,200	0	26.8	19,400

NOTE.—No flow during August.

SALINAS RIVER BASIN

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SAN ANTONIO RIVER AT PLEYTO, CALIF.

LOCATION.—Water-stage recorder in Pleyto grant, at highway bridge at old town site of Pleyto, Monterey County, 15 miles west of Bradley. Altitude, about 720 feet.

DRAINAGE AREA.—282 square miles.

RECORDS AVAILABLE.—April to September 1922, December 1929 to September 1933.

DISCHARGE.—Maximum during year, 624 second-feet Jan. 29 (gage height, 2.03 feet); no flow several months.

1930-33: Maximum, 7,460 second-feet Dec. 28, 1931 (gage height, 4.55 feet); no flow several months each year.

REMARKS.—Records good. Discharge estimated Dec. 1 to Jan. 8, May 16-31. Diversions for irrigation above station.

Discharge, in second feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	Day	Jan.	Feb.	Mar.	Apr.	May
1.-----	0.2	67	11	14	1.9	16.-----	0.2	16	18	4.8	1.2
2.-----	.2	57	11	13	1.9	17.-----	.2	15	39	5	1.1
3.-----	.2	44	11	12	1.9	18.-----	.2	14	40	4.8	1.0
4.-----	.2	38	11	11	1.8	19.-----	.4	13	37	4.1	.9
5.-----	.2	33	11	10	1.6	20.-----	.3	12	34	3.6	.9
6.-----	.2	27	9.5	9.5	1.4	21.-----	.3	12	31	3.0	.8
7.-----	.2	24	9.5	9	1.3	22.-----	.4	12	28	2.7	.7
8.-----	.2	21	9.5	8.5	1.3	23.-----	.3	12	25	2.5	.6
9.-----	.2	18	9	8	1.2	24.-----	.3	12	24	2.2	.5
10.-----	.2	18	8.5	7.5	1.2	25.-----	.5	11	23	2.2	.5
11.-----	.2	18	8.5	7	1.4	26.-----	.4	11	20	2.2	.4
12.-----	.2	18	9.5	6.5	1.6	27.-----	.4	12	16	2.2	.3
13.-----	.2	18	9.5	6	1.4	28.-----	2.1	12	19	2.0	.2
14.-----	.2	16	12	5	1.4	29.-----	163	-----	17	2.0	.2
15.-----	.2	16	14	4.8	1.4	30.-----	273	-----	16	2.0	.1
						31.-----	100	-----	15	-----	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December-----			0.1	6.1
January-----	273	0.2	17.6	1,080
February-----	67	11	21.3	1,180
March-----	40	8.5	18.0	1,110
April-----	14	2.0	5.90	351
May-----	1.9	.1	1.04	64.0
The year-----	273	0	5.24	3,790

NOTE.—No flow during months omitted.

ARROYO SECO NEAR SOLEDAD, CALIF.

LOCATION.—Water-stage recorder in sec. 21, T. 19 S., R. 6 E., half a mile downstream from Vaguer Creek and 11 miles south of Soledad. Altitude, about 370 feet.

DRAINAGE AREA.—238 square miles (revised).

RECORDS AVAILABLE.—January 1901 to September 1933.

DISCHARGE.—Maximum during year, 2,340 second-feet Jan. 29 (gage height, 7.31 feet); no flow Oct. 1 to Nov. 10 and Aug. 4 to Sept. 30.

1901-33: Maximum, about 22,000 second-feet Feb. 21, 1917, and Nov. 27, 1926 (gage height, 16.5 feet); no flow during periods in 1902-4, 1906, 1913, 1914, 1919, 1921, 1924, 1926, 1931-33. Average, 32 years (1901-33), 169 second-feet.

REMARKS.—Records good. Discharge estimated Jan. 21-23. No large diversions above station.

Discharge, in second-feet, 1932-33

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1.....	0	8	12	176	39	49	24	11	2.0	0.1
2.....	0	9	12	137	37	46	25	11	1.9	.1
3.....	0	8.5	12	115	37	43	28	11	1.7	.1
4.....	0	7.5	12	101	36	42	24	13	1.4	0
5.....	0	7.5	12	90	36	39	22	14	1.1	0
6.....	0	7.5	12	83	36	37	22	16	1.1	0
7.....	0	7	12	75	35	37	22	14	1.0	0
8.....	0	7	12	69	35	37	36	12	.8	0
9.....	0	7	12	64	35	36	33	11	.7	0
10.....	0	7.5	12	62	35	35	28	9.5	.5	0
11.....	1.2	9	12	58	35	33	26	8.5	.4	0
12.....	2.0	10	12	66	38	32	26	8	.4	0
13.....	2.1	10	12	74	69	31	25	7	.3	0
14.....	2.3	10	12	69	58	29	23	6.5	.3	0
15.....	2.5	9.5	12	64	50	28	21	5.5	.3	0
16.....	3.0	10	13	62	62	27	20	4.8	.3	0
17.....	3.0	10	14	60	113	27	19	4.2	.2	0
18.....	3.2	11	15	58	82	28	19	4.0	.2	0
19.....	3.2	12	348	56	69	28	18	3.8	.2	0
20.....	3.5	13	143	53	64	27	18	3.8	.1	0
21.....	4.0	19	88	51	58	27	18	3.8	.1	0
22.....	4.0	17	164	49	56	26	18	3.8	.1	0
23.....	4.0	19	164	47	53	25	18	3.5	.1	0
24.....	4.2	46	137	44	50	26	17	3.2	.1	0
25.....	4.2	28	394	44	47	26	16	3.0	.1	0
26.....	4.5	21	192	43	46	25	14	2.8	.1	0
27.....	4.5	17	166	41	43	25	13	2.5	.1	0
28.....	4.5	15	245	39	50	24	13	2.4	.1	0
29.....	4.5	14	1,040	-----	72	24	12	2.3	.1	0
30.....	6	13	464	-----	57	24	12	2.1	.1	0
31.....	-----	13	242	-----	51	-----	11	-----	.1	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	6	0	2.35	140
December.....	46	7	13.0	799
January.....	1,040	12	129	7,930
February.....	176	39	69.6	3,870
March.....	113	35	51.1	3,140
April.....	49	24	31.4	1,870
May.....	36	11	20.7	1,270
June.....	16	2.1	6.93	412
July.....	2.0	.1	.52	31.7
August.....	.1	0	.01	.6
The year.....	1,040	0	26.9	19,500

NOTE.—No flow during months omitted.

PAJARO RIVER BASIN

UVAS CREEK NEAR MORGAN HILL, CALIF.

LOCATION.—Water-stage recorder in Las Uvas grant, 500 feet above Uvas Dam and $4\frac{1}{4}$ miles southwest of Morgan Hill, Santa Clara County. Altitude, about 390 feet.

DRAINAGE AREA.—30.2 square miles.

RECORDS AVAILABLE.—December 1930 to September 1933.

DISCHARGE.—Maximum during year, 1,020 second-feet Jan. 29 (gage height, 5.85 feet); no flow at times.

1930-33: Maximum, 4,340 second-feet Dec. 27, 1931 (gage height, 10.82 feet); no flow at times each year.

REMARKS.—Records good. Discharge estimated Nov. 1-20, Apr. 25-28, Aug. 24-31. No regulation or large diversions above station. Water diverted at Uvas Dam, 500 feet below gage, for Gilroy water supply.

Discharge, in second-feet, 1932-33

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1.....		1.8	1.0	35	5.5	24	8.5	2.4	0.8	0.2
2.....		1.8	.9	27	5.5	20	10	2.4	.8	.2
3.....		1.7	.9	22	5	18	7	2.4	.8	.2
4.....		1.5	.9	19	4.8	17	6.5	2.4	.7	.2
5.....		1.5	.9	17	4.6	16	5.5	2.2	.6	.2
6.....		1.4	.9	15	4.6	14	5	2.2	.6	.2
7.....		1.2	.9	13	4.6	14	8.5	2.1	.5	.2
8.....		1.0	.9	12	4.6	13	9	1.9	.5	.2
9.....		.9	.9	11	4.4	12	9	1.7	.4	.2
10.....		.7	.9	10	4.1	12	11	1.7	.4	.2
11.....	0.1	.7	.8	12	4.1	11	8.5	1.6	.4	.2
12.....		.8	.8	17	10	10	7.5	1.5	.4	.2
13.....		.8	.8	15	8.5	9	6.5	1.3	.4	.2
14.....		.8	.8	13	6.5	8.5	6	1.2	.3	.2
15.....		.8	1.0	12	6	8.5	5.5	1.2	.3	.2
16.....		.9	1.4	11	27	8.5	5.5	1.2	.3	.2
17.....		1.2	1.2	10	20	8.5	5.5	1.1	.3	.2
18.....		1.8	.74	9.5	14	8.5	5	1.1	.3	.2
19.....		2.5	67	9	12	8	4.8	1.1	.3	.2
20.....		3.8	26	8.5	10	7.5	4.6	1.1	.3	.2
21.....	.1	2.5	57	8.5	10	7.5	4.4	1.0	.2	.2
22.....	.1	2.7	33	8	9	7	4.1	1.0	.2	.1
23.....	.1	5.5	73	7	8.5	6.5	3.9	.9	.3	.1
24.....	.2	3.1	161	6.5	8.5	7	3.7	1.0	.3	.1
25.....	.2	1.7	104	6.5	8	7	3.4	.9	.3	.1
26.....	.3	1.3	40	6.5	14	7	3.2	.9	.3	.1
27.....	.3	1.2	114	6	13	6.5	3.1	.9	.2	.1
28.....	.3	1.2	86	6	89	6.5	2.8	.9	.2	.1
29.....	.4	1.0	416	-----	48	6.5	2.6	.8	.2	.1
30.....	.5	1.0	98	-----	33	6.5	2.5	.8	.2	.1
31.....	-----	1.0	51	-----	27	-----	2.5	-----	.2	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....			0.05	3.1
November.....	0.5	0.1	.15	8.9
December.....	5.5	.7	1.61	99.0
January.....	416	.8	45.7	2,810
February.....	35	6	12.6	700
March.....	89	4.1	14.0	861
April.....	24	6.5	10.5	625
May.....	11	2.5	5.66	348
June.....	2.4	.8	1.43	85.1
July.....	.8	.2	.39	23.8
August.....	.2	.1	.17	10.3
September.....	-----	-----	.03	1.8
The year.....	4.6	-----	7.70	5,580

SAN FRANCISQUITO CREEK BASIN

SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY, CALIF.

LOCATION.—Water-stage recorder in Rinconada del Arroyo de San Francisquito grant, Santa Clara County, at Stanford University golf course, three-quarters of a mile below junction with Los Trancos Creek. Altitude, about 120 feet.

DRAINAGE AREA.—37.7 square miles.

RECORDS AVAILABLE.—January 1931 to September 1933.

DISCHARGE.—Maximum during year, 730 second-feet Jan. 27 (gage height, 4.18 feet); no flow several months.

1931-33: Maximum, 1,160 second-feet Dec. 27, 1931 (gage height, 5.20 feet); no flow several months each year.

REMARKS.—Records good. Discharge estimated May 9-14, June 2-4, 6-11, 15. Storage at Searsville Lake. See records for Los Trancos Canal and Lagunita Canal, which divert water above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	0.2	0.9	0.2	0.3	0.2	0.1
2.....	0	.2	.3	.2	.3	.2	.1
3.....	0	.2	.3	.2	.2	.2	.1
4.....	0	.3	.3	.2	.2	.2	.1
5.....	0	.3	.3	.2	.2	.2	.1
6.....	0	.3	.2	.2	.2	.2	.1
7.....	0	.3	.2	.2	.2	.2	.1
8.....	0	.3	.2	.2	.2	.2	.1
9.....	0	.3	.2	.2	.2	.2	.1
10.....	0	.3	.2	.2	.2	.2	.1
11.....	0	.3	3.7	.2	.2	.2	.1
12.....	0	.3	6	.2	.2	.2	.1
13.....	0	.3	1.0	.2	.2	.2	.1
14.....	0	.3	.3	.2	.2	.2	.1
15.....	0	.3	.2	3.0	.2	.2	.1
16.....	0	.3	.2	31	.2	.2	0
17.....	0	.3	.2	1.4	.2	.2	0
18.....	0	.5	.2	1.9	.2	.2	0
19.....	0.1	.6	.2	.7	.2	.2	0
20.....	.2	.5	.2	.2	.2	.2	0
21.....	.5	26	.2	.3	.2	.2	0
22.....	.3	1.9	.2	.2	.2	.2	0
23.....	.4	22	.2	.2	.2	.2	0
24.....	.3	46	.2	.2	.2	.2	0
25.....	.2	36	.1	.2	.2	.2	0
26.....	.2	.6	.1	.4	.2	.2	0
27.....	.2	158	.1	.7	.2	.1	0
28.....	.2	40	.1	106	.2	.1	0
29.....	.2	176	-----	24	.2	.1	0
30.....	.2	33	-----	.4	.2	.1	0
31.....	.2	7	-----	1.6	-----	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	0.5	0	0.10	5.3
January.....	176	.2	17.8	1,090
February.....	6	.1	.59	32.7
March.....	106	.2	5.65	347
April.....	0.3	.2	.21	12.3
May.....	.2	.1	.13	11.3
June.....	.1	0	.06	3.0
The year.....	176	0	2.09	1,500

NOTE.—No flow during months omitted.

SAN FRANCISQUITO CREEK AT PALO ALTO, CALIF.

LOCATION.—Water-stage recorder in Rancho de las Pulgas grant, San Mateo County, 175 feet above Newell Avenue Bridge, Palo Alto, and about 2 miles above mouth. Altitude, about 5 feet.

DRAINAGE AREA.—38.6 square miles.

RECORDS AVAILABLE.—January 1931 to September 1933.

DISCHARGE.—Maximum during year, 651 second-feet Jan. 27 (gage height, 7.30 feet); no flow several months.

1931-33: Maximum, 1,170 second-feet Dec. 27, 1931 (gage height, 10.07 feet); no flow several months each year.

REMARKS.—Records good. No records Jan. 21-25. Storage at Searsville Lake. See records for Los Trancos Canal and Lagunita Canal, which divert water above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Day	Dec.	Jan.	Feb.	Mar.
1.....	0	0	0.9	0	16.....	0	0	0	19
2.....	0	0	0	0	17.....	0	0	0	4.7
3.....	0	0	0	0	18.....	0	0	0	0
4.....	0	0	0	0	19.....	0	0	0	0
5.....	0	0	0	0	20.....	0	0	0	0
6.....	0	0	0	0	21.....	0	-----	0	0
7.....	0	0	0	0	22.....	0	-----	0	0
8.....	0	0	0	0	23.....	.1	-----	0	0
9.....	0	0	0	0	24.....	0	-----	0	0
10.....	0	0	0	0	25.....	0	-----	0	0
11.....	0	0	0	0	26.....	0	1.5	0	0
12.....	0	0	2.3	0	27.....	0	141	0	0
13.....	0	0	0	0	28.....	0	43	0	82
14.....	0	0	0	0	29.....	9	148	-----	28
15.....	0	0	0	0	30.....	0	31	-----	0
					31.....	0	8	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	0.1	0	0.003	0.2
February.....	2.3	0	0.11	6.3
March.....	82	0	4.31	265

NOTE.—No flow during October, November, April to September.

LOS TRANCOS CREEK AT STANFORD UNIVERSITY, CALIF.

LOCATION.—Water-stage recorder in El Corte de Madera grant, about 800 feet above mouth and 1.6 miles southwest of Stanford University post office, Santa Clara County. Altitude, about 160 feet.

DRAINAGE AREA.—7.5 square miles.

RECORDS AVAILABLE.—January 1931 to September 1933.

DISCHARGE.—Maximum during year, 89 second-feet Jan. 27 (gage height, 1.78 feet); no flow several months.

1931-33: Maximum, 277 second-feet Feb. 8, 1932 (gage height, 2.93 feet); no flow several months each year.

REMARKS.—Records fair. Discharge estimated Dec. 14-19. See records for Los Trancos Canal, which diverts water about 2 miles above station to Felt Lake storage reservoir.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	0	0.2	0.1	0.1	0.1	0.3
2.....	0	0	.2	.1	.1	.1	.3
3.....	0	0	.1	.1	.1	.1	.2
4.....	0	0	.1	.1	.1	.1	0
5.....	0	0	.1	.1	.1	.1	0
6.....	0	0	.1	0	.1	.1	0
7.....	0	0	.1	0	.1	.2	0
8.....	0	0	.1	0	.1	.1	0
9.....	0	0	.1	0	.1	.1	.1
10.....	0	0	.1	0	.1	.1	0.1
11.....	0	0	.3	0	.1	.1	0
12.....	0	0	.3	.1	.1	.1	0
13.....	.1	0	.2	.1	.1	.1	0
14.....		0	.1	.1	.1	.1	0
15.....		0	.1	.1	.1	.1	0
16.....	.2	0	.1	.5	.1	.1	0
17.....		0	.1	.1	.1	.1	0
18.....		.1	.1	.1	.1	.1	0
19.....		.1	.1	.1	.1	.1	0
20.....	0	0	.1	.1	.1	.1	0
21.....	0	.5	.1	.1	.1	.1	0
22.....	0	.1	.1	.1	.1	.1	0
23.....	.1	.3	.1	.1	.1	.1	0
24.....	0	1.1	.1	.1	.1	.1	0
25.....	0	.6	.1	.1	.1	.1	0
26.....	0	.2	.1	.1	.1	.1	0
27.....	0	12	.1	.1	.1	.1	0
28.....	0	.7	.1	.6	.1	.1	0
29.....	0	6		.2	.1	0	0
30.....	0	.5		.2	.1	.2	0
31.....	0	.3		.2		.4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....		0	0.05	2.8
January.....	12	0	.73	44.6
February.....	.3	.1	.12	6.9
March.....	.6	0	.12	7.3
April.....	.1	.1	.10	6.0
May.....	.4	0	.11	6.9
June.....	.3	0	.03	1.8
The year.....	12	0	.11	76.3

NOTE.—No flow during months omitted.

LOS TRANCOS CANAL NEAR STANFORD UNIVERSITY, CALIF.

LOCATION.—Water-stage recorder in El Corte de Madera grant, half a mile below intake and 3 miles southwest of Stanford University post office, Santa Clara County. Altitude, about 360 feet.

RECORDS AVAILABLE.—October 1931 to September 1933.

DISCHARGE.—Maximum mean daily during year, 21 second-feet Jan. 27, 29; no flow at times.

1931-33: Maximum mean daily, 33 second-feet Dec. 24, 27, 1931; no flow at times each year.

REMARKS.—Records fair. Discharge estimated for June and July. Canal diverts from Los Trancos Creek 2 miles above mouth and conveys water to Felt Lake, an irrigation reservoir on Stanford University campus.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	0.1	0.1	0.3	0.3	1.9	0.8	1.7	1.1
2	.1	.1	.2	.3	1.6	.7	1.6	1.1
3	.1	.1	.2	.3	1.3	.7	1.5	1.0
4	.1	.1	.3	.3	1.2	.6	1.4	1.0
5	.2	.1	.3	.3	1.1	.6	1.3	1.1
6	.2	.1	.3	.2	1.1	.9	1.3	1.0
7	.2	.1	.3	.2	1.0	1.0	1.3	1.8
8	.2	.1	.3	.2	.9	1.0	1.3	1.4
9	.2	.1	.3	.3	.9	.9	1.2	1.3
10	.1	.1	.3	.3	.9	.9	1.2	1.2
11	.1	.1	.3	.3	1.6	.9	1.1	1.2
12	.1	.2	.3	.3	2.7	2.2	1.1	1.3
13	.1	.2	.3	.3	2.0	1.6	1.0	1.2
14	.1	.1	.2	.3	1.5	1.1	1.0	1.0
15	.1	.1	0	.3	1.3	.9	1.0	1.0
16	.1	.1	0	.3	1.2	5.5	1.0	1.1
17	.1	.2	0	.3	1.1	2.1	1.0	1.0
18	.1	.2	0	.5	1.0	1.4	1.0	1.0
19	.1	.2	.1	.5	1.0	1.3	1.0	1.0
20	.1	.2	0	.4	1.0	1.1	1.0	1.0
21	.1	.2	.2	3.6	1.0	1.0	1.0	1.0
22	.1	.2	.3	2.2	1.0	1.0	1.0	1.0
23	.1	.2	.3	6.5	1.0	1.0	1.0	.9
24	.1	.2	.3	16	.9	1.0	.9	.9
25	.1	.2	.3	13	.9	.9	.9	.8
26	.1	.2	.3	2.4	.9	2.3	.9	.8
27	.1	.2	.2	21	.9	1.6	.9	.7
28	.1	.2	.2	9.5	.9	8	1.0	.7
29	.1	.3	.2	21	-----	3.4	1.0	.7
30	.1	.3	.2	5	-----	2.3	1.0	.6
31	.1	-----	.2	2.6	-----	1.8	-----	.6

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.12	7.1
November	.3	.1	.16	9.5
December	.3	0	.21	13.1
January	21	.2	3.52	216
February	2.7	.9	1.21	67.2
March	8	.6	1.63	100
April	1.7	.9	1.12	66.6
May	1.8	.6	1.02	62.7
June	-----	-----	.30	17.9
July	-----	-----	.05	3.1
The year	21	0	.78	563

NOTE.—Little or no flow during months omitted.

LAGUNITA CANAL AT STANFORD UNIVERSITY, CALIF.

LOCATION.—Water-stage recorder in Rinconada del Arroyo de San Francisquito grant, 500 feet below intake, at Stanford University, Santa Clara County. Altitude, about 150 feet.

RECORDS AVAILABLE.—January 1931 to September 1933.

DISCHARGE.—Maximum mean daily during year, 18 second-feet Mar. 28; no flow several months.

1931-33: Maximum mean daily, 21 second-feet Dec. 27, 31, 1931, Jan. 2, 1932; no flow several months each year.

REMARKS.—Records fair. Canal diverts water from San Francisquito Creek below junction with Los Trancos Creek to supply Lagunita irrigation reservoir on Stanford University campus.

Discharge, in second-feet, 1932-33

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	0.3	0.2	15	0.5	10	0.6	0
2	0	.2	.2	10	.5	7	1.4	0
3	0	.2	.2	8	.5	5	.8	0
4	0	.2	.2	6	.4	3	.5	0
5	0	.2	.2	4.7	.5	2	.4	0
6	0	.2	.2	3.8	.6	2	.3	0
7	0	.3	.2	1.9	.8	2	1.5	0
8	0	.5	.2	1.0	1.0	2	4.6	0
9	0	.7	.2	1.1	1.0	2	5	0
10	0	.7	.2	1.0	1.0	1.5	4.1	0
11	0	.8	.2	4.5	1.0	1.2	3.0	0
12	0	.7	.2	17	1.0	1.1	1.3	0
13	0	.8	.2	13	2.0	.9	1.2	0
14	0	.8	.2	2.2	1.1	.7	1.4	0
15	0	.8	.2	1.6	6.5	.8	1.0	0
16	0	.8	.2	1.5	13	.7	.6	0
17	0	.6	.2	1.5	7	.9	.7	0
18	0	.4	1.0	1.3	7	.7	.5	0
19	0	1.4	2.0	1.1	4.5	.7	.3	0
20	0	.7	3.0	1.0	3.4	.8	.2	0
21	0	.8	.5	1.0	9	.4	.3	0
22	0	.4	10	1.0	1.1	.3	.3	0
23	0	.7	17	.9	1.0	.2	.3	0
24	0	.4	9.5	.8	.9	.3	.2	0
25	0	.2	14	.8	1.0	.5	.1	0
26	0	.2	.8	.7	11	.4	.1	0
27	0	.2	17	.7	13	.3	.1	0
28	0	.2	17	.7	18	.4	0	.1
29	0	.2	16		16	.4	0	.1
30	.4	.2	16		14	.8	0	0
31		.2	17		12		0	
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
November	0.4		0		0.01		0.8	
December	1.4		.2		.48		29.8	
January	17		.2		5.08		309	
February	17		.7		3.71		206	
March	18		.4		4.85		298	
April	10		.2		1.63		97.0	
May	5		0		.99		61.1	
June	.1		0		.01		.4	
The year	18		0		1.38		1,000	

* Estimated.

NOTE.—No flow during months omitted.

STEVENS CREEK BASIN

STEVENS CREEK NEAR CUPERTINO, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 22, T. 7 S., R. 2 W., at county highway bridge about 4 miles west of Cupertino. Altitude, about 385 feet.

DRAINAGE AREA.—18.1 square miles.

RECORDS AVAILABLE.—January 1930 to September 1933.

DISCHARGE.—Maximum during year, 200 second-feet Jan. 27 (gage height, 2.73 feet); no flow several months.

1930-33: Maximum, 709 second-feet Dec. 27, 1932 (gage height, 4.57 feet); no flow several months each year.

REMARKS.—Records good. Discharge estimated for August. Small diversions at times above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.	0	0.4	11	2.8	8.5	3.7	1.3	0.4
2.	0	.4	9	3.4	6.5	3.7	1.3	.4
3.	0	.4	7	3.1	6	2.8	1.3	.4
4.	0	.3	4.9	2.8	6	2.8	1.3	.4
5.	0	.3	4.6	2.5	5.5	2.8	1.5	.4
6.	0	.3	4.3	2.5	5.5	2.8	1.5	.4
7.	0	.3	4.3	2.5	4.9	7.5	1.3	.4
8.	0	.3	4.3	2.5	4.6	4.9	1.3	.4
9.	0	.3	4.3	2.8	4.0	3.7	1.3	.4
10.	0	.2	4.0	2.8	4.0	3.4	1.1	.4
11.	0	.3	4.9	2.8	4.0	2.8	.9	.4
12.	0	.3	8	6.5	4.0	2.8	.9	.3
13.	0	.3	7.5	7.5	3.7	2.5	.9	.3
14.	0	.3	5.5	4.3	3.4	1.7	.7	.3
15.	0	.3	4.9	3.1	3.4	2.5	.6	.3
16.	0	.5	5.5	17	3.4	2.8	.5	.3
17.	0	.5	5.5	9	4.0	2.5	.5	.3
18.	0	7.5	4.6	5.5	3.1	2.5	.5	.3
19.	0	12	4.3	4.3	3.1	2.5	.5	.3
20.	.2	4.9	4.3	4.0	3.1	2.2	.5	.2
21.	1.3	7.5	4.3	3.1	3.1	1.7	.5	.2
22.	1.1	8	4.0	3.1	2.5	1.9	.5	.2
23.	6.5	17	4.0	3.1	2.8	1.7	.4	.2
24.	2.3	36	3.7	3.1	3.1	1.7	.4	.2
25.	1.1	27	3.4	3.1	3.1	1.7	.5	.2
26.	.5	12	3.4	5.5	2.5	1.7	.5	.2
27.	.4	62	3.4	4.6	2.5	1.7	.5	.1
28.	.4	17	3.4	22	2.8	1.5	.5	.1
29.	.4	57	-----	14	3.4	1.3	.4	.1
30.	.4	23	-----	12	3.4	1.3	.4	.1
31.	.4	14	-----	10	-----	1.3	-----	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	6.5	0	0.48	29.8
January	62	.2	10.0	615
February	11	3.4	5.08	282
March	22	2.5	5.65	347
April	8.5	2.5	4.00	238
May	7.5	1.3	2.59	159
June	1.5	.4	.81	48.2
July	.4	.1	.28	17.3
August	-----	-----	.03	1.8
The year	62	0	2.40	1,740

NOTE.—No flow during months omitted.

GUADALUPE CREEK BASIN

GUADALUPE CREEK AT GUADALUPE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 19, T. 8 S., R. 1 E., half a mile northwest of Guadalupe and 3½ miles upstream from junction with Alamitos Creek. Altitude, about 325 feet.

DRAINAGE AREA.—12.6 square miles.

RECORDS AVAILABLE.—January 1930 to September 1933.

DISCHARGE.—Maximum during year, 234 second-feet Jan. 29 (gage height, 2.20 feet); no flow several months.

1930-33: Maximum, 1,160 second-feet Dec. 28, 1931 (gage height, 4.05 feet); no flow during part of each year.

REMARKS.—Records good. Discharge estimated May 11 to July 30. Small diversions above station.

Discharge, in second-feet, 1932-33

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	0.4	0.5	14	3.2	10	3.5	1.0	0.3
2	0	.4	.5	10	3.2	9.5	3.7	1.0	.3
3	0	.4	.5	8.5	3.0	8.5	3.0	1.0	.3
4	0	.4	.5	7.5	2.8	8	3.2	1.0	.3
5	0	.4	.5	7	2.7	7.5	2.8	.9	.3
6	0	.3	.5	6	2.7	7	2.4	.9	.2
7	0	.3	.5	5.5	2.6	6.5	3.5	.9	.2
8	0	.3	.5	5	2.6	6	3.0	.9	.2
9	0	.4	.5	4.5	2.4	6	2.8	.8	.2
10	0	.4	.5	4.3	2.4	5.5	2.7	.8	.2
11	0	.4	.5	4.8	2.4	5	2.6	.8	.2
12	0	.4	.5	5.5	6	4.8	2.4	.8	.7
13	0	.4	.5	5	6	4.3	2.2	.7	.7
14	0	.5	.5	4.5	4.5	4.3	2.1	.7	.1
15	0	.4	.5	4.3	4.0	4.0	2.0	.7	.1
16	0	.4	.5	4.3	8	3.7	2.0	.7	.1
17	0	.5	.5	4.0	7	3.7	1.9	.6	.1
18	0	.5	11	3.7	6	3.5	1.8	.6	.1
19	0	.7	9.5	3.4	5.5	3.4	1.8	.6	.1
20	.1	1.1	4.5	3.4	5.5	3.4	1.7	.6	.1
21	.1	1.4	11	3.4	4.8	3.2	1.6	.5	.1
22	.1	1.2	9.5	3.4	4.8	3.2	1.6	.5	.1
23	.2	4.0	18	3.5	4.8	3.0	1.5	.5	.1
24	.2	1.7	38	3.5	4.3	3.4	1.4	.5	0
25	.2	1.0	28	3.5	4.3	3.5	1.3	.4	0
26	.2	.7	12	3.2	8	3.7	1.2	.4	0
27	.2	.7	49	3.2	7	3.5	1.2	.4	0
28	.2	.6	31	3.2	27	3.5	1.1	.4	0
29	.3	.5	100	-----	21	2.8	1.1	.4	0
30	.4	.5	34	-----	16	3.4	1.1	.3	0
31	-----	.5	20	-----	13	-----	1.1	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	0.4	0	0.07	4.4
December	4.0	.3	.70	43.2
January	100	.5	12.4	762
February	14	3.2	5.08	282
March	27	2.4	6.37	302
April	10	2.8	4.93	293
May	3.7	1.1	2.11	130
June	1.0	.3	.68	40.3
July	.3	0	.13	8.1
The year	100	0	2.70	1,960

NOTE.—No flow during months omitted.

GUADALUPE CREEK AT SAN JOSE, CALIF.

LOCATION.—Water-stage recorder 100 feet downstream from junction with Los Gatos Creek, at San Jose, Santa Clara County. Altitude, about 80 feet.

DRAINAGE AREA.—131 square miles.

RECORDS AVAILABLE.—January 1930 to September 1933.

DISCHARGE.—Maximum during year, 365 second-feet Jan. 29 (gage height, 2.07 feet); no flow most of year.

1930-33: Maximum, 6,700 second-feet Dec. 27, 1931 (gage height, 11.12 feet); no flow most of each year.

REMARKS.—Records good. Small diversions above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Mar.	Day	Dec.	Jan.	Mar.	Day	Dec.	Jan.	Mar.
1.....	0	0	0	11.....	0	0.1	0	21.....	0	0	0
2.....	0	0	0	12.....	0	.2	0	22.....	0	0	0
3.....	0	0	0	13.....	0	.2	0	23.....	0	0	.1
4.....	0	0	0	14.....	0	.2	0	24.....	.2	9.5	.1
5.....	0	0.1	0	15.....	0	0	.1	25.....	0	15	0
6.....	0	.3	0	16.....	0	.1	.1	26.....	0	0	0
7.....	0	0	0	17.....	0	.2	.2	27.....	0	22	0
8.....	0	0	0	18.....	0	.4	0	28.....	.1	4.5	0
9.....	0	0	0	19.....	0	.2	0	29.....	.2	110	.1
10.....	0	.1	0	20.....	0	0	0	30.....	.2	8	0
								31.....	.1	0	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	0.2	0	0.03	1.6
January.....	110	0	5.52	339
March.....	.2	0	.2	1.4
The year	110	0	.47	342

NOTE.—No flow during months omitted.

ALAMITOS CREEK NEAR EDENVALE, CALIF.

LOCATION.—Water-stage recorder in W½ sec. 16, T. 8 S., R. 1 E., 7½ miles south of San Jose and 4 miles southwest of Edenvale. Altitude, about 200 feet.

DRAINAGE AREA.—35.0 square miles.

RECORDS AVAILABLE.—January 1930 to September 1933.

DISCHARGE.—Maximum during year, 175 second-feet Jan. 29 (gage height, 3.75 feet); no flow several months.

1930-33: Maximum, 2,670 second-feet Dec. 27, 1931 (gage height, 6.60 feet); no flow several months each year.

REMARKS.—Records good. Small diversions above station.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1-----	0	11	0	11	16-----	0	2.7	0.2	0.6
2-----	0	7.5	0	9	17-----	0	2.4	1.8	.4
3-----	0	6	0	8	18-----	0	1.6	1.4	.1
4-----	0	4.3	0	7.5	19-----	0	1.1	.9	0
5-----	0	3.7	0	6.5	20-----	0	1.1	.5	0
6-----	0	3.2	0	6	21-----	0	1.1	.2	0
7-----	0	2.2	0	6	22-----	0	.5	0	0
8-----	0	1.8	0	5	23-----	0	.2	0	0
9-----	0	1.4	0	4.3	24-----	7	0	0	0
10-----	0	.8	0	3.7	25-----	18	0	0	0
11-----	0	.8	0	3.4	26-----	.8	0	.9	0
12-----	0	4.0	0	3.2	27-----	25	0	2.4	0
13-----	0	3.7	0	2.0	28-----	22	0	13	0
14-----	0	2.9	0	1.2	29-----	88	-----	18	0
15-----	0	2.7	0	1.1	30-----	35	-----	15	0
					31-----	19	-----	13	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	88	0	6.93	426
February-----	11	0	2.38	132
March-----	18	0	2.17	133
April-----	11	0	2.63	156
The year-----	88	0	1.17	847

NOTE.—No flow during months omitted.

LOS GATOS CREEK AT LOS GATOS, CALIF.

LOCATION.—Water-stage recorder about 700 feet upstream from highway bridge at Los Gatos, Santa Clara County. Altitude, about 360 feet.

DRAINAGE AREA.—40.0 square miles.

RECORDS AVAILABLE.—January 1930 to September 1933.

DISCHARGE.—Maximum during year, 582 second-feet Jan. 29 (gage height, 4.63 feet); no flow at times.

1930-33: Maximum, 3,340 second-feet Dec. 27, 1931 (gage height, 9.75 feet); no flow during part of each year.

REMARKS.—Records good. Several small storage reservoirs and diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Sept.
1	0	0.1	2.8	0.4	30	1.4	28	4.4	0.4	0
2	0	.2	.3	.4	21	1.3	23	9.5	.4	0
3	0	.2	.2	.4	17	1.1	19	3.4	.4	0
4	0	.2	.2	.4	14	1.1	17	2.0	.5	0
5	0	.2	.2	.4	11	1.1	15	1.1	1.0	0
6	0	.2	.2	.4	9	1.1	14	1.0	.6	0
7	.1	.2	.2	.4	7	1.0	13	9.5	.4	0
8	.1	.2	.2	.4	5.5	.9	11	6	.4	0
9	.1	.2	.3	.4	5.5	.8	10	3.7	.3	0
10	.1	.2	.3	.4	5.5	.7	9	3.0	.3	0
11	.1	.2	.3	.4	12	.7	8.5	2.5	.3	0
12	.1	.6	.3	.4	20	14	7.5	2.0	.3	0
13	.1	.3	.3	.4	13	11	7	1.1	.2	0
14	.1	.1	.4	.4	10	4.6	6.5	1.0	.2	0
15	.1	.1	.4	.7	8.5	2.4	5	.9	.2	0
16	.1	.1	.4	.6	7.5	4.6	4.8	.7	.2	
17	.1	.1	.6	.4	6.5	23	4.6	1.5	.2	
18	.1	.1	.8	40	5.5	11	4.8	2.8	.2	
19	0	.1	1.0	40	5	8.5	4.0	.9	.2	
20	0	.2	.8	14	4.6	7.5	3.7	.7	.2	.1
21	0	.2	10	27	4.6	5.5	3.2	.7	.1	
22	0	.2	5	29	3.9	5	3.2	.8	.1	
23	0	.2	20	50	3.2	5	2.5	.8	.1	
24	0	.2	8.5	112	2.4	4.2	2.0	.6	.1	
25	0	.2	3.7	84	1.8	4.2	1.5	.5	.1	.2
26	0	.2	2.7	37	1.7	31	1.4	.4	.1	.2
27	0	.2	1.3	175	1.7	21	1.0	.4	.1	.2
28	0	.4	.7	91	1.5	136	1.0	.4	.1	.2
29	0	1.1	.5	296		70	1.3	.4	.1	.2
30	0	6	.4	85		46	1.4	.4	.1	.2
31	.1		.4	45		36		.4		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.1	0	0.04	2.6
November	6	.1	.42	25.2
December	20	.2	2.28	140
January	296	.4	36.5	2,240
February	30	1.5	8.53	474
March	136	.7	16.2	996
April	28	1.0	7.80	464
May	9.5	.4	2.05	126
June	1.0	.1	.26	15.6
July			.02	1.2
September	.2	0	.07	4.2
The year	296	0	6.21	4,490

* Estimated.

NOTE.—No flow during August.

COYOTE CREEK BASIN

COYOTE CREEK NEAR MADRONE, CALIF.

LOCATION.—Water-stage recorder in northwest corner of San Jose grant, above highway bridge at mouth of canyon, a quarter of a mile below mouth of Las Animas Creek, and 2½ miles northeast of Madrone, Santa Clara County. Altitude, about 420 feet.

DRAINAGE AREA.—193 square miles.

RECORDS AVAILABLE.—October 1902 to September 1912, December 1916 to September 1933.

DISCHARGE.—Maximum during year, 2,080 second-feet Jan. 29 (gage height, 8.72 feet); minimum, 0.1 second-foot many days in August and September.

1916-33: Maximum discharge, 10,100 second-feet Feb. 21, 1917 (gage height, 14.5 feet); a furnished record shows discharge of 25,000 second-feet, probably on Mar. 7, 1911; no flow for several short periods during 1902-11, 1920, 1924, 1929-31. Average, 27 years (1902-12, 1916-33), 73.6 second-feet.

REMARKS.—Records good. Discharge estimated Sept. 17-25. No large diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.2	0.8	1.1	73	12	12	5	3.1	1.4	0.5	0.1
2	.5	.3	.8	1.1	48	12	12	5.5	3.1	1.7	.5	.2
3	.6	.3	.8	1.1	36	11	11	4.8	3.2	1.3	.6	.2
4	.5	.3	.8	1.1	28	11	11	4.6	3.2	1.4	.5	.2
5	.5	.4	.8	1.1	22	10	10	4.5	3.2	1.2	.5	.2
6	.5	.4	.8	1.1	19	10	10	4.5	3.1	1.2	.4	.2
7	.7	.4	.8	1.1	17	10	10	5	3.0	1.2	.4	.1
8	.6	.4	.8	1.1	15	9.5	9	4.5	2.9	1.2	.4	.1
9	.5	.4	.9	1.1	14	9	9	4.5	2.7	1.2	.4	.1
10	.4	.4	.9	1.1	13	9	8.5	4.4	2.7	1.0	.3	.2
11	.4	.4	1.0	1.1	14	9	8.5	4.5	2.5	.8	.2	.2
12	.4	.4	1.0	1.1	25	11	8	4.5	2.4	.8	.2	.2
13	.4	.4	1.0	1.1	97	10	8	4.3	2.3	.8	.2	.3
14	.4	.4	1.0	1.1	67	9	7.5	4.2	2.2	.8	.2	.3
15	.4	.4	1.0	1.2	41	9	7.5	4.2	2.1	.8	.2	.1
16	.5	.5	1.1	1.3	32	11	7	4.0	2.0	.9	.2	.1
17	.5	.5	1.2	1.2	26	10	7.5	3.9	2.0	.8	.1	.1
18	.4	.4	1.2	3.6	22	11	7.5	3.9	2.0	.8	.1	.1
19	.3	.4	1.6	9	19	13	7	3.8	2.1	.7	.1	.1
20	.3	.5	1.6	4.4	17	14	6.5	3.9	2.0	.6	.1	.1
21	.3	.5	2.0	3.4	16	14	6.5	4.2	2.0	.6	.2	.1
22	.3	.6	1.6	3.3	16	14	6	3.9	2.0	.6	.2	.1
23	.3	.6	2.8	21	15	13	6	3.8	2.0	.6	.2	.1
24	.4	.6	2.2	85	14	12	6	3.7	2.0	.6	.1	.1
25	.3	.6	1.6	469	13	12	6	3.7	1.9	.6	.1	.1
26	.3	.6	1.3	137	13	12	5.5	3.7	1.9	.4	.2	.1
27	.3	.6	1.2	103	13	12	5.5	3.6	1.6	.4	.2	.2
28	.2	.6	1.2	184	12	14	5.5	3.3	1.6	.3	.2	.1
29	.2	.7	1.1	979	-----	12	5.5	3.2	1.6	.3	.2	.1
30	.2	.8	1.1	304	-----	12	5.5	3.2	1.5	.4	.1	.1
31	.2	-----	1.1	118	-----	12	-----	3.1	-----	.4	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.7	0.2	0.40	24.4
November	.8	.2	.47	27.8
December	2.8	.8	1.20	73.8
January	979	1.1	78.8	4,850
February	97	12	27.0	1,500
March	14	9	11.3	695
April	12	5.5	7.85	467
May	5.5	3.1	4.13	254
June	3.2	1.5	2.33	139
July	1.7	.3	.83	51.2
August	.6	.1	.25	15.7
September	.3	.1	.14	8.5
The year	979	.1	11.2	8,110

COYOTE CREEK NEAR EDENVALE, CALIF.

LOCATION.—Staff gage at east boundary of Santa Teresa grant, at "The Narrows," 7 miles south of San Jose and 1½ miles northeast of Edenvale, Santa Clara County. Altitude, about 190 feet.

DRAINAGE AREA.—229 square miles.

RECORDS AVAILABLE.—October 1916 to September 1933.

DISCHARGE.—Maximum during year, 1,820 second-feet Jan. 29 (gage height, 6.0 feet); no flow during most of year.

1916-33: Maximum, 10,000 second-feet Feb. 10, 1922 (gage height, 12.8 feet); no flow during most of each year. Average, 17 years (1916-33), 27.5 second-feet.

REMARKS.—Records good. Water pumped from wells along creek above station for irrigation.

Discharge, in second-feet, 1932-33

Jan. 25.....	46	Jan. 28.....	26	Jan. 31.....	46
Jan. 26.....	36	Jan. 29.....	648	Feb. 1.....	1.6
Jan. 27.....	.1	Jan. 30.....	288		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	648	0	35.2	2,160
February.....	1.6	0	.06	3.2
The year.....	648	0	2.99	2,160

NOTE.—No flow except as shown.

ALAMEDA CREEK BASIN

ALAMEDA CREEK NEAR NILES, CALIF.

LOCATION.—Water-stage recorder in Arroyo de la Alameda grant, an eighth of a mile above highway bridge and $1\frac{1}{4}$ miles northeast of Niles, Alameda County. Altitude, about 100 feet.

DRAINAGE AREA.—633 square miles.

RECORDS AVAILABLE.—October 1916 to September 1933.

DISCHARGE.—Maximum during year, 905 second-feet Jan. 27 (gage height, 5.05 feet); no flow during several months.

1916-33: Maximum, 13,900 second-feet Feb. 10, 1922 (gage height, 12.44 feet); no flow during periods in 1918, possibly 1920, 1924-33. Average, 16 years (1916-19, 1920-33), 59.3 second-feet.

REMARKS.—Records excellent. San Francisco aqueduct and other diversions above station. Water released from storage at Calaveras Reservoir Apr. 12 to May 2. Gage-height record furnished by City of San Francisco.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	64	2.7	9	54	1.1	1.4
2.....	0	39	2.7	8	51	1.0	1.3
3.....	0	24	2.5	6.5	7.5	1.1	1.2
4.....	0	10	2.4	5.5	2.8	1.2	1.3
5.....	0	5.5	2.4	4.9	2.0	1.3	1.1
6.....	0	5	2.2	.2	1.6	1.2	1.0
7.....	0	3.8	2.2	4.1	2.3	1.1	1.0
8.....	0	3.1	2.2	3.9	1.9	1.2	1.0
9.....	0	2.4	2.2	3.9	1.4	1.2	1.0
10.....	0	1.9	2.0	3.7	1.2	1.3	.9
11.....	0	5.0	1.9	3.4	1.0	1.3	.7
12.....	0	9	2.4	16	.8	1.3	.6
13.....	0	17	3.3	45	.6	1.2	.6
14.....	0	8	3.3	60	.6	1.3	.6
15.....	0	6	3.8	66	.6	1.3	.2
16.....	0.2	6	4.9	66	.6	1.3	.4
17.....	.3	5.5	6	68	.6	1.3	.3
18.....	.5	4.7	5.5	70	.6	1.5	.2
19.....	62	4.0	4.9	50	.6	1.5	.2
20.....	10	3.6	4.9	53	.6	1.4	.1
21.....	2.9	3.3	4.5	51	.7	1.4	0
22.....	33	3.1	4.2	75	.7	1.4	0
23.....	42	2.9	4.5	61	.7	1.4	0
24.....	39	2.5	4.2	56	.8	1.4	0
25.....	145	2.4	4.0	56	.8	1.4	0
26.....	63	2.2	6	60	.9	1.4	0
27.....	205	2.0	5.5	66	.0	1.4	0
28.....	218	2.7	2	64	1.1	1.4	0
29.....	329	-----	29	64	1.0	1.3	0
30.....	436	-----	12	64	1.0	1.2	0
31.....	158	-----	11	-----	1.1	-----	0
Month	Maximum	Minimum	Mean	Run-off in acre-feet			
January.....	436	0	56.3	3,460			
February.....	64	1.9	8.77	487			
March.....	29	1.9	5.46	336			
April.....	75	3.4	38.9	2,310			
May.....	54	.6	4.58	282			
June.....	1.4	1.0	1.29	76.8			
July.....	1.4	0	.49	29.9			
The year.....	436	0	9.65	6,980			

NOTE.—No flow during months omitted.

KERN RIVER BASIN

KERN RIVER NEAR KERNVILLE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 14, T. 23 S., R. 32 E., 3 miles above Salmon Creek and 15 miles north of Kernville. Altitude, about 3,550 feet (formerly published in error).

RECORDS AVAILABLE.—January 1912 to September 1933.

DISCHARGE.—Maximum during year, 3,250 second-feet June 15 (gage height, 9.59 feet); minimum, 0.4 second-foot Feb. 26.

1912-33: Maximum, 9,690 second-feet Jan. 17, 1916 (gage height, 8.8 feet, old datum); no flow at intervals July 31, 1924, to Feb. 7, 1925.

REMARKS.—Records good except those for Oct. 17 to Nov. 7, Dec. 11-24, which were estimated. (See records for Kern River No. 3 Canal, which diverts 1 mile above station.) For combined discharge of canal and river see p. 8; average combined discharge, 21 years (1912-33), 649 second-feet. Gage-height record and results of several discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	2.0	3.6	3.1	1.3	1.5	48	78	1,610	565	1.7	2.4
2	2.1		2.6	2.7	1.2	1.3	124	56	1,490	528	2.4	2.3
3	2.8		2.7	2.4	1.2	1.2	226	21	1,330	510	2.6	2.4
4	2.3		3.6	2.7	1.2	1.2	372	37	990	510	2.4	2.3
5	2.7		3.1	2.7	1.4	1.2	429	53	906	510	2.0	3.1
6	2.8	1.5	3.1	3.1	1.2	1.5	429	26	758	545	2.0	2.4
7	3.1		2.7	2.4	1.1	1.6	358	29	758	608	1.3	2.4
8	3.1		3.1	1.7	1.2	1.2	282	87	1,020	545	1.7	3.1
9	3.0		3.6	2.1	1.5	1.3	184	51	1,490	336	1.7	2.6
10	2.8		3.0	2.1	1.1	1.2	124	12	1,870	316	1.8	3.6
11	2.7	1.8	2.5	2.2	1.4	.8	101	2.6	2,000	258	1.8	1.7
12	2.8	2.1		1.6	1.2	1.1	117	2.2	2,280	358	3.0	3.1
13	2.6	1.4		2.1	1.1	1.2	167	2.6	2,470	460	3.4	2.8
14	2.7	2.0		2.0	.8	1.0	254	3.1	2,720	476	3.1	3.1
15	3.0	2.0		2.4	1.2	1.0	358	3.9	2,820	476	3.0	2.4
16	2.8	2.4	2.5	2.7	1.3	1.6	386	20	2,720	429	5.5	3.6
17		2.6		2.2	1.7	10	311	37	2,230	345	35	3.4
18		2.2		2.3	1.5	2.2	181	70	1,740	260	22	4.6
19		1.6		2.2	1.2	2.6	115	106	1,410	258	2.7	3.8
20		2.1		1.0	1.1	2.7	88	164	1,330	212	2.8	2.6
21	3.0	2.6	3.6	1.8	1.1	3.1	101	220	1,290	162	3.3	3.3
22		2.4		2.3	.9	2.3	109	167	1,260	111	2.6	3.0
23		2.4		2.2	1.1	1.8	119	193	1,180	53	2.8	3.0
24		2.3		2.0	.6	1.8	116	275	1,120	9.5	3.3	3.3
25		2.7		2.8	.7	2.3	109	444	1,020	4.4	3.3	3.6
26	3.1	3.4	1.6	.7	1.8	116	730	900	4.2	1.6	3.0	
27	2.4	3.4	2.0	1.5	2.2	99	930	840	9	1.7	2.0	
28	3.0	2.8	1.3	1.3	2.4	112	1,180	680	5	1.8	2.2	
29	2.3	2.1	1.7	1.6	1.6	140	1,490	655	4.2	2.3	1.6	
30	3.1	2.1	1.5	1.5	1.7	100	1,530	655	2.8	2.6	1.1	
31	-----	2.7	1.1	-----	2.3	-----	1,570	-----	-----	2.4	3.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-----	-----	2.88	177
November	-----	-----	2.18	130
December	-----	-----	2.78	171
January	3.1	1.0	2.13	131
February	1.7	.6	1.17	65.0
March	10	.8	1.96	121
April	429	48	192	11,400
May	1,570	2.2	309	19,000
June	2,820	655	1,450	86,300
July	608	2.4	288	17,700
August	35	1.3	4.20	258
September	4.6	1.1	2.79	166
The year	2,820	.6	188	136,000

Combined discharge, in second-feet, of Kern River and Kern River No. 3 Canal near Kernville, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	243	197	194	197	258	324	640	666	2,180	1,120	428	209
2.....		197	180	193	257	334	725	644	2,060	1,080	397	204
3.....		197	181	193	242	354	827	609	1,900	1,060	368	201
4.....		193	190	192	246	360	976	624	1,550	1,060	347	197
5.....		196	185	193	249	358	1,040	640	1,460	1,060	331	196
6.....	228	200	180	194	251	388	1,040	612	1,320	1,100	314	192
7.....		198	168	193	250	430	965	613	1,320	1,160	297	187
8.....		196	169	192	236	449	890	670	1,580	1,100	289	184
9.....		227	193	180	193	242	484	792	2,050	937	280	181
10.....		222	192	161	195	233	476	732	593	2,430	866	275
11.....	217	192	152	192	239	434	709	567	2,560	808	267	176
12.....	213	192	156	189	251	421	725	554	2,840	908	270	175
13.....	211	190	178	191	250	421	772	549	3,030	1,010	281	173
14.....	208	189	190	191	239	398	860	549	3,280	1,030	291	172
15.....	206	186	188	193	238	380	963	570	3,380	1,030	333	168
16.....	205	186	188	199	247	438	990	589	3,280	983	348	165
17.....	205	189	190	192	262	530	914	605	2,800	899	393	161
18.....	206	188	190	186	252	463	784	638	2,300	814	377	161
19.....	209	185	188	161	245	478	716	674	1,970	812	326	161
20.....	211	183	188	106	244	517	688	733	1,890	766	304	157
21.....	205	185	188	155	252	558	700	789	1,850	716	292	158
22.....	209	183	180	212	255	528	707	735	1,820	665	274	156
23.....	209	180	184	227	267	488	715	761	1,740	605	262	153
24.....	209	178	190	229	259	424	711	842	1,680	552	260	152
25.....	205	184	184	254	247	423	703	1,010	1,580	519	275	157
26.....	202	189	193	244	253	409	706	1,290	1,460	517	264	159
27.....	204	188	214	245	278	432	690	1,500	1,400	543	248	155
28.....	202	188	210	247	303	487	702	1,750	1,240	551	236	151
29.....	200	181	194	240	-----	460	729	2,060	1,210	536	227	149
30.....	198	184	199	234	-----	462	688	2,100	1,210	503	223	148
31.....	197	-----	199	235	-----	527	-----	2,140	-----	464	217	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	-----	197	216	13,300
November.....	200	178	189	11,200
December.....	214	152	185	11,400
January.....	254	106	202	12,400
February.....	303	233	252	14,000
March.....	558	324	440	27,100
April.....	1,040	640	793	47,200
May.....	2,140	549	881	54,200
June.....	3,380	1,210	2,010	120,000
July.....	1,160	464	831	51,100
August.....	428	217	300	18,400
September.....	209	148	171	10,200
The year.....	3,380	106	539	390,000

KERN RIVER AT ISABELLA, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 17, T. 26 S., R. 33 E., half a mile above South Fork of Kern River and half a mile north of Isabella. Altitude, about 2,490 feet.

DRAINAGE AREA.—1,070 square miles (revised).

RECORDS AVAILABLE.—October 1910 to September 1912 (fragmentary); October 1925 to September 1933.

DISCHARGE.—Maximum during year, 2,860 second-feet June 15 (gage height, 11.08 feet); minimum, 1.4 second-feet Sept. 25–26, 30.

1925–33: Maximum, 4,500 second-feet Nov. 27, 1926 (gage height, 12.73 feet); minimum, 0.8 second-foot Sept. 2, 1930.

REMARKS.—Records good. Irrigation and power diversions and regulation above station (see records for Borel Canal). Gage-height record and results of several discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	7	6	4.8	5	4.8	8	85	183	1,560	666	7.5	2.4
2.....	7	5.5	4.8	5	4.8	8	195	161	1,460	602	7.5	2.4
3.....	7	6	4.8	5	4.8	9.5	308	137	1,340	602	6.5	2.2
4.....	7	6	4.8	5	4.8	10	484	102	1,100	584	6	2.0
5.....	6.5	6	4.8	5	4.8	9.5	608	121	960	602	5	2.0
6.....	6.5	6	5	5	4.8	10	608	118	925	614	5	2.0
7.....	6.5	6	5	4.0	5	12	566	94	834	685	4.6	2.0
8.....	6.5	6	5	3.4	5	13	489	144	960	659	4.1	2.0
9.....	6.5	6	5	3.4	5	16	375	141	1,340	524	3.7	2.0
10.....	6.5	6	5	3.4	5.5	14	295	112	1,700	406	2.7	2.0
11.....	7	6	5	3.4	5.5	13	246	69	1,850	345	2.2	2.0
12.....	6.5	6	5	3.4	6	12	237	40	2,000	360	2.0	1.8
13.....	6	5.5	4.8	3.1	6.5	14	259	32	2,200	524	1.8	1.8
14.....	6	5.5	4.8	2.8	6.5	13	350	35	2,410	554	1.6	1.8
15.....	6	6	4.8	2.8	6	12	472	54	2,520	572	2.4	1.8
16.....	6.5	5.5	4.8	3.4	6	12	560	72	2,460	548	2.2	1.8
17.....	6.5	5.5	4.8	3.7	7	67	530	92	2,200	467	2.0	1.8
18.....	6	5	5	3.1	7.5	28	401	115	1,750	380	2.0	1.8
19.....	6.5	4.8	5	5	7.5	15	282	154	1,420	345	2.2	1.8
20.....	6.5	4.8	5	5	6.5	15	202	206	1,300	318	2.2	1.8
21.....	6.5	4.8	5.5	3.7	6	53	195	286	1,260	268	2.2	1.8
22.....	6.5	4.8	5.5	4.0	6	43	206	300	1,220	210	2.2	1.8
23.....	6.5	4.8	5.5	4.4	7	16	224	264	1,180	148	2.2	1.8
24.....	6.5	4.8	5.5	4.4	7.5	13	237	308	1,100	69	2.2	1.6
25.....	6.5	4.8	5	4.8	6	13	237	462	1,060	28	2.2	1.4
26.....	6.5	4.8	5	5.5	6	13	219	737	960	14	2.2	1.4
27.....	6	4.8	5	5	6	10	215	960	890	12	2.2	1.6
28.....	6.5	4.8	5	5.5	7.5	11	210	1,140	806	11	2.2	1.6
29.....	6.5	4.8	5	5.5	-----	13	224	1,340	718	11	2.2	1.6
30.....	6	1.4	5	5.5	-----	12	250	1,460	730	10	2.2	1.4
31.....	6	-----	5	5	-----	12	-----	1,460	-----	9	2.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7	6	6.47	398
November.....	6	4.4	5.39	321
December.....	5.5	4.8	5.00	307
January.....	5.5	2.8	4.30	264
February.....	7.5	4.8	5.94	330
March.....	67	8	16.8	1,030
April.....	608	85	326	19,400
May.....	1,460	32	352	21,600
June.....	2,520	718	1,410	83,900
July.....	685	9	360	22,100
August.....	7.5	1.6	3.14	193
September.....	2.4	1.4	1.84	109
The year.....	2,520	1.4	207	150,000

Combined discharge, in second-feet, of Kern River and Borel Canal at Isabella, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	261	194	193	208	279	365	636	746	2, 140	1, 230	456	208
2.....	268	196	187	203	285	374	749	724	2, 030	1, 160	424	203
3.....	264	195	182	207	274	404	864	700	1, 910	1, 160	394	198
4.....	262	193	191	205	275	412	1, 040	663	1, 670	1, 150	371	191
5.....	246	192	191	204	279	408	1, 170	683	1, 530	1, 160	356	188
6.....	238	196	188	205	279	426	1, 170	680	1, 500	1, 180	338	188
7.....	234	196	178	202	285	479	1, 130	656	1, 410	1, 250	325	183
8.....	236	194	175	201	270	497	1, 060	706	1, 530	1, 220	310	176
9.....	236	191	183	205	277	537	936	703	1, 900	1, 090	294	175
10.....	232	190	175	205	266	542	855	674	2, 260	968	284	173
11.....	227	190	160	202	270	500	806	630	2, 410	907	276	172
12.....	218	190	162	198	291	477	799	602	2, 560	922	277	167
13.....	216	190	179	203	302	487	821	594	2, 760	1, 090	287	167
14.....	210	190	196	201	288	460	912	597	2, 970	1, 120	292	164
15.....	206	188	195	202	278	430	1, 040	616	3, 080	1, 140	337	162
16.....	206	186	197	213	289	455	1, 120	635	3, 020	1, 110	352	159
17.....	204	188	201	210	310	612	1, 090	655	2, 760	1, 030	392	155
18.....	204	188	196	199	304	556	964	677	2, 310	942	372	151
19.....	210	187	192	217	290	537	844	716	1, 980	908	322	152
20.....	216	184	193	134	280	561	765	708	1, 860	881	302	152
21.....	210	183	198	162	292	605	760	848	1, 820	831	288	152
22.....	210	183	192	222	298	593	771	861	1, 780	773	277	152
23.....	212	181	198	252	310	556	789	830	1, 740	711	264	150
24.....	208	179	202	251	312	491	802	884	1, 660	632	258	149
25.....	206	181	201	278	289	476	800	1, 040	1, 620	570	268	151
26.....	204	188	199	272	291	458	782	1, 310	1, 520	545	270	151
27.....	203	189	217	268	311	465	778	1, 540	1, 450	551	251	149
28.....	202	187	226	280	344	510	773	1, 720	1, 370	564	239	145
29.....	200	183	203	270	-----	523	787	1, 920	1, 280	556	230	142
30.....	198	178	208	260	-----	501	813	2, 040	1, 290	532	222	141
31.....	194	-----	214	258	-----	549	-----	2, 040	-----	492	215	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	268	194	221	13, 600
November.....	196	178	188	11, 200
December.....	228	160	193	11, 900
January.....	280	134	219	13, 500
February.....	344	266	290	16, 100
March.....	612	365	492	30, 300
April.....	1, 170	636	887	52, 800
May.....	2, 040	594	918	56, 400
June.....	3, 080	1, 280	1, 970	117, 000
July.....	1, 250	492	915	56, 300
August.....	456	215	308	18, 900
September.....	208	141	166	9, 880
The year.....	3, 080	134	564	408, 000

KERN RIVER NEAR BAKERSFIELD, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 2, T. 29 S., R. 28 E., at mouth of lower canyon, 5 miles northeast of Bakersfield. Altitude, about 470 feet.

DRAINAGE AREA.—2,345 square miles.

RECORDS AVAILABLE.—October 1893 to September 1933.

DISCHARGE.—1896-1933: Maximum, 18,287 second-feet Jan. 26, 1914; minimum 57 second-feet in November 1924. Average, 38 years (1893-1906, 1908-33), 941 second-feet.

REMARKS.—Several small diversions on main river and South Fork for irrigation. There are four hydroelectric plants on Kern River above station. Complete record, except run-off in acre-feet, furnished by Kern County Land Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	247	205	195	237	357	420	639	873	2,108	1,281	482	218
2	259	208	201	236	375	452	713	841	2,098	1,225	450	210
3	262	209	209	232	377	466	828	813	2,000	1,206	421	204
4	256	213	208	233	366	400	948	784	1,862	1,188	397	203
5	247	214	209	238	368	504	1,130	768	1,659	1,206	367	198
6	232	211	205	234	378	497	1,220	778	1,625	1,201	345	192
7	231	218	197	232	381	521	1,221	786	1,491	1,204	326	189
8	234	217	187	231	388	589	1,174	792	1,459	1,246	318	187
9	243	208	181	232	364	622	1,113	815	1,713	1,187	301	178
10	247	201	186	236	357	660	1,041	795	2,122	1,043	284	171
11	240	202	195	241	346	649	984	775	2,444	966	268	167
12	233	205	190	242	353	594	955	750	2,589	905	262	167
13	224	208	183	240	380	565	939	725	2,875	963	255	167
14	219	209	185	247	388	584	946	707	3,142	1,073	255	166
15	214	208	203	247	382	573	1,024	711	3,427	1,095	270	162
16	208	206	207	252	360	551	1,114	721	3,442	1,096	296	158
17	204	200	210	273	371	620	1,170	739	3,250	1,096	322	157
18	208	198	213	264	380	767	1,118	750	2,800	1,024	326	153
19	215	197	217	293	395	699	996	792	2,383	875	341	152
20	220	194	217	296	386	672	890	836	2,064	848	335	152
21	221	192	222	226	373	686	851	901	1,998	805	305	156
22	218	193	232	239	374	721	847	998	1,951	755	288	152
23	220	190	225	310	375	720	872	964	1,892	712	269	151
24	222	188	234	323	396	666	902	925	1,809	670	254	151
25	224	191	231	329	419	586	897	955	1,753	625	243	146
26	222	195	226	397	397	552	885	1,106	1,649	575	247	148
27	220	200	225	373	398	526	878	1,373	1,540	538	255	152
28	216	206	238	378	413	531	864	1,586	1,488	522	244	158
29	211	203	242	393	-----	583	853	1,807	1,348	529	237	154
30	208	200	229	389	-----	611	862	2,029	1,309	519	234	152
31	203	-----	231	366	-----	597	-----	2,066	-----	509	227	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	271	201	227	14,000
November	221	186	203	12,100
December	247	180	211	13,000
January	459	217	279	17,200
February	429	335	378	21,000
March	794	411	589	36,200
April	1,258	599	962	57,200
May	2,122	695	976	60,000
June	3,769	1,244	2,107	125,000
July	1,322	492	925	56,900
August	492	221	304	18,700
September	221	145	169	10,100
The year	3,769	145	610	441,000

NOTE.—Maximum and minimum are absolute values determined from a water-stage recorder graph.

KERN RIVER NO. 3 CANAL NEAR KERNVILLE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 25, T. 23 S., R. 32 E., 4 miles below intake and 12 miles north of Kernville. Altitude, about 3,450 feet.

RECORDS AVAILABLE.—March 1921 to September 1933.

DISCHARGE.—Maximum mean daily during year, 608 second-feet Apr. 8-12; minimum, 105 second-feet Jan. 20.

1921-33: Maximum mean daily, 648 second-feet July 16, 1921; no flow at times. Average, 12 years (1921-33), 330 second-feet.

REMARKS.—Records excellent except those for Oct. 1-7, which were estimated. Canal diverts from left bank of Kern River in sec. 12, T. 23 S., R. 32 E. Water is used for power and returned to river 8 miles below. Gage-height record and results of several discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	195	190	194	257	322	592	588	565	554	426	207
2		195	177	190	256	333	601	588	565	554	395	202
3		195	178	191	241	353	601	588	565	554	365	199
4		191	186	189	245	359	604	587	563	554	345	195
5		194	182	190	248	357	606	587	563	553	329	193
6	225	198	177	191	250	387	606	586	563	553	312	190
7		196	165	191	249	428	607	584	563	553	296	185
8		194	166	190	285	448	608	583	563	552	287	181
9		191	176	191	240	483	608	583	562	551	278	178
10		219	190	158	193	232	608	581	563	550	273	177
11	214	190	150	190	238	433	608	564	564	550	265	174
12	210	190	153	187	250	420	608	552	562	550	267	172
13	208	189	175	189	249	420	605	546	562	552	278	170
14	205	187	187	189	238	397	606	546	562	554	288	169
15	203	184	185	191	237	379	605	566	562	554	330	166
16	202	184	186	196	246	436	604	569	564	554	343	161
17	202	186	188	190	260	520	603	568	566	554	358	158
18	203	186	187	184	250	461	603	568	565	554	355	156
19	206	183	186	159	244	475	601	568	564	554	323	157
20	208	181	186	105	243	514	600	569	563	554	301	154
21	202	182	186	153	251	555	599	569	562	554	289	155
22	206	181	177	210	254	526	598	568	561	554	271	153
23	206	178	182	225	266	486	596	568	560	552	259	150
24	206	176	188	227	258	422	595	567	559	542	257	149
25	202	181	180	251	246	421	594	565	557	515	272	153
26	199	186	190	242	252	407	590	564	555	513	262	156
27	201	186	211	243	277	430	591	565	555	534	246	153
28	199	185	207	246	302	485	590	566	555	546	234	149
29	197	179	192	238	-----	458	589	565	555	532	225	147
30	195	181	197	232	-----	460	588	566	555	500	220	147
31	194	-----	196	234	-----	525	-----	567	-----	462	214	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	-----	194	213	13, 100
November	198	176	187	11, 100
December	211	150	182	11, 200
January	251	105	200	12, 500
February	302	232	250	13, 900
March	555	322	438	26, 900
April	608	588	600	35, 700
May	588	546	571	35, 100
June	566	555	561	33, 400
July	554	462	544	33, 400
August	426	214	296	18, 200
September	207	147	169	10, 100
The year	608	105	351	254, 000

BOREL CANAL AT TILLEY CREEK, CALIF.

LOCATION.—Water-stage recorder in sec. 4, T. 26 S., R. 33 E., where canal crosses Tilley Creek, three-quarters of a mile south of Kernville. Altitude, about 2,570 feet.

RECORDS AVAILABLE.—January 1910 to September 1914, October 1925 to September 1933.

DISCHARGE.—Maximum mean daily during year, 576 second-feet May 24, 28-31; minimum, 129 second-feet Jan. 20.

1925-33: Maximum mean daily, 605 second-feet June 3-5, 1927; no flow at times.

REMARKS.—Records good. Daily discharge estimated Aug. 1, 12-20. Canal diverts from Kern River half a mile below Kernville. It supplies Borel hydro-electric plant of Southern California Edison Co., Ltd., 10 miles below; water then returns to Kern River. Gage-height record and results of several discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	254	188	188	203	274	357	551	563	575	561	448	206
2.....	261	190	182	198	280	366	554	563	574	562	417	201
3.....	257	189	177	202	269	394	556	563	574	562	387	196
4.....	255	187	186	200	270	402	556	561	574	562	365	189
5.....	239	186	186	199	274	398	562	562	574	561	350	186
6.....	231	190	183	200	274	416	562	562	572	562	333	186
7.....	228	190	173	198	280	467	561	562	574	562	320	181
8.....	229	188	170	198	265	484	561	562	569	562	306	174
9.....	229	185	178	202	272	521	561	562	562	562	290	173
10.....	225	184	170	202	261	528	560	562	562	562	281	171
11.....	220	184	155	199	264	487	560	561	562	562	274	170
12.....	212	184	157	195	285	465	562	562	562	562	275	165
13.....	210	184	174	200	296	473	562	562	562	562	285	165
14.....	204	184	191	198	281	447	562	562	562	562	290	162
15.....	200	182	190	199	272	418	563	562	562	563	335	160
16.....	199	180	192	210	283	443	565	563	563	563	350	157
17.....	198	182	196	206	303	545	563	563	561	562	390	153
18.....	198	183	193	196	296	528	563	562	560	562	370	149
19.....	203	182	187	212	283	522	562	562	560	563	320	150
20.....	210	179	188	129	274	546	563	562	560	563	300	150
21.....	204	178	192	158	286	552	565	562	561	563	286	150
22.....	203	178	186	218	292	550	565	561	561	563	275	150
23.....	205	176	192	248	303	540	565	566	561	563	262	148
24.....	202	174	196	247	304	478	565	576	561	563	256	147
25.....	199	176	196	273	283	463	563	575	560	542	266	150
26.....	197	183	194	267	285	445	563	575	560	531	268	150
27.....	197	184	212	263	305	455	563	575	561	539	249	147
28.....	195	182	221	274	336	499	563	576	562	553	237	143
29.....	194	178	198	265	-----	510	563	576	562	545	228	140
30.....	192	174	203	255	-----	489	563	576	562	522	220	140
31.....	188	-----	209	253	-----	537	-----	576	-----	483	213	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	261	188	214	13, 200
November.....	190	174	183	10, 900
December.....	221	155	188	11, 600
January.....	274	129	215	13, 200
February.....	336	261	294	15, 800
March.....	552	357	475	29, 200
April.....	565	551	562	33, 400
May.....	576	561	566	34, 800
June.....	575	560	564	33, 600
July.....	563	483	555	34, 100
August.....	448	213	305	18, 800
September.....	206	140	164	9, 760
The year.....	576	129	357	258, 000

SOUTH FORK OF KERN RIVER NEAR ONYX, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 24, T. 25 S., R. 35 E., three-quarters of a mile north of Kernville-Walker Pass Road and 5 miles northeast of Onyx. Altitude, about 2,900 feet.

DRAINAGE AREA.—531 square miles.

RECORDS AVAILABLE.—September 1911 to August 1914; January 1919 to September 1933.

DISCHARGE.—Maximum during year, 384 second-feet Apr. 16 (gage height, 3.66 feet); minimum, 2.0 second-feet Aug. 13-14.

1911-14, 1919-33: Maximum, 2,360 second-feet Jan. 25, 1914 (gage height, 7.1 feet); no flow several days in July and August 1929. Average, 12 years (1911-13, 1919-25, 1929-33), 76.0 second-feet.

REMARKS.—Records good. Discharge interpolated Oct. 1-3, 6, Apr. 5-10, June 14-19. (See Lowell and Thomas Ditches, which divert water above station.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	23	21	22	25	29	52	101	161	161	40	11	3.6
2.....	25	21	24	24	30	55	116	158	151	37	10	3.4
3.....	27	22	21	25	29	59	138	151	135	36	9.5	3.3
4.....	29	21	21	26	31	63	182	148	126	34	9	3.3
5.....	25	20	23	25	32	62	186	171	133	32	7	3.3
6.....	24	20	22	25	32	62	190	160	160	29	8	3.4
7.....	22	22	18	25	33	68	193	143	188	29	5	3.4
8.....	18	22	18	24	30	70	196	160	174	26	3.4	3.6
9.....	19	22	18	24	34	79	200	163	141	25	2.5	3.6
10.....	18	22	16	25	33	79	203	146	132	23	2.2	3.7
11.....	17	21	14	22	35	76	206	130	122	20	2.2	3.9
12.....	17	20	14	20	38	76	204	132	114	20	2.2	4.2
13.....	16	21	17	25	39	78	236	151	108	18	2.0	4.4
14.....	16	22	18	26	34	67	269	160	103	18	2.0	4.6
15.....	17	21	16	25	33	63	295	151	98	16	5	6
16.....	17	20	16	29	37	69	332	148	93	16	13	7
17.....	17	22	18	18	41	78	303	148	88	16	23	7.5
18.....	18	23	22	23	37	68	226	148	83	15	16	7.5
19.....	18	23	23	29	37	70	172	146	78	14	14	8
20.....	18	22	24	22	38	75	169	149	73	12	11	8
21.....	18	21	22	23	43	84	178	151	68	12	9	8
22.....	18	22	20	30	43	84	186	146	64	12	7	8
23.....	20	20	22	31	44	78	188	136	60	11	4.8	8
24.....	20	20	20	26	41	69	200	144	59	11	5	8
25.....	20	20	20	31	37	64	188	146	58	7.5	7	6.5
26.....	18	21	20	29	42	60	194	153	54	9.5	7	6
27.....	19	26	25	29	46	63	180	154	50	9	7	6
28.....	20	26	27	31	51	71	176	154	47	11	7	6
29.....	20	24	22	30	-----	75	190	154	45	14	6	7
30.....	21	22	25	29	-----	73	176	154	42	14	6	8
31.....	21	-----	25	30	-----	82	-----	158	-----	12	5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	29	16	19.9	1,220
November.....	26	20	21.7	1,290
December.....	27	14	20.4	1,250
January.....	31	18	26.0	1,600
February.....	51	29	36.8	2,040
March.....	84	52	70.1	4,310
April.....	332	101	199	11,800
May.....	171	130	151	9,280
June.....	188	42	100	5,950
July.....	40	7.5	19.3	1,190
August.....	23	2.0	7.38	454
September.....	8	3.3	5.57	331
The year.....	332	2.0	56.3	40,700

SOUTH FORK OF KERN RIVER AT ISABELLA, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 20, T. 26 S., R. 33 E., a quarter of a mile above junction with Kern River, at Isabella. Altitude, about 2,480 feet.

DRAINAGE AREA.—985 square miles.

RECORDS AVAILABLE.—October 1910 to September 1913, January 1929 to September 1933.

DISCHARGE.—Maximum during year, 130 second-feet Apr. 17; maximum gage height, 2.12 feet June 8; minimum discharge, 4.7 second-feet Nov. 28, Dec. 1, 1929-33: Maximum, 675 second-feet Apr. 18, 1932 (gage height, 3.27 feet); minimum, 0.3 second-foot July 26, 1931.

REMARKS.—Records good. Twenty-seven irrigation ditches divert from river above station; considerable return flow from many of them.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	9.5	10	4.9	12	46	48	9	81	27	16	12	6.5
2.....	9	10	5	12	47	48	8.5	67	28	16	11	9.5
3.....	9	10	5	12	48	49	8	64	23	16	9	10
4.....	9	10	5.5	12	48	50	8.5	56	29	16	8	10
5.....	9	9.5	6	12	49	52	11	54	48	14	7	10
6.....	9	9.5	6.5	12	49	52	27	73	55	12	10	11
7.....	9	9.5	6.5	12	48	54	38	85	75	10	8	10
8.....	9	9.5	6.5	12	48	55	43	82	94	10	6	10
9.....	9	9.5	6	12	47	55	61	75	87	12	6	12
10.....	9	10	8.5	13	48	57	63	80	70	14	6	10
11.....	9	10	11	13	48	57	56	80	87	13	6.5	10
12.....	8.5	9.5	11	13	49	51	46	75	91	12	6.5	9.5
13.....	8.5	10	11	13	52	47	46	59	73	11	11	10
14.....	9	10	11	13	52	46	56	72	76	7.5	11	9.5
15.....	9	10	11	13	52	44	69	70	65	6.5	11	10
16.....	9	10	11	13	52	44	94	73	49	6	11	10
17.....	9	10	12	12	55	44	118	62	38	9	11	10
18.....	9.5	7.5	12	13	55	44	102	62	34	11	11	10
19.....	10	7.5	11	16	55	44	76	59	31	6.5	11	10
20.....	9.5	9	12	26	55	43	60	51	30	6	11	10
21.....	9	7.5	12	25	55	39	50	55	24	5.5	11	10
22.....	9	5.5	12	28	57	31	46	59	19	5.5	11	9.5
23.....	9.5	5.5	12	30	57	26	47	49	15	12	11	9.5
24.....	9.5	5	12	32	52	22	54	46	10	11	11	9.5
25.....	10	5	12	34	49	19	52	41	10	11	11	10
26.....	10	5	12	46	46	17	64	42	11	12	11	10
27.....	10	4.9	12	44	46	16	69	38	11	12	10	9
28.....	10	4.9	12	44	47	16	69	30	12	12	9.5	9
29.....	10	5	12	45	-----	15	61	36	13	12	8.5	9
30.....	10	5	12	46	-----	12	86	31	14	12	6	9
31.....	10	-----	12	46	-----	10	-----	27	-----	12	6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	10	8.5	9.31	572
November.....	10	4.9	8.14	484
December.....	12	4.9	9.85	606
January.....	46	12	22.1	1,360
February.....	57	46	50.4	2,800
March.....	57	10	38.9	2,390
April.....	118	8	53.3	3,170
May.....	85	27	59.2	3,640
June.....	94	10	41.6	2,480
July.....	16	5.5	11.0	676
August.....	12	6	9.35	575
September.....	11	6.5	9.68	576
The year.....	118	4.9	26.7	19,300

LOWELL DITCH NEAR ONYX, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 24, T. 25 S., R. 35 E., three-quarters of a mile below intake and 5 miles northeast of Onyx. Altitude, about 3,000 feet.

RECORDS AVAILABLE.—April 1929 to October 1933 (discontinued).

DISCHARGE.—Maximum mean daily during period Oct. 1, 1932, to Oct. 30, 1933, 4.6 second-feet Apr. 27 to May 2; no flow Mar. 15 to Apr. 4.

1929-33: Maximum mean daily, 5.5 second-feet Apr. 22-26, 1930, May 1-2, 1931, May 7-15, 19-20, 1932; no flow at times.

REMARKS.—Records fair. Discharge estimated Dec. 11-19, Dec. 24 to Jan. 30, Feb. 8-24, July 7-10, from weekly discharge measurements. Ditch diverts from South Fork of Kern River 1 mile above gaging station near Onyx, and water is used for irrigation on Lowell ranch. Its flow, together with that of Thomas Ditch, should be added to flow at Onyx station to obtain total flow of South Fork.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	1.2	1.1	1.2		0.9	1.0	0	4.6	4.1	2.6	3.3	3.1	2.6
2	1.2	1.1	1.2		.9	1.0	0	4.6	4.0	2.5	3.1	2.9	2.8
3	1.2	1.2	1.2	a 1.3	.9	1.0	0	4.5	4.0	2.3	2.8	2.6	3.1
4	1.2	1.2	1.2		.9	1.0	0	4.3	3.9	2.2	2.6	2.3	3.1
5	1.1	1.2	1.2		.9	1.0	2.0	4.3	3.9	2.0	2.4	2.2	2.2
6	1.1	1.1	1.2		.9	1.0	2.6	4.3	3.9	3.0	2.3	2.1	1.5
7	1.0	1.0	1.2		.9	1.0	2.5	4.2	4.0		2.1	2.1	1.5
8	1.0	1.0	1.0			1.0	.6	4.3	4.0		2.3	1.9	1.5
9	.9	1.0	1.1			1.0	1.0	4.3	4.0		2.8	1.8	1.6
10	.9	1.0	1.1	a 1.4		1.0	2.1	4.3	3.8		3.0	1.8	1.7
11	.9	1.0				1.0	3.2	4.2	3.6	3.5	2.9	1.8	1.8
12	.9	1.0				1.0	3.2	4.2	3.5	3.4	2.7	1.9	1.8
13	.8	1.0				1.0	3.3	4.3	3.6	3.2	2.9	1.9	1.8
14	.8	1.0				.5	3.6	4.4	4.0	3.6	2.8	1.8	1.8
15	.8	1.0	1.2			0	3.9	4.4	3.9	4.0	3.5	1.7	1.7
16	.8	1.1			.9	0	4.0	4.4	3.8	4.1	3.6	1.5	1.6
17	.9	1.1		a 1.2		0	4.1	4.4	3.7	4.0	3.7	1.4	1.6
18	.9	1.1				0	4.0	4.4	3.6	3.8	3.6	1.4	1.6
19	.9	1.1				0	3.9	4.4	3.6	3.8	3.5	1.4	1.6
20	.9	1.1	1.2			0	3.8	4.3	3.5	3.6	3.3	1.4	1.5
21	1.0	1.1	1.2			0	3.8	4.3	3.5	3.7	3.2	1.6	1.6
22	1.0	1.1	1.2			0	3.9	4.3	3.4	3.7	3.1	1.8	1.5
23	1.0	1.1	1.2			0	3.9	4.3	3.4	3.2	2.9	1.8	1.6
24	1.0	1.1		a .8		0	2.6	4.3	3.3	2.6	2.7	1.9	1.6
25	1.0	1.1			.9	0	2.8	4.3	3.2	2.6	2.7	2.1	1.6
26	1.0	1.2			.9	0	4.4	4.3	3.1	3.0	2.6	2.3	1.6
27	1.0	1.2	1.2		1.0	0	4.6	4.4	3.0	3.2	2.6	2.4	1.6
28	1.0	1.2			1.0	0	4.6	4.4	2.9	1.5	2.6	2.4	1.6
29	1.0	1.2				0	4.6	4.3	2.8	2.4	2.7	2.4	1.6
30	1.0	1.2				0	4.6	4.3	2.7	3.6	2.5	2.5	1.7
31	1.0			a .9		0		4.2		3.5	2.6		1.7

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932-33				
October	1.2	0.8	0.98	60.3
November	1.2	1.0	1.10	65.5
December	1.2	1.0	1.19	73.2
January			1.1	67.6
February	1.0		.91	50.4
March	1.0	0	.44	26.7
April	4.6	0	2.92	174
May	4.6	4.2	4.34	267
June	4.1	2.7	3.59	214
July	4.1	1.5	3.10	191
August	3.7	2.1	2.88	177
September	3.1	1.4	2.01	120
The year	4.6	0	2.05	1,490
1933				
October	3.1	1.5	1.81	111

a Discharge measurement.

THOMAS DITCH NEAR ONYX, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 24, T. 25 S., R. 35 E., 200 feet below intake and 5 miles northeast of Onyx. Altitude, about 2,920 feet.

RECORDS AVAILABLE.—April 1929 to October 1933 (discontinued).

DISCHARGE.—Maximum mean daily during period Oct. 1, 1932, to Oct. 31, 1933, 8 second-feet June 14; no flow Feb. 22 to Mar. 5.

1929-33: Maximum mean daily, 11 second-feet many days in 1929 and 1930; no flow several days each year.

REMARKS.—Records fair. Stage-discharge relation affected by ice Jan. 11-23; discharge estimated from weekly discharge measurements. Ditch diverts from South Fork of Kern River 1,000 feet above gaging station near Onyx, supplying irrigation water for Thomas ranch. Its flow, together with that of Lowell Ditch, should be added to flow at Onyx station to obtain total flow of South Fork.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1.....	3.3	2.7	1.6	0.7	0.2	0	5.5	1.0	5.5	4.1	2.1	3.7	2.4
2.....	3.6	2.7	1.6	.7	.2	0	5.5	1.0	6.5	3.8	2.0	3.9	2.3
3.....	3.7	2.7	1.6	.7	.2	0	6	.9	6.5	3.7	1.9	4.0	2.1
4.....	3.6	2.7	1.7	.8	.2	0	3.5	.6	6.5	3.6	1.9	4.0	2.1
5.....	3.4	2.8	1.6	.7	.1	0	1.8	.6	6	3.5	2.2	4.2	2.1
6.....	3.1	2.8	1.6	.7	.1	0.3	1.9	.5	4.7	3.4	3.2	4.2	2.1
7.....	2.9	2.8	1.5	.6	.1	4.1	2.0	.5	3.5	3.2	4.8	4.4	2.1
8.....	2.9	2.8	1.5	.5	.2	4.1	2.3	.5	5.5	3.2	6.5	4.4	2.1
9.....	2.9	2.8	1.4	.5	.2	4.1	2.4	.4	5	4.2	6	4.5	2.1
10.....	2.9	2.8	.5	.5	.1	4.2	1.8	.4	4.7	3.9	6	4.5	2.1
11.....	2.9	2.8	.2	.5	.1	4.2	1.5	.4	1.1	4.4	5.5	4.7	2.1
12.....	2.9	2.8	.2	.5	.1	4.2	1.2	1.1	4.1	4.4	5.5	4.7	2.1
13.....	2.8	2.7	.2	.4	.2	1.2	1.4	3.7	7	4.2	6	4.8	2.2
14.....	2.7	2.6	.2	.4	.4	1.2	2.1	5.5	8	4.0	6	4.9	2.2
15.....	2.7	2.6	.2	.4	.9	1.2	2.3	5.5	8	3.7	5	4.7	2.2
16.....	2.6	2.3	.2	.3	.9	1.2	2.9	5.5	6	3.7	4.0	1.2	2.1
17.....	2.5	2.3	.2	.3	.9	1.1	2.9	5.5	4.8	3.6	4.5	1.2	2.1
18.....	2.5	2.5	.2	.3	.9	1.0	1.9	4.1	4.4	3.1	4.2	1.1	2.1
19.....	2.5	2.6	.2	.3	.8	1.0	1.9	5.5	4.4	4.0	3.7	1.1	2.1
20.....	2.5	2.6	1.0	.3	.8	1.0	2.4	3.1	5	6	3.5	1.1	2.1
21.....	2.5	2.6	1.1	.2	.1	.9	2.5	3.0	4.9	5.5	3.2	1.0	2.2
22.....	2.6	2.5	1.0	.2	0	1.4	3.3	2.9	4.7	5.5	4.6	1.0	4.0
23.....	2.7	2.5	1.0	.2	0	2.9	6	2.9	4.6	5	5.5	1.0	4.1
24.....	2.7	2.2	1.0	.2	0	2.9	2.6	2.9	4.5	4.5	5.5	1.0	2.2
25.....	2.7	1.5	1.0	.2	0	4.2	2.4	2.9	.2	5.5	3.7	2.0	1.2
26.....	2.6	1.4	1.0	.2	0	6	2.4	2.9	.1	2.6	3.6	4.4	1.2
27.....	2.3	1.5	1.2	.2	0	6	2.3	3.7	2.5	2.4	3.4	4.6	1.1
28.....	2.6	1.6	1.3	.2	0	7.5	1.2	4.5	4.4	2.4	3.4	4.6	1.0
29.....	2.7	1.6	1.3	.2	-----	5	1.1	1.0	4.4	2.7	3.2	4.3	.9
30.....	2.8	1.5	1.2	.2	-----	5	1.1	4.1	4.2	2.8	2.9	2.4	.9
31.....	2.7	-----	1.1	.2	-----	5.5	-----	4.4	-----	2.4	2.9	-----	.7

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932-33				
October.....	3.7	2.3	2.83	174
November.....	2.8	1.4	2.41	143
December.....	1.7	.2	.95	58.7
January.....	.8	.2	.40	24.4
February.....	0	0	.28	15.3
March.....	7.5	0	2.63	162
April.....	6	1.1	2.60	155
May.....	5.5	.4	2.63	162
June.....	8	.1	4.66	277
July.....	6	2.4	3.84	236
August.....	6.5	1.9	4.08	251
September.....	4.9	1.0	3.25	193
The year.....	8	0	2.56	1,850
1933				
October.....	4.1	0.7	2.01	124

TULARE LAKE BASIN

DEER CREEK AT HOT SPRINGS, CALIF.

LOCATION.—Staff gage in sec. 31, T. 23 S., R. 31 E., at forest supervisor's headquarters, 1 mile west of Hot Springs.

DRAINAGE AREA.—16.9 square miles (revised).

RECORDS AVAILABLE.—October 1910 to September 1933.

DISCHARGE.—Maximum during year not known; minimum, 1.2 second-foot Aug. 26, Sept. 2-3.

1910-33: Maximum recorded, about 420 second-foot Jan. 24, 1914 (gage height, 2.9 feet); minimum, 0.5 second-foot July 20, 1931. Average, 15 years (1910-15, 1917-21, 1925-31), 7.30 second-foot.

REMARKS.—Records fair. Flow regulated at times by filling and emptying swimming tank at Hot Springs. Gage-height record furnished by United States Forest Service.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May	June	July	Aug.	Sept.
1	2.1	1.5	2.3	2.8	4.3	6.5	8.5	18	5	2.3	1.6
2	2.3	1.5	1.6	2.8	3.8	7	11	15	5	2.3	1.2
3	2.3	1.5	1.6	2.8	3.8	8.5	8.5	14	4.6	2.3	1.2
4	1.8	1.5	1.6	2.8	3.7	10	8.5	14	4.6	1.9	1.4
5	1.9	1.5	1.6	2.8	3.6	10	8.5	14	4.6	1.6	1.6
6	1.9	1.5	1.5	2.8	3.5	11	7	15	4.6	1.4	1.9
7	1.9	1.5	1.3	2.8	3.4	12	7	14	3.6	1.6	1.9
8	1.9	1.5	1.5	2.8	3.4	12	16	14	3.6	1.4	1.9
9	2.1	1.5	1.5	2.8	3.4	13	11	14	3.6	1.4	1.9
10	2.1	1.4	1.5	2.8	3.4	13	9	12	3.6	1.6	1.9
11	1.9	1.4	1.5	2.8	3.8	12	9	12	3.6	1.6	1.9
12	1.9	1.4	1.5	2.4	4.8	11	9	11	2.8	1.6	2.3
13	1.8	1.4	2.4	2.4	4.8	17	9	10	2.8	1.6	1.9
14	1.8	1.4	1.8	2.4	5	12	9	10	2.8	1.9	1.9
15	1.8	1.4	1.8	2.4	5	10	11	9.5	2.8	1.9	1.9
16	1.8	1.4	1.9	2.8	5.5	10	12	9	2.8	1.9	1.9
17	1.9	1.4	1.9	2.4	4.8	30	10	8	2.4	1.9	1.9
18	1.8	1.4	2.0	2.1	4.8	20	10	8	2.4	1.6	1.9
19	1.8	1.3	2.0	7	4.8	18	11	8	2.4	1.6	1.9
20	1.8	1.3	2.1	3.8	4.8	16	12	7.5	2.1	1.4	1.6
21	4.0	1.3	2.1	3.4	4.8	14	12	7.5	2.4	1.4	1.9
22	1.4	1.3	2.4	4.3	5.5	12	12	7.5	2.4	1.6	1.6
23	1.4	1.3	2.8	3.0	6.5	12	12	7	2.3	1.6	1.6
24	1.6	1.3	2.8	3.4	5.5	11	12	7	2.3	1.4	1.6
25	1.6	1.4	2.8	4.3	5.5	11	14	7	2.3	1.4	1.4
26	1.5	1.4	2.8	3.4	5.5	10	12	7	2.3	1.2	1.6
27	1.6	1.4	2.8	3.8	6	10	17	6	1.9	1.4	1.6
28	1.5	1.4	2.8	3.4	5.5	11	19	6	2.3	1.4	1.6
29	1.5	1.4	2.8	4.3		12	19	6	2.3	1.6	1.9
30	1.5	1.9	2.8	4.3		11	19	5	2.3	1.6	1.9
31	1.6		2.8	3.8		11	19		2.3	1.4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.0	1.4	1.86	114
November	1.9	1.3	1.43	85.1
December	2.8	1.3	2.08	128
January	7	2.1	3.22	198
February	6.5	3.4	4.61	256
March	30	6.5	12.4	762
May	19	7	11.7	719
June	18	5	10.1	601
July	5	1.9	3.06	188
August	2.3	1.2	1.64	101
September	2.3	1.2	1.74	104

• Estimated.

NOTE.—No record for April.

TULE RIVER NEAR PORTERVILLE, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 25, T. 21 S., R. 28 E., at highway bridge 1 mile above mouth of South Fork and 6 miles east of Porterville. Altitude, about 580 feet.

DRAINAGE AREA.—266 square miles.

RECORDS AVAILABLE.—May 1901 to September 1933.

DISCHARGE.—Maximum during year, 1,670 second-feet Jan. 29 (gage height, 7.15 feet); minimum, 0.2 second-foot Sept. 16–18.

1901–33: Maximum, about 6,780 second-feet Jan. 17, 1916 (gage height, 11.0 feet, old staff-gage datum); practically no flow during periods in 1926, 1929, 1931. Average, 32 years (1901–32), 135 second-feet.

REMARKS.—Records good. Several small diversions above station. Power is developed on Middle Fork and tributaries.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.0	3.5	13	25	116	116	193	143	408	66	1.5	0.3
2.....	1.3	3.2	14	25	100	116	251	163	365	62	1.3	.3
3.....	1.2	4.0	13	25	91	124	291	135	325	59	1.3	.3
4.....	1.2	4.5	13	25	85	129	332	133	273	55	1.3	.3
5.....	1.2	4.5	13	25	82	127	340	129	260	52	1.3	.8
6.....	1.2	5	13	26	82	137	332	123	253	48	1.5	.4
7.....	1.0	5.5	14	26	84	156	289	119	233	44	2.8	.4
8.....	1.2	6	14	26	79	164	241	211	253	40	1.3	.4
9.....	1.4	6	15	26	72	182	201	166	273	38	.8	.4
10.....	1.5	6	22	26	70	190	170	159	283	35	.8	.3
11.....	1.5	6	23	25	68	159	149	157	275	30	.8	.3
12.....	1.8	6	24	25	86	143	148	149	271	28	.8	.3
13.....	1.8	6	25	25	113	147	148	168	269	25	.8	.3
14.....	1.8	6	25	25	99	140	168	166	265	20	.8	.3
15.....	1.9	6	24	25	87	120	190	177	251	17	.8	.3
16.....	2.0	6	24	32	87	138	199	205	231	17	.8	.2
17.....	2.0	7.5	24	45	91	496	186	186	209	16	.8	.2
18.....	2.0	10	25	36	90	239	157	188	182	14	.7	.2
19.....	2.2	10	25	510	82	184	140	193	163	12	.7	.4
20.....	3.0	10	25	212	79	186	123	219	148	9	1.2	.4
21.....	3.0	11	29	94	86	205	119	251	135	8	.8	.4
22.....	3.0	11	31	118	91	199	126	237	124	6.5	.9	.4
23.....	3.2	10	30	142	102	177	137	225	114	6	.6	.4
24.....	3.5	10	34	99	106	153	143	235	107	4.5	.5	.4
25.....	3.2	10	30	216	94	140	151	289	102	3.6	.4	.4
26.....	3.2	11	28	146	90	129	138	362	98	3.6	.4	.4
27.....	3.2	12	28	137	94	127	135	395	90	3.3	.4	.4
28.....	3.2	10	30	195	103	154	149	420	84	2.5	.4	.4
29.....	3.5	7	28	528	-----	181	163	432	79	2.3	.4	.4
30.....	3.8	8	26	315	-----	151	172	420	73	2.1	.3	.4
31.....	3.8	-----	25	151	-----	159	-----	420	-----	1.9	.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	3.8	1.0	2.22	136
November.....	12	3.2	7.39	440
December.....	34	13	22.8	1,400
January.....	528	25	108	6,640
February.....	116	68	89.6	4,980
March.....	496	116	167	10,300
April.....	340	119	189	11,200
May.....	432	119	225	13,800
June.....	408	73	207	12,300
July.....	66	1.9	23.6	1,450
August.....	2.8	.3	.89	54.5
September.....	.8	.2	.36	21.4
The year.....	528	.2	86.8	62,700

SOUTH FORK OF TULE RIVER NEAR SUCCESS, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 4, T. 22 S., R. 29 E., 3 miles south-east of Success and 5 miles above mouth. Altitude, about 750 feet.

DRAINAGE AREA.—106 square miles.

RECORDS AVAILABLE.—June 1930 to September 1933.

DISCHARGE.—Maximum during year, 407 second-feet Jan. 29 (gage height, 3.18 feet); no flow several months.

1930-33: Maximum, 1,520 second-feet Dec. 28, 1931 (gage height, 5.20 feet); no flow several months each year.

REMARKS.—Records good except those for November and July, which are fair. Discharge estimated Apr. 28-29, May 1-5. Several irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	0.6	6	7.	40	33	64	32	62	13
2.....	0	0	3.6	6.5	33	35	81	35	57	12
3.....	0	0	3.0	6.5	30	40	88	30	52	12
4.....	0	0	3.4	6.5	27	43	96	29	48	12
5.....	0	0	4.4	6.5	26	43	97	28	53	10
6.....	0	0	4.0	6.5	26	47	90	27	53	9.5
7.....	0	0	4.0	7	26	56	78	27	44	8.5
8.....	0	0.5	3.8	6.5	24	58	64	66	42	8
9.....	0	.8	4.4	6.5	21	63	53	43	41	7
10.....	0	.8	6	7	19	66	44	40	39	7
11.....	0	.6	5.5	7	19	56	40	38	37	7
12.....	0	.2	6	7	26	50	38	36	36	6
13.....	0	.2	6	7	34	63	39	36	34	5
14.....	0	.2	6	7	27	53	44	38	33	5
15.....	0	.2	6	7	26	44	47	40	31	4.2
16.....	0	.2	6	9	26	61	48	45	29	4.0
17.....	0	.2	6	11	27	166	44	40	27	3.8
18.....	0	.2	7	8.5	26	79	36	40	26	3.5
19.....	0	.4	7	122	24	64	32	40	25	2.7
20.....	0	1.7	7	54	23	64	29	43	24	2.0
21.....	0	1.8	8	26	26	71	28	48	22	1.0
22.....	0	1.8	8.5	34	26	64	31	47	20	.4
23.....	0	1.8	8	44	29	58	32	46	19	.2
24.....	0	1.8	10	31	30	48	34	47	19	0
25.....	0	1.8	8	66	26	44	36	53	18	0
26.....	0	1.8	7	47	26	41	31	61	18	0
27.....	0	2.0	7	47	27	42	32	63	16	0
28.....	0	2.2	7.5	58	30	53	34	67	16	0
29.....	0	2.6	7.5	150	-----	61	36	68	15	0
30.....	0	3.2	7	103	-----	50	37	67	14	0
31.....	0.2	-----	7	54	-----	54	-----	64	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.2	0	0.01	0.4
November.....	3.2	0	.92	54.7
December.....	10	3.0	6.15	378
January.....	150	6.5	31.1	1,910
February.....	40	19	26.8	1,490
March.....	166	33	57.1	3,510
April.....	97	28	49.4	2,940
May.....	68	27	44.6	2,740
June.....	62	14	32.3	1,920
July.....	13	0	4.64	285
The year.....	166	0	21.1	15,200

NOTE.—No flow during months omitted.

KAWEAH RIVER NEAR THREE RIVERS, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 27, T. 17 S., R. 28 E., three-quarters of a mile below South Fork, 3 miles below North Fork, and 1¼ miles southwest of Three Rivers. Altitude, about 680 feet.

DRAINAGE AREA.—520 square miles.

RECORDS AVAILABLE.—April 1903 to September 1933.

DISCHARGE.—Maximum during year, 3,620 second-feet June 14 (gage height, 9.07 feet); minimum, 19 second-feet Sept. 20.

1903-33: Maximum, about 14,700 second-feet Jan. 17, 1916 (gage height, 13.5 feet); minimum, 9.5 second-feet Aug. 29 to Sept. 1, 1924. Average, 30 years (1903-33), 538 second-feet.

REMARKS.—Records good. Irrigation diversions above station. Power is developed on Middle and East Forks.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	50	37	53	65	164	246	548	580	2,540	702	99	40
2.....	53	37	53	63	158	249	770	586	2,290	681	94	38
3.....	52	38	50	63	149	280	948	518	1,960	639	89	38
4.....	48	38	50	61	149	296	1,120	560	1,490	625	87	38
5.....	43	38	45	61	155	288	1,160	542	1,490	606	82	38
6.....	41	38	43	63	168	322	1,130	489	1,320	618	77	41
7.....	45	38	40	67	171	382	966	489	1,580	632	73	41
8.....	46	37	40	69	155	392	732	660	2,010	536	71	41
9.....	45	35	43	71	149	445	606	530	2,290	434	67	41
10.....	43	35	45	71	146	462	548	512	2,420	403	59	41
11.....	41	35	45	69	142	382	548	489	2,480	378	59	38
12.....	41	35	48	67	164	354	586	478	2,540	418	57	37
13.....	38	35	53	65	190	403	674	489	2,680	397	57	37
14.....	38	34	53	65	171	349	858	524	2,750	373	55	35
15.....	37	35	52	65	164	300	975	580	2,610	344	55	34
16.....	37	35	50	82	168	352	984	660	2,290	313	59	32
17.....	38	37	53	92	184	770	874	592	2,010	284	59	29
18.....	40	37	61	82	184	445	674	646	1,700	253	57	29
19.....	41	35	55	456	164	363	566	725	1,550	235	55	28
20.....	40	34	53	204	161	392	518	898	1,490	217	53	28
21.....	40	34	57	158	174	467	500	1,060	1,420	204	50	29
22.....	40	35	57	164	184	413	548	874	1,350	187	48	28
23.....	41	35	61	177	207	378	612	906	1,260	168	46	26
24.....	43	35	63	142	210	322	599	1,170	1,190	155	45	26
25.....	45	37	59	184	184	309	625	1,550	1,060	142	46	25
26.....	41	37	61	164	184	276	566	1,850	1,000	139	48	29
27.....	38	37	61	174	197	288	586	2,120	948	133	46	32
28.....	38	38	65	217	224	368	681	2,290	810	124	45	34
29.....	37	40	61	422	-----	363	740	2,480	842	119	45	35
30.....	37	41	65	264	-----	322	660	2,420	786	107	43	34
31.....	38	-----	65	190	-----	378	-----	2,540	-----	102	41	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	53	37	41.8	2,570
November.....	41	34	36.4	2,170
December.....	65	40	53.5	3,290
January.....	456	61	134	8,240
February.....	224	142	172	9,550
March.....	770	246	366	22,500
April.....	1,160	500	730	43,400
May.....	2,540	478	994	61,100
June.....	2,750	786	1,740	104,000
July.....	702	102	344	21,200
August.....	99	41	60.2	3,700
September.....	41	25	34.1	2,080
The year.....	2,750	25	391	284,000

NORTH FORK OF KAWEAH RIVER AT KAWEAH, CALIF.

LOCATION.—Staff gage in SW $\frac{1}{4}$ sec. 2, T. 17 S., R. 28 E., at highway bridge in Sequoia National Forest, a quarter of a mile above Manikin Creek, half a mile north of Kaweah, and 2 miles above mouth. Altitude, about 990 feet.

DRAINAGE AREA.—128 square miles.

RECORDS AVAILABLE.—October 1910 to September 1933.

DISCHARGE.—Maximum recorded during year, 340 second-feet May 29 (gage height, 2.58 feet); minimum, 1.2 second-feet Sept. 13.

1910-33: Maximum, about 7,400 second-feet Jan. 25, 1914 (gage height, 10.2 feet); no flow many days during July to October 1924. Average, 22 years (1911-33), 85.7 second-feet.

REMARKS.—Records good. Several small irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	4.4	9	8	35	82	172	137	300	45	6.5	2.2
2	3.7	4.3	7	7.5	32	88	198	143	262	45	6.5	2.0
3	4.0	4.4	6	7.5	32	97	262	124	245	43	6.5	2.0
4	4.0	4.3	6.5	7.5	32	100	262	135	213	39	6.5	1.9
5	3.4	4.3	6	7.5	35	91	340	143	228	35	6.5	2.1
6	3.2	4.4	6	7.5	45	100	262	122	198	35	6.5	2.4
7	3.4	4.4	6	7.5	41	109	262	149	185	33	6.5	2.2
8	3.4	4.4	6	7.5	35	129	185	172	198	33	6.5	2.2
9	4.0	4.4	6.5	8	33	149	160	131	198	32	5.5	2.1
10	4.2	4.6	7.5	8	33	160	160	149	198	28	4.9	2.1
11	4.3	4.6	7.5	7	33	122	160	124	172	24	4.9	2.0
12	4.3	4.6	9	7	41	115	198	122	172	23	3.2	1.3
13	4.6	4.4	9.5	7	48	129	172	127	172	25	3.5	1.2
14	4.6	4.4	8.5	6.5	54	112	198	131	149	19	3.5	1.2
15	4.6	4.4	6.5	7	44	94	198	135	149	19	3.5	1.4
16	4.6	4.4	6.5	16	48	112	228	185	126	18	3.5	1.4
17	4.6	4.4	7	12	53	213	198	160	114	15	3.0	1.5
18	3.8	4.4	8.5	11	59	126	172	160	117	14	2.7	1.7
19	4.3	4.4	7	65	44	106	129	160	98	14	2.7	1.6
20	4.0	4.4	7.5	30	46	115	126	185	92	14	2.8	1.4
21	4.0	4.4	10	28	48	145	126	198	86	13	2.7	1.4
22	4.2	4.4	8.5	30	56	122	129	160	78	12	2.5	1.4
23	4.2	4.4	11	35	59	127	149	185	72	19	2.0	1.4
24	4.3	4.6	11	24	63	100	143	198	66	12	2.0	1.5
25	4.3	4.6	10	43	54	91	172	245	61	12	1.8	1.7
26	4.4	4.6	10	25	55	91	145	300	61	12	2.0	1.4
27	4.4	4.6	9.5	26	62	91	160	300	59	10	2.0	1.5
28	4.4	4.6	9.5	33	74	112	149	300	56	9	2.0	1.6
29	4.4	4.6	9	109	-----	112	172	340	56	7	2.1	1.6
30	4.4	5	9	49	-----	103	149	300	53	7	2.1	1.5
31	4.4	-----	9.5	35	-----	131	-----	300	-----	6.5	2.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.6	3.0	4.11	253
November	5	4.3	4.47	266
December	11	6	8.10	498
January	109	6.5	22.0	1,350
February	74	32	46.2	2,570
March	213	82	115	7,070
April	340	126	185	11,000
May	340	122	185	11,400
June	300	53	141	8,890
July	45	6.5	21.7	1,530
August	6.5	1.8	3.84	235
September	2.4	1.2	1.70	101
The year	340	1.2	61.4	44,500

KINGS RIVER NEAR HUME, CALIF.

LOCATION.—Water-stage recorder near west line of sec. 35, T. 12 S., R. 28 E., $1\frac{1}{2}$ miles below junction of South and Middle Forks of Kings River and $3\frac{3}{4}$ miles north of Hume. Altitude, about 2,100 feet.

DRAINAGE AREA.—836 square miles.

RECORDS AVAILABLE.—August 1921 to September 1933.

DISCHARGE.—Maximum during year, 9,000 second-feet June 14 (gage height, 8.21 feet); minimum, 80 second-feet Jan. 20.

1921-33: Maximum, 11,700 second-feet June 4, 1922 (gage height, 8.67 feet); minimum, 63 second-feet Sept. 29 to Oct. 4, 1924.

REMARKS.—Records good. Discharge estimated July 22 to Aug. 4. Small amount of water released from Hume Lake occasionally.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	334	176	135	152	314	362	780	1,170	5,620	2,530	740	226
2	330	173	128	145	310	370	932	1,140	5,200	2,530	680	215
3	354	161	135	148	294	388	1,100	1,060	4,430	2,460	620	206
4	330	155	138	145	290	397	1,320	1,100	3,250	2,460	570	200
5	314	155	135	145	294	415	1,460	1,100	3,250	2,530	535	194
6	298	155	135	145	294	470	1,500	1,030	2,740	2,600	500	188
7	290	152	126	145	290	505	1,410	1,100	3,410	2,670	470	182
8	282	150	120	145	278	510	1,280	1,060	4,700	2,400	446	176
9	266	148	124	148	274	535	1,140	1,030	6,060	1,970	420	170
10	250	150	112	148	262	545	1,060	965	6,720	1,860	410	164
11	236	145	104	142	266	525	1,030	982	6,950	1,800	402	158
12	222	142	102	142	278	593	1,100	932	7,410	2,150	397	152
13	218	142	112	142	286	626	1,200	932	7,640	2,270	410	152
14	212	138	126	142	274	550	1,460	965	8,110	2,270	424	148
15	206	135	124	142	278	485	1,700	1,060	7,870	2,270	415	142
16	203	135	128	145	282	535	1,750	1,100	7,410	2,030	446	140
17	209	135	148	145	290	604	1,500	1,140	6,060	1,860	530	132
18	203	132	145	140	290	560	1,240	1,170	4,900	1,650	505	130
19	206	130	142	132	278	571	1,140	1,200	4,250	1,500	460	128
20	191	128	142	88	282	615	1,060	1,460	4,250	1,410	424	122
21	188	128	145	128	294	654	1,100	1,650	4,340	1,320	392	120
22	194	128	135	197	298	615	1,170	1,460	4,160	1,240	358	120
23	182	126	150	294	310	571	1,240	1,600	4,070	1,100	342	118
24	182	126	148	290	306	520	1,200	1,910	3,900	990	326	118
25	191	128	135	298	298	510	1,240	2,670	3,570	940	322	118
26	188	132	150	278	302	480	1,170	3,490	3,410	910	302	118
27	188	130	161	314	318	495	1,170	4,070	3,410	1,020	286	116
28	182	130	161	306	342	555	1,280	4,900	2,670	1,060	274	112
29	182	124	148	314		520	1,410	5,410	2,810	990	258	110
30	179	130	152	302		535	1,200	5,520	2,740	900	246	108
31	176		155	314		626		5,620		810	236	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	354	176	232	14,300
November	176	124	141	8,390
December	161	102	136	8,360
January	314	88	189	11,600
February	342	262	292	16,200
March	654	362	524	32,200
April	1,750	780	1,240	73,800
May	5,620	932	1,940	119,000
June	8,110	2,670	4,840	288,000
July	2,670	810	1,760	108,000
August	740	236	424	26,100
September	226	108	149	8,870
The year	8,110	88	988	715,000

KINGS RIVER ABOVE NORTH FORK, CALIF.

LOCATION.—Water-stage recorder in N½ sec. 27, T. 12 S., R. 26 E. (unsurveyed), 1 mile above junction with North Fork of Kings River and 10 miles southeast of Trimmer. Altitude, about 1,020 feet.

DRAINAGE AREA.—954 square miles.

RECORDS AVAILABLE.—March 1927 to December 1928; October 1931 to September 1933.

DISCHARGE.—Maximum during year, 10,900 second-feet June 15 (gage height, 7.23 feet); minimum, 98 second-feet Dec. 13.

1927-28, 1931-33: Maximum, 11,200 second-feet¹ May 17, 1927 (gage height, 10.30 feet at station a quarter of a mile downstream); minimum, 81 second-feet Oct. 16-17, 1931.

REMARKS.—Records good. Discharge estimated July 23-30. Small amount of water released from Hume Lake occasionally.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	325	186	139	163	361	399	867	1,280	6,260	2,820	800	237
2	311	176	129	154	353	407	1,060	1,820	5,750	2,820	734	225
3	339	165	129	156	339	428	1,280	1,190	5,090	2,820	664	217
4	325	159	135	154	336	432	1,560	1,230	3,680	2,820	604	209
5	305	154	131	152	339	445	1,720	1,230	3,680	2,820	562	203
6	285	156	127	152	342	498	1,780	1,150	3,140	2,900	517	196
7	279	154	118	152	339	557	1,660	1,190	3,680	2,900	475	188
8	273	150	117	150	322	567	1,460	1,190	5,090	2,750	449	184
9	260	148	126	154	315	604	1,280	1,150	6,430	2,260	424	179
10	248	146	122	154	305	620	1,190	1,060	6,960	2,130	407	172
11	234	146	108	152	302	577	1,110	1,040	7,320	2,010	399	165
12	225	144	107	148	336	669	1,190	1,040	7,680	2,320	391	161
13	214	142	107	148	353	842	1,320	1,040	8,040	2,530	399	159
14	209	139	122	148	325	680	1,560	1,110	8,590	2,600	412	154
15	217	137	126	148	322	567	1,890	1,190	8,780	2,530	403	148
16	217	137	127	159	325	630	2,010	1,280	8,040	2,260	428	144
17	234	137	144	159	342	794	1,780	1,230	6,780	2,070	503	137
18	225	137	154	163	336	686	1,410	1,280	5,410	1,890	498	135
19	222	133	144	292	315	669	1,230	1,320	4,800	1,720	462	131
20	214	131	150	148	311	722	1,190	1,660	4,660	1,560	424	129
21	201	131	152	154	325	770	1,190	1,950	4,800	1,460	395	127
22	206	129	148	203	328	722	1,280	1,660	4,660	1,360	364	127
23	203	126	161	325	346	680	1,360	1,780	4,420	1,200	342	126
24	198	124	163	328	342	598	1,360	2,190	4,310	1,070	336	126
25	206	126	148	346	322	593	1,410	2,980	4,090	1,020	328	126
26	206	131	154	315	325	547	1,320	3,980	3,780	970	311	127
27	203	131	167	361	342	562	1,320	4,540	3,780	1,110	295	126
28	196	131	170	380	368	652	1,410	5,240	3,060	1,160	282	120
29	181	126	159	403	-----	620	1,560	6,090	3,140	1,070	270	118
30	176	129	161	372	-----	609	1,360	6,090	3,060	970	260	117
31	181	-----	163	364	-----	698	-----	6,260	-----	874	248	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	339	176	226	14,500
November	186	124	142	8,450
December	170	107	139	8,550
January	403	148	218	13,400
February	368	302	333	18,600
March	842	399	608	37,400
April	2,010	867	1,400	83,300
May	6,260	1,040	2,160	133,000
June	8,780	3,060	5,300	315,000
July	2,900	874	1,960	121,000
August	800	248	452	26,600
September	237	117	157	9,340
The year	8,780	107	1,090	789,000

¹ Revised maximum discharge for June 23, 1932, is 10,900 second-feet instead of 11,600 second-feet as published in Water-Supply Paper 736.

KINGS RIVER AT PIEDRA, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 8, T. 13 S., R. 24 E., half a mile below highway bridge at Piedra and 12 miles northeast of Sanger. Altitude, about 500 feet.

DRAINAGE AREA.—1,700 square miles.

RECORDS AVAILABLE.—September 1895 to September 1933.

DISCHARGE.—Maximum during year, 14,400 second-feet June 15 (gage height, 10.38 feet); minimum, 126 second-feet Sept. 30 (gage height, 1.33 feet).

1895-1933: Maximum, about 59,700 second-feet Jan. 25, 1914 (gage height, 21.8 feet, old datum); minimum, 67 second-feet Oct. 3, 1924. Average, 38 years (1895-1933), 2,310 second-feet.

REMARKS.—Records excellent. Discharge interpolated Aug. 31 to Sept. 2. Small storage on Hume Creek and one hydroelectric plant on North Fork of Kings River. No unreturned diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	338	202	176	212	612	689	1,580	2,430	10,700	3,460	880	255
2	325	199	186	209	575	730	2,010	2,320	9,540	3,390	820	245
3	328	189	172	199	545	790	2,490	2,060	8,700	3,320	730	236
4	342	181	172	202	513	820	3,180	2,260	6,040	3,180	656	229
5	318	176	172	196	518	790	3,460	2,320	5,830	3,180	606	220
6	302	174	169	196	531	850	3,600	2,010	5,240	3,250	565	212
7	296	174	164	202	536	1,010	3,180	2,010	6,040	3,320	522	207
8	292	174	155	202	504	1,040	2,670	2,260	8,160	3,180	486	202
9	286	172	155	202	482	1,080	2,320	2,060	9,820	2,670	450	196
10	276	172	167	204	472	1,180	2,110	1,830	11,000	2,430	422	191
11	261	169	158	204	459	1,120	2,060	1,830	11,000	2,260	402	186
12	246	169	142	199	518	1,080	2,210	1,740	11,300	2,430	394	181
13	237	169	144	194	601	1,460	2,550	1,780	11,600	2,730	398	174
14	229	167	149	194	531	1,260	3,120	1,920	11,900	2,790	402	172
15	226	167	167	194	500	978	3,750	2,110	11,900	2,790	418	167
16	229	164	167	209	504	945	3,900	2,210	11,300	2,550	418	162
17	237	164	172	226	555	1,430	3,390	2,110	9,540	2,320	459	158
18	240	164	199	223	570	1,180	2,550	2,160	7,650	2,060	526	155
19	237	164	202	1,280	518	1,080	2,160	2,380	6,470	1,880	490	151
20	240	162	196	776	486	1,150	2,060	2,920	6,470	1,740	450	149
21	229	160	202	289	513	1,320	2,060	3,530	6,250	1,580	410	144
22	232	160	207	302	545	1,290	2,380	2,980	6,250	1,500	386	140
23	229	158	204	459	570	1,220	2,610	3,120	6,040	1,320	360	138
24	223	153	229	540	601	1,080	2,430	3,900	5,630	1,180	335	136
25	223	151	212	823	536	945	2,670	5,240	5,240	1,120	332	134
26	229	151	196	689	522	912	2,430	6,920	4,870	1,080	325	134
27	226	160	207	555	560	945	2,430	8,160	4,870	1,220	312	134
28	220	158	223	850	623	1,080	2,730	9,540	3,980	1,260	302	134
29	212	162	220	1,720	-----	1,220	3,050	10,400	3,900	1,180	289	132
30	199	169	202	1,080	-----	1,040	2,670	10,100	3,750	1,080	273	128
31	194	-----	207	700	-----	1,180	-----	10,700	-----	978	265	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	342	194	255	15,700
November	202	151	168	10,000
December	229	142	184	11,300
January	1,720	194	443	27,200
February	623	459	536	29,800
March	1,460	689	1,060	65,200
April	3,900	1,580	2,660	158,000
May	10,700	1,740	3,780	232,000
June	11,900	3,750	7,700	468,000
July	3,460	978	2,210	136,000
August	880	265	454	27,900
September	255	128	173	10,300
The year	11,900	128	1,680	1,180,000

NORTH FORK OF KINGS RIVER BELOW MEADOW BROOK, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 1, T. 10 S., R. 28 E., half a mile below Meadow Brook and half a mile above Fleming Creek. Altitude, about 8,150 feet.

DRAINAGE AREA.—35.3 square miles.

RECORDS AVAILABLE.—October 1921 to September 1933.

DISCHARGE.—Maximum during year, 1,090 second-feet June 14 (gage height, 4.93 feet); minimum recorded, 0.9 second-foot Sept. 22.

1921-33: Maximum, that of June 14, 1933; minimum, 0.3 second-foot part of Sept. 12-14, 1924.

REMARKS.—Records good. Discharge estimated Nov. 28-30; interpolated June 28-29. Discharge not determined on account of ice Dec. 1-9; no record Dec. 10 to Apr. 23. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1.....	2.1	1.1	-----	53	515	142	11	2.0
2.....	1.8	1.1	-----	45	442	131	9.5	1.9
3.....	1.5	1.1	-----	35	336	120	8	1.8
4.....	1.4	1.1	-----	43	246	118	7	1.8
5.....	1.2	1.1	-----	49	220	114	6	1.8
6.....	1.4	1.2	-----	38	240	114	5.5	1.7
7.....	1.4	1.2	-----	38	368	105	4.9	1.6
8.....	1.4	1.2	-----	35	495	90	4.4	1.5
9.....	1.4	1.2	-----	34	608	74	3.9	1.5
10.....	1.2	1.2	-----	25	615	64	3.7	1.4
11.....	1.1	1.2	-----	25	622	57	3.7	1.3
12.....	1.0	1.2	-----	23	643	65	4.9	1.3
13.....	1.0	1.2	-----	23	672	67	8	1.3
14.....	1.0	1.2	-----	26	680	65	5.5	1.2
15.....	1.0	1.2	-----	26	636	60	5	1.2
16.....	1.0	1.2	-----	23	550	52	4.6	1.2
17.....	1.0	1.2	-----	23	429	44	6.5	1.0
18.....	1.1	1.2	-----	25	333	37	5.5	1.0
19.....	1.1	1.2	-----	36	301	32	5.5	1.0
20.....	1.1	1.2	-----	54	308	28	4.9	1.0
21.....	1.1	1.2	-----	56	304	26	4.4	1.0
22.....	1.1	1.1	-----	43	294	22	3.9	1.0
23.....	1.1	1.0	-----	69	277	20	3.5	1.0
24.....	1.1	1.1	-----	53	118	264	17	3.4
25.....	1.1	1.2	57	196	220	18	3.5	1.2
26.....	1.1	1.2	57	255	212	17	3.4	1.2
27.....	1.1	1.2	67	315	198	17	2.8	1.2
28.....	1.1	1.2	86	411	175	17	2.6	1.1
29.....	1.1	1.4	78	452	168	17	2.3	1.1
30.....	1.1	1.4	54	465	151	14	2.2	1.1
31.....	1.1	-----	-----	515	-----	12	2.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.1	1.0	1.20	73.8
November.....	1.4	1.0	1.18	70.2
May.....	515	23	115	7,070
June.....	680	151	384	22,800
July.....	142	12	57.2	3,820
August.....	11	2.1	4.91	302
September.....	2.0	1.0	1.31	78.0

NORTH FORK OF KINGS RIVER NEAR CLIFF CAMP, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 12, T. 11 S., R. 27 E., at Cliff Camp Bridge, 1 mile northwest of Cliff Camp. Altitude, about 6,150 feet.

DRAINAGE AREA.—174 square miles.

RECORDS AVAILABLE.—August 1921 to September 1933.

DISCHARGE.—Maximum during year, 3,910 second-feet May 28 (gage height, 11.17 feet); minimum, 4.5 second-feet Sept. 19.

1921-33: Maximum, 6,030 second-feet June 4, 1922 (gage height, 10.6 feet at former gage); minimum, 0.6 second-foot Dec. 30, 1930. Average, 11 years (1921-32), 310 second-feet.

REMARKS.—Records good except those estimated for period of ice effect, Dec. 1-3. Discharge not determined Dec. 6 to Mar. 31 on account of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Apr.	May	June	July	Aug.	Sept.
1	11	8	12	304	455	2,530	327	27	7.5
2	10	8.5	11	404	413	2,240	297	25	7
3	9	8.5	10	560	386	1,770	271	23	6.5
4	8	8.5	10	665	455	1,240	246	21	6.5
5	7.5	8.5	10	682	472	1,240	232	20	6
6	7	9		630	389	1,290	231	18	6
7	7	9		525	407	1,830	214	17	6
8	7	8.5		434	380	2,310	187	16	6
9	7	8.5		374	337	2,530	157	15	5.5
10	7	8.5		345	292	2,530	138	14	5.5
11	7	8.5		389	282	2,450	126	13	5.5
12	7	8		490	271	2,450	128	12	5.5
13	6.5	8		630	299	2,450	128	15	5.5
14	6	8		800	362	2,380	124	16	5.5
15	6	7.5		900	371	2,240	115	15	5.5
16	6	8		840	329	1,960	103	14	5.5
17	6.5	8.5		630	337	1,530	91	15	5
18	8.5	8.5		428	389	1,220	79	15	4.8
19	8	8		395	525	1,090	72	14	4.8
20	8	8		404	700	1,040	66	14	4.8
21	8	7.5		472	700	980	59	13	4.8
22	8	7		595	578	920	53	12	4.9
23	8.5	6		578	780	820	46	11	4.9
24	8.5	6.5		525	1,110	760	40	11	4.9
25	8	8.5		508	1,590	648	38	14	5
26	8.5	9		525	1,960	595	40	13	5.5
27	8	9		595	2,240	560	40	11	5.5
28	8	9		665	2,610	446	40	10	5
29	8	7.5		682	2,690	425	37	9	4.9
30	8	9		508	2,690	383	33	8.5	4.8
31	8				2,850		30	8	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	6	7.73	475
November	9	6	8.18	487
April	900	304	549	32,700
May	2,850	271	892	54,800
June	2,530	383	1,500	89,300
July	327	30	122	7,500
August	27	8	14.8	910
September	7.5	4.8	5.50	327

NORTH FORK OF KINGS RIVER BELOW RANCHERIA CREEK, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 34, T. 11 S., R. 27 E., just above backwater from forebay of Balch power house, and 1 mile below mouth of Rancheria Creek. Altitude, about 4,150 feet.

DRAINAGE AREA.—225 square miles.

RECORDS AVAILABLE.—March 1927 to September 1933.

DISCHARGE.—Maximum during year, 4,150 second-feet May 31 (gage height, 10.97 feet); minimum, 11 second-feet Sept. 20.

1927-33: Maximum, 5,910 second-feet May 16, 1927 (gage height, 12.6 feet); minimum, 5.0 second-feet Aug. 29, 1931.

REMARKS.—Records good except those for Jan. 16 to Feb. 28, which were estimated on account of ice. Stage discharge relation slightly affected by ice Dec. 10-15. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	16	20	22	84	429	588	2,700	408	41	16
2	20	17	19	22	90	555	540	2,340	378	38	15
3	19	17	19	22	99	710	499	1,800	348	35	15
4	18	17	20	22	102	830	570	1,280	328	34	14
5	17	16	20	22	114	870	605	1,280	300	32	14
6	16	17	18	23	139	810	499	1,310	300	30	14
7	16	17	17	23	151	658	540	1,840	282	28	14
8	16	17	16	23	149	555	512	2,260	248	26	14
9	16	17	16	24	174	486	462	2,610	210	25	14
10	16	17	15	24	175	462	408	2,520	182	24	13
11	16	17	14	23	145	512	398	2,520	163	23	13
12	16	17	13	23	153	605	388	2,520	160	22	13
13	15	17	13	23	145	770	408	2,520	161	21	13
14	15	16	17	23	125	945	486	2,400	154	26	13
15	15	16	18	23	110	1,040	512	2,260	145	24	13
16	15	16	19		130	1,020	474	1,900	132	23	13
17	15	17	22		131	790	474	1,520	117	22	12
18	17	17	22		124	555	512	1,220	102	22	12
19	18	17	21		143	499	658	1,120	92	22	12
20	17	16	20		210	112	850	1,070	86	22	12
21	18	16	21		240	588	895	1,040	79	21	12
22	17	16	21		210	730	710	970	71	20	12
23	17	15	22	34	175	730	895	895	65	19	12
24	17	15	22		145	658	1,200	850	58	19	12
25	17	16	22		144	658	1,660	750	54	20	12
26	17	17	23		144	640	1,980	675	54	22	12
27	17	17	23		173	710	2,340	658	53	20	12
28	17	17	23		202	810	2,790	540	52	18	12
29	17	16	22		155	850	2,880	512	51	17	12
30	16	19	23		175	640	2,790	462	48	17	12
31	16		24		300		2,880		44	16	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	20	15	16.7	1,030
November	19	15	16.6	988
December	24	13	19.5	1,200
January			28.6	1,760
February			50.0	2,760
March	300	84	153	9,410
April	1,040	429	688	40,900
May	2,880	388	1,010	62,100
June	2,700	462	1,550	92,200
July	408	44	159	9,780
August	41	16	24.2	1,490
September	16	12	13.0	774
The year	2,880	12	310	224,000

HELMS CREEK AT SAND MEADOW, CALIF.

LOCATION.—Water-stage recorder in sec. 1, T. 10 S., R. 27 E., at lower end of Sand Meadow, half a mile below crossing of trail from Deer Meadow to Long Meadow. Altitude, about 8,000 feet.

DRAINAGE AREA.—34.1 square miles.

RECORDS AVAILABLE.—October 1922 to September 1933.

DISCHARGE.—Maximum during year, 870 second-feet May 28 (gage height, 5.16 feet); minimum recorded, 1.1 second-feet Oct. 30.

1922-33: Maximum, 1,140 second-feet May 16, 1927 (gage height, 5.58 feet); minimum, 1.1 second-feet Aug. 1, 27, 1924, Oct. 30, 1932.

REMARKS.—Records excellent. Discharge interpolated Oct. 20-28, Nov. 15, estimated Nov. 18-30. No record Nov. 27 to Apr. 22, Apr. 30 to May 25. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1.....	3.6	2.8			514	37	3.6	2.6
2.....	3.4	3.0			458	34	3.4	2.6
3.....	3.2	2.8			330	31	3.4	2.6
4.....	3.0	2.8			264	28	3.4	2.6
5.....	2.8	2.8			270	24	3.2	2.4
6.....	3.0	2.8			306	22	3.2	2.2
7.....	3.0	2.6			398	21	3.0	2.2
8.....	3.0	2.6			434	18	2.8	2.1
9.....	3.2	2.8			438	16	2.8	2.1
10.....	3.2	2.8			414	15	3.0	2.1
11.....	3.2	2.8			398	13	3.0	2.1
12.....	3.2	2.8			390	13	3.0	2.1
13.....	3.2	2.8			374	12	3.2	2.1
14.....	3.2	2.8			346	11	3.2	2.1
15.....	3.2	2.8			302	9.5	3.2	2.2
16.....	3.2	2.6			250	9	3.2	2.2
17.....	3.4	2.8			189	8	3.2	2.2
18.....	3.6				151	7.5	3.0	2.2
19.....	3.6				134	6.5	3.0	2.2
20.....	3.5				123	6.5	3.0	2.2
21.....	3.5				112	6	2.8	2.2
22.....	3.4				102	5.5	2.6	2.2
23.....	3.4		80		93	5.5	2.8	2.2
24.....	3.3	2.8	84		83	5	3.8	2.2
25.....	3.3		90		72	5	5.5	2.2
26.....	3.2		98	458	66	5	3.4	2.2
27.....	3.2		118	522	60	4.7	2.8	2.2
28.....	3.1		120	595	54	4.4	2.6	2.2
29.....	3.0		106	580	48	4.0	2.6	2.2
30.....	2.8			585	42	3.8	2.6	2.2
31.....	2.8			610		3.8	2.6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	3.6	2.8	3.22	198
November.....			2.79	166
June.....	514	42	240	14,300
July.....	37	3.8	12.7	781
August.....	5.5	2.6	3.13	192
September.....	2.6	2.1	2.24	133

RANCHERIA CREEK NEAR SMITH MEADOW, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 19, T. 11 S., R. 28 E., half a mile below North Fork of Rancheria Creek and half a mile north of Smith Meadow. Altitude, about 6,400 feet.

DRAINAGE AREA.—21.9 square miles.

RECORDS AVAILABLE.—October 1924 to September 1933.

DISCHARGE.—Maximum during year, 344 second-feet May 31 (gage height, 4.79 feet); minimum recorded, 3.1 second-feet Nov. 23.

1924-33: Maximum, 426 second-feet May 16, 1927 (gage height, 5.45 feet); practically no flow part of Nov. 25, 26, 27, 1924.

REMARKS.—Records fair. Discharge estimated Nov. 27-30. No record Dec. 1 to Apr. 11. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sep. t.
1.....	6.5	5.5	-----	37	248	39	7.5	5
2.....	6.5	5.5	-----	34	234	36	7	4.8
3.....	6	5.5	-----	33	185	33	7	4.8
4.....	6	5.5	-----	34	140	29	7	5
5.....	6	5.5	-----	35	141	27	7	5
6.....	6	5.5	-----	33	149	26	7	4.8
7.....	6	5.5	-----	32	202	25	6.5	4.8
8.....	6	5.5	-----	30	236	21	6.5	4.8
9.....	6	5.5	-----	28	259	20	6	4.8
10.....	6	5.5	-----	27	258	18	6	4.8
11.....	6	5.5	-----	25	261	18	6	4.8
12.....	6	5.5	35	24	264	16	6	4.8
13.....	6	5.5	46	25	258	16	5.5	4.8
14.....	6	5.5	57	28	244	15	5.5	4.8
15.....	6	5.5	63	32	227	14	5.5	4.6
16.....	6	5.5	60	34	202	14	5.5	4.5
17.....	6	5.5	51	35	164	12	5.5	4.5
18.....	6.5	5.5	43	42	135	12	5.5	4.5
19.....	6.5	5.5	35	55	120	11	5.5	4.3
20.....	6	5.5	33	70	109	10	5.5	4.3
21.....	6	5.5	39	68	103	10	5.5	4.3
22.....	6	5	42	59	95	9.5	5	4.3
23.....	6	5	41	79	87	9	5	4.3
24.....	6	5.5	42	116	79	9	5.5	4.3
25.....	6	5.5	41	157	71	8.5	6	4.5
26.....	6	5.5	45	191	64	8.5	5.5	4.3
27.....	5.5	5.5	54	219	63	8	5	4.3
28.....	5.5	5.5	60	248	56	7.5	5	4.1
29.....	5.5	6	60	253	50	7.5	5	4.1
30.....	5.5	6.5	47	256	45	7.5	5	4.1
31.....	5.5	-----	-----	270	-----	7.5	5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	6.5	5.5	5.98	36 ³
November.....	6.5	5	5.52	32 ³
May.....	270	24	84.2	5,18 ³
June.....	264	45	158	9,40 ³
July.....	39	7.5	16.3	1,00 ³
August.....	7.5	5	5.84	35 ³
September.....	5	4.1	4.57	27 ³

DINKY CREEK AT DINKY MEADOW, CALIF.

LOCATION.—Water-stage recorder in sec. 21, T. 10 S., R. 26 E., at lower end of Dinky Meadow, half a mile above Bear Creek and 11 miles above mouth of stream. Altitude, about 5,440 feet.

DRAINAGE AREA.—50.8 square miles.

RECORDS AVAILABLE.—October 1921 to September 1933.

DISCHARGE.—Maximum during year, 1,060 second-feet May 28 (gage height, 5.57 feet); minimum recorded, 1.2 second-feet Sept. 30.

1921-33: Maximum, 2,660 second-feet Nov. 26, 1927 (gage height, 7.62 feet); minimum, 0.2 second-foot Aug. 24-30, 1931.

REMARKS. Records good except those for Mar. 1-6, which were estimated. Discharge not determined Dec. 8 to Feb. 27 on account of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	2.2	4.6	-----	34	173	152	580	71	7	1.6
2	3.0	2.3	3.6	-----	34	224	144	525	64	6.5	1.5
3	2.6	2.4	3.4	-----	34	285	151	400	58	6	1.5
4	2.3	2.4	3.1	-----	37	330	165	295	53	6	1.5
5	2.1	2.4	3.0	-----	40	335	157	365	50	6	1.5
6	2.0	2.4	2.8	-----	48	288	130	330	47	5.5	1.5
7	2.0	2.4	2.4	-----	57	228	133	430	45	5	1.5
8	2.1	2.3	-----	-----	55	189	128	475	40	4.8	1.6
9	2.1	2.2	-----	-----	67	168	114	508	36	4.6	1.5
10	2.1	2.2	-----	-----	67	165	106	490	32	4.4	1.5
11	2.1	2.3	-----	-----	53	184	102	490	29	4.2	1.5
12	1.9	2.2	-----	-----	52	213	102	490	27	3.8	1.5
13	1.8	2.2	-----	-----	45	266	113	490	25	3.7	1.6
14	1.8	2.2	-----	-----	41	320	144	475	24	3.8	1.6
15	1.8	2.2	-----	-----	37	332	160	430	23	3.8	1.6
16	1.9	2.2	-----	-----	38	288	151	368	21	3.7	1.6
17	2.2	2.2	-----	-----	37	220	144	298	20	3.4	1.5
18	2.8	2.2	-----	-----	39	157	161	245	18	3.2	1.5
19	2.8	2.2	-----	-----	50	137	202	211	16	3.1	1.5
20	2.5	2.1	-----	-----	73	134	255	193	15	3.0	1.5
21	2.5	2.1	-----	-----	81	163	241	175	14	2.8	1.5
22	2.5	2.1	-----	-----	73	198	191	160	13	2.5	1.5
23	2.5	2.0	-----	-----	61	196	262	145	12	2.4	1.5
24	2.5	2.0	-----	-----	49	224	370	135	11	2.3	1.6
25	2.5	2.2	-----	-----	52	228	475	123	10	2.3	1.6
26	2.4	2.2	-----	-----	57	193	525	111	9.5	2.3	1.6
27	2.4	2.3	-----	-----	69	207	580	105	8.5	2.1	1.6
28	2.2	2.2	-----	28	73	224	670	96	8	2.0	1.5
29	2.2	2.2	-----	-----	62	241	645	88	7.5	1.8	1.4
30	2.2	4.0	-----	-----	80	182	645	80	7	1.7	1.4
31	2.2	-----	-----	-----	120	-----	670	-----	7	1.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.1	1.8	2.29	141
November	4.0	2.0	2.28	136
December	120	34	55.3	3,400
January	335	134	223	13,300
February	670	102	264	16,200
March	580	80	308	18,300
April	71	7	26.5	1,630
May	7	1.7	3.72	229
June	1.6	1.4	1.53	91.0

DINKY CREEK AT MOUTH, CALIF.

LOCATION.—Water-stage recorder in sec. 3, T. 12 S., R. 26 E. (unsurveyed), half a mile above mouth. Altitude, about 1,310 feet.

DRAINAGE AREA.—136 square miles.

RECORDS AVAILABLE.—January 1920 to September 1933.

DISCHARGE.—Maximum during year, 1,530 second-feet May 28 (gage height, 8.70 feet); minimum, 4.8 second-feet Sept. 30.

1920-33: Maximum, 3,360 second-feet Nov. 9, 1924 (gage height, 10.57 feet); minimum, 0.9 second-foot Aug. 26-30, 1931. Average, 12 years (1921-33), 168 second-feet.

REMARKS.—Records good. Stage-discharge relation slightly affected by ice Dec. 10-15; discharge estimated. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	10	8	16	16	33	74	291	284	975	124	18	7
2.....	9.5	8	12	15	33	82	382	279	875	116	18	7
3.....	9.5	8	11	14	34	88	480	259	710	109	18	6.5
4.....	9	8.5	11	14	33	91	570	293	532	100	17	6.5
5.....	8	8.5	10	14	34	97	570	293	550	91	16	6.5
6.....	8	9	10	15	37	114	515	241	570	84	16	6.5
7.....	7.5	9	10	16	37	127	414	261	710	80	16	6.5
8.....	8	8.5	9.5	16	34	124	319	252	775	74	14	6.5
9.....	8	8.5	10	16	33	138	288	230	825	69	14	6.5
10.....	8.5	8	10	16	32	152	274	216	800	65	13	6.5
11.....	8	8	9	16	33	121	298	206	775	60	12	6
12.....	8	8	9	15	39	131	352	204	775	57	12	6
13.....	7.5	8	9	15	39	131	424	210	750	52	11	6
14.....	7	8	12	15	36	105	515	254	730	50	10	6
15.....	7	8	12	16	36	86	550	293	650	47	10	5.5
16.....	7	8	12	18	39	104	498	286	570	44	11	5.5
17.....	7	8	15	18	44	119	404	265	490	42	10	5.5
18.....	8.5	8	18	18	42	96	288	284	395	38	10	5
19.....	9.5	8	14	45	37	94	250	352	341	36	9.5	5
20.....	9.5	8	13	20	37	135	234	430	314	34	9.5	5
21.....	9	8	15	26	42	163	263	463	286	32	9	5
22.....	9	8	13	28	46	148	330	335	267	30	9	5.5
23.....	8.5	8	18	30	51	132	338	427	245	28	8.5	5.5
24.....	9	7.5	14	26	49	103	341	610	228	26	8.5	5.5
25.....	9	8	14	34	44	104	401	775	206	25	8	5.5
26.....	9	8	15	30	48	101	327	875	190	24	8	6
27.....	9	8	15	36	56	121	338	975	176	22	8	6
28.....	8.5	8	16	36	66	156	382	1,080	168	20	8	6
29.....	8	8	14	48	-----	127	490	1,080	151	20	7.5	5.5
30.....	8	10	15	37	-----	125	330	1,050	138	18	7.5	5
31.....	8	-----	16	33	-----	190	-----	1,100	-----	18	7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	10	7	8.39	516
November.....	10	7.5	8.18	487
December.....	18	9	12.8	757
January.....	48	14	23.0	1,410
February.....	66	32	40.1	2,270
March.....	190	74	119	7,330
April.....	570	234	380	22,600
May.....	1,100	204	457	28,100
June.....	975	138	505	30,000
July.....	124	18	52.7	3,270
August.....	18	7	11.4	701
September.....	7	5	5.90	351
The year.....	1,100	5	135	97,700

DEER CREEK BELOW EAST FORK, CALIF.

LOCATION.—Water-stage recorder in sec. 6, T. 11 S., R. 27 E., 100 feet above proposed dam and about 200 feet below mouth of East Fork. Altitude, about 6,700 feet.

DRAINAGE AREA.—21.1 square miles.

RECORDS AVAILABLE.—October 1923 to September 1933.

DISCHARGE.—Maximum during year, 490 second-feet May 31 (gage height, 6.20 feet); minimum, 0.5 second-foot Sept. 30.

1923-33: Maximum, 860 second-feet May 16, 1932 (gage height, 7.02 feet); minimum, 0.1 second-foot Aug. 9-11, 1931.

REMARKS.—Records good. Discharge not determined on account of ice Dec. 6-10; no record Dec. 11 to Apr. 26. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Apr.	May	June	July	Aug.	Sept.
1	1.1	0.9	1.3		49	204	17	3.5	1.1
2	1.1	.9	1.7		44	183	14	3.5	.9
3	1.1	.9	2.0		49	129	13	3.5	.9
4	.9	.9	2.0		53	104	12	3.0	.9
5	.9	.9	1.7		52	104	11	3.0	1.1
6	.9	.9			44	124	11	2.5	.9
7	.9	.9			41	163	10	2.0	.9
8	.9	.9			40	180	9.5	2.0	.9
9	.9	.9			37	183	9	1.7	.9
10	.9	.9			34	173	8.5	1.7	.7
11	.9	.9			33	168	8.5	1.5	.7
12	.9	.9			31	161	8.5	1.5	.7
13	.7	.9			33	150	8.5	1.5	.7
14	.7	.9			43	134	8	1.5	.7
15	.7	.9			52	112	8	1.5	.7
16	.7	.9			49	92	7	1.5	.7
17	.9	.9			48	75	7	1.7	.7
18	.9	.9			56	63	6.5	1.7	.7
19	.9	.9			73	54	6.5	1.7	.7
20	.9	.9			94	49	6.5	1.7	.7
21	.9	.9			85	44	6	1.5	.7
22	.9	.9			70	40	5	1.5	.7
23	.9	.7			110	37	5	1.3	.7
24	.9	.7			178	32	5	1.3	.7
25	.9	.9			235	29	4.5	1.1	.7
26	.9	.9			235	27	4.0	1.1	.7
27	.9	.9		70	232	25	4.0	.9	.7
28	.9	.9		80	250	22	4.0	.9	.6
29	.9	.9		78	238	20	3.5	.9	.6
30	.9	1.1		63	259	17	3.5	1.1	.6
31	.9				271		3.5	1.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.1	0.7	0.89	55.0
November	1.1	.7	.89	53.1
May	271	31	101	6,210
June	204	17	96.6	5,750
July	17	3.5	7.68	472
August	3.5	.9	1.77	109
September	1.1	.6	.76	45.4

LOS GATOS CREEK NEAR COALINGA, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 4, T. 20 S., R. 14 E., at mouth of canyon $7\frac{1}{2}$ miles northwest of Coalinga. Altitude, about 1,000 feet. Gage datum lowered 1.00 foot Oct. 13, 1932.

DRAINAGE AREA.—105 square miles.

RECORDS AVAILABLE.—October 1931 to September 1933.

DISCHARGE.—Maximum during year, about 20 second-feet probably Jan. 29 (gage height, 0.9 foot, from high water marks); no flow several months.

1931-33: Maximum, about 1,050 second-feet Dec. 28, 1931 (gage height, 4.66 feet, present datum); no flow several months each year.

REMARKS.—Records fair; daily discharge estimated Jan. 15-30, Feb. 4-19, May 28 to June 30. No diversions or regulation above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1-----	0	0.2	1.0	0.3	0.2	0.2	16-----	0.1	0.2	0.3	0.3	0.2	0.2
2-----	0	.3	.8	.3	.2	.2	17-----	.2	.5	.3	.3	.2	.2
3-----	0	.3	.6	.3	.2	.2	18-----	.2	1.0	.3	.2	.2	.2
4-----	0	.3	.6	.3	.2	.2	19-----	.2	.5	.3	.2	.2	.2
5-----	0	.2	.5	.3	.2	.2	20-----	.2	1.0	.3	.2	.2	.2
6-----	0	.2	.5	.3	.2	.2	21-----	.2	.8	.3	.2	.2	.2
7-----	0	.2	.5	.3	.2	.2	22-----	.2	.5	.3	.2	.2	.2
8-----	0	.2	.5	.2	.2	.2	23-----	.2	.5	.3	.2	.2	.2
9-----	.1	.2	.4	.2	.2	.2	24-----	.2	.5	.3	.2	.2	.2
10-----	.1	.2	.4	.2	.2	.2	25-----	.2	.5	.3	.2	.2	.1
11-----	.1	.2	.4	.2	.2	.2	26-----	.2	.5	.3	.2	.2	.1
12-----	.1	.2	.4	.3	.2	.2	27-----	.2	.5	.3	.2	.2	.1
13-----	.1	.2	.4	.3	.2	.2	28-----	.2	1.0	.3	.3	.2	.1
14-----	.1	.1	.4	.3	.2	.2	29-----	.2	10	-----	.3	.2	.1
15-----	.1	.1	.4	.2	.2	.2	30-----	.2	5	-----	.2	.2	.1
							31-----	.2	1.6	-----	.2	-----	.1
Month							Maximum	Minimum	Mean		Run-off in acre-feet		
December-----							0.2	0	0.12		7.6		
January-----							10	.1	1.04		64.0		
February-----							1.0	.2	.42		23.2		
March-----							.3	.2	.25		15.1		
April-----							.2	.2	.20		11.9		
May-----							.2	.1	.18		10.9		
June-----							-----	-----	.10		6.0		
The year-----							10	0	.19		139		

NOTE.—No flow during months omitted.

SAN JOAQUIN RIVER BASIN

SAN JOAQUIN RIVER AND TRIBUTARIES ABOVE FRESNO RIVER

FLORENCE LAKE NEAR BIG CREEK, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 36, T. 7 S., R. 27 E., in gate house of Florence Lake Tunnel, 16 miles northeast of Big Creek. Crest of dam is 7,329 feet above mean sea level.

RECORDS AVAILABLE.—November 1925 to September 1933.

REMARKS.—Florence Lake, capacity, 64,406 acre-feet, on South Fork of San Joaquin River, is one of main storage units of Big Creek system of Southern California Edison Co., Ltd. Released water flows through Florence Lake Tunnel into Huntington Lake. Record of daily contents shows available storage and is furnished by Southern California Edison Co., Ltd.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1.....	30,345	590	560	504	570	544	560	595	4,867	63,628	64,098	50,380
2.....	29,289	590	562	508	571	540	589	590	5,784	63,763	64,089	49,813
3.....	28,176	588	570	501	560	538	622	603	6,134	63,820	64,070	49,239
4.....	27,069	574	576	500	541	542	558	594	6,024	63,925	64,060	48,678
5.....	26,001	503	579	500	538	570	582	597	5,668	63,858	64,081	48,092
6.....	24,952	498	574	500	550	534	546	607	5,331	63,868	63,983	47,518
7.....	23,893	497	566	499	542	498	540	578	5,959	63,897	63,743	46,939
8.....	22,847	503	567	499	527	499	533	629	7,439	63,762	63,331	46,242
9.....	21,777	510	557	501	516	523	530	594	9,439	63,743	62,910	45,488
10.....	20,702	516	548	500	523	519	544	611	11,683	63,916	62,395	44,603
11.....	19,696	519	544	500	525	505	552	615	14,225	63,954	61,776	43,407
12.....	18,722	521	541	499	509	533	572	602	17,820	64,041	61,179	43,296
13.....	17,696	521	539	498	505	538	563	596	22,255	63,964	60,574	41,195
14.....	16,638	516	535	497	521	540	620	609	27,171	64,089	59,988	40,080
15.....	15,596	512	532	497	541	555	600	605	31,494	64,031	59,386	38,966
16.....	14,592	515	527	503	562	572	569	592	35,531	63,945	58,805	37,864
17.....	13,621	515	528	510	555	585	558	614	38,740	63,993	58,271	36,723
18.....	12,648	516	528	530	528	582	566	614	41,302	63,983	57,640	35,602
19.....	11,586	510	536	546	510	588	590	622	43,658	63,964	57,210	34,459
20.....	10,502	505	542	545	513	574	593	630	45,967	64,060	56,645	33,334
21.....	9,414	499	555	558	525	538	586	608	48,380	64,127	56,063	32,211
22.....	8,311	499	560	574	535	517	585	611	50,842	64,098	55,519	31,085
23.....	7,198	504	577	586	546	498	588	653	53,133	64,050	55,069	29,970
24.....	6,102	510	586	596	552	528	588	735	55,465	64,118	54,582	28,820
25.....	4,923	527	598	596	557	540	568	932	57,470	64,127	54,116	27,698
26.....	3,675	538	589	594	564	539	567	1,130	59,424	64,146	53,614	26,610
27.....	2,486	552	587	570	562	544	594	1,569	61,273	64,146	53,106	25,540
28.....	1,449	558	582	530	551	532	587	2,111	62,529	64,060	52,554	24,496
29.....	662	561	513	553	-----	521	594	2,839	63,302	64,089	52,022	23,471
30.....	588	572	504	542	-----	567	586	3,476	63,532	64,060	51,476	22,449
31.....	589	-----	505	552	-----	579	-----	4,060	-----	64,060	50,931	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30.....	31,403	-----	May 31.....	4,060	+3,474
Oct. 31.....	589	-30,814	June 30.....	63,532	+59,472
Nov. 30.....	572	-17	July 31.....	64,060	+528
Dec. 31.....	505	-67	Aug. 31.....	50,931	-13,129
Jan. 31.....	552	+47	Sept. 30.....	22,449	-28,482
Feb. 28.....	551	-1	The year.....	-----	-8,954
Mar. 31.....	579	+28			
Apr. 30.....	586	+7			

SOUTH FORK OF SAN JOAQUIN RIVER NEAR FLORENCE LAKE, CALIF.

LOCATION.—Water-stage recorder in sec. 36, T. 7 S., R. 27 E., just below spillway of Florence Lake Dam, 6 miles above mouth of Bear Creek. Altitude, about 7,200 feet.

DRAINAGE AREA.—171 square miles.

RECORDS AVAILABLE.—December 1921 to September 1933.

DISCHARGE.—Maximum during year, 282 second-feet Nov. 5 (gage height, 9.76 feet); minimum, 0.1 second-foot several days in April, May, June.

1921-33: Maximum, 3,460 second-feet June 4, 1922 (gage height, 13.75 feet); practically no flow Aug. 30, Sept. 2-7, 1924, Dec. 16-17, 1925.

REMARKS.—Records good except those for January to March, which were estimated on account of ice. Storage and diversions above station (see records for Florence Lake and Florence Lake Tunnel at intake). Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.6	1.3	1.7	0.7	-----	-----	1.5	0.2	0.1	1.7	0.9	0.7
2.....	2.6	1.5	2.0	0.7	0.7	0.8	1.5	0.2	0.1	1.7	1.1	0.5
3.....	2.9	1.7	2.0	-----	-----	-----	2.0	0.2	0.1	1.7	1.1	0.9
4.....	2.9	3.2	2.0	-----	-----	-----	2.3	0.2	0.1	1.7	1.1	1.7
5.....	2.9	2.4	2.0	-----	-----	-----	1.5	0.2	0.1	1.5	1.1	1.3
6.....	2.9	4.7	2.0	-----	-----	-----	1.5	0.2	0.1	1.5	1.1	1.3
7.....	2.9	4.1	2.0	-----	-----	-----	0.5	0.2	0.1	1.5	1.1	1.3
8.....	2.9	3.8	2.0	-----	-----	-----	0.1	0.2	0.1	1.5	1.3	1.3
9.....	2.9	3.8	2.0	-----	-----	-----	0.1	0.2	0.1	1.5	1.3	1.3
10.....	2.9	3.8	2.3	-----	-----	-----	0.1	0.2	0.1	1.5	1.3	1.1
11.....	2.9	3.8	2.3	-----	-----	-----	0.2	0.3	0.1	1.5	1.3	1.1
12.....	2.9	3.5	2.3	-----	-----	-----	0.2	0.2	0.1	1.5	1.3	1.1
13.....	2.6	3.5	2.3	-----	-----	-----	0.2	0.2	0.1	1.5	1.1	1.1
14.....	2.6	3.5	2.3	-----	-----	-----	0.2	0.2	0.1	1.5	1.1	0.9
15.....	2.6	2.9	2.3	-----	-----	-----	0.1	0.2	0.1	1.5	1.1	0.9
16.....	2.6	2.3	2.3	-----	-----	-----	0.1	0.2	0.1	1.5	1.1	0.9
17.....	2.3	2.3	2.3	-----	-----	-----	0.1	0.2	0.1	1.5	1.1	0.9
18.....	2.3	2.3	2.3	-----	-----	-----	0.1	0.1	0.1	1.5	0.9	0.9
19.....	2.3	2.0	1.7	-----	-----	-----	0.1	0.1	0.1	1.5	0.9	0.9
20.....	2.3	2.0	0.7	-----	-----	-----	0.1	0.1	0.1	1.5	0.9	0.9
21.....	2.3	2.0	0.7	-----	-----	-----	0.1	0.1	0.1	1.5	0.9	0.9
22.....	2.0	2.0	0.7	-----	-----	-----	0.2	0.1	0.6	1.5	0.9	0.9
23.....	2.0	2.0	0.7	-----	-----	-----	0.2	0.1	1.3	1.3	0.7	0.9
24.....	2.0	2.0	0.7	-----	-----	-----	0.2	0.1	1.3	1.3	0.7	1.1
25.....	1.7	2.0	0.9	-----	-----	-----	0.1	0.1	1.5	1.3	0.7	1.1
26.....	1.7	1.7	0.9	-----	-----	-----	0.1	0.1	1.7	1.1	0.7	1.1
27.....	1.7	1.7	0.9	-----	-----	-----	0.1	0.1	1.7	1.3	0.7	1.1
28.....	1.7	1.7	0.7	-----	-----	-----	0.2	0.1	1.7	1.1	0.9	1.1
29.....	1.7	1.7	0.7	-----	-----	-----	0.2	0.1	1.7	0.9	0.9	1.1
30.....	1.5	1.7	0.7	-----	-----	-----	0.2	0.1	1.7	0.9	0.9	1.1
31.....	1.5	-----	0.7	-----	-----	-----	-----	0.1	-----	1.1	0.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.9	1.5	2.37	146
November.....	2.4	1.3	3.28	195
December.....	2.3	0.7	1.58	97.2
January.....	-----	-----	0.7	43.0
February.....	-----	-----	0.7	38.9
March.....	-----	-----	0.8	49.2
April.....	2.3	0.1	0.47	28.0
May.....	0.2	0.1	0.16	9.7
June.....	1.7	0.1	0.51	30.3
July.....	1.7	0.9	1.42	87.3
August.....	1.3	0.7	1.00	61.5
September.....	1.7	0.5	1.05	62.5
The year.....	2.4	0.1	1.17	849

Discharge measurement.

SAN JOAQUIN RIVER ABOVE BIG CREEK, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 11, T. 8 S., R. 24 E., 3 miles above mouth of Big Creek. Altitude, about 2,500 feet.

DRAINAGE AREA.—1,040 square miles (revised).

RECORDS AVAILABLE.—March 1922 to September 1933.

DISCHARGE.—Maximum during year, 8,880 second-feet June 14 (gage height, 14.70 feet); minimum, 73 second-feet Sept. 30.

1922-33: Maximum, 18,000 second-feet June 5, 1922 (gage height, 17.34 feet); minimum, 52 second-feet Sept. 24-25, 1931.

REMARKS.—Records good. Large diversions and storage on South Fork of San Joaquin River and tributaries. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	95	140	142	263	408	1,240	1,550	6,040	1,520	319	118
2	155	96	111	136	260	429	1,550	1,550	5,000	1,480	298	112
3	138	98	109	132	254	450	1,920	1,340	4,260	1,410	274	111
4	130	98	114	134	251	450	2,350	1,440	2,920	1,340	251	107
5	120	96	112	132	280	470	2,260	1,520	2,350	1,380	235	103
6	114	96	111	132	274	546	2,220	1,270	2,600	1,380	224	102
7	112	102	105	134	274	610	1,880	1,380	3,490	1,380	210	96
8	114	112	95	134	254	602	1,580	1,340	4,520	1,270	202	95
9	116	102	105	136	240	615	1,380	1,240	5,400	1,050	197	94
10	114	100	103	142	232	660	1,270	1,080	5,820	965	188	92
11	111	98	92	138	235	606	1,300	1,080	6,040	910	184	89
12	107	96	94	130	257	938	1,440	1,050	6,490	992	181	88
13	103	95	102	136	257	938	1,690	1,080	6,960	1,050	184	88
14	102	94	114	138	246	705	1,960	1,200	7,200	1,050	184	88
15	102	94	118	136	249	584	2,400	1,270	6,720	992	186	86
16	100	94	116	140	263	660	2,400	1,200	6,040	882	184	83
17	100	94	134	140	307	830	1,800	1,170	5,200	780	184	82
18	103	94	146	144	301	682	1,340	1,140	3,810	705	195	79
19	102	90	138	202	280	682	1,170	1,300	3,190	638	207	79
20	98	89	146	144	277	780	1,140	1,620	3,020	606	202	77
21	98	88	140	157	298	882	1,300	2,000	3,020	562	181	76
22	102	88	138	184	313	830	1,580	2,920	2,920	514	166	75
23	102	86	144	204	329	730	1,720	1,720	2,750	458	155	75
24	102	86	144	204	326	638	1,550	2,350	2,700	422	151	75
25	98	86	134	217	289	606	1,550	3,370	2,450	408	146	75
26	96	90	144	214	304	584	1,410	4,020	2,220	443	144	77
27	100	94	146	260	339	597	1,580	4,340	2,220	446	138	82
28	98	94	146	257	370	780	2,000	5,200	1,840	418	134	80
29	96	94	138	263	-----	780	2,350	6,040	1,690	387	130	76
30	96	114	140	251	-----	730	1,690	6,040	1,620	359	126	73
31	95	-----	144	260	-----	910	-----	6,490	-----	335	122	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	155	95	109	6,700
November	114	86	95.1	5,660
December	146	92	125	7,690
January	263	130	170	10,500
February	370	232	279	15,500
March	938	408	668	41,100
April	2,400	1,140	1,700	101,000
May	6,490	1,050	2,220	138,000
June	7,200	1,620	4,020	239,000
July	1,520	335	856	52,600
August	319	122	190	11,700
September	118	73	87.8	5,220
The year	7,200	73	875	633,000

SAN JOAQUIN RIVER NEAR FRIANT, CALIF. .

LOCATION.—Water-stage recorder in NE¼ sec. 5, T. 11 S., R. 21 E., 1½ miles northeast of Friant. Altitude, about 320 feet.

DRAINAGE AREA.—1,650 square miles.

RECORDS AVAILABLE.—October 1907 to September 1933.

DISCHARGE.—Maximum during year, 8,900 second-feet June 14 (gage height, 10.78 feet); minimum, 74 second-feet Nov. 26.

1907-33: Maximum, about 46,200 second-feet Jan. 25, 1914 (gage height, 21.72 feet); minimum, 44 second-feet Sept. 15, 1924, Sept. 14, Oct. 12, 1931. Average, 25 years (1908-33), 2,270 second-feet.

REMARKS.—Records excellent except those for Dec. 6-16, which were estimated. There are four storage reservoirs and six power plants above station. See records for Florence Lake, Huntington Lake, and Shaver Lake. Storage in Crane Valley Reservoir was 32,520 acre-feet on Sept. 30, 1932, and 24,945 acre-feet on Sept. 30, 1933.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	928	1,140	503	814	990	1,300	1,640	2,080	6,340	2,080	1,380	1,270
2	905	1,100	389	716	938	1,410	1,890	2,000	5,290	1,980	1,480	1,270
3	965	1,070	387	778	952	1,370	2,040	2,200	4,900	1,760	1,410	994
4	1,060	994	364	850	901	1,370	2,760	2,000	3,380	1,740	1,410	1,00
5	1,080	996	216	904	860	1,300	3,260	2,000	3,140	1,760	1,440	1,310
6	1,080	881	320	912	810	1,290	3,000	2,000	3,020	1,690	1,140	1,32
7	1,090	717	270	881	978	1,490	2,580	1,550	3,380	1,880	1,290	1,26
8	1,000	641	580	734	996	1,410	2,330	2,000	4,370	1,840	1,520	1,240
9	902	656	600	498	904	1,260	2,210	1,800	5,290	1,470	1,320	1,260
10	906	670	900	886	855	1,360	2,060	1,920	5,910	1,580	1,350	994
11	1,030	638	780	833	864	1,280	2,000	1,760	5,700	1,520	1,410	1,060
12	1,060	540	500	906	964	1,430	2,000	1,840	6,560	1,550	1,380	1,28
13	1,100	619	650	902	1,020	1,820	2,120	1,920	7,010	1,720	1,110	1,290
14	1,100	433	880	988	1,040	1,400	2,180	1,720	7,240	1,760	1,260	1,340
15	1,130	659	940	786	1,050	1,350	2,760	1,840	7,240	1,660	1,410	1,230
16	1,120	607	910	864	1,030	1,320	3,120	1,880	6,340	1,580	1,440	1,190
17	981	604	826	918	1,070	1,930	2,640	1,800	5,910	1,550	1,320	886
18	1,150	596	831	902	1,080	1,520	2,200	1,800	4,210	1,550	1,380	1,070
19	1,190	576	800	1,230	954	1,280	2,100	1,690	3,630	1,660	1,350	1,230
20	1,130	548	952	1,060	1,000	1,390	2,000	1,920	3,380	1,520	1,260	1,290
21	1,190	420	714	886	1,060	1,520	2,000	2,080	3,500	1,580	1,230	1,22
22	1,190	554	819	894	1,140	1,630	2,000	2,420	3,260	1,410	1,290	1,170
23	1,160	512	958	951	1,080	1,520	2,180	2,120	3,260	1,170	1,390	1,050
24	1,090	271	1,020	1,050	1,150	1,410	2,160	2,700	3,020	1,230	1,300	94
25	1,140	170	779	1,100	1,050	1,420	2,000	3,380	2,910	1,480	1,320	91
26	1,160	205	489	1,090	1,000	1,330	2,180	4,370	2,510	1,480	1,270	1,11
27	1,180	250	764	1,000	1,030	1,180	2,100	4,700	2,600	1,550	1,040	1,05
28	1,340	229	886	1,080	1,140	1,330	2,380	4,900	2,600	1,550	1,220	1,050
29	1,170	367	848	1,250	-----	1,650	2,720	6,120	2,240	1,380	1,370	1,050
30	1,080	406	846	1,160	-----	1,590	2,700	5,910	2,120	1,140	1,240	995
31	1,120	-----	860	1,010	-----	1,490	-----	6,560	-----	1,260	1,310	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,340	902	1,090	67,000
November	1,140	170	602	35,800
December	1,020	216	699	43,000
January	1,250	498	930	57,200
February	1,150	810	997	55,400
March	1,930	1,180	1,430	87,000
April	3,260	1,640	2,310	137,000
May	6,560	1,550	2,680	165,000
June	7,240	2,120	4,340	258,000
July	2,080	1,140	1,580	97,200
August	1,520	1,040	1,320	81,200
September	1,540	886	1,140	67,800
The year	7,240	170	1,590	1,150,000

SAN JOAQUIN RIVER NEAR NEWMAN, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 3, T. 7 S., R. 9 E., at highway bridge on Hills Ferry road, 300 feet below mouth of Merced River and 3½ miles northeast of Newman. Elevation of zero of gage is 51.0 feet, United States Army Engineers datum.

RECORDS AVAILABLE.—April 1912 to September 1933.

DISCHARGE.—Maximum during year, 2,660 second-feet June 21 (gage height, 7.08 feet); minimum, 177 second-feet Aug. 18 (gage height, 1.51 feet).

1912-33: Maximum, 20,700 second-feet Jan. 27, 1914 (gage height, 18.0 feet); minimum, 15 second-feet Aug. 9, 10, 1924. Average, 21 years (1912-33), 2,180 second-feet.

REMARKS.—Records good. Discharge estimated Nov. 16-19, 21-22. Practically entire low-water flow of main river and tributaries is diverted for irrigation, hence low-water records show mainly amount of return water.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	381	245	262	755	2,100	1,060	500	417	555	611	247	236
2	361	240	273	775	2,040	1,010	440	440	1,100	574	228	243
3	388	230	265	815	1,980	968	451	462	1,470	538	219	268
4	378	228	255	900	2,040	900	486	482	1,740	486	230	290
5	350	226	280	968	2,240	878	482	482	1,920	486	221	272
6	347	226	238	968	2,240	695	437	482	1,980	454	226	268
7	347	228	233	835	2,170	595	417	518	2,100	438	240	249
8	311	228	230	795	1,980	555	448	635	2,040	438	217	234
9	333	228	224	795	1,980	518	454	655	1,740	438	209	238
10	337	228	221	795	1,860	482	444	695	1,370	413	199	254
11	327	228	226	815	1,800	482	414	675	1,100	377	191	265
12	327	245	230	835	1,680	462	401	615	1,080	354	189	245
13	320	252	245	815	1,740	465	392	575	1,150	334	195	228
14	347	255	242	755	1,800	482	388	518	1,370	318	201	230
15	351	252	247	715	1,800	518	363	482	1,570	308	193	245
16	382	245	262	715	1,800	575	354	444	1,740	305	203	238
17	354	235	281	695	1,740	595	372	398	1,920	313	191	240
18	360	230	273	655	1,680	715	354	366	2,240	298	193	258
19	376	225	292	675	1,620	655	360	369	2,450	295	203	247
20	327	225	318	755	1,620	655	379	354	2,590	277	199	234
21	300	230	351	815	1,620	655	379	348	2,660	260	207	221
22	292	230	414	878	1,620	655	369	369	2,520	247	187	226
23	286	228	635	945	1,620	615	369	372	2,040	256	187	223
24	289	224	735	1,080	1,570	615	408	372	1,520	254	197	223
25	275	228	715	1,300	1,570	595	434	333	1,240	258	193	247
26	268	224	735	1,470	1,470	575	420	312	1,140	247	205	256
27	260	224	735	1,570	1,220	555	372	348	1,020	277	211	240
28	257	210	735	1,680	1,120	535	388	333	880	290	221	228
29	245	217	755	1,800	-----	555	398	324	782	247	226	226
30	247	247	755	1,980	-----	518	404	284	687	288	230	213
31	242	-----	755	2,100	-----	500	-----	321	-----	248	230	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	388	242	321	19,700
November	255	217	232	13,800
December	755	221	400	24,600
January	2,100	655	1,010	62,100
February	2,240	1,120	1,780	98,900
March	1,060	462	633	38,900
April	500	354	409	24,300
May	695	284	445	27,400
June	2,660	555	1,590	94,600
July	611	238	351	21,800
August	247	187	209	12,900
September	290	213	243	14,500
The year	2,660	187	626	453,000

SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.

LOCATION.—Water-stage recorder in El Pescadero grant, at Durham Ferry highway bridge $3\frac{1}{2}$ miles northeast of Vernalis, San Joaquin County.

RECORDS AVAILABLE.—July 1922 to September 1933 (low-water records only 1922-23, 1925-29).

DISCHARGE.—Maximum during year, 8,570 second-feet June 17 (gage height, 14.74 feet); minimum, 548 second-feet Aug. 16.

1922-33: Maximum determined, 18,200 second-feet May 31, 1932 (gage height, 21.58 feet); minimum, 184 second-feet Aug. 14, 1931.

REMARKS.—Records good. Practically entire flow of main river and tributaries is diverted above station during irrigation season, and low-water records show mainly amount of return water.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	1,120	2,500	1,630	2,110	3,050	2,560	1,360	1,120	3,940	2,370	641	760
2-----	1,120	2,370	1,630	2,050	3,050	2,560	1,360	1,150	4,420	2,160	632	735
3-----	1,180	2,110	1,660	1,930	2,980	2,560	1,330	1,180	5,040	2,030	646	760
4-----	1,210	2,050	1,690	1,930	2,910	2,440	1,270	1,180	5,580	1,850	675	812
5-----	1,210	1,990	1,810	1,930	2,910	2,300	1,210	1,210	5,760	1,760	675	840
6-----	1,210	1,990	1,750	1,990	2,980	2,240	1,120	1,270	5,100	1,610	725	840
7-----	1,210	1,990	1,750	1,990	3,050	2,050	1,120	1,420	4,440	1,490	725	922
8-----	1,210	2,050	1,870	1,930	3,050	1,870	1,120	1,690	5,200	1,430	700	1,070
9-----	1,240	2,370	1,990	1,870	3,190	1,870	1,150	1,660	5,900	1,370	675	1,160
10-----	1,240	2,500	1,870	1,870	3,190	1,750	1,120	1,630	6,000	1,340	646	1,220
11-----	1,240	2,500	1,870	1,870	3,190	1,660	1,150	1,570	5,900	1,280	632	1,280
12-----	1,210	2,370	1,810	1,930	3,050	1,570	1,150	1,540	5,800	1,160	623	1,250
13-----	1,180	1,870	1,750	1,870	2,980	1,570	1,070	1,510	5,500	1,050	614	1,280
14-----	1,210	1,810	1,750	1,810	2,910	1,540	1,040	1,510	5,600	970	623	1,250
15-----	1,210	1,750	1,750	1,750	2,980	1,420	1,040	1,480	5,900	915	600	1,220
16-----	1,240	1,750	1,690	1,690	3,050	1,390	1,070	1,450	7,700	915	578	980
17-----	1,270	1,690	1,690	1,660	2,980	1,600	1,120	1,360	8,240	888	569	1,100
18-----	1,300	1,660	1,750	1,660	3,190	1,660	1,180	1,270	7,300	860	569	1,280
19-----	1,810	1,690	1,810	1,690	3,330	1,690	1,150	1,210	7,500	805	614	1,370
20-----	2,050	1,660	1,810	1,750	3,260	1,750	1,120	1,180	7,200	778	725	1,340
21-----	2,050	1,660	1,870	1,810	2,910	1,630	1,100	1,180	6,300	725	650	1,310
22-----	2,110	1,630	1,990	1,870	3,050	1,480	1,100	1,300	5,300	750	675	1,280
23-----	2,110	1,630	2,050	1,930	3,120	1,450	1,100	1,330	5,200	725	700	1,250
24-----	2,180	1,630	2,050	1,990	2,910	1,450	1,180	1,270	5,000	725	700	1,250
25-----	2,440	1,630	2,110	2,050	2,770	1,390	1,180	1,210	4,620	725	720	1,250
26-----	2,500	1,630	2,110	2,180	2,770	1,360	1,210	1,180	3,580	700	685	1,310
27-----	2,560	1,600	2,050	2,300	2,770	1,390	1,150	1,150	3,000	675	675	1,340
28-----	2,560	1,630	2,050	2,500	2,560	1,390	1,040	1,120	2,930	641	730	1,370
29-----	2,560	1,600	2,050	2,630	-----	1,420	1,040	1,210	2,720	610	730	1,340
30-----	2,560	1,600	2,180	2,770	-----	1,450	1,070	1,300	2,580	596	735	1,340
31-----	2,500	-----	2,110	2,910	-----	1,390	-----	3,050	-----	618	760	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	2,560	1,120	1,670	103,000
November-----	2,500	1,600	1,900	113,000
December-----	2,180	1,630	1,870	115,000
January-----	2,910	1,660	2,010	124,000
February-----	3,330	2,560	3,000	167,000
March-----	2,560	1,360	1,740	107,000
April-----	1,360	1,040	1,150	68,400
May-----	3,050	1,120	1,380	84,800
June-----	8,240	2,580	5,310	316,000
July-----	2,370	596	1,110	68,200
August-----	760	569	666	41,000
September-----	1,370	735	1,150	68,400
The year-----	8,240	569	1,900	1,380,000

FLORENCE LAKE TUNNEL AT INTAKE, CALIF.

LOCATION.—Water-stage recorders and Venturi meter in SE $\frac{1}{4}$ sec. 36, T. 7 S., R. 27 E., in gate house at entrance of tunnel. Altitude, about 7,350 feet (corrected).

RECORDS AVAILABLE.—April 1925 to September 1933.

DISCHARGE.—Maximum mean daily during year, 1,040 second-feet May 30; minimum, 0.5 second-foot June 13.

1925-33: Maximum mean daily, 1,990 second-feet Apr. 30, 1926; practically no flow at times.

REMARKS.—Records good except those for Dec. 11, Mar. 4-5, Apr. 13-15, which were estimated. Florence Lake Tunnel diverts water from Florence Lake, a storage reservoir on South Fork of San Joaquin River, to Huntington Lake for use in Big Creek power plants of Southern California Edison Co., Ltd. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	582	26	12	15	50	41	165	168	953	676	174	326
2.....	586	25	11	15	50	41	174	167	785	653	174	326
3.....	598	25	11	15	50	41	221	145	609	651	152	324
4.....	595	24	11	14	50	41	281	169	746	680	128	323
5.....	560	24	11	14	50	45	251	169	804	806	127	323
6.....	549	23	11	14	50	70	267	142	801	829	123	323
7.....	557	20	10	13	50	77	214	156	654	829	215	323
8.....	555	15	11	13	50	55	182	114	600	793	299	380
9.....	560	13	11	12	44	47	154	146	607	606	300	405
10.....	557	13	11	12	34	55	132	111	602	451	328	528
11.....	524	13	11	13	35	54	141	129	606	533	398	577
12.....	505	14	11	13	41	43	159	132	246	628	400	584
13.....	528	14	11	12	36	52	200	122	.5	743	400	580
14.....	540	13	11	12	31	55	220	124	.6	683	401	584
15.....	542	13	11	12	28	49	300	133	.7	709	400	580
16.....	510	13	10	12	28	49	292	130	.7	680	400	577
17.....	497	12	10	12	34	51	205	111	.8	533	398	577
18.....	501	12	10	12	44	60	145	126	.8	493	400	584
19.....	536	12	10	12	43	70	122	152	.9	459	401	580
20.....	559	12	11	12	33	88	139	193	.9	367	401	580
21.....	568	12	11	12	29	98	164	220	1.0	337	401	582
22.....	565	8	11	12	29	84	189	182	1.1	337	364	579
23.....	570	6.5	11	15	30	76	198	210	1.1	300	320	580
24.....	566	6.5	11	28	31	50	186	298	1.2	221	321	586
25.....	571	6.5	11	40	30	55	192	410	1.2	270	321	579
26.....	570	6.5	21	41	30	62	174	553	1.2	248	321	558
27.....	565	7	30	57	34	65	154	626	1.2	310	324	546
28.....	530	7	29	69	41	74	202	700	150	376	332	539
29.....	431	7	24	49	-----	69	221	881	424	273	331	533
30.....	67	7	20	57	-----	63	182	1,040	664	268	329	524
31.....	27	-----	15	56	-----	116	-----	1,000	-----	220	328	-----
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October.....	598			27			515			31,700		
November.....	26			6.5			13.7			815		
December.....	30			10			13.2			812		
January.....	69			12			22.4			1,380		
February.....	50			28			38.8			2,150		
March.....	116			41			61.2			3,760		
April.....	300			122			194			11,500		
May.....	1,040			111			289			17,800		
June.....	953			.5			309			18,400		
July.....	829			220			515			31,700		
August.....	401			123			313			19,200		
September.....	586			323			500			29,800		
The year.....	1,040			.5			233			169,000		

FLORENCE LAKE TUNNEL AT OUTLET, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 5, T. 8 S., R. 26 E., just above tunnel outlet at east end of Huntington Lake, 6 miles northeast of Big Creek. Altitude, about 7,200 feet.

RECORDS AVAILABLE.—November 1927 to September 1933.

DISCHARGE.—Maximum mean daily during year, 1,730 second-feet May 31; minimum, 31 second-feet Nov. 29.

1927-33: Maximum mean daily, 1,840 second-feet Nov. 20-21, 1927, May 30, 1928; minimum, 3.2 second-feet Oct. 23, 1929.

REMARKS.—Records excellent. Tunnel diverts water from Florence Lake to Huntington Lake (see Florence Lake Tunnel at intake). Between intake and outlet tunnel receives water diverted from Bear Creek, Mono Creek, and at times from several other very small tributaries of South Fork of San Joaquin River. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	641	58	37	52	121	98	303	362	1,670	1,330	345	384
2.....	638	58	43	50	119	98	325	350	1,520	1,310	330	383
3.....	653	56	48	49	116	98	405	327	1,280	1,290	301	379
4.....	648	52	44	48	112	99	501	360	1,380	1,300	263	378
5.....	621	56	42	48	110	103	480	368	1,400	1,450	253	376
6.....	606	57	38	48	108	138	499	325	1,360	1,480	243	372
7.....	616	53	35	48	107	161	419	327	1,360	1,470	302	370
8.....	611	46	39	48	104	124	368	301	1,320	1,430	306	416
9.....	611	42	35	48	99	116	330	317	1,340	1,150	392	444
10.....	611	44	34	48	87	125	297	270	1,340	918	420	549
11.....	576	44	37	48	82	125	302	292	1,340	985	486	614
12.....	552	44	40	48	92	106	332	301	1,030	1,150	493	628
13.....	571	44	41	47	86	113	399	280	737	1,330	496	623
14.....	589	42	42	46	82	128	450	297	742	1,290	499	628
15.....	590	42	40	45	77	120	576	306	738	1,270	493	624
16.....	561	44	40	43	77	119	561	299	733	1,220	496	619
17.....	539	44	40	44	84	121	409	271	716	994	555	618
18.....	542	43	41	45	97	136	323	279	708	886	521	624
19.....	576	42	42	39	96	146	297	327	708	830	509	619
20.....	601	41	42	40	85	175	312	412	703	713	501	616
21.....	602	41	43	44	78	196	343	477	699	658	491	621
22.....	601	36	44	46	78	172	382	396	698	619	462	616
23.....	602	32	45	52	79	157	405	450	696	558	406	616
24.....	601	33	44	68	78	128	385	604	692	444	402	621
25.....	604	39	46	86	77	128	372	861	689	497	401	618
26.....	604	38	56	94	78	134	351	1,130	684	504	392	601
27.....	602	37	72	119	84	139	348	1,270	679	616	391	594
28.....	574	36	70	136	96	148	408	1,390	776	638	396	574
29.....	506	31	63	114	-----	145	444	1,590	1,030	502	392	568
30.....	119	37	61	121	-----	138	375	1,710	1,320	475	389	561
31.....	60	-----	53	128	-----	206	-----	1,730	-----	416	385	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	653	60	562	24,600
November.....	58	31	43.7	2,600
December.....	72	34	45.1	2,770
January.....	136	39	62.6	2,980
February.....	121	77	92.5	5,140
March.....	206	98	134	8,240
April.....	576	297	390	23,200
May.....	1,730	270	580	35,700
June.....	1,670	679	1,000	59,560
July.....	1,480	416	959	59,080
August.....	555	243	413	25,400
September.....	628	370	541	32,280
The year.....	1,730	31	404	292,000

BEAR CREEK NEAR VERMILION VALLEY, CALIF.

LOCATION.—Water-stage recorder in sec. 12, T. 7 S., R. 27 E., 2 miles above mouth and 4 miles by trail south of Vermilion Valley, from which it is separated by Bear Ridge. Altitude, about 7,400 feet.

DRAINAGE AREA.—53.5 square miles.

RECORDS AVAILABLE.—November 1921 to September 1933.

DISCHARGE.—Maximum during year, 791 second-feet June 13 (gage height, 5.86 feet); minimum, 2.0 second-feet Nov. 21–22.

1921–33: Maximum, 857 second-feet June 4, 1922 (gage height, 5.97 feet); minimum, 1.2 second-feet Sept. 29 to Oct. 5, 1924.

REMARKS.—Records good except those for Dec. 7 to Mar. 31, which were estimated on account of ice. No diversions. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Apr.	May	June	July	Aug.	Sept.
1	16	6	5.5	49	50	355	210	46	13
2	15	6	8.5	60	46	321	208	42	13
3	14	6	7	76	48	249	198	37	12
4	13	4.3	6	84	54	184	202	33	11
5	12	5.5	5.5	80	56	162	215	32	11
6	11	6	4.9	76	44	157	229	29	10
7	11	5		63	44	232	232	27	9.5
8	10	5		55	43	332	190	25	8.5
9	10	4.6		48	42	404	157	23	8
10	9	4.3		44	40	444	144	23	8
11	8	4.3		42	38	485	140	23	7
12	8	4.3		50	36	535	177	24	6.5
13	7.5	4.3		59	36	575	193	25	6.5
14	7.5	3.5		73	41	560	193	28	6
15	7	3.5		81	40	515	188	27	5.5
16	6.5	4.3		66	34	520	165	38	5
17	6.5	4.3		49	31	426	146	52	4.9
18	6	4.0		41	30	351	125	41	4.6
19	6	3.2		42	41	325	113	35	4.3
20	6	3.0		42	59	336	106	31	4.0
21	5.5	2.8		45	66	340	98	28	3.8
22	6.5	2.5		52	51	340	85	25	3.8
23	6.5	3.0		59	64	328	74	23	3.8
24	6	3.0		52	88	325	67	23	3.8
25	6	4.3		46	146	300	70	22	4.3
26	6.5	4.0		43	181	275	78	20	4.0
27	6	4.6		45	215	272	80	18	3.8
28	6	3.8		52	262	208	71	17	3.8
29	5.5	3.5		54	303	215	63	16	3.8
30	6	4.6		50	347	218	57	15	3.8
31	6				359		52	15	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	5.5	8.27	508
November	6	2.5	4.25	253
December	8.5		5.5	338
January			12	738
February			16	889
March			24	1,480
April	84	41	55.9	3,330
May	359	30	94.7	5,820
June	575	152	343	20,400
July	232	52	140	8,610
August	52	15	27.8	1,710
September	13	3.8	6.57	391
The year	575	2.5	61.4	44,500

MONO CREEK NEAR VERMILION VALLEY, CALIF.

LOCATION.—Water-stage recorder in sec. 35, T. 6 S., R. 27 E. (unsurveyed), 1 mile below lower end of Vermilion Valley and 6 miles below mouth of North Fork. Altitude, about 7,400 feet.

DRAINAGE AREA.—92.0 square miles.

RECORDS AVAILABLE.—November 1921 to September 1933.

DISCHARGE.—Maximum during year, 1,350 second-feet June 13 (gage height, 8.01 feet); minimum, 7.5 second-feet Dec. 6.

1921-33: Maximum, 1,420 second-feet June 16, 1927, June 22, 1932 (gage height, 8.10 feet); minimum, that of Dec. 6, 1932.

REMARKS.—Records good except those estimated for Oct. 1-2 and those for Dec. 7 to Mar. 31, which were estimated because of ice. No diversions. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Apr.	May	June	July	Aug.	Sept.
1	29	19	23	70	121	645	392	101	30
2	29	20	27	81	116	570	392	90	29
3	28	19	28	99	116	488	380	82	28
4	27	18	23	116	119	392	376	75	27
5	25	19	21	124	124	356	380	71	27
6	25	20	17	133	114	336	388	67	26
7	25	18		124	114	429	368	63	25
8	25	17		116	119	595	340	62	24
9	24	17		110	112	721	292	57	23
10	23	17		101	101	792	272	54	23
11	22	17		101	107	875	264	53	22
12	21	17		110	103	930	320	54	21
13	20	17		124	101	1,050	340	54	21
14	20	17		138	107	1,110	340	54	20
15	20	17		159	110	1,050	328	52	19
16	20	18		156	105	1,020	296	53	18
17	19	18		126	101	848	264	52	18
18	19	17		110	99	695	231	65	17
19	19	16	17	114	112	630	214	56	17
20	18	16		114	133	640	198	50	16
21	20	17		116	148	635	184	47	16
22	20	18		126	131	620	161	44	16
23	20	20		131	151	605	141	43	16
24	18	23		121	189	585	133	42	16
25	18	20		119	264	560	141	42	18
26	20	18		116	340	530	161	37	18
27	19	18		124	388	506	189	36	17
28	18	16		138	470	416	148	34	16
29	18	17		138	555	412	133	33	16
30	18	17		121	605	400	124	32	16
31	19				645		114	31	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	29	18	21.5	1,320
November	23	16	17.9	1,070
December	28		18.2	1,120
January			25	1,540
February			32	1,780
March			46	2,830
April	159	70	119	7,080
May	645	99	197	12,100
June	1,110	336	648	38,600
July	392	114	258	15,900
August	101	31	55.4	3,410
September	30	16	20.5	1,220
The year	1,110		121	88,000

HUNTINGTON LAKE NEAR BIG CREEK, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 14, T. 8 S., R. 25 E., at Dam No. 1, 2 miles northeast of Big Creek. Crest of dam is 6,952 feet above mean sea level.

RECORDS AVAILABLE.—October 1926 to September 1933.

REMARKS.—Huntington Lake on Big Creek, capacity 88,834 acre-feet, is original storage reservoir of Big Creek system of Southern California Edison Co., Ltd. It receives water from South Fork of San Joaquin River, Bear Creek, and Mono Creek, through Florence Lake Tunnel. Released water is discharged through Big Creek power house no. 1. Surplus water flows through Huntington-Shaver conduit to Shaver Lake. Record of daily contents shows available storage and is furnished by Southern California Edison Co., Ltd.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1....	88,033	85,281	66,685	47,243	25,470	7,232	3,581	17,786	44,570	86,680	87,376	87,590
2....	88,205	84,283	66,659	46,499	24,833	7,139	4,391	18,206	46,326	87,049	87,220	87,547
3....	88,319	83,235	66,685	45,663	24,192	7,062	5,178	18,561	47,243	87,276	86,950	87,733
4....	88,376	82,194	66,748	44,802	23,553	7,211	5,741	19,154	48,377	87,962	86,638	87,919
5....	88,376	81,145	66,722	43,907	23,012	7,427	6,272	19,753	49,225	87,990	86,411	87,919
6....	88,319	80,196	66,672	43,105	22,385	7,507	6,804	20,230	50,091	87,947	86,425	87,733
7....	88,291	79,254	66,369	42,810	21,725	7,661	7,170	20,934	51,413	87,919	86,240	87,518
8....	88,362	78,398	65,802	41,745	21,058	7,594	7,468	21,317	52,820	87,904	86,184	87,163
9....	88,534	77,518	65,050	41,033	20,392	7,304	7,852	21,437	54,315	87,890	86,084	86,865
10....	88,548	76,657	64,301	40,236	19,700	7,065	7,999	21,338	55,817	88,376	86,028	86,794
11....	88,548	75,906	63,580	39,447	19,050	6,868	8,121	21,233	57,608	88,577	86,099	86,808
12....	88,448	75,119	62,926	38,555	18,528	7,008	8,526	21,127	59,066	88,562	86,212	86,851
13....	88,376	74,575	62,186	37,890	17,841	6,875	9,282	21,113	61,648	88,562	86,510	86,922
14....	88,376	73,766	61,440	37,115	17,137	6,618	10,232	21,352	64,140	88,376	86,638	86,978
15....	88,519	72,898	60,709	36,339	16,423	6,335	11,252	21,507	66,381	88,562	86,709	87,021
16....	88,548	72,085	60,005	35,646	15,719	6,108	12,230	21,648	68,387	88,391	86,751	87,049
17....	88,434	71,289	59,198	34,875	15,019	5,963	12,661	21,669	70,200	88,448	86,879	87,106
18....	88,319	70,420	58,430	34,261	14,362	5,771	12,680	21,725	72,085	88,562	86,964	87,149
19....	88,233	69,657	57,644	33,681	13,795	5,574	12,578	22,061	73,490	88,605	87,149	87,205
20....	88,176	69,092	56,863	32,880	13,102	5,455	12,544	22,990	74,720	88,434	87,590	87,220
21....	88,162	68,272	56,238	32,133	12,398	5,409	12,636	24,146	75,866	88,505	87,704	87,276
22....	88,233	67,495	55,442	31,369	11,686	5,270	12,971	24,710	77,007	88,591	87,833	87,319
23....	88,348	67,101	54,651	30,756	10,992	4,995	13,815	25,447	78,073	88,605	87,804	87,447
24....	88,334	67,038	53,841	30,288	10,292	4,541	14,595	26,773	79,186	88,391	87,747	87,719
25....	88,405	66,811	52,924	29,600	9,596	4,128	14,882	28,906	80,566	88,348	87,690	87,762
26....	88,534	66,773	52,104	28,973	8,993	3,688	15,047	31,115	81,530	88,534	87,647	87,804
27....	88,534	66,811	51,301	28,471	8,286	3,233	15,391	32,510	82,277	88,805	87,847	87,776
28....	88,462	66,722	50,491	27,889	7,647	3,063	15,873	34,540	83,110	88,348	87,876	87,747
29....	88,262	66,596	49,679	27,339	-----	2,840	16,546	36,855	84,507	88,033	87,819	87,690
30....	87,376	66,685	48,851	26,724	-----	2,649	17,264	39,606	85,872	87,833	87,733	87,647
31....	86,340	-----	48,017	26,101	-----	2,813	-----	42,258	-----	87,590	87,661	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30.....	87,833	-----	May 31.....	42,258	+24,994
Oct. 31.....	86,340	-1,493	June 30.....	85,872	+43,614
Nov. 30.....	66,685	-19,655	July 31.....	87,590	+1,718
Dec. 31.....	48,017	-18,668	Aug. 31.....	87,661	+71
Jan. 31.....	26,101	-21,916	Sept. 30.....	87,647	-14
Feb. 28.....	7,647	-18,454			
Mar. 31.....	2,813	-4,834	The year.....	-----	-186
Apr. 30.....	17,264	+14,451			

BIG CREEK BELOW HUNTINGTON LAKE, CALIF.

LOCATION.—Water-stage recorder in sec. 23, T. 8 S., R. 25 E., 800 feet above Grouse Creek and 1 mile below Huntington Lake. Altitude, about 6,600 feet. RECORDS AVAILABLE.—June 1925 to September 1933.

DISCHARGE.—Maximum during year, 23 second-feet Oct. 24 (gage height, 3.57 feet); minimum, 0.4 second-foot several days November to March.

1925-33: Maximum, 2,040 second-feet June 23, 1925 (gage height, 10.3 feet); minimum, 0.1 second-foot Sept. 10-13, Oct. 7-18, Dec. 5-16, 1931.

REMARKS.—Records good except those for Oct. 1-4, Jan. 5 to Feb. 28, June 1-6, which were estimated. Stage-discharge relation affected by ice Jan. 5 to Feb. 28. Natural flow of Big Creek is completely regulated at Huntington Lake and during most of year is diverted for use through Big Creek power house no. 1. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.6	0.6	0.6	0.4	0.4	0.5	1.9	1.8	1.7	1.2	0.8	0.6
2.....	.6	.6	.6	.4	.4	.5	2.2	1.7	1.7	1.2	.8	.6
3.....	.6	.6	.6	.4	.4	.6	2.6	1.8	1.7	1.2	.8	.6
4.....	.6	.6	.6	.4	.4	.6	2.9	2.0	1.7	1.2	.8	.6
5.....	.6	.6	.5	.4	.4	.6	2.8	1.8	1.6	1.2	.7	.6
6.....	.6	.6	.5	.4	.4	.7	2.5	1.7	1.6	1.2	.6	.6
7.....	.6	.6	.5	.4	.4	.7	2.0	1.6	1.6	1.2	.6	.6
8.....	.6	.5	.5	.4	.4	.7	1.7	1.5	1.6	1.2	.6	.6
9.....	.6	.5	.5	.4	.4	.8	1.5	1.4	1.5	1.2	.6	.6
10.....	.8	.5	.5	.4	.4	.9	1.6	1.3	1.4	1.2	.6	.6
11.....	1.0	.5	.5	.4	.4	.7	1.6	1.2	1.3	1.2	.6	.6
12.....	.8	.5	.5	.4	.4	.6	1.8	1.2	1.2	1.2	.6	.6
13.....	.6	.5	.5	.4	.4	.5	2.0	1.3	1.2	1.1	.6	.6
14.....	.6	.5	.4	.4	.4	.5	2.2	1.5	1.2	1.1	.6	.6
15.....	.6	.5	.4	.4	.4	.4	2.2	1.8	1.2	1.0	.6	.6
16.....	.7	.5	.4	.4	.4	.4	2.1	1.7	1.2	1.0	.6	.6
17.....	.8	.5	.4	.4	.4	.4	1.8	1.6	1.2	.9	.6	.6
18.....	1.0	.4	.4	.4	.4	.4	1.6	1.6	1.2	.8	.6	.6
19.....	.8	.4	.4	.4	.4	.6	1.6	1.6	1.2	.8	.6	.6
20.....	.8	.4	.4	.4	.4	.8	1.7	1.8	1.2	.8	.7	.6
21.....	.6	.4	.4	.4	.4	.8	1.8	1.7	1.2	.8	.6	.6
22.....	.6	.4	.4	.4	.4	.8	1.9	1.6	1.2	.8	.6	.7
23.....	.6	.4	.4	.4	.4	.8	1.9	1.6	1.2	1.0	.6	.7
24.....	2.5	.4	.4	.4	.4	.8	2.0	1.7	1.2	1.0	.6	.7
25.....	.8	.4	.4	.4	.4	.7	2.0	1.7	1.2	.9	.6	.8
26.....	.8	.4	.4	.4	.4	.8	2.0	1.7	1.2	.8	.6	.8
27.....	1.0	.5	.4	.4	.4	.9	2.0	1.8	1.2	1.0	.6	.8
28.....	.9	.5	.4	.4	.4	1.0	2.0	1.8	1.2	2.0	.6	.7
29.....	.8	.5	.4	.4	-----	.9	2.0	1.8	1.2	.8	.6	.8
30.....	.7	.6	.4	.4	-----	1.0	1.8	1.8	1.2	.8	.6	.8
31.....	.6	-----	.4	.4	-----	1.4	-----	1.8	-----	.8	.6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.5	0.6	0.77	47.2
November.....	.6	.4	.50	29.6
December.....	.6	.4	.45	28.0
January.....	.4	.4	.40	24.6
February.....	.4	.4	.40	22.2
March.....	1.4	.4	.70	43.2
April.....	2.9	1.5	1.99	118
May.....	2.0	1.2	1.64	101
June.....	1.7	1.2	1.34	79.7
July.....	1.2	.8	1.05	64.6
August.....	.8	.6	.63	38.9
September.....	.8	.6	.65	38.5
The year.....	2.9	.4	.88	636

PITMAN CREEK BELOW TAMARACK CREEK, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 35, T. 8 S., R. 25 E., 500 feet below Tamarack Creek, 3 miles above mouth, and 3 miles southeast of Big Creek. Altitude, about 7,100 feet.

DRAINAGE AREA.—22.0 square miles.

RECORDS AVAILABLE.—December 1927 to September 1933.

DISCHARGE.—Maximum during year, 455 second-feet May 28 (gage height, 5.51 feet); minimum, 0.1 second-foot Oct. 14–15, 17, Sept. 16–21.

1927–33: Maximum, 605 second-feet May 16, 1932 (gage height, 5.93 feet); no flow part of Nov. 24, 1930, and Oct. 15–18, 1931.

REMARKS.—Records good except those for period of ice effect, Nov. 14 to May 19, which were estimated. No diversions. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May	June	July	Aug.	Sept.
1	0.2	0.5						291	31	2.1	0.5
2	.2	.5	* 0.6			* 1.5		262	28	2.1	.5
3	.4	.5			* 1.2			198	26	1.8	.5
4	.4	.5		* 0.8				164	24	1.5	.4
5	.5	.5						171	22	1.3	.4
6	.5	.4						185	21	1.3	.4
7	.5	.4						229	20	1.1	.4
8	.4	.4						242	18	.9	.4
9	.4	.2						244	16	.8	.3
10	.4	.2					42	234	15	.7	.2
11	.2	.2						232	13	.7	.2
12	.2	.2						229	13	.6	.2
13	.2	.2						218	12	.6	.2
14	.1							205	10	.6	.2
15	.1							178	9.5	.6	.2
16	.2							154	9	.5	.1
17	.1							125	8.5	.5	.1
18	.5							102	7.5	.5	.1
19	.5							90	7	.5	.1
20	.6						96	82	6	.5	.1
21	.6	3					96	74	6	.5	.1
22	.6						78	68	5	.5	.2
23	.5						110	68	4.8	.5	.2
24	.5						162	57	4.4	.5	.2
25	.6						213	52	4.0	.5	.2
26	.6						244	48	3.7	.5	.2
27	.6						274	47	3.4	.5	.2
28	.6						309	45	3.4	.5	.2
29	.5						316	40	3.0	.5	.2
30	.5						313	35	2.7	.5	.2
31	.5						320		2.4	.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.6	0.1	0.41	25.2
November			.33	19.5
December			.7	43.0
January			1.0	61.5
February			1.3	72.2
March			3.0	184
April			45.0	2,680
May	320		107	6,580
June	291	35	145	8,630
July	31	2.4	11.6	713
August	2.1	.5	.80	49.0
September	.5	.1	.25	14.7
The year	320	.1	26.4	19,100

* Discharge measurements.

SHAVER LAKE NEAR BIG CREEK, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 13, T. 9 S., R. 24 E., at dam on Stevenson Creek 6 miles southwest of Big Creek. Elevation of crest of dam, 5,371 feet above mean sea level.

RECORDS AVAILABLE.—October 1927 to September 1933.

REMARKS.—Record shows available storage. This lake, capacity 135,283 acre-feet, is largest storage unit of Big Creek system of Southern California Edison Co., Ltd. It receives water from Huntington Lake Reservoir and Pitman Creek through Huntington-Shaver conduit. Released water is discharged through power house no. 2A on Big Creek. Record of daily contents furnished by Southern California Edison Co., Ltd.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	87,308	70,811	65,591	54,687	43,918	38,876	27,765	34,881	61,017	99,061	115,569	77,718
2.....	87,181	70,135	65,238	54,545	43,675	38,042	28,042	35,108	64,048	101,087	114,843	76,474
3.....	86,733	69,563	64,887	54,089	43,406	37,219	28,372	35,433	66,934	103,033	113,144	75,273
4.....	86,213	68,991	64,811	53,619	43,265	36,227	28,405	35,676	69,849	104,660	111,908	74,051
5.....	85,675	68,484	64,460	53,157	43,265	35,468	28,734	35,922	72,804	106,935	110,677	72,869
6.....	85,140	68,327	64,018	52,723	43,009	34,628	29,109	36,133	75,774	109,190	109,451	71,728
7.....	84,663	68,155	63,715	52,359	42,768	33,799	29,425	36,450	78,767	111,403	108,208	70,666
8.....	84,097	68,045	63,533	52,373	42,528	33,212	29,478	36,684	81,769	113,591	106,975	69,754
9.....	83,884	67,929	63,140	51,904	42,289	32,923	29,689	36,885	84,787	115,487	105,745	68,991
10.....	83,374	67,810	63,109	51,533	42,036	32,722	29,573	37,088	87,817	115,896	104,522	68,609
11.....	82,798	67,763	63,003	51,011	41,910	32,633	29,394	37,219	90,836	116,202	103,307	67,794
12.....	82,187	67,685	62,504	50,451	41,948	32,911	29,668	37,350	93,360	117,107	102,095	66,90
13.....	81,579	67,669	61,798	49,893	41,696	32,967	29,994	37,541	93,851	118,631	101,029	66,038
14.....	81,062	67,606	61,047	49,404	41,422	32,677	30,381	37,743	94,322	120,185	99,811	65,208
15.....	80,321	67,450	60,376	49,228	41,186	32,354	30,768	37,970	94,739	121,351	98,561	64,353
16.....	80,063	67,324	59,735	48,713	40,950	32,209	31,145	38,200	95,082	122,918	97,353	63,684
17.....	79,483	67,309	59,289	48,212	40,763	31,968	31,452	38,405	95,368	123,337	96,092	63,291
18.....	78,904	67,293	59,097	47,902	40,627	31,716	31,518	38,647	95,597	123,337	94,854	62,489
19.....	78,258	67,309	58,580	47,781	40,639	31,771	31,529	38,925	95,806	123,274	93,605	61,603
20.....	77,651	67,309	58,240	47,188	40,415	31,496	31,573	39,264	95,997	123,169	92,363	60,793
21.....	77,061	67,293	57,945	46,758	40,182	31,233	31,760	39,668	96,168	122,729	91,115	59,869
22.....	76,457	67,309	57,446	46,705	40,048	30,908	32,012	39,974	96,339	122,248	89,898	59,068
23.....	76,190	67,309	57,035	46,259	39,852	30,639	32,287	40,342	96,473	122,102	88,652	58,255
24.....	75,607	67,293	56,742	45,681	39,680	30,391	32,666	40,825	96,588	121,455	87,417	57,607
25.....	74,908	67,293	56,712	45,342	39,558	30,101	32,989	41,409	96,722	120,580	86,213	56,903
26.....	74,199	67,058	56,683	45,017	39,595	30,101	33,301	42,617	96,837	119,439	84,981	56,144
27.....	73,523	66,965	56,289	44,914	39,472	29,847	33,573	45,563	96,951	118,445	83,778	55,376
28.....	72,886	66,594	55,913	44,680	39,313	29,372	33,901	48,632	97,047	118,218	82,536	54,616
29.....	72,282	66,177	55,536	44,810	-----	28,941	34,308	51,739	97,143	117,786	81,338	53,875
30.....	72,087	65,977	55,159	44,538	-----	28,465	34,582	54,815	97,660	117,618	80,131	53,241
31.....	71,471	-----	54,815	44,200	-----	27,969	-----	57,930	-----	116,716	78,904	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30.....	87,690	-----	May 31.....	57,930	+23,348
Oct. 31.....	71,471	-16,219	June 30.....	97,660	+39,730
Nov. 30.....	65,977	-5,494	July 31.....	116,716	+19,056
Dec. 31.....	54,815	-11,162	Aug. 31.....	78,904	-37,812
Jan. 31.....	44,200	-10,615	Sept. 30.....	53,241	-25,663
Feb. 28.....	39,313	-4,887			
Mar. 31.....	27,969	-11,344			
Apr. 30.....	34,582	+6,613	The year.....	-----	-34,449

HUNTINGTON-SHAVER CONDUIT AT OUTLET, CALIF.

LOCATION.—Water-stage recorder at tunnel outlet in SW¼ sec. 10, T. 9 S., R. 25 E., 4 miles south of Big Creek. Altitude about 6,680 feet.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum mean daily during year, 1,540 second-feet May 30–31, June 9, 11; minimum, 1.9 second-feet Dec. 12–13, Jan. 11–14.

1928–33: Maximum mean daily, 1,640 second-feet May 27, 1932; minimum, 1.8 second-feet Aug. 28 to Sept. 13, 1931.

REMARKS.—Records good. Conduit diverts water from Huntington Lake to Shaver Lake and picks up water from Pitman Creek en route. Gage-height record and results of discharge measurements furnished by Southern California Edison Co., Ltd.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3.5	2.2	2.0	2.4	2.8	3.2	11	48	1,530	737	13	2.4
2.....	3.5	2.2	2.2	2.2	2.8	3.0	13	42	1,520	1,050	13	2.2
3.....	3.5	2.2	2.2	2.4	2.8	3.0	17	39	1,480	988	13	2.2
4.....	3.5	2.0	2.2	2.4	2.8	3.2	24	50	1,470	848	13	2.2
5.....	3.2	2.0	2.2	2.2	2.8	3.5	45	53	1,490	1,170	9	2.2
6.....	3.2	2.0	2.2	2.2	2.8	3.5	51	43	1,490	1,170	4.3	2.2
7.....	3.2	2.0	2.0	2.0	2.8	3.8	40	42	1,520	1,160	4.0	2.2
8.....	2.2	2.0	2.0	2.0	2.8	4.0	32	39	1,550	1,120	3.8	2.2
9.....	3.2	2.0	2.0	2.0	2.8	4.3	39	36	1,540	987	3.5	2.2
10.....	3.2	2.0	2.0	2.0	2.8	4.6	34	33	1,530	230	3.2	2.2
11.....	3.2	2.0	2.0	1.9	2.8	4.6	32	32	1,540	425	3.2	2.2
12.....	3.2	2.0	1.9	1.9	2.8	4.6	41	30	1,260	676	3.2	2.2
13.....	3.2	2.0	1.9	1.9	2.8	4.6	55	31	231	867	3.0	2.2
14.....	3.2	2.0	2.0	1.9	2.8	4.3	71	37	218	889	3.0	2.2
15.....	3.0	2.0	2.2	2.0	2.8	4.3	80	42	191	673	3.0	2.2
16.....	3.0	2.0	2.2	2.0	2.8	4.3	75	41	164	860	3.0	2.2
17.....	3.0	2.0	2.2	2.0	2.8	4.3	59	39	132	486	3.0	2.2
18.....	3.0	2.0	2.2	2.0	2.8	4.3	40	51	110	328	3.0	2.2
19.....	2.6	2.0	2.2	2.0	2.8	4.6	32	70	98	312	3.0	2.2
20.....	2.4	2.0	2.2	2.0	2.8	5	31	98	88	266	3.0	2.2
21.....	2.4	2.0	2.2	2.2	2.8	6	38	99	80	80	3.0	2.2
22.....	2.4	2.0	2.2	2.2	2.8	6	53	80	74	14	2.8	2.2
23.....	2.4	2.0	2.2	2.2	2.8	6.5	58	112	67	14	2.8	2.2
24.....	2.4	2.0	2.2	2.2	2.8	6	58	164	60	14	2.8	2.2
25.....	2.2	2.0	2.2	2.0	2.8	6	65	214	55	14	2.8	2.2
26.....	2.4	2.0	2.2	2.2	2.8	6	63	543	51	10	2.8	2.2
27.....	2.4	2.0	2.2	2.6	2.8	6	69	1,400	47	6	2.8	2.2
28.....	2.4	2.0	2.4	2.6	3.0	7	75	1,500	45	304	2.6	2.2
29.....	2.4	2.0	2.4	2.6	-----	7	74	1,530	40	94	2.6	2.2
30.....	2.4	2.0	2.4	2.6	-----	7	57	1,540	276	13	2.4	2.2
31.....	2.4	-----	2.4	2.6	-----	9	-----	1,540	-----	13	2.4	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October.....	3.5					2.2			2.88		177	
November.....	2.2					2.0			2.02		120	
December.....	2.4					1.9			2.16		133	
January.....	2.6					1.9			2.17		133	
February.....	3.0					2.8			2.81		156	
March.....	9					3.0			4.95		304	
April.....	80					11			47.7		2,840	
May.....	1,540					30			310		19,100	
June.....	1,540					40			664		39,500	
July.....	1,170					6			510		31,400	
August.....	13					2.4			4.52		278	
September.....	2.4					2.2			2.21		132	
The year.....	1,540					1.9			130		94,300	

FRESNO RIVER BASIN

FRESNO RIVER NEAR KNOWLES, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 15, T. 8 S., R. 20 E., at Fresno Crossing, 6 miles northeast of Knowles. Altitude, about 1,140 feet.

DRAINAGE AREA.—132 square miles.

RECORDS AVAILABLE.—September 1911 to January 1914, November 1915 to September 1933.

DISCHARGE.—Maximum during year, 265 second-feet Mar. 17 (gage height, 2.09 feet); no flow Aug. 15 to Sept. 22.

1911-14, 1915-33: Maximum, about 4,500 second-feet Feb. 21, 1917 (gage height, 6.0 feet, former staff gage); no flow at times in 1919, 1924, 1926, 1928-31, 1933. Average, 18 years (1911-12, 1916-33), 65.5 second-feet.

REMARKS.—Records good. Water is brought into this drainage basin from San Joaquin and Merced River Basins; water is also diverted above for irrigation and lumbering. Average annual excess of "foreign" water over diversions past station is estimated roughly as 6,000 acre-feet.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	2.8	10	16	37	44	76	81	102	28	0.6	0
2	1.8	2.8	10	15	35	48	84	87	96	26	.8	0
3	1.6	2.9	7.5	15	32	50	102	84	128	24	.6	0
4	2.0	2.9	7	15	30	50	132	84	105	22	.5	0
5	2.0	3.2	7	15	29	46	139	84	122	19	.5	0
6	1.8	3.2	7	16	30	48	135	73	142	17	.6	0
7	1.8	3.5	7	15	30	52	122	71	135	16	.5	0
8	2.0	3.5	7.5	15	28	54	105	108	128	16	.6	0
9	2.0	3.7	8.5	15	28	59	96	84	125	15	.6	0
10	2.2	3.7	8	15	26	56	87	73	122	14	.3	0
11	2.2	3.7	6	14	28	52	87	76	118	13	.3	0
12	2.2	3.7	5	13	41	100	96	78	122	10	.2	0
13	2.2	3.7	4.9	13	54	146	102	78	122	9	.1	0
14	2.2	3.7	18	13	41	78	111	76	115	8.5	.1	0
15	2.2	3.7	16	14	39	61	118	84	108	7	0	0
16	2.2	3.7	18	16	39	78	118	84	102	7.5	0	0
17	2.3	3.7	19	16	41	202	105	84	93	4.9	0	0
18	2.3	3.7	22	17	41	108	81	76	87	4.6	0	0
19	2.2	3.7	16	44	35	84	73	76	71	4.3	0	0
20	2.3	3.7	16	34	34	78	66	78	64	3.5	0	0
21	2.0	4.0	16	23	35	81	66	84	56	2.8	0	0
22	2.0	4.0	17	28	37	73	78	96	52	2.6	0	0
23	2.2	4.3	16	37	39	66	99	84	46	2.6	0	0.1
24	2.4	4.3	19	32	39	59	96	84	43	2.0	0	.5
25	2.4	4.3	17	46	35	56	102	99	41	1.8	0	.5
26	2.4	4.6	16	34	35	54	93	111	39	1.6	0	.4
27	2.6	4.6	17	39	37	54	78	115	35	1.3	0	.6
28	2.6	4.6	16	50	43	78	90	108	34	1.1	0	.7
29	2.6	4.3	16	84	-----	122	102	108	32	.8	0	.6
30	2.6	5	15	71	-----	76	105	102	29	.7	0	.4
31	2.6	-----	15	44	-----	71	-----	102	-----	.7	0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.6	1.6	2.18	134
November	5	2.8	3.77	224
December	22	4.9	12.9	793
January	84	13	26.9	1,660
February	54	26	35.6	1,980
March	202	44	73.7	4,530
April	139	66	98.1	5,840
May	115	71	87.5	5,380
June	142	29	87.1	5,180
July	28	.7	9.27	570
August	.8	0	.20	12.5
September	.7	0	.11	6.5
The year	202	0	36.3	26,300

CHOWCHILLA RIVER BASIN

CHOWCHILLA RIVER AT BUCHANAN DAM SITE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 22, T. 8 S., R. 18 E., 5 miles west of Raymond. Altitude, about 390 feet.

DRAINAGE AREA.—238 square miles.

RECORDS AVAILABLE.—October 1921 to September 1923; October 1930 to September 1933.

DISCHARGE.—Maximum during year, 620 second-feet Jan. 30 (gage height, 4.8 feet); no flow for several months.

1921-23, 1930-33: Maximum, 8,520 second-feet Dec. 28, 1931 (gage height, 11.65 feet); no flow several months each year.

REMARKS.—Records good. No large diversions.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	7	75	65	65	26	13	1.4
2.....	0	7.5	60	67	64	26	13	1.1
3.....	0	7.5	56	68	61	31	13	1.1
4.....	0	7	51	66	60	27	14	.6
5.....	0	6.5	48	62	57	24	14	.5
6.....	0	6.5	49	60	52	22	20	.4
7.....	0	7	51	63	50	24	24	.3
8.....	0	7	47	64	47	45	18	.2
9.....	.2	7	43	63	44	46	15	.2
10.....	.6	7	43	61	41	34	13	.2
11.....	.9	6.5	43	58	39	37	12	.1
12.....	1.4	6.5	65	86	36	41	10	.1
13.....	1.7	6.5	139	210	35	43	9	0
14.....	1.7	6.5	101	124	34	36	8.5	0
15.....	1.6	6.5	79	87	33	31	7.5	0
16.....	1.7	9	75	88	31	28	6	0
17.....	2.0	11	86	325	30	26	5.5	0
18.....	2.0	12	83	184	30	24	4.7	0
19.....	2.8	69	72	121	30	24	4.4	0
20.....	3.9	115	66	101	29	22	4.2	0
21.....	6.5	43	68	93	27	22	4.1	0
22.....	8	33	70	83	27	31	3.5	0
23.....	11	90	72	74	26	30	3.2	0
24.....	11	82	79	69	26	24	2.9	0
25.....	11	202	65	61	24	22	2.7	0
26.....	9	128	58	58	24	20	2.6	0
27.....	8.5	71	62	53	24	18	2.6	0
28.....	7.5	160	64	62	24	17	2.1	0
29.....	7.5	289	-----	134	24	16	1.8	0
30.....	7.5	331	-----	84	27	15	1.7	0
31.....	7.5	114	-----	70	-----	14	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	11	0	3.73	229
January.....	331	6.5	60.0	3,690
February.....	139	43	66.8	3,710
March.....	325	53	92.4	5,680
April.....	65	24	37.4	2,230
May.....	46	14	27.3	1,680
June.....	24	1.7	8.53	508
July.....	1.4	0	.20	12.3
The year.....	331	0	24.5	17,700

NOTE.—No flow during months omitted.

MERCED RIVER BASIN

MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CALIF.

LOCATION.—Water-stage recorder at Happy Isles Bridge, $1\frac{1}{2}$ miles southeast of Yosemite, in Yosemite National Park, Mariposa County. Altitude, about 4,000 feet.

DRAINAGE AREA.—181 square miles.

RECORDS AVAILABLE.—August 1915 to September 1933.

DISCHARGE.—Maximum during year, 2,520 second-feet June 15 (gage height, 5.91 feet); minimum, 2.1 second-feet Sept. 30.

1915-33: Maximum, 3,800 second-feet May 28, 1919 (gage height, 7.10 feet); minimum, 1.5 second-feet Sept. 30, 1926. Average, 18 years (1915-33), 316 second-feet.

REMARKS.—Records good except those for Aug. 1-13, which were estimated. Small diversion above station for Yosemite Valley water supply.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	14	4.8	6	10	23	37	173	371	1,920	453	70	13
2.....	14	5	6.5	9.5	24	41	240	336	1,620	432	60	12
3.....	13	5	6	10	25	42	336	309	1,310	417	55	11
4.....	11	5	5.5	10	25	43	424	342	923	405	50	10
5.....	10	5	5.5	9.5	25	49	466	346	929	432	45	9.5
6.....	9.5	5	5	9.5	26	62	466	293	947	445	45	8.5
7.....	9.5	5	5	9	25	71	386	300	1,350	449	40	8.5
8.....	9.5	5	5	9.5	24	69	325	275	1,620	383	40	8
9.....	9	5	5	10	23	68	272	275	1,780	306	35	7.5
10.....	8.5	5	5	9.5	23	70	243	232	1,870	266	35	7
11.....	8	5	5.5	9.5	24	65	235	235	1,920	246	30	6.5
12.....	8	4.8	5.5	9.5	23	70	263	222	2,050	287	30	6
13.....	8	4.6	5.5	9.5	23	65	329	222	2,140	319	50	6
14.....	8	4.8	6	9.5	22	62	457	252	2,240	329	46	5.5
15.....	7.5	5	6	9	23	58	606	260	2,140	322	38	4.9
16.....	7	5	6	9	25	59	575	246	1,870	275	34	4.6
17.....	7	5	7	10	24	61	405	232	1,540	222	81	4.1
18.....	7	4.6	7	9.5	24	65	284	227	1,140	194	66	3.9
19.....	7	4.6	8	9	24	73	243	266	929	173	56	3.7
20.....	6.5	4.8	7	9	25	91	232	364	941	160	46	3.5
21.....	6.5	4.6	8	11	25	100	269	445	923	148	37	3.5
22.....	6	4.3	8	13	26	91	360	364	899	130	31	3.0
23.....	6	4.3	8	14	28	89	428	421	845	110	27	3.0
24.....	6	5	8	14	26	79	386	622	821	96	24	2.8
25.....	5.5	5	8.5	14	27	79	402	965	719	91	22	3.0
26.....	5.5	4.6	9	14	29	73	379	1,240	622	120	21	3.0
27.....	5.5	4.6	9.5	16	33	71	449	1,380	643	133	20	2.6
28.....	5.5	4.8	9	16	35	86	580	1,700	535	108	18	2.4
29.....	5	5	9	17	-----	80	570	1,870	497	93	17	2.4
30.....	5	6.5	9.5	19	-----	88	402	1,960	488	84	15	2.2
31.....	5	-----	10	22	-----	124	-----	2,050	-----	75	14	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	14	5	7.85	485
November.....	6.5	4.3	4.89	291
December.....	10	5	6.92	425
January.....	22	9	11.6	715
February.....	35	22	25.3	1,415
March.....	124	37	70.4	4,330
April.....	606	173	373	22,200
May.....	2,050	222	601	37,000
June.....	2,240	488	1,270	75,600
July.....	453	75	248	15,200
August.....	81	14	38.6	2,370
September.....	13	2.2	5.72	340
The year.....	2,240	2.2	222	160,000

MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CALIF.

LOCATION.—Water-stage recorder at Pohono Bridge, 5 miles below Yosemite, in Yosemite National Park, Mariposa County. Altitude, about 3,870 feet.

DRAINAGE AREA.—321 square miles.

RECORDS AVAILABLE.—November 1916 to September 1933.

DISCHARGE.—Maximum during year, 4,230 second-feet May 31 (gage height, 8.60 feet); minimum, 16 second-feet Sept. 28–30.

1916–33: Maximum, 6,370 second-feet June 5, 1922 (gage height, 10.0 feet); minimum, 3.3 second-feet Sept. 29, Oct. 1, 1924. Average, 16 years (1917–33), 524 second-feet.

REMARKS.—Records good. Discharge interpolated Nov. 16–28. Small diversion above station for Yosemite Valley water supply.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	25	19	21	21	34	71	346	830	3,400	675	106	31
2.....	26	19	18	21	35	80	493	740	3,000	655	96	30
3.....	26	19	18	21	35	85	675	2,470	615	87	29	29
4.....	26	19	18	21	37	87	830	740	1,820	595	80	27
5.....	25	19	18	21	38	94	905	762	1,820	615	73	27
6.....	24	19	18	21	39	119	905	635	1,920	595	69	26
7.....	24	19	18	21	38	142	740	655	2,470	595	63	25
8.....	24	19	18	21	39	143	655	595	2,820	535	59	25
9.....	24	19	18	21	38	143	535	575	3,000	448	55	24
10.....	24	19	18	22	37	154	493	500	3,100	394	53	24
11.....	22	19	18	21	39	143	496	518	3,100	361	50	23
12.....	22	19	17	21	42	170	555	518	3,400	376	48	22
13.....	22	19	18	21	43	152	675	518	3,500	415	76	22
14.....	22	19	18	21	42	138	930	615	3,500	421	73	21
15.....	22	18	18	21	42	133	1,140	615	3,400	415	63	21
16.....	22	18	18	22	44	136	1,140	595	2,910	373	59	20
17.....	22	18	20	22	46	149	855	575	2,470	315	87	20
18.....	21	18	20	21	45	147	635	555	1,850	273	88	19
19.....	21	18	21	22	45	156	555	655	1,540	243	79	18
20.....	21	18	22	25	46	190	555	855	1,470	225	70	18
21.....	21	18	21	23	48	223	615	1,030	1,410	208	62	18
22.....	21	18	21	24	49	206	785	830	1,350	190	55	18
23.....	21	18	21	25	55	198	955	955	1,260	167	52	18
24.....	21	18	21	25	54	169	830	1,350	1,200	149	47	17
25.....	21	18	20	27	53	169	855	1,880	1,080	138	45	17
26.....	21	18	20	27	56	158	808	2,310	955	145	43	17
27.....	20	18	21	30	62	152	955	2,550	955	178	40	17
28.....	20	18	21	30	66	188	1,170	3,200	880	154	39	16
29.....	19	18	21	30	-----	182	1,230	3,400	785	136	36	16
30.....	19	23	21	30	-----	184	880	3,600	740	124	34	16
31.....	19	-----	21	31	-----	241	-----	3,700	-----	114	32	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	26	19	22.2	1,360
November.....	23	18	18.6	1,110
December.....	22	17	19.4	1,190
January.....	31	21	23.5	1,440
February.....	66	34	44.5	2,470
March.....	241	71	152	9,350
April.....	1,230	346	773	46,000
May.....	3,700	500	1,210	74,400
June.....	3,500	740	2,120	126,000
July.....	675	114	350	21,500
August.....	106	32	61.9	3,810
September.....	31	16	21.4	1,270
The year.....	3,700	16	401	290,000

MERCED RIVER AT KITTRIDGE, CALIF.

LOCATION.—Water-stage recorder in sec. 26, T. 3 S., R. 16 E., 3 miles above Horseshoe Bend and a quarter of a mile below Kittridge. Altitude, about 750 feet.

DRAINAGE AREA.—935 square miles.

RECORDS AVAILABLE.—November 1922 to September 1933.

DISCHARGE.—Maximum during year, 6,720 second-feet May 31 (gage height, 10.31 feet); minimum, 30 second-feet Sept. 23.

1922-33: Maximum, 20,900 second-feet Mar. 25, 1928 (gage height, 19.20 feet at former location); minimum, 13 second-feet Oct. 5, 1925.

REMARKS.—Records good except those estimated. No large diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	a 55	49	a 75	82	a 220	326	833	1,460	5,520	917	135	52
2.....	a 55		a 75	82		350	1,050	1,380	4,810	875	125	51
3.....	a 55		a 70	80		377		1,170	4,260	833	119	48
4.....	a 55		a 70	81				1,290	3,100	792	111	47
5.....	a 54		a 70	80				1,320	2,800	772	107	46
6.....	a 53		a 65	79	a 500			1,170	3,100	752	99	44
7.....	a 52		a 65	78				1,140	3,710	752	93	43
8.....	a 51		a 60	78				1,230	4,260	712	87	42
9.....	a 51		a 55	80				1,100	4,700	628	82	41
10.....	a 50		a 50	80				1,000	4,700	540	77	40
11.....	a 50		a 50	79				959	4,700	486	72	39
12.....	49		a 48	78				959	5,040	445	72	38
13.....	49		a 50	77				938	5,040	483	65	37
14.....	48		a 55	78		1,600	1,000	5,040	505	74	35	35
15.....	47		a 60	79	277	532	1,100	4,920	498	90	34	34
16.....	47		a 60	87	290	818	1,100	4,260	479	79	33	33
17.....	47		a 70	350	350	1,920	1,070	3,710	413	74	32	32
18.....	46		a 85	326	326	1,020	1,000	2,900	353	86	32	32
19.....	48		90	285	792	1,050	1,050	2,300	315	105	32	32
20.....	48		96	253	732	1,020	1,350	2,080	285	95	32	32
21.....	51		103	a 260	260	772	1,800	2,000	260	88	32	32
22.....	51		103		270	732	1,600	1,840	240	80	32	32
23.....	52		92		293	672	1,490	1,700	224	72	31	31
24.....	52		109		323	584	2,000	1,630	201	68	31	31
25.....	52		92		280	509	2,900	1,460	185	65	32	32
26.....	52		82	222	260	494	3,710	1,320	170	62	32	32
27.....	52		82	232	275	475	4,150	1,200	179	60	33	33
28.....	52		82	389	312	612	4,920	1,260	195	58	33	33
29.....	51		82	380		792	5,520	1,070	172	57	33	33
30.....	50		80	406		632	5,520	980	155	54	32	32
31.....	49		80	280		652	5,880		142	52	32	32

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	55	46	50.8	3,120
November.....			45.0	2,680
December.....	109	48	74.4	4,570
January.....	406	77	178	10,900
February.....	350		255	14,200
March.....	1,920	326	622	38,200
April.....			1,350	80,300
May.....	5,880	938	2,010	124,000
June.....	5,520	980	3,180	189,000
July.....	917	142	450	27,700
August.....	135	52	82.7	5,080
September.....	52	31	37.3	2,220
The year.....	5,880	31	693	502,000

a Estimated.

LAKE McCLURE AT EXCHEQUER, CALIF.

LOCATION.—Staff gage at Exchequer Dam, on Merced River, and indicator in power house in SW¼ sec. 13, T. 4 S., R. 15 E., 5 miles northeast of Merced Falls.

DRAINAGE AREA.—1,020 square miles.

RECORDS AVAILABLE.—April 1926 to September 1933.

REMARKS.—This is main storage unit for Merced Irrigation District. Capacity, 250,000 acre-feet. Elevation of crest of dam is 714.0 feet, top of spillway gate, 707.0 feet, and spillway, 693.0 feet above mean sea level. Released water passes through power house at dam and down Merced River to diversion dam below Merced Falls, where it enters main irrigation canal. Gage-height record furnished by Merced Irrigation District.

Gage height, in feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	607.4	587.0	587.2	589.7	600.1	572.5	587.3	596.8	635.0	681.5	644.9	578.1
2	606.1	587.0	587.3	589.8	599.6	572.3	587.8	596.5	639.2	680.8	643.1	575.5
3	604.8	587.0	587.3	589.8	598.5	572.2	588.7	595.9	642.6	680.1	641.1	572.7
4	603.4	587.0	587.4	589.9	597.3	572.9	590.2	595.2	644.6	679.5	639.3	569.8
5	602.0	587.0	587.4	590.0	596.1	573.6	591.8	594.8	646.2	678.7	637.3	567.2
6	600.7	587.0	587.5	590.1	594.8	574.3	593.3	594.1	648.1	678.0	635.6	564.2
7	599.2	587.0	587.5	590.1	593.7	575.2	594.2	593.5	650.7	677.2	633.7	561.3
8	597.8	587.0	587.6	590.2	592.5	576.3	594.6	593.3	653.8	676.5	631.8	558.4
9	596.4	587.0	587.6	590.3	591.1	577.3	594.6	593.0	657.2	675.6	630.0	555.5
10	594.9	587.0	587.6	590.4	589.7	577.5	594.3	592.8	660.5	674.7	628.0	552.4
11	593.5	587.0	587.7	590.5	588.5	577.5	594.0	592.5	663.8	673.7	626.1	549.3
12	592.0	587.0	587.7	590.6	587.3	577.7	593.7	592.1	667.4	672.7	624.0	546.0
13	590.5	587.0	587.8	590.6	586.7	578.8	593.6	591.9	670.8	671.6	622.0	542.6
14	589.0	587.0	587.8	590.7	585.7	579.1	594.1	591.7	674.2	670.6	620.0	539.0
15	587.5	587.0	587.8	590.8	584.6	579.2	595.3	591.7	677.3	669.5	617.9	535.1
16	587.4	587.0	587.8	590.9	583.4	579.2	596.6	591.6	679.6	668.5	615.7	531.1
17	587.4	587.0	587.9	591.1	582.3	583.2	597.1	591.3	681.4	667.3	613.6	526.7
18	587.2	587.0	588.0	591.2	581.2	584.4	597.0	590.8	682.4	666.1	611.4	521.9
19	587.1	587.0	588.1	592.0	580.1	585.2	596.6	590.5	683.0	664.9	609.3	516.7
20	587.1	587.1	588.2	592.5	578.8	585.7	595.8	590.4	683.4	663.6	607.0	510.8
21	587.0	587.1	588.4	592.9	577.5	586.3	595.1	591.4	683.7	662.2	604.9	507.3
22	587.0	587.1	588.5	593.2	576.3	586.7	594.8	592.1	683.9	660.8	602.5	503.6
23	587.0	587.1	588.7	593.8	575.1	586.9	594.9	592.5	684.0	659.4	600.2	500.0
24	587.0	587.1	588.9	594.4	573.9	587.0	595.0	593.8	684.0	657.9	597.9	499.5
25	587.0	587.1	589.0	595.3	573.6	587.0	595.1	596.6	683.9	656.3	595.5	498.4
26	587.0	587.1	589.1	595.8	573.2	586.9	595.1	600.8	683.7	654.8	593.2	497.2
27	587.0	587.1	589.2	596.5	572.9	586.7	595.0	605.5	683.3	653.3	590.8	495.0
28	587.0	587.1	589.3	597.7	572.7	586.8	595.6	611.2	683.0	651.9	588.4	494.5
29	587.0	587.1	589.4	598.8	-----	587.3	596.5	617.4	682.6	650.2	585.8	493.1
30	587.0	587.1	589.5	599.7	-----	587.3	596.9	623.3	682.0	648.5	583.2	491.6
31	587.0	-----	589.6	600.3	-----	587.3	-----	629.5	-----	646.7	580.3	-----

MERCED RIVER AT EXCHEQUER, CALIF.

LOCATION.—Water-stage recorder about on line between secs. 14 and 23, T. 4 S., R. 15 E., at Exchequer, half a mile below Lake McClure and 5 miles northeast of Merced Falls. Altitude, about 400 feet.

DRAINAGE AREA.—1,030 square miles.

RECORDS AVAILABLE.—November 1915 to September 1933; 1915 to 1922 at station 1 mile above present site.

DISCHARGE.—Maximum during year, 1,770 second-feet Aug. 3 (gage height 4.08 feet); minimum, 7.5 second-feet Oct. 18.

1915-33: Maximum, about 22,000 second-feet Jan. 17, 1916 (gage height, 20.0 feet at old station); minimum, that of Oct. 18, 1932. Average, 17 years (1916-33), 1,070 second-feet.

REMARKS.—Records good. Discharge estimated Dec. 28 to Jan. 17, May 23-26. No large diversions. Flow is completely regulated in Lake McClure by Exchequer Dam. (See record for Lake McClure.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	892	43	42	38	468	437	782	1,600	1,350	1,560	1,660	1,320
2.....	892	43	42	38	500	442	810	1,600	1,350	1,520	1,660	1,280
3.....	892	43	42	38	939	442	892	1,600	1,350	1,520	1,700	1,280
4.....	892	43	42	38	961	102	950	1,600	1,350	1,520	1,630	1,280
5.....	892	43	42	38	954	101	980	1,560	1,320	1,520	1,600	1,250
6.....	892	43	42	38	958	92	1,100	1,560	1,320	1,520	1,600	1,220
7.....	892	43	36	37	954	94	1,190	1,490	1,350	1,560	1,560	1,220
8.....	892	43	35	37	935	92	1,190	1,350	1,350	1,520	1,520	1,160
9.....	892	43	37	37	939	92	1,190	1,280	1,350	1,520	1,520	1,160
10.....	892	43	40	37	933	444	1,190	1,190	1,380	1,520	1,520	1,160
11.....	892	43	40	37	937	555	1,250	1,160	1,380	1,520	1,520	1,160
12.....	865	43	40	37	914	565	1,250	1,100	1,380	1,560	1,520	1,130
13.....	865	43	35	37	918	565	1,250	1,100	1,460	1,560	1,520	1,130
14.....	865	43	40	37	918	565	1,280	1,100	1,460	1,560	1,520	1,130
15.....	865	43	36	37	916	565	1,350	1,100	1,490	1,560	1,520	1,130
16.....	225	43	39	37	905	565	1,420	1,160	1,560	1,560	1,520	1,130
17.....	29	43	42	37	904	470	1,420	1,220	1,560	1,560	1,520	1,130
18.....	146	43	42	37	892	468	1,420	1,250	1,560	1,560	1,490	1,130
19.....	90	43	42	28	904	478	1,420	1,280	1,600	1,560	1,490	1,130
20.....	53	43	42	25	894	510	1,420	1,280	1,600	1,560	1,460	1,130
21.....	48	45	36	23	885	524	1,420	1,280	1,600	1,630	1,460	646
22.....	46	43	50	26	886	528	1,460	1,250	1,600	1,630	1,490	605
23.....	42	42	38	25	876	550	1,490	1,250	1,600	1,630	1,460	570
24.....	36	40	32	25	887	546	1,490	1,250	1,600	1,630	1,420	99
25.....	40	38	35	26	455	555	1,460	1,250	1,600	1,630	1,380	176
26.....	42	40	31	26	442	575	1,490	1,250	1,600	1,630	1,350	181
27.....	42	40	38	29	440	580	1,490	1,250	1,600	1,490	1,350	188
28.....	42	40	38	28	441	590	1,520	1,280	1,600	1,560	1,350	195
29.....	43	42	38	26	-----	590	1,560	1,280	1,600	1,660	1,350	195
30.....	43	42	38	26	-----	665	1,560	1,350	1,600	1,660	1,350	195
31.....	43	-----	38	37	-----	675	-----	1,350	-----	1,660	1,320	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	892	29	461	28,300
November.....	45	38	42.4	2,520
December.....	50	31	39.0	2,400
January.....	38	23	33.0	2,030
February.....	961	440	820	45,500
March.....	675	92	452	27,800
April.....	1,560	782	1,290	76,800
May.....	1,600	1,100	1,310	80,600
June.....	1,600	1,320	1,480	88,100
July.....	1,660	1,490	1,570	96,500
August.....	1,700	1,320	1,490	91,600
September.....	1,320	99	890	53,000
The year.....	1,700	23	823	595,000

MERCED RIVER NEAR LIVINGSTON, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 20, T. 6 S., R. 11 E., 3½ miles west of Livingston. Altitude, about 82 feet.

RECORDS AVAILABLE.—March 1922 to September 1924, October 1925 to September 1933.

DISCHARGE.—Maximum during year, 1,220 second-feet Feb. 13 (gage height, 5.31 feet); minimum, 97 second-feet Aug. 21.

1922-24, 1925-33: Maximum, 8,100 second-feet June 5, 1922 (gage height, 15.80 feet, present datum); minimum recorded, 18 second-feet Aug. 30, 1924.

REMARKS.—Records good. Discharge estimated Mar. 8-15, 17-27. Practically entire flow is diverted above station during irrigating season; return water enters above station. Storage at Lake McClure. Gage-height record furnished by Merced Irrigation District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	120	106	115	241	545	202	171	136	151	164	161
2	193	116	107	115	228	530	215	180	126	151	157	157
3	205	116	110	115	347	530	269	207	135	141	162	169
4	193	115	109	114	818	500	263	213	140	161	152	185
5	196	114	109	114	970	384	245	189	156	173	149	182
6	205	113	107	114	1,010	267	226	191	141	136	154	171
7	194	115	106	114	1,010	241	239	224	130	138	178	166
8	200	113	106	113	990		259	273	120	141	151	169
9	198	111	107	113	990		230	296	118	151	138	169
10	203	110	107	114	990		215	269	122	152	118	175
11	198	111	110	115	970	250	207	279	132	122	116	166
12	200	111	111	116	1,010		198	237	126	123	130	161
13	189	114	110	115	1,050		189	187	141	135	128	149
14	187	110	107	114	1,030		176	185	146	144	140	166
15	200	108	107	113	1,010		159	184	128	130	135	161
16	169	107	108	115	1,010	285	173	164	135	143	132	166
17	169	106	109	119	1,010		171	162	126	135	122	169
18	207	106	109	120	990		157	171	144	134	124	161
19	184	107	111	132	990		156	164	154	129	113	159
20	157	106	114	152	990		148	157	140	120	115	152
21	151	107	120	171	970		134	166	138	122	109	164
22	149	107	123	166	970	300	138	169	135	132	115	171
23	148	108	124	149	970		156	161	141	126	130	148
24	144	108	126	141	950		189	144	162	146	119	159
25	141	107	124	151	950		168	132	146	136	134	203
26	136	106	124	253	650		136	154	135	164	129	162
27	136	106	122	241	560		122	159	134	218	156	140
28	136	104	119	243	545	328	138	161	151	146	154	130
29	132	104	118	339		300	157	156	132	141	159	124
30	129	104	116	273		253	164	128	129	166	152	132
31	129		115	283		232		140		161	161	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	207	129	173	10,600
November	120	104	110	6,550
December	126	106	113	6,950
January	339	113	154	9,470
February	1,050	228	865	48,000
March			313	19,200
April	269	122	187	11,100
May	296	128	186	11,400
June	162	118	137	8,150
July	218	120	144	8,850
August	178	109	139	8,550
September	203	124	162	9,640
The year	1,050	104	219	158,000

TENAYA CREEK NEAR YOSEMITE, CALIF.

LOCATION.—Water-stage recorder at Tenaya Bridge in Yosemite National Park, five-eighths of a mile above junction with Merced River and $1\frac{1}{8}$ miles east of Yosemite, Mariposa County. Altitude, about 4,000 feet.

DRAINAGE AREA.—47 square miles.

RECORDS AVAILABLE.—July 1904 to June 1909, January 1912 to September 1933.

DISCHARGE.—Maximum during year, 1,080 second-feet May 30 (gage height, 5.77 feet); minimum, 1.0 second-foot Nov. 9–29, Jan. 5–17.

1904–9, 1912–33: Maximum, 1,730 second-feet May 28, 1919 (gage height, 7.05 feet); minimum, 0.5 second-foot Sept. 12 and most of October 1906.

Average, 19 years (1913–15, 1916–33), 97.8 second-feet.

REMARKS.—Records good except those for Mar. 18–22, which were estimated. No diversions.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.0	1.5	-1.3	1.1	1.1	10	84	186	670	86	5.5	1.8
2.....	2.0	1.5	1.1	1.1	1.3	12	117	163	619	77	5	1.8
3.....	2.0	1.5	1.1	1.1	1.5	14	161	152	502	71	5	1.8
4.....	2.0	1.5	1.1	1.1	1.5	14	192	159	386	65	4.6	1.8
5.....	2.0	1.3	1.1	1.0	1.5	17	204	152	386	60	4.3	1.5
6.....	2.0	1.1	1.1	1.0	1.8	24	190	131	440	55	3.9	1.5
7.....	2.0	1.1	1.1	1.0	1.8	29	157	129	518	53	3.6	1.5
8.....	2.0	1.1	1.1	1.0	1.8	27	129	128	551	48	3.3	1.5
9.....	2.0	1.0	1.1	1.0	1.8	27	108	123	585	42	3.1	1.5
10.....	2.0	1.0	1.1	1.0	1.8	30	98	107	585	38	2.9	1.5
11.....	2.0	1.0	1.1	1.0	2.9	29	104	105	602	34	2.6	1.5
12.....	2.0	1.0	1.1	1.0	3.9	34	118	101	619	30	2.4	1.5
13.....	1.8	1.0	1.1	1.0	4.3	33	155	105	619	28	2.4	1.5
14.....	1.8	1.0	1.1	1.0	4.6	32	210	126	619	25	2.4	1.5
15.....	1.8	1.0	1.1	1.0	4.6	29	284	126	551	23	2.4	1.5
16.....	1.8	1.0	1.3	1.0	4.6	30	309	123	486	21	2.4	1.5
17.....	1.8	1.0	1.3	1.0	5	32	279	117	404	19	2.4	1.5
18.....	1.8	1.0	1.3	1.1	5.5	33	204	110	325	17	2.4	1.5
19.....	1.8	1.0	1.5	1.1	6	38	155	131	270	15	2.4	1.5
20.....	1.8	1.0	1.3	1.1	6	44	142	182	241	14	2.4	1.5
21.....	1.5	1.0	1.3	1.1	6.5	50	155	221	219	12	2.4	1.5
22.....	1.5	1.0	1.3	1.1	7	45	198	170	196	11	2.2	1.5
23.....	1.5	1.0	1.3	1.1	7.5	40	213	206	177	10	2.2	1.5
24.....	1.8	1.0	1.1	1.1	8	37	186	301	161	9.5	2.2	1.5
25.....	1.8	1.0	1.1	1.1	8	38	190	416	145	9	2.2	1.5
26.....	1.8	1.0	1.1	1.1	8	34	179	486	131	8	2.2	1.5
27.....	2.0	1.0	1.1	1.1	8	33	226	551	132	7.5	2.0	1.5
28.....	2.0	1.0	1.1	1.1	9	42	265	653	120	7	2.0	1.5
29.....	1.8	1.0	1.1	1.1	-----	41	274	706	107	6.5	2.0	1.5
30.....	1.8	1.3	1.1	1.1	-----	42	208	742	94	6	2.0	1.5
31.....	1.8	-----	1.1	1.1	-----	57	-----	760	-----	5.5	2.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.0	1.5	1.86	114
November.....	1.5	1.0	1.10	65.5
December.....	1.5	1.1	1.16	71.3
January.....	1.1	1.0	1.06	65.2
February.....	9	1.1	4.48	249
March.....	57	10	32.2	1,980
April.....	309	84	183	10,900
May.....	760	101	254	15,600
June.....	670	94	382	22,700
July.....	86	5.5	29.5	1,810
August.....	5.5	2.0	2.86	176
September.....	1.8	1.5	1.54	91.6
The year.....	760	1.0	74.4	53,800

ORESTIMBA CREEK BASIN

ORESTIMBA CREEK NEAR NEWMAN, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 20, T. 7 S., R. 8 E., at highway bridge 5 miles west of Newman. Altitude, about 190 feet.

RECORDS AVAILABLE.—January 1932 to September 1933.

DISCHARGE.—Maximum during year, 345 second-feet Jan. 29 (gage height, 2.3 feet); no flow several months.

1932-33: Maximum, 3,440 second-feet Feb. 8, 1932 (gage height, 5.15 feet); no flow several months each year.

REMARKS.—Records good except that for Jan. 29, which was estimated. No diversions or regulation.

Discharge, in second-feet, 1932-33

Jan. 29.....	89	Feb. 1.....	4.7
Jan. 30.....	55	Feb. 2.....	1.0
Jan. 31.....	16		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	89	0	5.16	317
February.....	4.7	0	.20	11.3
The year.....	89	0	.45	328

NOTE.—No flow during months omitted.

TUOLUMNE RIVER BASIN

HETCH HETCHY RESERVOIR AT HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder at O'Shaughnessy Dam, in sec. 16, T. 1 N., R. 20 E., on Tuolumne River at Hetch Hetchy. Zero of gage is at mean sea level.

RECORDS AVAILABLE.—May 1923 to September 1933 (gage heights only, 1923-30).

REMARKS.—This reservoir, which is main storage unit of Hetch Hetchy water-supply system for San Francisco, has capacity of 206,000 acre-feet. Elevation of crest of dam is 3,726.5 feet above mean sea level. Released water flows down natural channel of Tuolumne River for 15 miles to Early Intake and is then diverted through Hetch Hetchy Aqueduct to Moccasin Creek power plant.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144,850	109,720	69,970	30,030	134	190	1,280	27,440	109,600	206,320	195,730	165,380
2	144,040	108,320	68,720	28,730	134	200	1,860	28,730	118,960	206,320	194,780	164,200
3	142,960	107,080	67,380	27,440	134	200	2,610	29,620	127,320	206,490	193,830	163,160
4	142,020	105,850	66,140	26,060	139	205	3,790	30,510	132,190	206,490	192,890	161,980
5	140,800	104,390	65,000	24,760	139	215	5,240	31,510	136,210	206,490	191,780	160,940
6	139,720	103,050	63,670	23,390	144	241	6,590	32,190	140,660	206,490	190,670	159,920
7	138,640	101,820	62,440	22,080	144	266	7,620	32,530	147,040	206,490	189,900	158,940
8	137,420	100,580	61,100	20,800	139	266	8,430	33,300	155,440	206,490	188,980	157,960
9	136,210	99,240	59,870	19,520	134	266	8,900	33,800	165,380	206,490	188,070	156,840
10	135,260	97,900	58,540	18,250	128	276	9,100	34,060	176,060	206,320	187,010	155,720
11	134,320	96,370	57,220	17,050	134	276	9,170	34,400	186,860	206,160	185,940	154,740
12	133,240	95,110	55,940	15,700	134	276	9,370	34,570	199,050	206,000	184,880	153,620
13	132,060	93,740	54,480	14,460	134	374	9,770	34,820	207,620	206,000	183,970	152,500
14	130,910	92,590	53,120	13,320	134	369	10,440	35,420	207,300	206,000	183,060	151,520
15	129,880	91,220	51,670	11,980	134	328	11,650	36,180	207,300	206,000	181,990	150,400
16	128,730	89,960	50,390	10,640	144	282	13,120	36,700	207,130	205,840	181,080	149,280
17	127,710	88,600	49,030	9,370	159	369	13,930	37,120	206,810	205,370	180,170	148,020
18	126,680	87,240	47,860	8,160	159	390	14,460	37,380	206,650	205,050	179,100	146,900
19	125,530	85,900	46,540	7,240	149	384	14,730	37,540	206,650	204,740	178,190	145,930
20	124,380	84,600	45,400	6,220	149	526	14,860	38,140	206,650	204,260	177,280	144,860
21	123,100	83,300	44,080	4,920	149	757	15,000	39,500	206,810	203,790	176,370	143,770
22	121,950	82,000	42,760	4,220	154	872	15,480	41,080	206,650	203,310	175,460	142,690
23	120,800	80,700	41,440	3,270	164	815	16,600	42,230	206,490	202,520	174,560	141,740
24	119,780	79,400	40,030	2,610	169	670	17,800	44,250	206,650	201,890	173,520	140,530
25	118,730	78,100	38,740	1,970	164	410	18,920	47,770	206,490	201,260	172,480	139,320
26	117,790	76,800	37,460	1,160	169	374	19,820	53,030	206,810	200,630	171,450	138,370
27	116,510	75,350	36,270	410	185	328	20,720	59,300	206,810	199,840	170,410	137,290
28	115,220	74,000	35,000	200	195	317	22,220	66,900	206,810	199,050	169,380	136,080
29	113,820	72,560	33,800	144	-----	400	24,520	76,120	206,650	198,420	168,490	134,860
30	112,410	71,220	32,530	134	-----	410	26,460	87,020	206,490	197,630	167,450	133,780
31	111,120	-----	31,260	139	-----	612	-----	98,570	-----	196,680	166,420	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month	
Sept. 30.....	145,800		May 31.....	98,570	+72,110	
Oct. 31.....	111,120	—34,680	June 30.....	206,490	+107,920	
Nov. 30.....	71,220	—39,900	July 31.....	196,680	—9,810	
Dec. 31.....	31,260	—39,960	Aug. 31.....	166,420	—30,260	
Jan. 31.....	139	—31,121	Sept. 30.....	133,780	—32,640	
Feb. 28.....	195	+56	The year.....			
Mar. 31.....	612	+417				—12,020
Apr. 30.....	26,460	+25,848				

TUOLUMNE RIVER NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 17, T. 1 N., R. 20 E., in Yosemite National Park, three-quarters of a mile below O'Shaughnessy Dam, at Hetch Hetchy. Altitude, about 3,450 feet.

DRAINAGE AREA.—462 square miles.

RECORDS AVAILABLE.—December 1914 to September 1933.

DISCHARGE.—Maximum during year, 10,300 second-feet June 13 (gage height, 13.03 feet); minimum, 92 second-feet Feb. 10.

1915-33: Maximum, 12,000 second-feet June 16, 1929 (gage height, 13.58 feet); minimum, 1.2 second-feet Jan. 18, 1931. Average, 18 years (1915-33), 892 second-feet.

REMARKS.—Records good. No diversions. (See records for Hetch Hetchy Reservoir, which stores water above station.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	602	760	685	700	100	201	430	700	700	1,480	602	602
2	555	760	700	715	100	215	460	670	700	1,420	602	602
3	552	745	700	715	105	215	460	670	700	1,450	602	578
4	578	745	670	700	108	215	470	670	715	1,360	602	540
5	602	745	655	715	114	229	490	685	700	1,330	602	540
6	590	715	670	730	122	280	510	685	700	1,280	578	578
7	602	685	730	730	119	320	530	670	700	1,230	540	590
8	602	685	730	685	108	320	565	655	715	1,110	565	590
9	578	730	730	700	102	312	640	640	700	912	578	590
10	565	745	715	700	94	320	640	640	715	878	602	578
11	578	745	715	700	94	312	640	640	700	825	602	578
12	590	730	730	715	100	320	640	640	745	790	590	578
13	602	685	730	700	104	346	640	640	6,520	790	578	578
14	602	670	730	700	104	355	655	640	8,610	790	540	565
15	602	715	715	715	106	337	670	628	7,830	790	565	590
16	552	730	730	700	117	328	685	640	6,830	760	578	602
17	530	730	730	700	130	355	670	640	5,690	715	578	590
18	552	745	685	685	128	355	655	740	4,190	640	578	565
19	590	745	670	670	121	364	655	655	3,430	590	590	552
20	602	745	670	640	119	382	655	670	3,290	590	565	565
21	602	730	700	615	129	410	655	655	3,430	590	540	590
22	590	730	730	590	141	420	655	655	3,170	590	540	602
23	565	745	745	565	157	410	670	655	2,930	590	540	590
24	552	715	730	540	157	391	685	670	2,830	590	565	590
25	540	700	685	510	138	373	685	685	2,440	578	590	590
26	602	700	670	470	144	346	685	685	2,300	578	590	578
27	730	715	670	391	176	328	685	655	2,400	578	578	590
28	745	745	670	208	194	337	700	670	2,090	590	552	602
29	760	745	670	123	-----	364	700	715	1,820	602	552	602
30	745	700	685	107	-----	364	700	700	1,680	602	540	590
31	760	-----	700	103	-----	391	-----	715	-----	602	565	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	760	530	607	37,300
November	760	670	726	43,200
December	745	655	701	43,100
January	730	103	588	36,200
February	194	94	122	6,780
March	420	201	330	20,300
April	700	430	619	36,800
May	715	628	664	40,800
June	8,610	700	2,670	159,000
July	1,480	578	846	52,000
August	602	540	574	35,300
September	602	540	582	34,600
The year	8,610	94	753	545,000

TUOLUMNE RIVER NEAR BUCK MEADOWS, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 24, T. 1 S., R. 17 E., two-thirds of a mile below junction with South Fork of Tuolumne River and 2 miles north of Buck Meadows. Altitude, about 1,375 feet.

DRAINAGE AREA.—934 square miles.

RECORDS AVAILABLE.—September 1907 to September 1933.

DISCHARGE.—Maximum during year, 12,300 second-feet June 13 (gage height, 11.25 feet); minimum, 10 second-feet Oct. 5.

1907-33: Maximum, 27,200 second-feet Jan. 14, 1909 (gage height, 14.0 feet); minimum, 4.2 second-feet Aug. 24-27, 1931.

REMARKS.—Records excellent except those for Nov. 18 to Dec. 4, Mar. 27 to Apr. 7, which were estimated. City of San Francisco diverts water from Cherry Creek and Tuolumne River at Early Intake above station to develop power and discharges it to Moccasin Creek. Storage in Hetch Hetchy Reservoir and Lake Eleanor.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	36	55	42	52	93	340	1,270	3,740	1,310	40	15
2	33	40	20	40	52	109	480	1,250	3,180	1,240	37	20
3	34	33	20	40	51	125	650	986	2,650	1,260	37	31
4	16	36	20	42	52	117	850	1,020	2,120	1,160	36	35
5	11	37	20	38	52	121	1,050	1,080	2,180	1,120	39	21
6	24	44	24	37	54	162	950	882	2,720	978	61	20
7	29	52	18	47	50	179	860	949	3,020	900	45	22
8	31	40	33	42	47	206	720	986	3,020	750	30	15
9	41	33	37	40	47	209	620	888	3,180	535	25	15
10	38	32	38	34	47	234	550	762	3,100	483	23	15
11	34	39	32	33	51	203	545	726	3,180	396	24	61
12	37	42	34	30	58	364	620	744	3,420	312	25	55
13	37	51	40	31	74	356	720	726	8,680	286	25	41
14	44	36	45	33	64	209	858	900	10,400	258	37	34
15	52	32	54	37	58	150	1,020	993	9,900	224	22	25
16	85	33	37	39	66	262	1,040	956	8,680	240	26	31
17	54	33	61	39	72	465	858	949	7,300	224	23	25
18	34	35	69	40	67	279	696	816	5,460	148	21	61
19	31	35	74	54	62	276	615	876	4,450	87	20	27
20	32	35	64	30	58	356	585	1,180	4,180	58	31	22
21	36	40	45	26	62	424	702	1,700	4,270	44	46	23
22	42	40	40	38	66	344	956	1,400	3,820	38	29	34
23	40	35	67	48	69	244	1,310	1,360	3,340	36	22	32
24	67	35	74	50	78	162	1,500	1,700	3,100	76	21	22
25	50	40	48	48	67	139	1,450	2,440	2,860	58	19	45
26	37	35	45	40	69	125	1,030	2,940	2,580	38	19	36
27	29	35	50	62	99	120	1,230	3,180	2,720	34	21	27
28	28	35	60	69	101	280	1,600	3,660	2,300	33	54	23
29	37	40	45	72	-----	380	1,940	3,820	1,880	36	33	23
30	38	60	34	64	-----	280	1,400	4,000	1,600	37	24	21
31	34	-----	48	54	-----	300	-----	4,090	-----	32	20	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	85	11	37.4	2,300
November	60	32	38.3	2,280
December	74	18	43.6	2,680
January	72	26	43.2	2,660
February	101	47	62.3	3,460
March	465	93	235	14,400
April	1,940	340	925	55,000
May	4,090	726	1,590	97,800
June	10,400	1,600	4,100	244,000
July	1,310	32	401	24,700
August	61	19	30.2	1,860
September	61	19	29.9	1,780
The year	10,400	11	625	453,000

TUOLUMNE RIVER NEAR JACKSONVILLE, CALIF.

LOCATION.—Water-stage recorder in $S\frac{1}{2}$ sec. 18, T. 1 S., R. 15 E., above Woods Creek, three-quarters of a mile east of Jacksonville, and $1\frac{1}{2}$ miles below Mocasin Creek. Altitude, about 620 feet.

DRAINAGE AREA.—1,350 square miles.

RECORDS AVAILABLE.—July 1923 to June 1933.

DISCHARGE.—1923-33: Maximum, 35,300 second-feet Mar. 25, 1928 (gage height, 12.38 feet); minimum, 12 second-feet several days in September 1931.

REMARKS.—Records good. Storage, regulation, and diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	782	791	166	80	158	267	1,210	2,100	5,500
2.....	443	799	92	78	222	277	1,350	1,970	4,730
3.....	942	805	65	74	466	305	2,100	1,580	4,110
4.....	902	806	53	74	462	334	2,430	1,550	3,320
5.....	767	778	48	80	254	317	2,640	1,600	3,070
6.....	771	321	48	74	444	340	2,710	1,450	3,320
7.....	756	768	46	74	263	420	2,570	1,400	3,740
8.....	772	1,000	50	84	144	465	2,230	1,600	3,660
9.....	536	884	63	86	138	514	1,840	1,420	3,740
10.....	840	776	78	84	138	535	1,700	1,220	3,740
11.....	738	682	72	74	138	514	1,660	1,130	-----
12.....	841	776	67	69	232	605	1,720	1,160	-----
13.....	792	446	67	67	377	966	1,970	1,160	-----
14.....	772	844	107	69	405	577	2,230	1,320	-----
15.....	632	863	102	70	507	446	2,430	1,500	-----
16.....	379	846	88	74	642	784	2,360	1,540	-----
17.....	812	762	84	80	598	1,900	2,160	1,610	-----
18.....	962	820	120	80	745	1,470	1,900	1,390	-----
19.....	889	734	126	616	585	1,020	1,780	1,360	-----
20.....	810	393	147	276	365	1,330	1,330	1,700	-----
21.....	764	371	117	102	389	1,380	1,470	2,230	-----
22.....	782	416	102	107	422	1,420	1,640	2,230	-----
23.....	353	234	90	161	510	1,340	1,900	2,040	-----
24.....	746	92	132	158	351	1,210	2,230	2,300	-----
25.....	766	126	107	668	223	1,150	2,230	3,000	-----
26.....	942	211	86	683	206	802	1,700	3,830	-----
27.....	954	108	84	772	219	985	1,680	4,210	-----
28.....	778	234	84	672	267	1,110	2,160	5,170	-----
29.....	793	69	88	658	-----	1,520	3,150	5,500	-----
30.....	820	146	78	346	-----	1,340	2,500	5,840	-----
31.....	794	-----	70	188	-----	1,270	-----	5,840	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	962	353	762	46,900
November.....	1,000	69	563	33,500
December.....	166	46	88.0	5,410
January.....	772	67	219	13,500
February.....	745	138	352	19,500
March.....	1,900	267	868	53,400
April.....	3,150	1,210	2,030	121,000
May.....	5,840	1,130	2,320	143,000
June 1-10.....	5,500	3,070	3,890	77,200
The period.....	-----	-----	-----	513,000

DON PEDRO RESERVOIR NEAR LA GRANGE, CALIF.

LOCATION.—Staff gage in SW¼ sec. 35, T. 2 S., R. 14 E., at Don Pedro Dam, on Tuolumne River, 5½ miles above La Grange. Crest of dam is 613.5 feet above mean sea level (figure previously published was spillway elevation).

RECORDS AVAILABLE.—October 1924 to September 1933 (stage only, 1924–30).

REMARKS.—This is joint storage reservoir for Turlock and Modesto Irrigation Districts. Reservoir capacity, 290,000 acre-feet (revised). Water released from reservoir develops power at dam and is diverted into Turlock and Modesto Canals at La Grange Dam, 4 miles downstream. Record of daily elevation furnished by Turlock and Modesto Irrigation Districts.

Contents, in acre-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1...	173, 100	116, 400	98, 600	105, 900	132, 100	135, 300	156, 900	142, 900	219, 100	288, 600	253, 500	192, 400
2...	170, 700	114, 300	99, 200	106, 700	131, 900	135, 600	156, 500	143, 800	224, 800	287, 650	251, 400	190, 500
3...	168, 400	112, 000	99, 800	107, 300	131, 400	135, 300	156, 200	145, 500	228, 900	287, 000	250, 200	188, 300
4...	166, 200	109, 900	99, 800	107, 900	131, 400	135, 300	157, 700	145, 000	232, 100	287, 000	248, 100	186, 200
5...	164, 100	107, 900	99, 400	108, 700	131, 200	135, 600	158, 400	144, 300	233, 600	286, 400	246, 600	184, 000
6...	161, 900	105, 700	99, 600	109, 300	130, 700	135, 800	158, 700	143, 800	236, 800	285, 800	244, 500	181, 900
7...	159, 700	103, 200	100, 000	110, 100	130, 400	137, 000	158, 700	142, 900	239, 200	286, 100	242, 200	180, 100
8...	158, 200	101, 300	100, 000	111, 000	130, 200	137, 400	157, 900	142, 200	239, 800	286, 400	240, 400	178, 200
9...	156, 500	99, 400	100, 100	111, 600	129, 600	138, 400	156, 700	141, 200	245, 100	286, 400	238, 600	176, 400
10...	155, 000	97, 400	100, 500	112, 400	129, 300	138, 900	154, 700	142, 200	248, 100	285, 500	236, 800	174, 300
11...	154, 000	95, 600	100, 500	113, 700	129, 100	139, 300	152, 500	142, 400	251, 100	284, 500	235, 100	171, 800
12...	153, 500	94, 800	100, 300	114, 300	129, 300	139, 800	150, 600	142, 600	253, 800	283, 900	233, 300	169, 200
13...	152, 800	94, 800	100, 100	115, 400	129, 800	140, 500	148, 900	143, 400	256, 300	282, 900	231, 500	167, 200
14...	152, 100	94, 700	100, 300	116, 200	130, 200	141, 900	147, 700	145, 000	269, 800	282, 000	229, 200	165, 200
15...	151, 300	94, 800	100, 700	117, 600	130, 200	142, 900	146, 700	147, 200	280, 400	280, 700	226, 900	163, 100
16...	150, 100	94, 800	101, 300	118, 400	130, 400	143, 600	146, 700	147, 400	284, 500	279, 200	225, 100	161, 100
17...	148, 600	95, 400	101, 700	119, 200	131, 200	145, 800	146, 000	152, 300	288, 600	277, 300	223, 400	161, 100
18...	146, 700	95, 700	101, 700	119, 900	131, 600	148, 400	145, 000	154, 700	289, 900	276, 000	221, 400	156, 500
19...	145, 000	95, 700	101, 500	121, 000	132, 600	150, 100	143, 400	156, 900	289, 900	274, 800	219, 600	154, 000
20...	143, 100	95, 900	101, 800	122, 100	132, 300	150, 600	141, 500	158, 200	288, 900	273, 200	217, 300	151, 600
21...	141, 000	95, 900	103, 000	123, 400	131, 900	152, 100	138, 900	161, 100	289, 600	271, 700	214, 800	149, 400
22...	138, 900	96, 100	103, 200	123, 900	131, 600	153, 300	138, 200	164, 900	289, 900	270, 100	212, 800	147, 200
23...	136, 500	96, 500	103, 200	123, 900	131, 900	154, 700	138, 200	167, 400	289, 600	268, 200	210, 800	145, 000
24...	133, 700	97, 000	103, 600	125, 000	132, 100	155, 500	138, 900	170, 000	288, 300	266, 400	209, 000	142, 600
25...	131, 400	96, 800	104, 000	125, 900	132, 300	157, 200	140, 000	173, 800	289, 300	264, 800	207, 100	140, 000
26...	129, 300	97, 000	104, 200	126, 600	133, 000	157, 700	141, 000	179, 000	289, 900	263, 300	205, 200	137, 700
27...	127, 300	97, 600	104, 200	127, 300	133, 500	157, 700	140, 500	184, 800	290, 200	261, 800	203, 200	135, 600
28...	125, 200	97, 600	104, 200	128, 900	134, 200	157, 900	141, 000	190, 800	290, 500	259, 900	200, 400	133, 500
29...	123, 200	97, 900	104, 400	129, 600	-----	157, 900	141, 200	196, 800	290, 500	258, 400	197, 900	131, 200
30...	121, 000	98, 100	104, 700	131, 200	-----	157, 700	142, 900	204, 600	289, 900	256, 300	196, 300	129, 100
31...	118, 600	-----	105, 300	132, 100	-----	157, 200	-----	211, 100	-----	254, 800	194, 100	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30.....	175, 100	-----	May 31.....	211, 100	+68, 200
Oct. 31.....	118, 600	-56, 500	June 30.....	289, 900	+78, 800
Nov. 30.....	98, 100	-20, 500	July 31.....	284, 800	-35, 100
Dec. 31.....	105, 300	+7, 200	Aug. 31.....	194, 100	-60, 700
Jan. 31.....	132, 100	+26, 800	Sept. 30.....	129, 100	-65, 000
Feb. 28.....	134, 200	+2, 100			
Mar. 31.....	137, 200	+3, 000	The year.....		-46, 000
Apr. 30.....	142, 900	-14, 300			

TUOLUMNE RIVER ABOVE LA GRANGE DAM, NEAR LA GRANGE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 3, T. 3 S., R. 14 E., half a mile below Don Pedro Dam, 3½ miles above La Grange Dam, and 5 miles above La Grange. Altitude, about 330 feet.

DRAINAGE AREA.—1,510 square miles.

RECORDS AVAILABLE.—March 1915 to September 1933. 1895 to 1917 at La Grange Dam.

DISCHARGE.—Maximum during year, 9,130 second-feet June 15 (gage height, 14.33 feet); minimum, 48 second-feet Feb. 20.

1915-33: Maximum, 38,100 second-feet Mar. 25, 1928 (gage height, 29.6 feet); minimum, 0.5 second-foot momentarily several times in October and November 1931. Average, 17 years (1916-33), 2,050 second-feet.

REMARKS.—Records good. A small amount of water is diverted for irrigation. Flow regulated by gates in Don Pedro Dam (see records for Don Pedro Reservoir). Water is also stored in Hetch Hetchy Reservoir and Lake Eleanor.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,920	1,790	670	490	588	556	1,500	2,420	2,130	2,980	1,790	1,800
2.....	1,890	1,770	683	500	591	548	1,470	1,770	2,200	2,270	1,800	1,800
3.....	1,940	1,790	697	509	597	554	1,540	2,500	2,340	2,270	1,780	1,740
4.....	1,950	1,760	642	486	572	550	1,990	2,580	2,340	2,270	1,810	1,780
5.....	1,950	1,760	704	500	548	514	2,500	2,500	2,340	2,340	1,820	1,790
6.....	1,960	1,680	708	482	572	703	2,650	2,500	2,660	2,130	1,770	1,790
7.....	1,670	1,770	712	488	592	708	2,660	2,500	2,900	1,840	1,840	1,790
8.....	1,570	1,790	732	434	560	708	2,660	2,580	2,900	1,830	1,810	1,820
9.....	1,530	1,770	744	503	562	714	2,660	1,990	2,900	1,780	1,820	1,810
10.....	1,330	1,700	760	350	570	730	2,660	1,740	2,900	1,720	1,820	1,770
11.....	1,240	812	720	312	580	758	2,660	1,740	2,900	1,820	1,840	1,840
12.....	1,240	848	776	364	528	708	2,660	1,540	3,060	1,850	1,860	1,860
13.....	1,220	798	743	366	582	758	2,660	1,290	3,140	1,840	1,790	1,870
14.....	1,230	806	720	379	564	780	2,660	990	4,870	1,830	1,840	1,870
15.....	1,250	790	712	350	545	780	2,660	930	7,800	1,830	1,840	1,880
16.....	1,180	762	714	496	501	810	2,660	1,110	8,080	1,800	1,830	1,860
17.....	1,810	746	726	508	498	752	2,660	1,170	6,960	1,850	1,840	1,830
18.....	1,840	758	684	504	518	769	2,660	1,140	6,280	1,840	1,830	1,890
19.....	1,830	754	733	524	534	703	2,660	1,170	5,760	1,850	1,850	1,900
20.....	1,830	714	742	486	474	764	2,660	1,170	5,040	1,860	1,800	1,930
21.....	1,830	744	746	526	516	810	2,340	1,140	4,920	1,860	1,850	1,890
22.....	1,830	744	764	460	480	758	2,200	1,290	4,920	1,840	1,860	1,900
23.....	1,870	716	758	492	506	769	2,130	1,540	4,920	1,810	1,860	1,920
24.....	1,850	675	753	610	498	764	2,200	1,570	3,830	1,840	1,860	1,860
25.....	1,850	694	675	580	492	774	2,340	1,640	3,300	1,840	1,850	1,900
26.....	1,860	712	684	598	454	692	2,420	1,880	3,380	1,830	1,860	1,840
27.....	1,840	652	725	596	484	758	2,500	1,990	3,380	1,810	1,760	1,840
28.....	1,820	701	715	602	480	1,230	2,500	1,960	3,380	1,800	1,860	1,840
29.....	1,810	700	718	535	-----	1,500	2,580	1,990	3,380	1,790	1,850	1,840
30.....	1,770	672	705	590	-----	1,500	2,500	2,020	3,300	1,740	1,860	1,830
31.....	1,810	-----	729	581	-----	1,500	-----	2,060	-----	1,800	1,850	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,960	1,180	1,690	104,000
November.....	1,790	652	1,080	64,300
December.....	776	642	719	44,200
January.....	610	312	490	30,100
February.....	597	454	535	29,700
March.....	1,500	514	804	49,400
April.....	2,660	1,470	2,420	144,000
May.....	2,580	930	1,760	108,000
June.....	8,080	2,130	3,940	234,000
July.....	2,980	1,740	1,930	119,000
August.....	1,860	1,760	1,830	113,000
September.....	1,930	1,740	1,840	109,000
The year.....	8,080	312	1,590	1,150,000

FALLS CREEK NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 3, T. 1 N., R. 20 E., in Yosemite National Park, a quarter of a mile above Wampana Falls and 2 miles north-east of Hetch Hetchy. Altitude, about 5,600 feet.

DRAINAGE AREA.—45.2 square miles.

RECORDS AVAILABLE.—November 1915 to September 1933.

DISCHARGE.—Maximum during year, 1,130 second-feet June 15 (gage height, 5.42 feet); no flow Sept. 12-30.

1915-33: Maximum, 1,740 second-feet Mar. 25, 1928 (gage height, 6.45 feet); no flow at times during summers of 1921, 1924, 1926, 1928-31, 1933. Average, 17 years (1916-33), 129 second-feet.

REMARKS.—Records excellent except those for Oct. 1-9 and those for period of ice effect, Dec. 10-14, which were estimated. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0.1	8	23	35	127	222	844	185	6	0.4
2	.2	.1	.1	7.5	26	36	159	185	754	178	5.5	.3
3	.2	.1	.1	7	23	38	203	180	606	173	4.9	.2
4	.2	.1	.1	7	19	41	233	176	436	159	4.4	.2
5	.1	.1	.2	7	19	47	255	162	397	151	3.8	.2
6	.1	.1	.2	7	19	61	238	136	460	148	3.3	.1
7	.1	.1	.2	8	18	66	211	134	732	134	2.8	.1
8	.1	.1	.2	8.5	16	66	195	127	775	119	2.5	.1
9	.1	.1	.2	24	15	66	151	123	798	100	2.1	.1
10	.1	.1	.2	9.5	15	66	129	100	844	83	1.9	.1
11	.1	.1	.5	7	15	55	131	100	820	71	1.7	.1
12	.1	.1	1.0	6.5	17	56	146	97	915	67	1.6	0
13	.1	.1	1.5	6.5	17	51	171	121	940	66	1.4	0
14	.1	.1	1.8	6.5	17	45	216	157	992	63	1.3	0
15	.1	.1	1.8	6	18	41	264	159	992	58	1.2	0
16	.1	.1	1.9	6	21	45	269	140	891	50	1.2	0
17	.1	.1	5.5	6.5	21	45	203	131	820	40	1.1	0
18	.1	.1	4.3	7	19	48	146	108	647	31	1.1	0
19	.1	.1	4.4	23	21	57	115	125	512	27	1.1	0
20	.1	.1	6	27	21	74	108	193	457	24	1.2	0
21	.1	.1	6	16	22	78	131	278	477	21	1.7	0
22	.1	.1	6.5	15	23	63	188	219	420	18	2.0	0
23	.1	.1	8	16	24	54	278	211	388	15	1.8	0
24	.1	.1	11	16	23	44	272	315	362	12	1.6	0
25	.1	.1	10	22	21	42	236	467	333	11	1.4	0
26	.1	.1	9.5	27	27	40	190	606	321	10	1.3	0
27	.1	.1	10	26	30	46	216	668	318	10	1.1	0
28	.1	.1	9	32	31	59	294	754	275	9.5	1.0	0
29	.1	.1	9	27	-----	51	384	844	244	9	.8	0
30	.1	.1	9.5	24	-----	61	269	915	216	8	.6	0
31	.1	-----	10	22	-----	93	-----	915	-----	6.5	.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.11	6.9
November	.1	.1	.10	6.0
December	11	.1	4.15	255
January	32	6	14.1	867
February	31	15	20.8	1,160
March	93	35	53.9	3,310
April	384	108	204	12,100
May	915	97	293	18,000
June	992	216	600	35,700
July	185	6.5	66.4	4,080
August	6	.5	2.06	127
September	.4	0	.06	3.8
The year	992	0	104	75,600

CHERRY CREEK NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 28, T. 2 N., R. 19 E. (revised), 3 miles by trail northwest from Lake Eleanor and 7½ miles northwest of Hetch Hetchy. Altitude, about 4,800 feet.

DRAINAGE AREA.—111 square miles.

RECORDS AVAILABLE.—April 1910 to September 1933.

DISCHARGE.—Maximum during year, 3,020 second-feet May 30 (gage height, 7.72 feet); minimum, 2.2 second-feet Sept. 23–24.

1910–33: Maximum, about 7,750 second-feet June 16, 1929 (gage height, 13.57 feet); no flow Sept. 6–12, 1910. Average, 23 years (1910–33), 348 second-feet.

REMARKS.—Records good except those for Dec. 8–11, 15–21, 23–26, Feb. 3–4, 9–16, which were estimated. Stage-discharge relation affected by ice during most of period Dec. 8 to Feb. 26. No diversions.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	5.5	2.2	25	36	42	114	428	560	1,850	314	10	3.5
2.....	4.5	3.3	21	30	45	127	548	488	1,500	292	9	3.5
3.....	4.7	8	21	30	45	132	680	424	1,230	284	8.5	3.5
4.....	4.7	7	14	28	45	138	765	464	1,230	259	8	3.3
5.....	4.5	5.5	11	30	45	158	742	456	1,180	245	7.5	3.3
6.....	4.0	4.7	8	32	45	192	742	352	1,440	234	7	3.1
7.....	4.0	4.5	6	32	45	208	640	345	1,610	214	6.5	3.1
8.....	3.8	4.2	6	36	45	211	492	376	1,610	188	6.5	3.1
9.....	3.8	4.2	6	42	45	214	388	307	1,730	158	6	3.1
10.....	3.8	4.0	6	44	45	217	345	252	1,730	132	6	3.1
11.....	3.8	3.8	5	36	45	176	380	262	1,790	114	5.5	3.1
12.....	3.8	3.8	5	32	45	179	460	292	1,970	102	5.5	3.1
13.....	3.5	3.5	6	32	45	152	560	326	1,970	100	5	3.1
14.....	3.5	3.5	6	32	45	138	680	428	2,030	96	4.9	3.1
15.....	3.5	3.5	8	30	45	124	765	424	1,910	86	4.7	3.0
16.....	3.5	3.5	9	20	50	141	660	408	1,670	77	4.5	3.0
17.....	3.3	3.3	20	20	55	146	416	388	1,470	66	4.5	2.8
18.....	3.3	3.3	25	20	55	149	295	318	1,130	57	4.5	2.8
19.....	3.3	3.3	20	18	55	185	241	448	922	50	4.5	2.6
20.....	3.3	3.3	20	20	55	259	273	640	832	44	4.2	2.6
21.....	3.3	3.3	25	25	65	273	408	832	832	38	4.2	2.4
22.....	3.3	3.1	22	30	70	221	580	572	742	33	4.0	2.4
23.....	3.1	3.1	24	32	75	176	720	620	680	28	4.0	2.4
24.....	3.1	3.1	26	32	65	135	742	922	640	24	4.0	2.2
25.....	3.1	3.1	28	34	65	135	640	1,310	592	21	3.8	2.6
26.....	3.1	3.0	30	35	90	127	468	1,470	568	18	3.8	5.5
27.....	3.1	3.0	30	36	112	146	700	1,610	592	16	3.8	5
28.....	3.1	3.1	35	38	112	241	855	1,850	532	14	3.8	3.8
29.....	3.3	3.1	30	40	-----	185	900	1,910	432	12	3.8	3.1
30.....	3.3	18	40	42	-----	208	548	2,100	364	12	3.5	3.0
31.....	3.3	-----	40	42	-----	318	-----	2,100	-----	11	3.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	5.5	3.1	3.65	224
November.....	18	3.0	4.31	256
December.....	40	5	18.6	1,140
January.....	44	18	31.8	1,960
February.....	112	42	57.0	3,170
March.....	318	114	178	10,900
April.....	900	241	569	33,900
May.....	2,100	252	750	46,100
June.....	2,030	364	1,230	73,200
July.....	314	11	108	6,640
August.....	10	3.5	5.32	327
September.....	5.5	2.2	3.14	187
The year.....	2,100	2.2	246	178,000

LAKE ELEANOR NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 3, T. 1 N., R. 19 E., at dam on Eleanor Creek 5½ miles northwest of Hetch Hetchy. Crest of dam is 4,661.0 feet above mean sea level.

RECORDS AVAILABLE.—October 1919 to September 1933 (stage only, 1919-30).

REMARKS.—This reservoir is part of Hetch Hetchy water supply system for San Francisco. Water is released down natural channel of Eleanor Creek, a tributary of Cherry Creek, and discharged into Tuolumne River at Early Intake. Reservoir capacity, 27,800 acre-feet. Storage below 1,800 acre-feet cannot be released.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	12,600	4,110	2,950	1,990	3,340	2,760	12,520	26,140	26,970	28,780	25,110	15,640
2-----	12,360	4,060	2,900	1,990	3,440	2,850	13,230	26,040	26,790	28,780	24,830	15,290
3-----	12,040	4,020	2,850	1,950	3,480	3,000	14,190	25,950	26,600	28,780	24,550	15,030
4-----	11,800	3,970	2,800	1,900	3,530	3,190	15,380	25,950	26,420	28,680	24,280	14,690
5-----	11,480	3,920	2,800	1,900	3,580	3,390	16,580	25,950	26,230	28,780	23,900	14,350
6-----	11,170	3,920	2,760	1,950	3,630	3,630	17,620	25,950	26,320	28,780	23,720	14,030
7-----	10,850	3,870	2,710	2,040	3,630	3,970	18,560	25,950	26,420	28,780	23,440	13,710
8-----	10,450	3,820	2,660	1,990	3,680	4,340	19,370	25,950	26,510	28,780	23,070	13,390
9-----	10,160	3,770	2,660	2,040	3,580	4,790	20,000	25,860	26,510	28,780	22,800	13,150
10-----	9,890	3,730	2,660	2,040	3,530	5,240	20,540	25,760	26,510	28,680	22,620	12,840
11-----	9,550	3,730	2,610	2,040	3,440	5,580	21,080	25,760	26,510	28,780	22,260	12,520
12-----	9,270	3,680	2,660	2,040	3,390	5,920	21,620	25,760	26,600	28,780	21,990	12,200
13-----	8,930	3,630	2,610	2,080	3,340	6,430	22,350	25,760	26,600	28,780	21,720	11,880
14-----	8,580	3,580	2,660	2,080	3,290	6,710	23,160	25,860	26,600	28,780	21,440	11,560
15-----	8,170	3,530	2,610	2,080	3,190	6,930	24,280	25,950	26,600	28,780	21,080	11,250
16-----	7,900	3,480	2,440	2,120	3,140	7,210	25,200	25,950	26,510	28,680	20,720	10,930
17-----	7,480	3,440	2,390	2,120	3,050	7,620	25,670	25,950	27,160	28,580	20,450	10,610
18-----	7,140	3,440	2,390	2,170	3,000	7,900	25,760	25,950	27,810	28,490	20,090	10,230
19-----	6,820	3,390	2,350	2,260	2,900	8,170	25,760	25,950	28,100	28,390	19,730	9,960
20-----	6,480	3,340	2,300	2,300	2,850	8,510	25,760	26,040	28,200	28,200	19,460	9,680
21-----	6,140	3,290	2,300	2,350	2,760	9,000	25,760	26,140	28,200	28,000	19,100	9,340
22-----	5,800	3,240	2,300	2,390	2,660	9,410	25,950	26,230	28,290	27,810	18,740	9,060
23-----	5,470	3,190	2,260	2,480	2,610	9,680	26,140	26,140	28,290	27,620	18,480	8,720
24-----	5,130	3,140	2,210	2,480	2,570	10,030	26,230	26,230	28,680	27,440	18,220	8,380
25-----	4,790	3,140	2,210	2,520	2,520	10,230	26,230	26,510	28,780	27,250	17,870	8,030
26-----	4,400	3,100	2,170	2,660	2,480	10,450	26,040	26,690	28,780	26,970	17,530	7,690
27-----	4,280	3,050	2,120	2,800	2,480	10,610	26,140	26,790	28,780	26,600	17,180	7,350
28-----	4,280	3,000	2,120	2,900	2,660	10,930	26,230	26,970	28,870	26,420	16,840	7,000
29-----	4,230	2,950	2,080	3,060	-----	11,320	26,420	27,070	28,870	26,040	16,580	6,710
30-----	4,170	2,950	2,040	3,140	-----	11,560	26,320	27,070	28,780	25,760	16,240	6,370
31-----	4,110	-----	2,040	3,240	-----	11,960	-----	27,070	-----	25,480	15,980	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30-----	12,920	-----	May 31-----	27,070	+750
Oct. 31-----	4,110	-8,810	June 30-----	28,780	+1,710
Nov. 30-----	2,950	-1,160	July 31-----	26,480	-3,300
Dec. 31-----	2,040	-910	Aug. 31-----	15,980	-9,500
Jan. 31-----	3,240	+1,200	Sept. 30-----	6,370	-9,610
Feb. 28-----	2,660	-580			
Mar. 31-----	11,960	+9,300	The year-----	-----	-6,550
Apr. 30-----	26,320	+14,360			

ELEANOR CREEK NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 3, T. 1 N., R. 19 E., in Yosemite National Park, a third of a mile below Lake Eleanor Dam and 5 $\frac{1}{2}$ miles northwest of Hetch Hetchy. Altitude, about 4,600 feet.

DRAINAGE AREA.—79 square miles (above dam site in sec. 3, T. 1 N., R. 19 E.). RECORDS AVAILABLE.—November 1909 to September 1933.

DISCHARGE.—Maximum during year, 1,010 second-feet May 31 (gage height, 5.48 feet); minimum, 0.1 second-foot Jan. 7.

1909-33: Maximum, 6,400 second-feet Mar. 25, 1928 (gage height, 11.0 feet); no flow Sept. 8-14, 1910, Oct. 15-21, 1930, Nov. 19, 22, 23, 1931. Average, 23 years (1910-33), 211 second-feet.

REMARKS.—Records good. Records for Jan. 10 to Mar. 6 were computed from outlet-gate openings in Lake Eleanor Dam. No diversions. (See records for Lake Eleanor, which stores water above station.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	168	21	20	20	20	49	20	470	885	142	160	185
2	170	21	20	20	27	50	.6	442	770	103	155	185
3	172	21	20	20	27	37	.4	381	680	110	155	185
4	172	21	20	20	27	28	.2	367	570	108	155	185
5	170	21	19	20	27	28	.2	374	502	90	155	185
6	168	21	19	9	40	14	.2	336	550	88	155	188
7	168	21	18	5.5	50	2.3	1.4	339	635	88	155	188
8	170	21	18	11	65	2.5	1.4	328	635	81	155	188
9	170	21	18	11	76	2.5	1.4	301	658	73	155	185
10	168	21	18	11	76	2.4	1.4	265	658	66	165	185
11	168	21	18	11	76	2.1	1.5	241	658	41	168	185
12	165	21	19	11	76	3.4	1.6	235	680	40	168	185
13	168	21	20	11	76	3.0	1.5	238	680	42	168	182
14	158	21	20	12	76	2.3	1.5	292	680	46	168	182
15	165	21	21	12	76	7	2.0	336	680	50	168	180
16	172	21	21	12	76	24	37	342	502	62	172	180
17	168	21	21	12	76	24	195	336	28	73	175	180
18	170	21	21	12	76	24	235	307	103	88	175	178
19	172	21	21	12	76	24	220	310	259	107	175	172
20	168	21	21	12	76	24	212	367	295	110	178	172
21	168	21	21	12	76	24	247	486	301	121	178	175
22	165	21	21	12	76	9.5	339	482	289	127	178	178
23	168	21	21	12	76	2.2	442	438	103	135	180	180
24	165	21	21	12	76	2.0	498	494	71	133	180	180
25	162	21	21	12	76	2.0	482	658	210	131	180	178
26	115	21	20	12	76	1.9	398	770	212	139	182	170
27	26	21	20	12	68	8.5	402	815	220	148	182	165
28	24	21	20	12	49	27	498	885	247	148	182	165
29	21	21	20	12	-----	37	612	910	198	155	182	162
30	21	21	20	12	-----	28	550	935	170	155	185	160
31	21	-----	20	12	-----	28	-----	960	-----	160	185	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	172	21	143	8,790
November	21	21	21.0	1,250
December	21	18	19.9	1,220
January	20	5.5	12.8	787
February	76	20	63.1	3,500
March	50	1.9	16.6	1,020
April	612	2	180	10,700
May	960	235	466	28,700
June	885	28	438	26,100
July	160	40	102	6,270
August	185	155	170	10,600
September	188	160	179	10,700
The year	960	.2	151	110,000

SOUTH FORK OF TUOLUMNE RIVER AT ITALIAN FLAT, NEAR SEQUOIA, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 29, T. 1 S., R. 19 E., at Italian Flat, 1¼ miles northeast of highway bridge on Big Oak Flat road and 1½ miles northwest of Sequoia. Altitude, about 3,800 feet.

DRAINAGE AREA.—66.7 square miles.

RECORDS AVAILABLE.—October 1924 to June 1930, October 1931 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 433 second-feet May 28 (gage height, 3.00 feet); minimum, 2.0 second-feet Sept. 17.

1924-33: Maximum recorded, 695 second-feet Mar. 27, 1928 (gage height, 4.45 feet); minimum, 0.5 second-foot Aug. 20, 1928.

REMARKS.—Records excellent except those for Dec. 8 to Feb. 21, which were estimated on account of ice. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	5	6	11	10	25	88	98	284	39	8.5	3.6
2.....	5	6	8	10	27	105	103	254	37	8.5	3.6
3.....	4.6	7	8	10	28	125	90	216	36	8.5	3.6
4.....	4.6	7	8.5	10	30	135	97	172	33	8.5	3.6
5.....	4.6	7	8	10	32	135	97	169	32	8	3.6
6.....	4.1	6.5	8	11	38	137	86	215	32	8	3.6
7.....	4.6	6.5	7.5	11	43	121	101	223	31	7.5	3.6
8.....	5	6.5		11	44	97	95	216	28	7	3.6
9.....	6	6		11	44	82	86	216	26	7	3.0
10.....	6	6		11	47	74	80	208	25	7	3.6
11.....	6	6		12	42	77	78	213	24	6.5	3.0
12.....	5	6		12	111	83	76	211	23	6.5	3.0
13.....	5	6		12	66	97	76	200	22	6	3.0
14.....	5	6		12	47	119	83	175	20	5	3.0
15.....	5	6		12	42	133	90	154	19	5	2.8
16.....	5	6.5		14	68	124	98	133	18	5	2.8
17.....	5	7		14	72	95	97	111	16	5	2.5
18.....	6	6.5		14	55	80	90	95	15	5	2.5
19.....	6	6		14	55	71	95	83	14	5	2.8
20.....	6	6.5	8	14	61	70	117	78	14	4.6	2.8
21.....	6	6		14	65	74	148	72	13	4.6	2.8
22.....	6	6.5		16	58	88	119	66	12	4.1	2.8
23.....	6	6		17	52	108	127	62	12	4.1	2.8
24.....	6	6		18	46	111	165	58	12	4.1	2.8
25.....	6	6		17	46	103	215	54	12	4.1	3.0
26.....	6	6		19	47	92	245	51	11	4.1	3.0
27.....	6	6		21	48	101	276	51	10	3.6	3.0
28.....	6	6		24	103	124	318	51	9	3.6	3.0
29.....	6	6.5			76	138	318	46	9	3.6	3.0
30.....	6	15			65	106	318	42	8.5	3.6	2.8
31.....	5				74		310		8.5	3.6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	6	4.1	5.44	334
November.....	15	6	6.57	391
December.....			8.10	498
January.....			9.0	553
February.....	24	10	13.6	755
March.....	111	25	53.5	3,290
April.....	138	70	103	6,130
May.....	318	76	142	8,730
June.....	284	42	139	8,270
July.....	39	8.5	20.0	1,230
August.....	8.5	3.6	5.65	347
September.....	3.6	2.5	3.09	184
The year.....	318	2.5	42.4	30,700

SOUTH FORK OF TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 29, T. 1 S., R. 18 E., 75 feet below highway bridge on Big Oak Flat road and half a mile southwest of Oakland Recreation Camp. Altitude, about 2,800 feet.

DRAINAGE AREA.—87.6 square miles.

RECORDS AVAILABLE.—March 1923 to September 1933.

DISCHARGE.—Maximum during year, 464 second-feet May 28 (gage height, 3.90 feet); minimum, 2.8 second-feet Sept. 18.

1923-33: Maximum, about 1,500 second-feet Apr. 16, 1923 (gage height, 7.03 feet); minimum, 0.6 second-foot Aug. 27 to Sept. 6, 1931. Average, 10 years (1923-33), 58.8 second-feet.

REMARKS.—Records good except those for Oct. 8-13, Dec. 8-11, which were estimated. Stage-discharge relation slightly affected by ice Dec. 8-11. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	5.5	12	9.5	13	31	121	109	301	39	8.5	3.9
2	5	5.5	9	9.5	14	35	147	119	271	36	8.5	3.8
3	5	6.5	8	9.5	13	37	179	101	240	35	8.5	3.7
4	4.9	7	8.5	10	13	39	190	107	195	32	8.5	3.7
5	4.6	7	8	9.5	14	42	188	105	186	30	8	3.8
6	4.4	7	8	9.5	14	51	184	93	220	28	8	3.9
7	4.4	7	7.5	9.5	15	62	160	117	235	28	7.5	3.9
8	4.5	6.5	7	10	15	65	126	114	225	26	7.5	4.0
9	4.6	6.5	7	10	14	67	104	101	230	24	7	4.0
10	4.6	6	7	10	14	67	91	93	222	22	7	3.9
11	4.9	6	7	11	14	65	91	88	225	21	6.5	3.7
12	4.5	6	8	10	15	179	97	85	222	19	6	3.6
13	5	6	8.5	9.5	16	130	112	83	210	18	5.5	3.6
14	5	6	9	9.5	16	78	139	90	199	17	5	3.5
15	5	6	8.5	10	16	62	158	96	177	16	4.9	3.4
16	5	6	8.5	10	17	116	147	104	156	16	4.7	3.3
17	4.9	6.5	14	10	19	166	112	102	132	15	5	3.2
18	5	6.5	13	10	19	99	93	94	110	14	4.9	3.2
19	5.5	6	14	9.5	18	87	81	97	94	14	4.9	3.4
20	5.5	6	14	8	17	94	78	119	85	13	4.8	3.5
21	5.5	6	11	10	18	101	81	160	80	12	4.6	3.4
22	5.5	6	9.5	12	19	84	96	128	73	12	4.4	3.5
23	6	6	11	14	22	73	121	134	69	12	4.3	3.5
24	6	6	9.5	13	23	61	124	168	64	11	4.2	3.5
25	6	6	10	12	21	58	119	215	60	11	4.1	3.7
26	6	6	10	12	22	56	101	248	55	10	4.0	4.0
27	6	6	9.5	14	26	60	107	276	54	9.5	4.0	4.0
28	5.5	6	9.5	17	29	141	135	326	56	9	3.9	3.8
29	5.5	6	10	17	-----	121	156	332	48	9.5	4.0	3.6
30	5.5	19	10	15	-----	91	119	332	43	8.5	4.0	3.5
31	5.5	-----	9.5	14	-----	101	-----	323	-----	8.5	4.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6	4.4	5.19	319
November	19	5.5	6.62	394
December	14	7	9.55	587
January	17	8	11.1	682
February	29	13	17.4	966
March	179	31	81.3	5,000
April	190	78	125	7,440
May	332	83	150	9,220
June	301	43	151	8,980
July	39	8.5	18.6	1,140
August	8.5	3.9	5.70	350
September	4.0	3.2	3.65	217
The year	332	3.2	48.8	35,300

MIDDLE TUOLUMNE RIVER NEAR MATHER, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 15, T. 1 S., R. 19 E., at highway bridge 2 miles south of Mather. Altitude, about 4,500 feet.

DRAINAGE AREA.—50.6 square miles.

RECORDS AVAILABLE.—October 1924 to December 1929, October 1931 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 419 second-feet May 30 (gage height, 2.40 feet); minimum, 0.9 second-foot Nov. 2, 24.

1924-29, 1931-33: Maximum, 810 second-feet Mar. 25, 1928 (gage height, 4.00 feet); no flow part of September and Oct. 1, 1931.

REMARKS.—Records good except those for Dec. 2 to Feb. 28, Aug. 10 to Sept. 7, Sept. 26-30, which were estimated. Stage-discharge relation affected by ice Dec. 16 to Feb. 28. Small diversion above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.1	2.0	2.0	2.5	6.5	25	71	312	47	4.7	1.3
2	1.6	1.0	1.5	2.0	2.5	6.5	34	66	294	43	4.7	1.3
3	1.4	1.1	1.5	2.0	2.5	6.5	42	60	264	41	4.5	1.2
4	1.4	1.3	1.5	2.5	2.5	6.5	51	64	214	38	4.2	1.2
5	1.3	1.3	1.5	2.5	2.5	7	52	66	219	35	4.2	1.2
6	1.3	1.4	1.5	2.5	2.5	8.5	51	60	261	31	4.0	1.1
7	1.3	1.4	1.0	2.5	2.5	10	47	63	286	31	3.8	1.1
8	1.4	1.4	1.0	2.5	2.5	11	46	58	289	30	3.6	1.1
9	1.6	1.3	1.0	2.5	2.5	13	46	56	291	26	3.6	1.1
10	1.6	1.3	1.0	2.5	2.5	14	43	51	289	24	3.5	1.1
11	1.6	1.3	1.0	2.5	2.5	14	39	52	294	23	3.4	1.1
12	1.4	1.3	1.0	2.5	2.5	24	43	50	297	22	3.2	1.1
13	1.3	1.1	1.0	2.5	2.5	17	50	51	286	20	3.1	1.1
14	1.1	1.1	1.0	2.5	2.5	12	63	58	275	18	3.0	1.1
15	1.1	1.1	1.0	2.0	2.5	12	78	62	242	18	2.9	1.0
16	1.1	1.1	1.0	2.0	2.5	16	78	63	211	16	2.8	1.0
17	1.3	1.3	2.0	2.0	2.5	15	58	63	177	16	2.7	1.0
18	1.3	1.3	2.0	2.0	2.5	14	46	60	149	15	2.6	1.0
19	1.3	1.3	2.5	2.0	2.5	16	41	66	126	13	2.5	1.0
20	1.1	1.1	2.5	2.0	2.5	17	41	89	116	12	2.4	1.0
21	1.1	1.1	2.5	2.0	3.0	18	44	110	104	11	2.3	1.0
22	1.3	1.0	2.5	2.0	3.0	17	54	89	92	10	2.2	1.0
23	1.3	1.0	2.5	2.0	3.0	16	64	100	83	9.5	2.1	1.0
24	1.3	1.0	2.0	2.0	3.5	14	66	133	74	8.5	2.0	1.0
25	1.3	1.0	2.0	2.0	4.0	14	63	179	68	7.5	1.9	1.0
26	1.1	1.1	2.0	2.0	4.0	14	60	216	64	7	1.8	1.0
27	1.1	1.1	2.0	2.0	5	15	76	242	64	6.5	1.7	1.0
28	1.0	1.1	2.0	2.0	5.5	26	94	291	68	6	1.6	1.0
29	1.0	1.3	2.0	2.0	-----	19	106	309	58	5.5	1.5	1.0
30	1.0	2.9	2.0	2.0	-----	18	76	317	51	5	1.5	1.0
31	1.0	-----	2.0	2.0	-----	21	-----	332	-----	4.7	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.6	1.0	1.28	78.7
November	2.9	1.0	1.24	73.8
December	2.5	1.0	1.68	103
January	2.5	2.0	2.18	134
February	5.5	2.5	2.99	160
March	26	6.5	14.1	867
April	106	25	55.9	3,330
May	332	50	114	7,010
June	312	51	187	11,100
July	47	4.7	19.4	1,190
August	4.7	1.4	2.88	177
September	1.3	1.0	1.07	63.7
The year	332	1.0	33.6	24,300

MIDDLE TUOLUMNE RIVER NEAR BUCK MEADOWS, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 28, T. 1 S., R. 18 E., half a mile above junction with South Fork of Tuolumne River and 4 miles east of Buck Meadows. Altitude, about 2,800 feet.

DRAINAGE AREA.—71.0 square miles.

RECORDS AVAILABLE.—November 1916 to September 1933.

DISCHARGE.—Maximum during year, 590 second-feet May 31 (gage height, 5.43 feet); minimum, 0.2 second-foot Sept. 18.

1917-33: Maximum, 1,330 second-feet May 28, 1919 (gage height, 8.15 feet); no flow Sept. 4-14, 1924, Aug. 12 to Oct. 5, 1931. Average, 16 years (1917-33), 59.3 second-feet.

REMARKS.—Records good except those for Mar. 1 and May 2-3, which were estimated. Stage-discharge relation slightly affected by ice Dec. 9-14. Small irrigation diversion above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.9	1.3	4.4	3.3	6.5	13	36	81	394	47	5	0.4
2.....	1.0	1.4	3.1	3.2	6.5	14	44	75	340	43	5	.4
3.....	1.1	1.6	2.4	3.2	6	15	53	65	318	40	4.9	.4
4.....	1.0	1.8	2.4	3.3	6	15	61	68	236	37	4.7	.4
5.....	.9	1.9	2.5	3.3	6	16	62	73	236	34	4.5	.4
6.....	.8	1.9	2.5	3.2	6	19	62	65	277	32	4.5	.4
7.....	.8	2.1	2.3	3.2	5.5	22	56	72	340	31	4.2	.4
8.....	.8	2.0	1.9	3.3	5.5	24	53	68	340	30	3.9	.4
9.....	.9	2.0	2.0	3.3	5.5	26	51	65	340	28	3.6	.3
10.....	.9	1.9	2.2	3.5	5.5	28	51	58	340	24	3.3	.3
11.....	1.1	1.9	2.2	3.2	5.5	26	44	59	340	22	3.1	.4
12.....	.8	1.8	2.4	3.5	6.5	67	46	55	350	21	2.8	.4
13.....	1.1	1.8	2.4	4.2	8	53	53	53	340	19	2.5	.3
14.....	.9	1.8	2.4	4.2	6.5	31	65	61	318	18	2.2	.3
15.....	.8	1.8	2.9	3.9	6.5	24	82	65	267	16	1.9	.3
16.....	.9	1.8	3.1	4.1	9	45	88	65	234	15	1.7	.3
17.....	.9	1.7	4.1	4.2	9.5	63	71	67	198	14	1.8	.3
18.....	1.0	1.8	4.2	4.9	8	36	49	63	159	13	1.8	.2
19.....	1.0	1.7	4.7	8	7	34	48	67	136	12	1.4	.2
20.....	1.0	1.6	4.7	6.5	7	35	44	89	124	11	1.2	.2
21.....	1.2	1.6	4.1	5.5	7.5	37	46	117	113	10	1.2	.2
22.....	1.2	1.5	3.2	6	8.5	32	56	96	100	9	1.0	.2
23.....	1.4	1.5	3.8	7.5	9.5	29	68	101	91	8	.9	.2
24.....	1.5	1.5	3.3	6.5	9	24	71	132	83	7.5	.8	.2
25.....	1.5	1.4	3.3	8	8.5	23	69	182	74	7.5	.8	.3
26.....	1.5	1.4	3.5	7	9	23	65	233	68	7.5	.7	.3
27.....	1.4	1.6	3.3	10	11	23	78	267	68	7.5	.6	.3
28.....	1.4	1.6	3.3	10	12	47	98	340	76	6.5	.6	.4
29.....	1.4	1.7	3.2	13	-----	38	112	383	61	6.5	.6	.4
30.....	1.4	4.7	3.2	10	-----	32	88	394	53	5.5	.5	.3
31.....	1.3	-----	3.2	7.5	-----	32	-----	416	-----	5.5	.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1.5	0.8	1.09	67.0
November.....	4.7	1.3	1.80	107
December.....	4.7	1.9	3.10	191
January.....	13	3.2	5.50	338
February.....	12	5.5	7.41	412
March.....	67	13	30.5	1,880
April.....	112	36	62.3	3,710
May.....	416	53	129	7,930
June.....	394	53	214	12,700
July.....	47	5.5	19.0	1,170
August.....	5	.5	2.33	143
September.....	.4	.2	.32	18.9
The year.....	416	.2	39.6	28,700

BIG CREEK NEAR GROVELAND, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 15, T. 1 S., R. 16 E., 2,000 feet below highway bridge and 2 miles northeast of Groveland. Altitude, about 2,520 feet.

DRAINAGE AREA.—24.9 square miles.

RECORDS AVAILABLE.—October 1931 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 78 second-feet Mar. 17 (gage height, 2.71 feet); no flow during summer months.

1931-33: Maximum, 2,520 second-feet Feb. 6, 1932 (gage height, 6.70 feet); no flow several months each year.

REMARKS.—Records good. No diversions.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	0	1.5	5	3.8	1.3	0.3
2	0	0	1.5	5.5	3.2	3.2	.3
3	0	0	1.5	5.5	2.7	1.9	.4
4	0	0	1.5	4.9	2.4	1.3	.4
5	0	0	1.7	4.4	2.2	1.1	.4
6	0	0	1.9	4.1	2.0	1.0	.6
7	0	0	2.2	4.1	2.0	7.5	.5
8	0	0	2.0	4.4	1.9	5	.4
9	0	0	1.7	4.1	1.7	2.4	.4
10	0	0	1.7	3.8	1.5	2.0	.2
11	0	0	2.7	3.0	1.5	1.7	.2
12	0	0	10	26	1.3	1.3	.2
13	0	0	11	22	1.1	1.0	.1
14	0	0	7.5	11	.8	.8	.1
15	0	0	5.5	6.5	.6	.8	.1
16	0	0	8.5	40	.8	.6	.1
17	0	.1	8.5	52	.8	.6	.1
18	0	.1	6.5	29	1.0	.6	.1
19	0	4.1	5	13	1.0	.6	.1
20	0	1.5	4.6	9.5	.8	.6	.1
21	0	.6	5	7	.6	1.5	0
22	.1	.6	5.5	5.5	.6	1.5	0
23	.1	.8	6.5	5	.6	1.0	0
24	.1	.6	6	4.4	.6	.8	0
25	0	.6	5	3.8	.6	.6	0
26	0	.6	5	3.2	.6	.6	0
27	0	2.0	5.5	3.0	.6	.5	0
28	0	2.7	5.5	10	.6	.4	0
29	0	4.1	-----	8.5	1.9	.4	0
30	0	2.7	-----	5	1.3	.4	0
31	0	1.7	-----	4.4	-----	.4	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet
December	0.1		0		0.01		0.6
January	4.1		0		.74		45.5
February	11		1.5		4.68		260
March	52		3.0		10.2		627
April	3.8		.6		1.37		81.5
May	7.5		.4		1.40		86.1
June	.6		0		.17		10.1
The year	52		0		1.54		1, 110

NOTE.—No flow during months omitted.

WOODS CREEK NEAR JACKSONVILLE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 12, T. 1 S., R. 14 E., 1½ miles above mouth and 1½ miles northwest of Jacksonville. Altitude, about 645 feet.

DRAINAGE AREA.—98.4 square miles.

RECORDS AVAILABLE.—October 1925 to September 1933.

DISCHARGE.—Maximum during year, 695 second-feet Jan. 29 (gage height, 2.81 feet); no flow Oct. 1-9 and July 8 to Sept. 30.

1925-33: Maximum, 9,580 second-feet Feb. 6, 1932 (gage height, 8.50 feet); no flow at times during summers of 1929-33.

REMARKS.—Records good except those for May 20 to June 5, which were estimated. No diversions. At times water from the Stanislaus drainage is spilled into Woods Creek above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	2.3	20	11	33	30	33	21	7	1.8
2.....	0	2.4	21	10	30	30	30	22	6	1.6
3.....	0	2.6	19	9.5	28	31	28	20	9	1.2
4.....	0	2.8	16	9.5	25	31	28	23	8	.8
5.....	0	2.8	21	9	25	32	26	16	8	.6
6.....	0	2.8	10	9	25	32	24	22	12	.3
7.....	0	2.9	7.5	8.5	36	31	24	42	10	.1
8.....	0	2.9	6.5	9.5	28	34	23	69	8	0
9.....	0	3.0	8.5	10	22	36	22	36	6.5	0
10.....	.9	3.2	11	10	21	35	22	34	5	0
11.....	1.4	3.4	11	10	21	33	22	36	5	0
12.....	1.4	3.4	12	10	109	48	21	36	9	0
13.....	1.4	3.5	11	9.5	190	109	20	36	9.5	0
14.....	1.6	3.5	16	9.5	83	59	17	31	8.5	0
15.....	1.6	3.8	16	9.5	55	43	15	30	4.2	0
16.....	1.8	4.0	38	10	59	135	15	22	2.9	0
17.....	1.6	4.5	42	12	83	296	15	21	2.4	0
18.....	1.8	4.8	20	13	59	96	19	21	2.8	0
19.....	1.9	5	19	65	46	62	19	21	2.8	0
20.....	2.2	5	27	45	41	50	19	20	2.4	0
21.....	2.3	5	21	37	40	48	25	30	2.2	0
22.....	2.2	6	21	34	41	42	30	25	2.0	0
23.....	2.2	6	30	62	40	41	21	20	1.8	0
24.....	2.3	7	30	58	40	40	15	18	1.9	0
25.....	2.3	7	22	90	34	35	16	16	1.8	0
26.....	2.3	6.5	15	46	31	34	18	14	2.0	0
27.....	2.4	7	14	69	31	32	18	12	2.3	0
28.....	2.3	13	14	77	31	45	17	11	2.4	0
29.....	2.2	16	12	314	-----	68	17	10	2.2	0
30.....	2.3	21	12	119	-----	42	25	9	2.0	0
31.....	2.2	-----	12	49	-----	37	-----	8	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.4	0	1.37	84.2
November.....	21	2.3	5.44	324
December.....	42	6.5	17.9	1,100
January.....	314	8.5	40.1	2,470
February.....	190	21	46.7	2,590
March.....	296	30	55.4	3,410
April.....	33	15	21.5	1,280
May.....	69	8	24.3	1,490
June.....	12	1.8	4.99	297
July.....	1.8	0	.21	12.7
The year.....	314	0	18.0	13,100

NOTE.—No flow during months omitted.

MODESTO CANAL NEAR LA GRANGE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 17, T. 3 S., R. 14 E., about 1 mile below intake at La Grange Dam, on Tuolumne River, and half a mile north-east of La Grange. Altitude, about 260 feet.

RECORDS AVAILABLE.—April 1903 to September 1933.

DISCHARGE.—Maximum mean daily during year, 1,530 second-feet June 15-19; no flow at times.

1903-33: Maximum mean daily, 1,700 second-feet June 13-15, 1930; no flow at times. Average, 26 years (1907-33), 345 second-feet.

REMARKS.—Records good. Discharge estimated Feb. 17 to Mar. 5. Canal diverts from right bank of Tuolumne River at La Grange Dam. Water used for irrigation in Modesto and Waterford irrigation districts. Gage-height record and results of several discharge measurements furnished by Modesto Irrigation District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	392	592	0	0	275	14	496	801	736	958	741	588
2.....	347	537	0	0	275		503	915	732	942	945	588
3.....	334	595	0	0	275		510	796	732	950	927	566
4.....	323	568	0	0	276		787	841	721	950	906	555
5.....	320	604	0	0	269		972	789	721	953	873	555
6.....	323	464	0	0	264	176	978	786	980	739	810	550
7.....	326	0	86	0	264	274	978	789	1,140	679	772	534
8.....	327	0	28	0	269	273	980	786	1,150	681	758	521
9.....	324	0	0	0	270	269	980	636	1,160	677	736	516
10.....	323	0	0	0	270	274	983	537	1,160	679	734	519
11.....	323	0	0	0	269	277	978	537	1,160	688	738	509
12.....	333	0	0	0	275	275	980	451	1,240	690	734	498
13.....	345	0	0	0	275	274	983	447	1,480	690	732	512
14.....	352	0	0	0	270	273	980	398	1,490	685	736	500
15.....	349	0	0	33	269	269	992	400	1,530	674	760	478
16.....	347	0	0	298	99	270	983	403	1,530	508	760	460
17.....	370	0	0	256		273	983	400	1,530	442	760	460
18.....	669	0	0	263		271	978	402	1,530	453	760	464
19.....	684	0	0	269		273	975	402	1,530	449	760	462
20.....	658	0	0	274		276	975	398	1,520	451	760	462
21.....	696	0	0	285	14	275	856	405	1,200	451	760	462
22.....	490	0	0	271		271	786	400	1,050	444	760	462
23.....	0	0	0	276		274	782	397	1,040	442	762	449
24.....	0	0	0	275		271	789	398	1,040	442	758	442
25.....	0	0	0	265		329	801	403	1,050	440	758	444
26.....	0	0	0	265	14	273	801	635	1,020	438	729	444
27.....	0	0	0	268		271	806	743	1,060	437	666	446
28.....	0	0	0	270		269	803	732	1,130	440	608	455
29.....	0	0	0	268		202	810	736	1,130	442	574	456
30.....	0	0	0	270		17	808	732	1,020	446	570	456
31.....	212	0	0	275	-----	332	-----	736	-----	444	578	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	696	0	206	18,200
November.....	604	0	112	6,660
December.....	86	0	3.68	6,226
January.....	298	0	141	8,670
February.....	276	-----	155	8,610
March.....	332	14	221	13,600
April.....	992	496	867	51,600
May.....	915	397	591	36,300
June.....	1,530	721	1,150	68,400
July.....	953	437	607	37,300
August.....	945	570	749	46,100
September.....	588	442	494	29,400
The year.....	1,530	0	449	325,000

TURLOCK CANAL NEAR LA GRANGE, CALIF.

LOCATION.—Water-stage recorder near north line of NW¼ sec. 21, T. 3 S., R. 14 E., 2,400 feet below intake at La Grange Dam and 1¼ miles east of La Grange. Altitude, about 265 feet.

RECORDS AVAILABLE.—July 1899 to September 1933.

DISCHARGE.—Maximum mean daily during year, 1,750 second-feet May 8; minimum, 5 second-feet Feb. 13-14.

1907-33: Maximum mean daily, 1,900 second-feet several days in May 1928; no irrigation flow during periods each year, but a small flow is carried for town of La Grange. Average, 26 years (1907-33), 521 second-feet.

REMARKS.—Records good. Discharge estimated Oct. 26 to Dec. 9, Dec. 22-23, July 15-16, Aug. 7-8. Canal diverts from left bank of Tuolumne River at La Grange Dam. Water is used for irrigation in Turlock Irrigation District, and a minimum flow estimated as 5 second-feet to supply town of La Grange. From October to July water is diverted from canal at tunnel a third of a mile above gage and after passing through La Grange power plant returns to river. Gage-height record furnished by Turlock Irrigation District, through R. V. Meikle, chief engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,430		8	7.5	182	1,000	1,590	1,370	1,580	860	1,130
2.....	1,390		8	7.5	166	976	864	1,430	1,190	652	1,110
3.....	1,460		8.5	7.5	170	1,000	1,640	1,560	1,160	706	1,080
4.....	1,500		8	7.5	161	1,140	1,730	1,570	1,160	739	1,090
5.....	1,500		8	7	176	1,460	1,730	1,510	1,190	766	784
6.....	1,500	10	8	6.5	487	1,630	1,730	1,540	1,230	822	686
7.....	1,280		7.5	7.5	447	1,630	1,730	1,360	984	880	726
8.....	1,150		8	7.5	447	1,650	1,750	1,270	962	900	746
9.....	1,120		8	7.5	466	1,610	1,290	1,250	958	941	752
10.....	908	36	7.5	7.5	472	1,630	1,250	1,260	975	947	710
11.....	815	37	48	7.5	493	1,620	1,160	1,280	962	953	784
12.....	800	55	120	6.5	464	1,600	958	1,370	964	952	823
13.....	794	100	113	5	493	1,580	846	1,240	991	919	831
14.....	790	127	81	5	544	1,590	654	1,360	982	962	1,230
15.....	795	102	92	6	523	1,610	515	1,360	960	952	892
16.....	684	114	6.5	46	546	1,610	618	1,550	1,110	940	896
17.....	40	123	6.5	152	512	1,630	762	1,620	1,200	952	845
18.....	32	110	7	163	508	1,630	743	1,650	1,190	942	896
19.....	34	151	7	342	464	1,630	755	1,640	1,200	967	918
20.....	34	152	6.5	126	494	1,630	750	1,610	1,220	963	932
21.....	32	153	6.5	198	521	1,490	721	1,650	1,200	984	927
22.....	33	180	6.5	171	512	1,390	822	1,640	1,210	1,020	911
23.....	32	180	6.5	172	496	1,340	1,130	1,650	1,170	975	948
24.....	31	158	6.5	161	498	1,380	1,180	1,590	1,200	1,030	916
25.....	27	88	6.5	184	491	1,530	1,210	1,590	1,200	1,010	949
26.....	19	72	6.5	187	428	1,570	1,190	1,650	1,190	1,010	792
27.....	19	128	6.5	154	496	1,660	1,210	1,640	1,190	1,040	770
28.....	19	133	6.5	149	937	1,690	1,190	1,630	1,170	1,130	783
29.....	19	114	6.5	-----	1,810	1,690	1,240	1,620	1,150	1,190	779
30.....	19	111	8	-----	1,490	1,660	1,250	1,620	1,130	1,190	790
31.....	19	159	7.5	-----	1,160	-----	1,260	-----	1,160	1,180	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,500	19	591	36,300
November.....	-----	-----	15	893
December.....	180	-----	86.2	5,300
January.....	120	6.5	20.7	1,270
February.....	342	5	78.9	4,380
March.....	1,490	161	534	32,800
April.....	1,690	976	1,510	89,800
May.....	1,750	515	1,140	70,100
June.....	1,650	1,240	1,500	89,300
July.....	1,580	958	1,130	69,500
August.....	1,190	652	951	58,500
September.....	1,230	686	881	52,400
The year.....	1,750	5	706	511,000

STANISLAUS RIVER BASIN

MIDDLE FORK OF STANISLAUS RIVER AT SAND BAR FLAT, NEAR AVERY, CALIF.

LOCATION.—Water-stage recorder in sec. 19, T. 4 N., R. 17 E., half a mile upstream from Pacific Gas & Electric Co. diversion dam at Sand Bar Flat and 11 miles southeast of Avery. Altitude, about 2,450 feet.

DRAINAGE AREA.—329 square miles, above diversion dam.

RECORDS AVAILABLE.—September 1905 to September 1933.

DISCHARGE.—Maximum mean daily during year, 3,090 second-feet May 30; minimum, 72 second-feet Oct. 12.

1905-33: Maximum mean daily, 9,760 second-feet Mar. 19, 1907; minimum, 30 second-feet Aug. 24, 1924. Average, 27 years (1905-8, 1909-33), 668 second-feet.

REMARKS.—Regulation and diversion into Middle Fork from South Fork above station. Storage at Relief Reservoir. Record of daily discharge furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	266	98	179	101	114	103	381	764	2,730	682	185	305
2.....	262	100	111	98	111	110	480	717	2,430	610	182	310
3.....	272	103	105	98	112	117	606	630	2,100	633	177	310
4.....	274	100	105	103	114	121	737	707	1,670	637	171	308
5.....	268	100	104	100	115	126	700	753	1,550	647	166	308
6.....	268	104	100	97	118	153	768	661	1,860	637	154	308
7.....	264	103	95	101	118	178	686	661	2,100	613	151	308
8.....	129	104	93	101	121	194	606	606	2,450	580	146	308
9.....	87	255	100	105	117	197	522	593	2,650	516	151	308
10.....	75	247	85	105	114	199	474	552	2,610	476	251	305
11.....	73	249	95	98	114	196	489	543	2,610	445	257	305
12.....	72	264	110	101	118	203	537	546	2,850	436	265	305
13.....	73	283	110	105	117	196	630	568	2,910	442	267	305
14.....	83	283	108	105	115	169	721	696	2,940	428	267	302
15.....	98	274	110	104	114	161	870	742	2,860	406	287	302
16.....	98	272	111	103	121	187	841	746	2,590	370	295	301
17.....	82	272	108	103	128	205	633	768	2,290	328	330	301
18.....	82	270	104	101	117	181	525	707	1,820	296	310	301
19.....	83	272	108	97	117	190	483	753	1,490	274	390	302
20.....	82	272	101	101	117	227	489	897	1,350	259	316	302
21.....	98	274	89	103	121	270	568	1,060	1,320	253	312	305
22.....	100	289	82	115	124	255	661	868	1,250	251	314	302
23.....	97	287	90	114	131	233	771	949	1,170	243	310	302
24.....	98	289	87	107	131	203	818	1,230	1,120	237	310	298
25.....	98	300	85	107	120	188	833	1,270	1,040	231	316	301
26.....	121	295	98	110	124	179	696	2,080	1,010	225	312	223
27.....	103	295	91	114	132	188	764	2,320	990	223	308	118
28.....	101	298	91	108	100	245	927	2,670	914	213	305	101
29.....	112	298	97	108	-----	243	985	2,960	845	205	308	96
30.....	100	346	96	115	-----	235	775	3,090	760	198	308	93
31.....	98	-----	100	117	-----	295	-----	3,020	-----	189	305	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	274	72	133	8,180
November.....	346	98	233	13,900
December.....	179	82	102	6,270
January.....	117	97	105	6,460
February.....	132	100	118	6,550
March.....	295	103	192	11,800
April.....	985	381	666	39,600
May.....	3,090	543	1,150	70,700
June.....	2,940	760	1,880	112,000
July.....	682	189	393	24,200
August.....	390	146	262	16,100
September.....	310	93	275	16,400
The year.....	3,090	72	458	332,000

MELONES RESERVOIR AT MELONES DAM, CALIF.

LOCATION.—Staff gage and reference point near center of sec. 11, T. 1 N., R. 13 E., at Melones Dam on Stanislaus River. Capacity, 112,500 acre-feet. Elevation of crest of dam, 723 feet above mean sea level.

RECORDS AVAILABLE.—June 1927 to September 1933.

REMARKS.—Water is stored in reservoir for irrigation use. Released water flows down Stanislaus River to Goodwin Dam, where it is diverted into Oakdale and South San Joaquin Canals. Part of released water passes through power house 1 mile below dam. Record of daily contents furnished by Pacific Gas & Electric Co.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23,864	8,570	15,789	10,850	18,640	11,020	10,765	39,751	102,950	111,685	80,350	31,236
2	22,941	8,606	16,128	11,108	18,940	10,356	11,275	40,721	102,100	110,945	79,023	30,145
3	22,253	8,570	16,241	10,807	19,253	10,032	12,115	42,200	101,080	110,028	77,552	29,149
4	21,435	8,642	15,129	10,558	19,565	9,870	13,480	43,816	100,060	109,479	75,800	28,260
5	20,779	8,678	15,290	10,457	20,000	9,756	15,129	44,960	99,550	108,747	73,922	27,460
6	19,815	8,714	14,754	10,356	20,321	10,150	16,580	46,978	100,570	108,381	72,060	26,684
7	19,065	8,930	14,330	10,194	19,690	9,832	18,040	47,620	101,080	107,832	70,660	26,145
8	18,400	8,858	13,285	10,234	18,520	9,718	18,760	49,167	100,570	107,466	68,995	25,540
9	17,624	8,894	13,190	10,475	17,392	9,642	19,253	49,944	100,570	106,554	67,240	25,099
10	16,696	8,930	13,190	8,951	16,467	9,376	19,253	50,511	100,570	106,008	65,526	24,511
11	15,789	9,148	13,237	8,566	16,467	9,038	18,940	50,965	100,570	105,280	63,965	23,935
12	14,861	9,376	13,430	9,604	16,754	8,894	18,700	51,192	101,420	104,370	62,584	23,509
13	13,880	9,756	13,380	9,728	17,334	9,074	18,760	51,306	101,080	103,642	60,970	23,154
14	12,953	10,153	13,430	9,870	16,696	9,110	19,253	51,760	100,910	102,950	59,506	22,801
15	12,070	10,457	13,480	10,072	16,467	8,966	20,065	52,793	100,740	102,100	57,831	22,527
16	11,147	10,765	13,430	10,234	15,902	8,678	21,705	53,948	104,370	101,080	55,073	22,253
17	10,396	11,020	12,237	10,275	14,807	9,148	23,083	55,350	109,845	100,060	54,528	21,911
18	10,315	11,317	13,000	10,296	14,230	9,981	23,793	56,760	110,577	99,380	52,908	21,435
19	10,052	11,575	13,190	10,722	13,142	9,991	24,219	57,950	109,662	98,360	51,192	21,173
20	9,756	11,890	12,715	11,190	13,480	10,765	24,437	59,628	110,394	96,830	49,498	20,911
21	9,566	12,250	12,205	11,487	12,430	10,892	24,584	62,835	111,315	95,488	47,841	20,649
22	9,566	12,572	11,935	11,935	11,620	11,275	25,246	66,439	112,055	94,148	46,229	20,321
23	9,262	12,905	11,935	12,250	11,755	11,487	26,761	68,320	111,610	92,660	44,648	20,065
24	8,966	13,237	11,890	12,500	11,710	11,445	28,740	70,240	112,610	91,360	42,900	19,815
25	8,714	13,380	11,890	12,700	11,845	11,232	31,320	73,922	112,795	89,904	41,400	19,440
26	8,750	13,780	12,205	14,280	12,115	11,020	33,980	79,465	113,165	88,349	39,848	19,190
27	8,686	14,180	11,980	14,754	12,525	11,105	34,514	86,027	112,980	87,087	38,144	18,760
28	8,714	14,594	11,020	15,676	11,800	10,722	35,226	93,310	112,795	85,877	36,488	18,220
29	8,570	15,022	11,020	16,467	-----	10,680	36,761	101,760	112,425	84,522	34,870	17,624
30	8,498	15,397	10,880	17,508	-----	10,765	38,896	103,120	112,055	83,324	33,548	17,102
31	8,642	-----	10,880	18,160	-----	10,680	-----	103,290	-----	81,536	32,250	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30	24,511	-----	May 31	103,290	+64,394
Oct. 31	8,642	-15,869	June 30	112,055	+8,765
Nov. 30	15,397	+6,755	July 31	81,536	-30,519
Dec. 31	10,880	-4,517	Aug. 31	32,250	-49,286
Jan. 31	18,160	+7,280	Sept. 30	17,102	-15,148
Feb. 28	11,800	-6,360			
Mar. 31	10,680	-1,120	The year	-----	-7,409
Apr. 30	38,896	+28,216			

STANISLAUS RIVER BELOW MELONES POWER HOUSE, CALIF.

LOCATION.—Water-stage recorder near line between secs. 10 and 15, T. 1 N., R. 13 E., 300 feet below power house and 1 mile below Melones Dam. Altitude, about 500 feet.

DRAINAGE AREA.—898 square miles.

RECORDS AVAILABLE.—January 1931 to September 1933.

DISCHARGE.—Maximum during year, 7,660 second-feet May 31 (gage height, 10.80 feet); minimum, 1 second-foot (estimated) Feb. 6.

1931-33: Maximum, 10,800 second-feet May 18, 1932 (gage height, 12.36 feet); minimum, that of Feb. 6, 1933.

REMARKS.—Records good. Discharge estimated Nov. 9-16, Mar. 17-21, Mar. 26 to Apr. 1. Numerous diversions and several storage reservoirs above. See record for Melones Reservoir. Gage-height record furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	746	136	111	12	79	619	610	1,210	6,310	1,200	884	819
2.....	652	126	126	203	79	455	486	978	5,690	1,160	996	771
3.....	739	100	746	200	82	408	612	655	4,830	1,110	1,030	763
4.....	747	132	16	206	81	407	655	943	3,570	1,100	1,030	708
5.....	747	136	378	207	6.5	66	685	771	3,100	1,050	1,020	670
6.....	675	12	403	192	544	466	803	1,050	3,330	987	867	605
7.....	630	141	650	186	843	494	960	934	5,250	960	987	584
8.....	622	136	195	4.5	838	495	1,080	934	4,830	943	1,040	550
9.....	622	130	128	400	661	526	1,070	952	4,830	952	1,020	518
10.....	622	130	123	352	241	590	1,110	978	4,830	934	996	584
11.....	622	130	16	89	81	619	1,110	1,040	4,180	934	978	505
12.....	615	130	120	87	11	472	1,120	1,080	5,390	934	1,040	466
13.....	608	12	112	90	667	626	1,130	1,060	5,250	795	934	466
14.....	615	130	108	91	433	628	1,130	1,080	5,110	884	1,060	440
15.....	600	130	155	16	544	615	1,140	1,120	3,660	884	1,130	428
16.....	525	130	234	91	830	608	1,120	1,110	1,460	909	1,120	440
17.....	302	130	274	87	746	600	1,030	1,080	2,320	731	1,120	512
18.....	225	134	19	88	741	540	943	1,020	3,100	892	1,110	453
19.....	260	111	440	87	10	310	859	892	2,580	926	1,120	428
20.....	252	14	450	81	751	510	851	626	1,410	960	1,160	428
21.....	126	114	452	76	684	530	835	619	1,460	952	1,130	428
22.....	168	122	218	12	234	525	739	943	1,460	960	1,150	428
23.....	273	128	199	46	190	560	700	1,160	1,560	909	1,150	428
24.....	248	124	217	43	154	608	550	1,180	1,660	943	1,140	453
25.....	151	130	13	46	153	592	550	1,180	1,230	969	1,140	440
26.....	158	128	208	46	19	488	1,020	1,170	1,560	875	1,140	446
27.....	162	11	213	46	659	610	1,210	1,180	1,510	875	1,130	440
28.....	167	121	640	49	662	610	1,210	1,200	1,460	900	1,090	440
29.....	189	118	210	24	-----	610	1,220	4,330	1,350	900	1,000	434
30.....	7.5	126	206	48	-----	610	1,220	6,470	1,210	859	934	428
31.....	132	-----	203	73	-----	610	-----	6,630	-----	884	859	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	747	7.5	426	26,200
November.....	141	11	112	6,660
December.....	746	13	245	15,100
January.....	400	4.5	106	6,520
February.....	843	6.5	394	21,900
March.....	628	66	529	32,500
April.....	1,220	486	925	55,000
May.....	6,630	619	1,470	90,400
June.....	6,310	1,210	3,180	189,000
July.....	1,200	731	944	58,000
August.....	1,160	859	1,050	64,600
September.....	819	428	517	30,800
The year.....	6,630	4.5	825	597,000

STANISLAUS RIVER NEAR KNIGHTS FERRY, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 1, T. 1 S., R. 12 E., 300 feet above old Tulloch Dam, 2 miles above the Goodwin Dam, and 6 miles above Knights Ferry.

DRAINAGE AREA.—972 square miles.

RECORDS AVAILABLE.—December 1915 to December 1932 (discontinued). May 1903 to April 1916 at Knights Ferry.

DISCHARGE.—Maximum during period, 1,260 second-feet Dec. 3 (gage height, 2.40 feet); minimum, 10 second-feet Oct. 31.

1915-32: Maximum, about 40,000 second-feet Mar. 25, 1928 (gage height, 17.0 feet from flood marks); minimum, 0.4 second-foot Nov. 5, 1931.

REMARKS.—Records good. Numerous diversions and several storage reservoirs above dam. (See record for Melones Reservoir.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1.....	715	133	125	11.....	600	138	59	21.....	111	98	407
2.....	600	127	128	12.....	590	135	86	22.....	150	137	208
3.....	671	106	653	13.....	580	54	121	23.....	264	143	188
4.....	704	146	126	14.....	580	96	116	24.....	239	133	197
5.....	715	142	285	15.....	570	133	154	25.....	148	137	80
6.....	660	56	370	16.....	484	132	220	26.....	151	140	130
7.....	620	101	616	17.....	323	131	262	27.....	160	56	196
8.....	610	142	232	18.....	214	134	76	28.....	171	88	566
9.....	590	134	134	19.....	252	136	337	29.....	180	126	207
10.....	610	131	126	20.....	252	58	407	30.....	61	128	180
								31.....	106		186

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	715	61	409	25, 100
November.....	146	54	118	7, 020
December.....	653	59	232	14, 300
The period				46, 400

NORTH FORK OF STANISLAUS RIVER NEAR AVERY, CALIF.

LOCATION.—Water-stage recorder in sec. 35, T. 5 N., R. 15 E., 700 feet above intake of Utica Mining Co.'s canal and 5 miles northeast of Avery. Altitude, about 3,400 feet.

DRAINAGE AREA.—163 square miles.

RECORDS AVAILABLE.—July 1914 to September 1922, November 1928 to September 1933.

DISCHARGE.—Maximum during year, 3,580 second-feet May 29 (gage height, 7.31 feet); minimum, 15 second-feet Nov. 18–20.

1914–22, 1928–33: Maximum, 5,250 second-feet May 11, 1915 (gage height, 8.7 feet); minimum, 5.5 second-feet Dec. 6–7, 1929. Average, 12 years (1914–22, 1929–33), 394 second-feet.

REMARKS.—Records excellent except those for Mar. 16–19, which were estimated. Storage in three reservoirs above station and diversion from Beaver Creek.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	68	35	26	22	23	45	245	690	2,050	185	49	53
2.....	65	38	22	21	22	46	314	605	1,800	168	49	40
3.....	63	34	20	21	20	51	386	512	1,680	155	48	32
4.....	62	30	19	22	19	56	445	645	1,220	141	48	30
5.....	61	30	19	20	18	58	400	690	1,220	132	47	30
6.....	60	30	18	20	18	70	430	548	1,800	123	46	34
7.....	59	29	18	21	18	80	430	530	1,850	114	45	34
8.....	58	28	17	21	18	88	478	460	1,710	108	44	37
9.....	57	21	17	22	18	97	386	415	1,710	97	43	40
10.....	55	17	17	21	17	111	317	386	1,620	87	42	40
11.....	52	17	18	20	17	102	357	371	1,580	78	41	40
12.....	47	16	18	21	18	111	430	386	1,620	69	41	40
13.....	47	16	18	22	18	97	548	445	1,530	64	40	44
14.....	47	16	18	22	18	84	645	668	1,410	60	39	46
15.....	47	16	18	22	19	80	840	740	1,260	56	39	46
16.....	43	16	18	20	22	90	765	715	1,080	49	39	46
17.....	38	16	29	19	23	120	478	715	900	44	43	46
18.....	38	15	23	19	24	110	357	605	715	39	48	46
19.....	38	15	24	18	22	120	297	715	585	44	47	46
20.....	38	15	22	22	24	128	343	960	512	61	46	46
21.....	38	16	22	22	26	151	530	1,150	478	60	45	46
22.....	38	16	20	22	28	135	668	790	415	59	44	46
23.....	38	16	22	22	32	120	765	870	371	58	42	46
24.....	37	16	21	22	30	102	815	1,290	343	57	41	47
25.....	37	16	21	21	30	102	815	1,760	304	57	40	53
26.....	37	16	21	23	33	97	548	1,950	285	55	39	50
27.....	36	16	21	24	40	106	690	2,050	275	53	37	49
28.....	36	17	22	24	43	145	930	2,360	275	53	39	46
29.....	36	18	20	26	-----	137	960	2,580	234	52	42	44
30.....	35	30	21	24	-----	138	715	2,640	206	51	39	44
31.....	35	-----	22	24	-----	194	-----	2,420	-----	50	45	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	68	35	46.6	2,870
November.....	38	15	20.9	1,240
December.....	29	17	20.4	1,250
January.....	26	18	21.6	1,330
February.....	43	17	23.5	1,310
March.....	194	45	102	6,270
April.....	960	245	544	32,400
May.....	2,640	371	1,020	62,700
June.....	2,050	206	1,030	61,300
July.....	185	39	80.0	4,920
August.....	49	37	43.1	2,650
September.....	53	30	42.9	2,550
The year.....	2,640	15	250	181,000

SOUTH SAN JOAQUIN CANAL NEAR KNIGHTS FERRY, CALIF.

LOCATION.—Water-stage recorder in sec. 15, T. 1 S., R. 12 E., three-quarters of a mile below head gate at Goodwin Dam, on Stanislaus River, 4 miles above Knights Ferry. Altitude, about 345 feet.

RECORDS AVAILABLE.—May 1914 to September 1933. Miscellaneous measurements and rough estimates for 1913.

DISCHARGE.—Maximum mean daily during year, 962 second-feet Apr. 30; no flow at times.

1914-33: Maximum mean daily, 1,070 second-feet July 1-3, 1921; no flow during several months each year. Average, 17 years (1914-30, 1931-32), 345 second-feet.

REMARKS.—Records fair. No records Oct. 28 to Dec. 31, Feb. 17 to Mar. 6. Discharge estimated Jan. 16-19. Canal diverts from right bank of Stanislaus River at Goodwin Dam; water used for irrigation in Oakdale and South San Joaquin Irrigation districts. Gage-height record furnished by South San Joaquin Irrigation District.

Discharge, in second-feet, 1932-33

Day	Oct.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	512	285	88	-----	453	953	740	910	636	572
2.....	439	26	75	-----	369	740	732	910	716	535
3.....	432	192	78	-----	376	236	724	885	796	505
4.....	498	188	80	-----	439	431	748	862	796	475
5.....	505	194	72	-----	453	288	732	796	788	432
6.....	460	200	132	-----	550	334	748	724	644	383
7.....	411	178	294	81	676	644	780	692	676	348
8.....	411	33	334	82	860	764	852	668	788	314
9.....	411	0	362	275	836	796	885	676	796	268
10.....	404	0	334	383	876	812	885	644	748	320
11.....	404	0	162	390	885	836	860	652	724	320
12.....	397	0	79	341	885	852	860	652	772	242
13.....	383	0	348	355	885	852	894	668	700	242
14.....	383	115	404	404	885	885	902	644	756	230
15.....	383	144	397	397	885	902	902	596	885	212
16.....	314	120	212	411	885	886	919	620	876	212
17.....	165	150	-----	390	820	732	910	620	876	281
18.....	64	83	-----	355	732	724	910	628	868	281
19.....	105	156	-----	341	604	588	910	628	860	224
20.....	105	125	-----	320	588	224	910	684	910	218
21.....	74	88	-----	341	565	224	910	684	894	212
22.....	44	72	-----	369	439	600	910	700	894	212
23.....	46	95	-----	425	248	902	910	660	894	212
24.....	123	88	-----	468	194	919	919	652	894	236
25.....	85	212	-----	439	212	919	910	724	885	236
26.....	36	183	-----	383	647	910	919	644	876	236
27.....	47	100	-----	404	953	902	902	572	902	236
28.....	-----	178	-----	439	953	910	910	628	860	236
29.....	-----	172	-----	468	953	910	902	636	804	236
30.....	-----	172	-----	453	962	902	910	604	724	230
31.....	-----	129	-----	446	-----	852	-----	604	636	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 1-27.....	-----	-----	283	15, 900
January.....	285	0	119	7, 320
February 1-16.....	-----	-----	216	6, 850
March 7-31.....	-----	-----	366	15, 100
April.....	962	194	669	39, 800
May.....	953	224	722	44, 400
June.....	919	724	864	51, 400
July.....	910	572	686	42, 200
August.....	910	636	802	49, 300
September.....	572	212	296	17, 600

OAKDALE CANAL NEAR KNIGHTS FERRY, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 10, T. 1 S., R. 12 E., half a mile below head gate at Goodwin Dam, on Stanislaus River, 4 miles above Knights Ferry. Altitude, about 350 feet.

RECORDS AVAILABLE.—May 1914 to September 1933. Also miscellaneous measurements and rough estimates for 1913.

DISCHARGE.—Maximum mean daily during year, 266 second-feet several days in July and August; no flow during several months.

1914-33: Maximum mean daily, that of July and August 1933; no flow during periods of each year. Average, 18 years (1914-32), 85.5 second-feet.

REMARKS.—Records good. No records Nov. 6 to Feb. 28. Canal diverts from left bank of river at Goodwin Dam. Water is used for irrigation in Oakdale Irrigation District. Gage-height record furnished by Oakdale Irrigation District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	208	98	0	122	260	262	263	265	235
2	204	100	0	130	258	260	264	265	240
3	204	78	0	168	260	260	264	265	239
4	204	56	36	186	260	260	264	265	239
5	203	57	51	199	259	261	265	265	237
6	203		67	223	257	261	264	264	230
7	203		82	232	188	260	264	266	230
8	204		115	234	146	260	264	266	229
9	201		136	234	146	260	264	264	227
10	202		153	235	148	260	264	266	222
11	203		154	241	158	260	264	265	219
12	201		154	245	170	262	264	265	218
13	204		157	245	170	262	99	265	212
14	206		164	246	175	262	251	264	210
15	203		167	248	204	261	260	264	206
16	179		79	246	230	262	265	264	195
17	163		0	227	241	262	76	264	192
18	148		0	225	249	262	265	265	190
19	149		0	231	254	262	266	264	191
20	150		0	239	260	261	266	266	194
21	118		35	243	262	262	266	265	192
22	82		54	245	257	262	266	265	193
23	100		69	251	260	262	264	265	188
24	124		92	251	262	263	264	265	186
25	121		120	257	262	265	265	265	177
26	110		114	258	261	265	265	264	173
27	90		121	260	263	264	266	268	172
28	91		130	262	261	264	266	245	170
29	93		125	261	260	264	265	232	173
30	34		121	261	260	264	264	230	174
31	25		124		261		264	231	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	208	25	156	9,590
November 1-5			77.8	772
March	167	0	84.6	5,200
April	262	122	230	13,700
May	263	146	231	14,200
June	265	260	262	15,600
July	266	76	253	15,600
August	266	230	261	16,000
September	240	170	205	12,200

CALAVERAS RIVER BASIN

CALAVERAS RIVER AT JENNY LIND, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 22, T. 3 N., R. 10 E., at highway bridge on Milton road a quarter of a mile south of Jenny Lind. North and South Forks unite 15 miles above station. Altitude, about 220 feet.

DRAINAGE AREA.—395 square miles.

RECORDS AVAILABLE.—January 1907 to September 1933.

DISCHARGE.—Maximum during year, 1,250 second-feet Jan. 29 (gage height, 4.91 feet); no flow for several months.

1907-33: Maximum, about 69,600 second-feet Jan. 31, 1911; stage was reported higher about midnight; no flow during late summer 1913-15, 1917-22,

1924-33. Average, 24 years (1908-23, 1924-33), 259 second-feet.

REMARKS.—Records good. Discharge estimated Apr. 12, 14, June 21, 22, July 6-8. Stockton flood-control dam above station regulates flow to some extent; small storage and diversion on North Fork in some years diverts up to 1,000 acre-feet into Mokelumne River drainage.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1		202	68	96	31	22	1.6
2		138	65	91	35	20	2.0
3		107	65	86	39	19	2.2
4		96	65	83	44	17	1.8
5		88	68	81	43	16	1.4
6		88	68	78	41	16	1.0
7		88	65	74	49	16	.6
8		88	65	70	100	16	.2
9		76	65	61	138	16	0
10		65	65	57	104	15	0
11		63	65	54	86	13	0
12		104	68	49	76	12	0
13		282	200	44	72	11	0
14		291	325	42	72	10	0
15		202	219	41	72	8.5	0
16		156	178	41	68	7	0
17		186	425	40	63	6	0
18		178	378	40	61	4.8	0
19		141	250	40	59	4.0	0
20	77	113	186	39	54	3.8	0
21	125	96	152	37	51	3.5	0
22	104	88	128	36	47	3.0	0
23	190	86	116	35	46	2.5	0
24	250	83	104	30	46	1.8	0
25	691	81	91	25	43	1.7	0
26	558	76	83	29	39	1.8	0
27	425	70	76	31	36	2.0	0
28	807	68	76	31	33	1.7	0
29	812		113	30	29	1.4	0
30	852		134	30	25	1.4	0
31	345		113		24		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January	852	0	169	10,400
February	291	63	121	6,720
March	425	65	134	8,240
April	96	25	50.7	3,020
May	138	24	55.7	3,420
June	22	1.4	9.13	543
July	2.2	0	.35	21.4
The year	852	0	44.7	32,400

NOTE.—No flow during months omitted.

COSGROVE CREEK NEAR VALLEY SPRINGS, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 35, T. 4 N., R. 10 E., 2½ miles south of Valley Springs. Altitude, about 580 feet.

DRAINAGE AREA.—20.6 square miles.

RECORDS AVAILABLE.—October 1929 to September 1933.

DISCHARGE.—Maximum during year, 310 second-feet Jan. 27 (gage height, 4.04 feet); no flow several months.

1929-33: Maximum, 1,060 second-feet Feb. 6, 1932 (gage height, 5.55 feet); no flow several months each year.

REMARKS.—Records good. No diversions.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1-----	0	0	5	0.6	0.7	0.1	16-----	0	0	4.8	2.7	0.2	C
2-----	0	0	3.5	.6	.6	.2	17-----	0	0	5	3.6	.2	C
3-----	0	0	2.6	.6	.5	.1	18-----	0	.1	2.7	2.0	.2	C
4-----	0	0	2.0	.5	.5	.1	19-----	0	.3	1.7	1.2	.2	C
5-----	0	0	1.6	.5	.4	.1	20-----	0	.2	1.5	.9	.2	C
6-----	0	0	1.4	.5	.3	.1	21-----	0	.2	1.2	.8	.2	C
7-----	0	0	1.0	.5	.3	.5	22-----	0	.3	1.0	.8	.2	C
8-----	0	0	.9	.5	.3	.3	23-----	.2	3.1	.9	.8	.2	C
9-----	0	0	.8	.4	.3	.2	24-----	.1	18	.8	.6	.2	C
10-----	0	0	.7	.4	.3	.1	25-----	0	35	.8	.6	.2	C
11-----	0	0	.9	.4	.3	.1	26-----	0	9.5	.8	.6	.2	C
12-----	0	0	11	2.5	.2	.1	27-----	0	68	.7	.5	.2	C
13-----	0	0	9.5	4.2	.2	.1	28-----	0	29	.6	1.4	.1	C
14-----	0	0	3.5	2.0	.2	.1	29-----	0	65	-----	2.9	.1	C
15-----	0	0	2.2	1.1	.2	.1	30-----	0	17	-----	1.2	.1	C
							31-----	0	8	-----	.8	-----	C

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December-----	0.2	0	0.01	0.6
January-----	68	0	8.18	508
February-----	11	.6	2.47	137
March-----	4.2	.4	1.18	72.6
April-----	.7	.1	.27	15.4
May-----	.5	0	.07	4.6
The year-----	68	0	1.01	734

NOTE.—No flow during months omitted.

BEAR CREEK BASIN

BEAR CREEK NEAR LOCKEFORD, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 31, T. 4 N., R. 8 E., at concrete highway bridge three-quarters of a mile southeast of Lockeford. Altitude, about 90 feet.

RECORDS AVAILABLE.—November 1930 to September 1933 (discontinued). October 1926 to November 1930 at station 3 miles downstream.

DISCHARGE.—Maximum during year, 213 second-feet Jan. 27 (gage height, 6.30 feet); no flow several months.

1926-33: Maximum, 952 second-feet Feb. 9, 1932 (gage height, 12.04 feet); no flow several months each year.

REMARKS.—Records good except those for Jan. 24, 26-27, Feb. 4-5, 20-22, which were estimated. No diversions. A small amount of water, released from East Bay Municipal Utility District Aqueduct into Bear Creek, is not included in records.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1.....	0	4.3	0.1	0.1	16.....	0	0.9	0.1	0
2.....	0	2.3	0	.1	17.....	0	2.0	.1	0
3.....	0	1.6	0	.1	18.....	0	1.6	1.0	0
4.....	0	1.2	0	0	19.....	0	.9	.5	0
5.....	0	.8	0	0	20.....	0	.7	.3	0
6.....	0	.5	0	0	21.....	0	.6	.1	0
7.....	0	.4	0	0	22.....	1.3	.5	.1	0
8.....	0	.3	0	0	23.....	14	.4	.1	0
9.....	0	.2	0	0	24.....	21	.3	.1	0
10.....	0	.1	0	0	25.....	74	.3	.1	0
11.....	0	.2	0	0	26.....	14	.2	.1	0
12.....	0	.2	.1	0	27.....	53	.2	.1	0
13.....	0	3.2	.1	0	28.....	55	.2	.1	0
14.....	0	3.1	.1	0	29.....	86		.1	0
15.....	0	1.2	0	0	30.....	28		.1	0
					31.....	8		.1	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	86	0	11.4	701
February.....	4.3	.1	1.01	56
March.....	1.0	.0	0.11	6.9
April.....	.1	0	.01	.6
The year.....	86	0	1.06	764

NOTE.—No flow during months omitted.

MOKELUMNE RIVER BASIN

SALT SPRINGS RESERVOIR NEAR WEST POINT, CALIF.

LOCATION.—Staff gage in SE¼ sec. 33, T. 8 N., R. 16 E., at Salt Springs dam, on North Fork of Mokelumne River, 18 miles northeast of West Point. Elevation of crest of dam is 3,958 feet above mean sea level.

DRAINAGE AREA.—160 square miles.

RECORDS AVAILABLE.—March 1931 to September 1933.

REMARKS.—This reservoir, capacity 130,000 acre-feet, is largest storage unit on Mokelumne system of Pacific Gas & Electric Co. Water is released through power house just below dam and discharges into Tiger Creek conduit. Record of daily contents furnished by Pacific Gas & Electric Co.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	62,161	36,454	20,743	10,540	1,767	0	1,845	25,216	85,336	129,542	108,428	85,806
2-----	61,135	35,468	20,334	10,326	1,481	0	2,557	26,119	90,084	129,449	107,476	85,023
3-----	60,184	34,493	19,969	10,053	1,194	0	3,420	26,805	92,417	128,985	106,614	84,011
4-----	59,108	33,431	19,647	9,784	909	0	4,431	27,497	95,430	128,706	105,754	83,003
5-----	58,108	32,482	19,248	9,489	729	0	5,490	28,383	97,407	128,335	104,811	82,000
6-----	57,119	31,448	18,892	9,170	449	0	6,609	29,233	100,742	128,057	103,957	81,078
7-----	56,010	30,525	18,618	8,856	355	0	7,628	30,188	105,840	127,594	103,022	80,085
8-----	54,978	30,092	18,307	8,547	355	0	8,436	30,864	110,955	127,132	102,175	79,172
9-----	53,958	29,661	18,036	8,272	413	0	9,113	31,350	115,896	126,579	101,247	78,188
10-----	52,888	29,138	17,767	7,974	472	0	9,577	31,889	120,829	125,934	100,322	77,209
11-----	51,828	28,901	17,462	7,628	532	0	9,666	32,037	125,569	125,383	99,485	76,459
12-----	51,333	28,336	17,122	7,290	556	0	9,873	32,482	130,195	124,833	98,569	75,936
13-----	51,025	28,149	16,785	7,035	544	0	10,265	32,930	129,822	124,284	97,656	75,489
14-----	50,718	27,683	16,450	6,758	532	0	10,786	33,431	130,009	123,553	96,664	74,820
15-----	50,350	27,266	16,155	6,462	532	0	11,866	34,036	129,636	122,642	95,759	74,153
16-----	49,862	26,805	15,826	6,147	544	0	13,191	35,571	130,195	121,915	94,857	73,562
17-----	49,256	26,393	15,536	5,815	568	0	13,841	36,872	130,195	121,190	93,877	72,900
18-----	48,774	26,074	15,284	5,536	568	0	13,841	37,663	130,382	120,377	92,902	72,241
19-----	48,055	25,712	14,856	5,263	580	0	13,806	38,461	129,636	119,475	92,417	71,657
20-----	47,460	25,306	14,292	5,016	580	0	13,841	40,078	130,195	118,666	92,093	71,001
21-----	46,868	24,903	13,875	4,709	532	0	13,944	42,002	130,102	117,770	91,771	70,276
22-----	46,164	24,548	13,531	4,410	472	0	14,784	43,687	130,009	116,965	91,448	69,626
23-----	45,466	24,150	13,259	4,118	425	0	15,899	45,408	130,009	116,074	91,126	68,907
24-----	44,773	23,712	12,921	3,813	344	0	17,273	46,868	130,009	115,185	90,725	68,119
25-----	43,517	23,321	12,554	3,536	275	0	18,307	49,862	130,009	114,388	90,324	67,335
26-----	42,504	22,888	12,192	3,079	298	132	19,209	53,578	129,915	113,592	89,924	66,555
27-----	41,503	22,417	11,834	2,823	332	367	19,727	57,448	129,915	112,710	89,285	65,497
28-----	40,514	22,035	11,608	2,557	264	460	21,114	62,161	129,822	111,831	88,807	64,586
29-----	39,481	21,489	11,353	2,402	-----	704	22,931	67,406	129,729	110,955	88,171	63,611
30-----	38,461	21,114	11,099	2,283	-----	883	24,238	73,562	129,636	110,168	87,459	62,712
31-----	37,452	-----	10,818	2,052	-----	1,250	-----	79,780	-----	109,210	86,670	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30-----	63,195	-----	May 31-----	79,780	+55,542
Oct. 31-----	37,452	-25,743	June 30-----	129,636	+49,856
Nov. 30-----	21,114	-16,338	July 31-----	109,210	-20,426
Dec. 31-----	10,818	-10,296	Aug. 31-----	86,670	-22,540
Jan. 31-----	2,052	-8,766	Sept. 30-----	62,712	-23,958
Feb. 28-----	264	-1,788			
Mar. 31-----	1,250	+986			
Apr. 30-----	24,238	+22,988	The year-----		-483

NORTH FORK OF MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CALIF.

LOCATION.—Water-stage recorder in sec. 33, T. 8 N., R. 16 E., a quarter of a mile below Salt Springs Dam and 3½ miles above Moore Creek. Altitude, about 3,600 feet.

DRAINAGE AREA.—160 square miles.

RECORDS AVAILABLE.—September 1926 to September 1933.

DISCHARGE.—Maximum during year, 5,060 second-feet June 12 (gage height, 10.85 feet); minimum, 1.8 second-feet Feb. 13–14, Mar. 23–28.

1926–33: Maximum, 8,740 second-feet Mar. 25, 1928 (gage height, 13.62 feet); minimum, 0.2 second-foot Mar. 31, 1931.

REMARKS.—Records good. Storage and diversion above station. (See records for Salt Springs Reservoir and Tiger Creek power-house conduit.) Gage-height record and results of discharge measurements furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	15	8.5	5.5	3.9	2.1	190	2.0	3.6	8.5	22	20	16
2.....	16	8.5	5.5	3.8	2.1	183	2.1	4.3	9	21	19	16
3.....	15	8	5.5	3.5	2.1	177	2.1	4.2	9.5	21	19	15
4.....	15	8	5.5	3.5	2.1	170	2.1	4.1	10	20	19	15
5.....	15	8	5.5	3.5	2.0	162	2.1	4.2	11	20	19	15
6.....	15	8	5	3.4	2.0	155	2.1	4.6	11	20	18	14
7.....	14	8	5	3.4	2.0	150	2.2	6	12	20	18	14
8.....	14	7.5	5	3.4	2.0	136	2.3	5	13	20	18	14
9.....	14	7	5	3.4	2.0	148	2.4	5	14	21	18	14
10.....	14	7	5	3.1	1.9	148	2.4	4.8	15	21	18	14
11.....	14	7	5	2.8	1.9	148	2.4	4.8	127	21	18	14
12.....	14	7	5	2.7	1.9	151	2.4	4.7	1,780	21	17	14
13.....	13	7	5	2.6	1.8	150	2.3	4.7	2,780	21	17	13
14.....	13	7	5	2.6	1.8	150	2.3	4.7	2,590	21	17	13
15.....	13	7	4.8	2.6	1.9	144	2.4	4.7	2,390	21	17	13
16.....	13	6.5	4.8	2.6	2.0	146	2.5	4.5	2,420	21	17	13
17.....	13	6.5	4.8	2.5	2.1	146	2.6	4.5	1,660	21	17	12
18.....	12	6.5	4.7	2.5	2.1	142	2.6	4.5	1,440	21	17	11
19.....	12	6.5	5.5	2.5	2.1	139	2.6	4.5	991	21	17	11
20.....	11	6.5	5	2.4	2.1	142	2.6	4.5	1,060	21	17	10
21.....	11	6.5	4.3	2.4	2.1	151	2.7	5	814	20	17	10
22.....	10	6.5	4.2	2.4	2.1	106	2.7	5	555	20	17	10
23.....	9.5	6	4.2	2.4	2.1	1.8	2.7	5	594	20	17	10
24.....	9.5	6	4.1	2.4	2.1	1.8	2.7	5.5	500	20	17	10
25.....	9.5	6	4.2	2.3	2.1	1.8	2.8	5.5	400	20	17	10
26.....	9.5	6	4.2	2.3	2.1	1.8	2.8	6	320	20	17	10
27.....	9	6	4.2	2.3	36	1.8	2.9	6	285	20	16	9.5
28.....	9	6	4.2	2.2	149	1.8	3.0	6.5	218	20	16	9.5
29.....	9	6	4.1	2.2	-----	1.9	3.2	6.5	152	20	16	9.5
30.....	9	6	4.0	2.2	-----	1.9	3.4	7	62	19	16	9.5
31.....	8.5	-----	4.0	2.2	-----	2.0	-----	8	-----	20	16	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	16	8.5	12.2	750
November.....	8.5	6	6.90	411
December.....	5.5	4.0	4.77	293
January.....	3.9	2.2	2.77	170
February.....	149	1.8	8.49	472
March.....	190	1.8	108	6,640
April.....	3.4	2.0	2.51	149
May.....	8	3.6	5.09	313
June.....	2,780	8.5	708	42,100
July.....	22	19	20.5	1,260
August.....	20	16	17.4	1,070
September.....	16	9.5	12.3	732
The year.....	2,780	1.8	75.2	54,400

* Interpolated.

MOKELUMNE RIVER NEAR MOKELUMNE HILL, CALIF.

LOCATION.—Water-stage recorder in sec. 1, T. 5 N., R. 11 E., at highway bridge $1\frac{1}{4}$ miles northwest of Mokelumne Hill. Altitude, about 650 feet.

DRAINAGE AREA.—538 square miles.

RECORDS AVAILABLE.—November 1927 to September 1933.

DISCHARGE.—Maximum during year, 7,760 second-feet June 12 (gage height, 8.82 feet); minimum, 64 second-feet Jan. 1.

1927-33: Maximum, 23,300 second-feet Mar. 25, 1928 (gage height, 16.10 feet); minimum, 14 second-feet Oct. 27, 1929.

REMARKS.—Records excellent except those for Mar. 17-23, Apr. 9-12, which were estimated. Diversions, three power plants, and several storage reservoirs above station (see records for Salt Springs Reservoir).

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	541	546	313	76	166	197	332	595	1,780	750	519	538
2.....	452	512	254	116	167	436	278	712	1,460	650	557	515
3.....	528	544	206	202	258	430	459	701	1,640	479	557	462
4.....	520	548	128	211	276	362	685	685	1,460	580	576	502
5.....	582	436	185	248	122	248	675	723	1,460	674	552	586
6.....	553	468	254	258	190	312	590	728	1,880	660	432	596
7.....	570	502	182	207	227	363	610	550	1,680	655	538	591
8.....	516	373	158	114	165	393	550	610	1,420	545	626	552
9.....	453	201	166	225	136	400	375	712	1,500	550	571	471
10.....	506	205	168	216	164	392	400	650	1,500	555	566	449
11.....	512	271	96	187	151	416	500	665	1,330	665	524	538
12.....	491	175	196	208	98	434	600	665	2,290	625	515	566
13.....	574	143	180	211	205	744	650	680	4,750	605	462	547
14.....	598	200	232	204	184	600	630	526	4,330	585	566	586
15.....	488	301	209	108	155	520	635	723	4,120	555	480	586
16.....	434	242	224	186	209	510	531	860	3,470	540	606	502
17.....	556	214	218	200	279	700	535	767	3,000	610	616	475
18.....	613	208	130	230	187	600	660	696	2,250	645	601	576
19.....	543	124	256	277	91	500	635	706	2,490	595	493	557
20.....	543	120	417	248	208	450	635	750	1,190	630	471	566
21.....	595	202	340	267	189	506	600	890	1,730	590	466	576
22.....	443	257	244	196	154	450	635	920	1,510	536	631	562
23.....	402	258	254	255	146	340	451	734	1,320	500	596	484
24.....	528	222	232	306	209	264	554	860	1,290	538	596	480
25.....	556	216	134	278	272	276	712	1,320	952	562	557	596
26.....	586	202	217	261	95	168	635	1,640	920	596	471	611
27.....	564	143	188	256	225	222	610	1,370	985	581	471	547
28.....	561	246	208	248	196	288	718	1,950	920	606	538	557
29.....	508	299	210	202	-----	418	836	2,110	784	547	621	566
30.....	416	289	218	315	-----	474	750	2,200	745	453	652	466
31.....	550	-----	146	218	-----	396	-----	2,180	-----	458	542	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	613	402	525	32,300
November.....	548	120	289	17,200
December.....	417	96	212	13,000
January.....	315	76	217	18,300
February.....	279	91	183	10,200
March.....	744	168	413	25,400
April.....	866	278	582	34,600
May.....	2,200	526	964	59,300
June.....	4,750	745	1,870	111,000
July.....	750	453	585	36,000
August.....	652	432	547	33,600
September.....	611	449	540	32,100
The year.....	4,750	76	578	418,000

PARDEE RESERVOIR NEAR VALLEY SPRINGS, CALIF.

LOCATION.—Water-stage recorder at Pardee Dam, on Mokelumne River, in SW¼ sec. 26, T. 5 N., R. 10 E., 5 miles north of Valley Springs. Elevation of crest of dam, 580 feet above mean sea level.

RECORDS AVAILABLE.—March 1929 to September 1933.

REMARKS.—Pardee Reservoir, capacity 209,612 acre-feet, provides storage for East Bay Municipal Utility District, which furnishes this record. Water is diverted through tunnel at dam to pipe line supplying East Bay cities and is also used to develop power at dam. Contents given is for midnight.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	199,022	193,569	172,735	146,919	121,310	99,212	90,805	91,045	116,778	189,060	182,532	174,429
2.....	198,675	193,397	171,992	145,887	120,522	98,956	90,515	91,261	118,503	188,745	182,267	174,055
3.....	198,436	193,223	171,171	145,067	119,863	98,674	90,238	91,299	120,599	188,515	181,982	173,838
4.....	198,175	193,056	170,179	144,183	119,265	98,286	90,502	91,274	122,628	188,599	181,696	173,720
5.....	198,060	192,674	169,340	143,333	118,397	97,699	90,704	91,312	124,381	188,641	181,411	173,424
6.....	197,979	192,292	168,649	142,490	117,592	97,234	90,679	91,440	126,060	188,411	181,207	173,050
7.....	197,914	192,018	167,726	141,648	116,838	96,863	90,691	91,771	123,123	188,119	180,901	172,637
8.....	197,762	191,506	166,823	140,641	115,950	96,254	90,578	91,758	130,757	187,931	180,779	172,227
9.....	197,393	190,690	165,953	139,806	115,055	95,664	90,200	91,796	132,585	187,972	180,515	172,051
10.....	197,199	189,818	165,087	138,926	114,265	95,087	89,571	91,758	134,379	187,806	180,172	172,012
11.....	197,005	189,060	164,045	137,930	113,555	94,708	89,072	91,681	136,222	187,701	179,828	171,816
12.....	196,790	188,223	163,193	137,058	112,714	95,113	88,997	91,643	139,366	187,555	179,505	171,621
13.....	196,726	188,162	162,309	136,188	111,923	95,467	88,997	91,618	146,919	187,408	179,222	171,425
14.....	196,725	188,409	161,453	135,290	111,105	95,585	88,922	91,771	153,683	187,179	178,838	171,132
15.....	196,466	188,725	160,624	134,230	110,292	95,520	88,847	92,127	160,661	186,865	178,476	170,959
16.....	196,078	184,917	159,841	133,323	109,583	95,585	89,471	92,679	165,812	186,886	178,255	170,567
17.....	195,949	184,093	159,080	132,405	108,950	95,887	89,459	93,128	170,273	186,741	178,095	170,567
18.....	195,927	183,291	158,138	131,668	108,176	96,123	89,359	93,411	173,779	186,430	177,854	170,461
19.....	195,776	182,288	157,473	131,001	107,106	95,991	89,297	93,747	177,393	186,036	177,394	170,276
20.....	195,647	181,818	156,620	130,172	106,344	95,690	89,184	94,202	178,576	185,725	177,253	170,024
21.....	195,582	180,374	156,576	129,397	105,582	95,441	88,997	95,113	180,779	185,331	176,812	169,811
22.....	195,259	179,626	155,734	128,543	104,728	95,336	88,897	95,874	182,512	184,813	176,672	169,482
23.....	194,852	178,838	155,044	127,774	103,864	95,100	89,359	96,281	183,846	184,772	176,453	169,094
24.....	194,681	178,015	154,206	127,199	103,073	94,539	89,309	96,956	185,207	184,381	176,175	169,110
25.....	194,553	177,213	153,161	126,545	102,412	93,916	89,546	98,522	186,202	184,175	175,738	168,997
26.....	194,489	176,374	152,351	125,785	101,450	93,257	89,634	100,646	186,907	184,056	175,261	168,939
27.....	194,406	175,440	151,526	125,103	100,660	92,653	89,646	102,288	187,722	183,888	175,142	168,784
28.....	194,293	174,665	150,705	124,176	99,913	92,178	89,847	105,092	188,369	183,702	174,904	168,611
29.....	194,126	174,094	149,850	123,595	-----	91,885	90,338	108,019	188,787	183,435	174,963	168,496
30.....	193,761	173,365	148,999	122,893	-----	91,694	91,019	111,410	189,060	183,250	174,963	168,297
31.....	193,611	-----	148,026	122,068	-----	91,363	-----	114,503	-----	182,839	174,745	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30.....	199,218	-----	May 31.....	114,503	+23,484
Oct. 31.....	193,611	-5,607	June 30.....	189,060	+74,557
Nov. 30.....	173,365	-20,246	July 31.....	182,839	-6,221
Dec. 31.....	148,028	-25,337	Aug. 31.....	174,745	-8,094
Jan. 31.....	122,068	-25,960	Sept. 30.....	168,207	-6,538
Feb. 28.....	99,913	-22,155			
Mar. 31.....	91,363	-8,550			
Apr. 30.....	91,019	-344	The year.....		-31,611

MOKELUMNE RIVER AT LANCHA PLANA, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 4, T. 4 N., R. 10 E., 1 mile east of Lancha Plana and 3 miles (revised) downstream from Pardee Dam. Altitude, about 200 feet.

DRAINAGE AREA.—584 square miles.

RECORDS AVAILABLE.—June 1926 to September 1933.

DISCHARGE.—Maximum during year, 713 second-feet Sept. 30 (gage height, 3.33 feet); minimum, 113 second-feet Mar. 7.

1926-33: Maximum, 27,300 second-feet Mar. 25, 1928 (gage height, 19.65 feet); minimum, 5.5 second-feet Nov. 21, 1929.

REMARKS.—Records excellent. Pardee, Salt Springs, and several smaller reservoirs, four hydroelectric plants and diversions above station. (See records for Pardee and Salt Springs Reservoirs and East Bay Municipal Utility District Aqueduct.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	549	518	542	579	516	517	544	531	506	577	543	551
2.....	547	524	552	580	504	515	395	538	511	648	562	571
3.....	553	551	569	580	520	513	521	632	520	497	564	462
4.....	556	545	565	579	523	517	489	632	359	387	560	417
5.....	539	572	557	598	543	506	525	632	511	467	563	625
6.....	528	559	550	606	527	476	542	632	510	640	416	660
7.....	522	557	544	587	538	524	539	410	506	644	556	668
8.....	522	553	548	594	541	642	546	553	499	500	556	668
9.....	530	549	539	595	557	648	492	632	497	407	559	514
10.....	524	552	542	607	526	648	628	632	511	490	609	421
11.....	523	560	543	607	531	585	628	632	479	548	568	567
12.....	526	557	545	603	483	190	628	636	496	563	549	578
13.....	524	556	556	597	541	474	632	636	510	549	475	577
14.....	519	559	560	603	566	515	632	406	488	552	609	672
15.....	530	563	561	601	557	513	632	507	475	552	556	672
16.....	525	558	556	602	513	508	179	478	453	404	561	582
17.....	523	562	550	604	551	506	467	478	479	500	566	462
18.....	509	558	550	614	548	514	628	482	337	640	582	570
19.....	513	549	562	608	648	454	628	474	448	636	583	578
20.....	515	566	538	608	506	512	628	463	446	628	413	627
21.....	515	559	576	603	540	515	628	385	451	636	560	646
22.....	513	563	581	611	555	509	628	745	468	636	566	700
23.....	516	559	591	607	543	551	203	463	462	403	564	646
24.....	524	565	591	596	530	512	464	447	464	586	568	434
25.....	527	565	590	577	561	519	538	450	330	539	629	610
26.....	526	558	563	598	567	510	544	471	444	512	581	604
27.....	527	560	552	679	575	457	538	451	445	535	408	592
28.....	528	562	562	663	558	511	545	394	441	521	533	592
29.....	522	566	561	549	.....	509	541	478	442	540	465	591
30.....	522	581	580	625	.....	527	387	365	445	412	492	582
31.....	530	.....	592	600	.....	539	.....	442	.....	521	542	.....

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	556	509	527	32,400
November.....	581	518	557	33,100
December.....	592	538	560	34,400
January.....	679	549	602	37,000
February.....	648	483	542	30,100
March.....	648	190	514	31,600
April.....	632	179	351	31,600
May.....	636	365	511	31,400
June.....	520	330	464	27,600
July.....	648	387	538	33,100
August.....	629	408	544	33,400
September.....	700	417	581	34,600
The year.....	700	179	539	390,000

MOKELUMNE RIVER NEAR CLEMENTS, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 15, T. 4 N., R. 8 E., above highway bridge 1 mile north of Clements. Altitude, about 80 feet.

DRAINAGE AREA.—630 square miles (revised).

RECORDS AVAILABLE.—October 1904 to September 1933.

DISCHARGE.—Maximum during year, 1,070 second-feet Jan. 27 (gage height, 5.05 feet); minimum, 137 second-feet Mar. 7.

1904-33: Maximum, 25,600 second-feet Mar. 25, 1928 (gage height, 22.45 feet at station below bridge); no flow July 9, Aug. 15, 20-23, 1924. Average, 23 years (1905-28), 1,120 second-feet (storage and diversions by East Bay Municipal Utility District have affected flow since March 1929).

REMARKS.—Records excellent. Diversions and storage above station. (See Mokelumne River at Lancha Plana.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	530	516	553	570	498	517	487	474	466	536	509	533
2.....	525	510	535	566	495	508	467	527	492	650	549	556
3.....	530	534	552	570	507	506	443	615	513	506	554	480
4.....	538	556	548	561	511	511	482	619	392	388	550	395
5.....	516	543	563	570	518	506	520	624	451	430	556	558
6.....	508	548	536	570	519	494	539	624	503	633	438	650
7.....	510	538	538	588	518	458	537	470	499	637	494	650
8.....	503	538	538	552	531	633	538	488	500	499	545	655
9.....	512	534	527	570	536	637	483	628	488	438	544	499
10.....	506	538	532	574	510	637	615	633	492	436	593	444
11.....	507	538	534	588	522	633	619	633	386	536	554	502
12.....	506	552	537	588	497	261	624	637	439	537	531	560
13.....	506	548	549	574	522	376	624	633	494	534	493	565
14.....	510	552	550	570	555	510	619	460	470	534	557	668
15.....	512	548	547	579	558	511	619	465	484	544	550	663
16.....	513	552	548	579	515	532	312	454	444	439	526	573
17.....	515	552	547	579	543	520	341	478	445	451	565	442
18.....	507	552	540	597	535	507	615	477	362	628	575	506
19.....	505	552	569	602	637	472	619	475	407	633	568	566
20.....	507	552	550	592	496	479	619	461	432	624	446	606
21.....	510	552	570	611	534	505	619	393	438	628	501	610
22.....	507	548	556	597	546	502	619	435	439	637	550	668
23.....	505	552	579	626	541	545	333	464	452	438	556	616
24.....	509	552	579	626	519	502	334	431	450	541	560	452
25.....	521	552	579	641	547	516	523	430	364	528	624	557
26.....	516	543	551	594	547	503	533	443	406	508	567	545
27.....	514	543	547	759	563	449	527	467	429	505	445	564
28.....	517	543	546	685	546	508	534	383	444	521	490	560
29.....	517	556	544	606	-----	508	528	461	433	524	454	559
30.....	519	570	561	588	-----	513	420	373	430	435	453	551
31.....	511	-----	561	615	-----	571	-----	405	-----	487	539	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	538	503	513	31,500
November.....	570	510	545	32,400
December.....	579	527	551	33,900
January.....	759	552	596	36,600
February.....	637	495	551	29,500
March.....	637	261	511	31,400
April.....	624	312	523	31,100
May.....	637	373	502	30,900
June.....	513	362	448	26,700
July.....	650	388	528	32,500
August.....	624	438	530	32,600
September.....	668	395	558	33,200
The year.....	759	261	528	382,000

MOKELUMNE RIVER AT WOODBRIDGE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 34, T. 4 N., R. 6 E., three-eighths of a mile downstream from dam of Woodbridge Irrigation District, at Woodbridge. Altitude, about 30 feet.

DRAINAGE AREA.—644 square miles (revised).

RECORDS AVAILABLE.—May 1924 to September 1933 (low-water records only for 1924 and 1925).

DISCHARGE.—Maximum during year, 1,250 second-feet Jan. 7 (gage height, 12.03 feet); minimum, 24 second-feet Apr. 25.

1924-33: Maximum stage, 26.58 feet Mar. 26, 1928 (discharge not determined); minimum, 0.9 second-foot Sept. 3, 1924.

REMARKS.—Records good. Woodbridge Canal diverts just above station; many other diversions and several storage reservoirs; regulation by hydro-electric power plant at Pardee Dam. Storage, power plants, and many irrigation diversions above station (see records for Woodbridge Canal).

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	324	360	463	565	545	520	394	191	122	195	207	268
2.....	320	362	438	553	491	524	461	326	259	336	227	304
3.....	332	372	448	559	510	526	280	252	252	341	246	329
4.....	337	394	461	565	531	518	391	352	244	248	254	204
5.....	332	396	448	570	526	510	390	359	103	111	252	156
6.....	354	406	438	574	518	497	414	333	274	223	255	406
7.....	351	402	444	737	529	467	425	359	258	349	134	366
8.....	334	399	450	604	541	539	422	179	219	320	254	436
9.....	334	394	484	602	550	520	398	359	217	252	259	425
10.....	331	394	473	609	531	314	312	392	224	133	272	343
11.....	331	394	471	616	529	412	380	399	228	191	284	208
12.....	344	397	471	620	539	373	362	405	108	233	266	326
13.....	336	402	513	604	508	250	362	407	187	233	289	324
14.....	334	402	497	597	548	418	356	375	214	232	235	367
15.....	331	406	501	616	563	461	355	236	182	232	282	429
16.....	339	397	507	622	531	582	310	330	170	240	265	372
17.....	339	399	540	599	543	528	62	214	138	141	273	357
18.....	337	413	515	599	548	487	136	210	166	215	240	184
19.....	327	397	521	627	588	453	273	234	82	299	302	314
20.....	292	386	549	629	558	380	354	203	118	305	312	381
21.....	287	413	543	618	524	441	322	235	170	296	152	377
22.....	317	449	584	609	529	453	256	124	165	304	266	398
23.....	326	420	569	602	537	459	275	257	163	281	289	445
24.....	326	411	567	606	514	481	32	236	162	131	318	398
25.....	336	397	561	666	537	467	190	207	176	208	341	286
26.....	340	423	543	632	545	491	232	206	81	196	362	399
27.....	340	406	535	650	550	435	185	226	124	179	329	352
28.....	346	409	525	767	550	435	285	152	162	194	172	369
29.....	392	418	531	675	-----	455	170	160	168	192	249	365
30.....	382	487	539	590	-----	451	223	304	168	203	168	367
31.....	368	-----	567	629	-----	427	-----	158	-----	162	212	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	392	287	336	20,700
November.....	487	360	404	24,000
December.....	584	438	506	31,100
January.....	767	553	616	37,900
February.....	588	491	536	29,800
March.....	582	250	460	28,300
April.....	461	32	300	17,900
May.....	407	124	271	16,700
June.....	274	81	177	10,500
July.....	349	111	231	14,200
August.....	362	134	257	15,800
September.....	445	156	342	20,400
The year.....	767	32	369	267,000

TIGER CREEK POWER HOUSE CONDUIT BELOW SALT SPRINGS DAM, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 33, T. 8 N., R. 16 E., 1,000 feet below Salt Springs Dam and power house. Altitude, about 3,700 feet.

RECORDS AVAILABLE.—June 1931 to September 1933.

DISCHARGE.—Maximum mean daily during year, 500 second-feet Oct. 7, 10, 12, 14, 17-18, Sept. 8; no flow several periods.

1931-33: Maximum mean daily, 543 second-feet July 29, 1931; no flow at times each year.

REMARKS.—Records good. Conduit conveys water of North Fork of Mokelumne River from tailrace of Salt Springs power house to forebay of Tiger Creek power house, picking up flow of several small creeks en route. Gage-height record and results of discharge measurements furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	487	486	185	140	162	0	0.2	80	0	443	454	497
2.....	487	485	186	140	165	0	.2	84	193	418	457	496
3.....	487	485	187	141	163	0	0	147	462	408	460	496
4.....	487	486	187	133	161	0	0	175	464	408	465	499
5.....	492	487	189	164	127	0	.2	85	462	408	468	499
6.....	494	486	159	163	144	0	.3	41	274	416	469	499
7.....	500	348	140	163	55	0	.3	.1	0	439	468	499
8.....	499	196	140	163	32	0	.4	150	0	448	467	500
9.....	499	196	143	164	5	0	.4	185	0	448	468	496
10.....	500	191	153	164	0	0	145	142	0	443	469	496
11.....	499	190	164	162	18	0	232	184	1.1	436	471	499
12.....	500	256	164	162	26	0	235	186	2.9	439	469	499
13.....	499	122	162	162	36	0	172	162	1.7	450	469	499
14.....	500	196	160	163	36	0	140	50	1.6	482	471	499
15.....	499	195	154	163	35	0	47	51	1.6	478	481	499
16.....	499	195	154	163	36	0	0	0	1.6	471	489	496
17.....	500	191	152	164	35	0	204	60	.6	479	492	497
18.....	500	187	153	165	35	0	281	65	0	472	493	499
19.....	499	188	267	164	35	0	271	67	46	471	495	496
20.....	497	191	268	164	53	0	261	10	178	471	495	496
21.....	499	190	185	163	73	0	230	0	191	472	495	496
22.....	494	191	186	163	70	0	23	0	261	472	493	497
23.....	487	191	186	162	69	0	0	0	297	472	495	497
24.....	487	203	185	164	74	0	20	0	297	472	495	497
25.....	487	209	185	167	52	0	50	0	330	471	497	493
26.....	487	220	164	164	52	0	131	0	353	469	495	495
27.....	487	220	145	163	40	28	212	0	354	464	496	493
28.....	487	220	140	163	0	109	96	0	357	455	496	493
29.....	487	220	161	130	-----	46	0	0	381	453	496	495
30.....	486	207	118	108	-----	46	0	0	427	453	497	496
31.....	487	-----	140	157	-----	33	-----	0	-----	451	-----	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	500	486	494	30,400
November.....	487	187	261	15,500
December.....	268	118	170	10,500
January.....	167	108	158	9,720
February.....	165	0	63.9	3,550
March.....	109	0	8.45	520
April.....	281	0	91.7	5,460
May.....	186	0	62.1	3,820
June.....	464	0	178	10,600
July.....	482	408	453	27,900
August.....	497	454	481	29,600
September.....	500	493	497	29,600
The year.....	500	0	244	177,000

COLD CREEK NEAR MOKELUMNE PEAK, CALIF.

LOCATION.—Water-stage recorder in sec. 28, T. 8 N., R. 16 E., $1\frac{1}{2}$ miles north of Salt Springs Dam and 6 miles southwest of Mokelumne Peak. Altitude, about 6,000 feet.

DRAINAGE AREA.—23 square miles.

RECORDS AVAILABLE.—July 1927 to September 1933.

DISCHARGE.—Maximum during year, 855 second-feet May 29 (gage height, 5.23 feet); minimum discharge recorded, less than 0.1 second-foot Sept. 22–23. 1927–33: Maximum, 2,330 second-feet Mar. 25, 1928 (gage height, 7.79 feet); practically no flow Aug. 17 to Oct. 7, 1931.

REMARKS.—Records good except those for period of ice effect, Dec. 9 to Apr. 7, which were estimated. No diversions. Gage-height record and results of discharge measurements furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.3			0.3	30	77	314	20	0.4	0.1
2	.1	.2	.3			.3	40	60	260	18	.4	.1
3	.1	.3	.2			.3	50	58	229	16	.4	.1
4	.1	.2	.2				60	83	189	14	.4	.1
5	.1	.2	.2	• 0.3			65	83	256	12	.4	.1
6	.1	.2	.2		• 0.3		65	58	404	10	.4	.1
7	.1	.2	.2				60	47	353	9	.4	.1
8	.1	.2	.2				49	49	358	8	.3	.1
9	.1	.2					40	41	368	7	.3	.1
10	.1	.2					35	36	356	6	.3	.1
11	.1	.1					44	35	390	5.5	.3	.1
12	.1	.1					60	37	401	4.6	.3	.1
13	.1	.1					77	49	362	4.2	.3	.1
14	.1	.1				.5	99	86	343	3.8	.2	.1
15	.1	.1					118	99	290	3.2	.2	.1
16	.1	.1					93	86	231	2.6	.2	.1
17	.1	.1					54	78	175	2.1	.2	.1
18	.1	.1					39	69	135	1.8	.2	.1
19	.1	.1					31	100	110	1.5	.2	.1
20	.1	.1					46	151	104	1.2	.2	.1
21	.1	.1					77	151	92	1.0	.2	.1
22	.1	.1					101	99	78	.8	.2	.1
23	.1	.1					136	123	67	.7	.1	.1
24	.1	.1					153	193	58	.7	.1	.1
25	.1	.1					134	292	51	.6	.1	.3
26	.1	.1				1	97	306	44	.6	.1	.2
27	.1	.1				2	154	367	46	.5	.1	.1
28	.1	.1				4	156	431	38	.5	.1	.1
29	.1	.1				6	134	504	31	.4	.1	.1
30	.1	.5				8	89	489	24	.4	.1	.1
31	.1					25		421		.4	.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.1	0.1	0.10	6.1
November	.5	.1	.15	8.9
December			.2	12.3
January			.3	18.4
February			.3	16.7
March	25	0.3	1.87	115
April	156	30	79.5	4,730
May	504	35	153	9,410
June	404	24	205	12,200
July	20	.4	5.07	312
August	.4	.1	.24	14.4
September	.3	.1	.11	6.5
The year	504	.1	37.1	26,900

• Discharge measurement.

BEAR RIVER AT PARDOE CAMP, CALIF.

LOCATION.—Water-stage recorder in sec. 18, T. 8 N., R. 16 E., 2 miles below Bear River Reservoir of Pacific Gas & Electric Co. Altitude, about 5,650 feet.

DRAINAGE AREA.—32.5 square miles.

RECORDS AVAILABLE.—July 1927 to September 1933.

DISCHARGE.—Maximum during year, 1,320 second-feet May 29 (gage height, 6.04 feet); minimum not recorded.

1927-33: Maximum, 3,350 second-feet Mar. 25, 1928 (gage height, 9.75 feet); no flow Sept. 8-30, Oct. 1-4, 7-29, 1928.

REMARKS.—Records good except those for Nov. 15 to Mar. 29, most of which were estimated. About 6,000 acre-feet is stored each year at reservoir above station and usually released between July and October. Gage-height record and results of discharge measurements furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	3.0	2.9		3.5	32	45	161	632	42	21	12
2	3.5	3.4			3.5	32	52	125	528	37	20	12
3	3.5	3.2			3.5	32	60	113	475	34	20	12
4	3.5	2.9			3.5	32	64	158	379	30	20	12
5	3.5	2.9		2.8	3.5		66	167	406	28	20	12
6	3.5	2.9		2.8	32		68	120	705	27	18	12
7	3.5	2.9		2.6	50		65	108	668	26	18	12
8	3.5	2.9	2.4				62	88	668	26	18	12
9	3.4	2.9	2.5				58	79	668	26	18	11
10	3.4	2.9	2.5			32	58	71	650	26	17	11
11	3.4	2.9	2.5				60	70	668	26	17	11
12	3.3	2.9					66	79	705	27	16	11
13	3.3	2.9					74	101	632	27	16	10
14	3.4	2.9					82	158	615	27	15	10
15	3.4	2.9					89	193	528	27	15	10
16	3.4	2.9					86	181	430	26	15	10
17	3.4	2.9					77	160	325	26	15	10
18	3.4	2.9					72	137	248	26	15	10
19	3.4	2.9					72	189	201	26	15	10
20	3.2	2.9					80	300	185	26	15	10
21	3.3	2.9					89	320	167	24	15	9.5
22	3.3	2.9					94	177	142	24	15	9.5
23	3.3	2.9					124	221	125	24	14	9.5
24	3.3	2.9					116	418	108	24	14	9.5
25	3.3	2.9					108	598	96	24	13	10
26	3.3	2.9					94	615	88	24	13	9.5
27	3.3	2.9					72	685	94	22	13	9
28	3.2	2.9					124	785	81	22	13	9
29	3.2	2.9					322	885	63	22	13	9
30	3.2	3.5				31	179	865	50	22	12	8.5
31	3.2					38		765		21	12	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.5	3.2	3.36	207
November	3.5	2.9	2.95	176
December			2.8	172
January			3.5	215
February			33.6	1,870
March	38		31.7	1,950
April	322	45	89.3	5,310
May	885	70	293	18,000
June	705	50	380	22,600
July	42	21	26.4	1,620
August	21	12	15.8	972
September	12	8.5	10.4	619
The year	885		74.2	53,700

• Estimated.

MIDDLE FORK OF MOKELUMNE RIVER AT WEST POINT, CALIF.

LOCATION.—Water-stage recorder in sec. 10, T. 6 N., R. 13 E., below highway bridge 1 mile south of West Point and $3\frac{1}{2}$ miles above junction with South Fork. Altitude, about 2,500 feet.

DRAINAGE AREA.—67.2 square miles.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum during year, 161 second-feet Mar. 17 (gage height, 2.22 feet); minimum, 0.7 second-foot Sept. 3.

1911-33: Maximum, 2,550 second-feet Jan. 23, 1914 (gage height, 10.0 feet, at site 1,000 feet upstream); practically no flow Aug. 23 to Sept. 14, 1931. Average, 21 years (1912-33), 49.3 second-feet.

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 10-16. Several diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.4	2.9	7	6.5	9.5	22	50	51	83	10	6	1.0
2.....	1.6	3.4	5.5	6	9	24	56	67	74	10	7	.9
3.....	1.7	4.2	4.4	6.5	9	26	66	54	64	9.5	7.5	.8
4.....	1.7	4.2	4.2	6	10	27	72	55	59	9	8.5	1.0
5.....	1.7	4.1	4.1	6	11	24	68	55	55	8	8	1.0
6.....	1.7	4.2	4.1	5.5	12	25	69	54	56	7.5	4.9	1.0
7.....	1.8	4.4	4.1	5.5	12	27	63	78	55	8	4.2	1.0
8.....	2.1	4.2	4.1	5	11	28	59	76	52	7.5	3.4	1.0
9.....	2.2	4.1	4.4	4.9	11	30	53	68	51	7	3.6	1.1
10.....	2.3	4.2	4.0	4.7	10	30	46	61	46	7	2.8	1.2
11.....	2.3	3.8	3.5	4.2	12	28	42	58	44	6	2.4	1.2
12.....	2.3	3.4	3.5	5.5	20	65	42	66	42	6	2.5	1.1
13.....	2.3	3.8	4.0	5.5	20	90	44	70	39	6	2.3	1.1
14.....	2.3	3.6	4.0	5	18	59	44	68	36	6	1.6	1.0
15.....	2.3	3.6	4.0	5	16	40	50	68	34	5	1.6	1.0
16.....	2.4	3.6	4.5	5.5	31	82	51	71	30	4.1	1.6	1.0
17.....	2.4	3.6	11	5	28	110	45	70	28	3.6	1.5	1.1
18.....	2.4	3.5	9	6	21	61	39	71	26	2.8	1.6	1.0
19.....	2.4	3.5	13	7	18	49	35	70	24	2.8	1.6	1.2
20.....	2.2	3.5	12	8	17	45	32	70	20	2.9	1.7	1.2
21.....	2.3	3.5	8.5	10	18	46	31	77	19	2.9	1.7	1.2
22.....	2.5	3.4	7	10	20	39	34	75	18	2.6	1.4	1.0
23.....	2.6	3.4	8	9	22	36	41	71	16	2.6	1.3	1.0
24.....	2.4	3.5	7	7.5	20	31	53	72	15	2.5	1.2	1.0
25.....	2.3	3.5	6.5	7	18	28	50	78	14	2.5	1.2	1.3
26.....	2.4	3.5	6	9	18	27	45	82	13	2.1	1.0	1.3
27.....	2.5	3.9	6	12	20	28	43	85	13	1.9	1.0	1.4
28.....	2.5	4.1	6	12	22	47	47	92	12	1.6	1.1	1.3
29.....	2.6	3.9	6	14	-----	62	54	99	11	1.2	1.1	1.2
30.....	2.7	9	6	11	-----	48	51	99	11	1.2	1.2	1.0
31.....	2.8	-----	6.5	10	-----	45	-----	95	-----	3.2	1.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.8	1.4	2.23	137
November.....	9	2.9	3.92	233
December.....	13	3.5	6.06	373
January.....	14	4.2	7.25	446
February.....	31	9	16.6	922
March.....	110	22	42.9	2,640
April.....	72	31	49.2	2,930
May.....	99	51	71.8	4,410
June.....	83	11	35.3	2,100
July.....	10	1.2	4.94	304
August.....	8.5	1.0	2.83	174
September.....	1.4	.8	1.09	64.9
The year.....	110	.8	20.3	14,700

SOUTH FORK OF WOKELUMNE RIVER NEAR RAILROAD FLAT, CALIF.

LOCATION.—Water-stage recorder in sec. 34, T. 6 N., R. 14 E., at Laidet Ranch, 5 miles above mouth of Licking Fork and 5 miles east of Railroad Flat. Altitude, about 2,680 feet.

DRAINAGE AREA.—36.9 square miles.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum during year, 108 second-feet May 28 (gage height, 1.78 feet); minimum, 1.4 second-feet (estimated) Sept. 30.

1911-33: Maximum, 3,330 second-feet Jan. 25, 1914 (gage height, 6.9 feet, on staff gage 700 feet downstream); minimum, 0.2 second-foot at times in August and September 1931. Average, 21 years (1912-33), 46.9 second-feet.

REMARKS.—Records good. Discharge estimated Dec. 9-16, Jan. 19, Sept. 14-19, 21-30. Stage discharge relation affected by ice Dec. 9-16. Small diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3.0	3.7	6	5.5	8	17	43	55	80	15	5	2.2
2.....	3.2	4.5	5	5.5	8	19	49	62	72	14	4.8	2.1
3.....	3.2	5.5	4.8	5.5	8	21	56	53	64	14	4.8	2.3
4.....	3.2	4.8	4.8	6	8.5	21	60	56	59	13	4.8	2.4
5.....	3.0	4.5	4.5	5.5	9	20	56	58	57	13	4.8	2.4
6.....	3.0	4.2	4.2	5.5	9.5	23	56	54	57	12	4.5	2.4
7.....	3.0	4.2	4.0	5.5	10	26	53	72	54	12	4.2	2.4
8.....	3.4	4.0	4.0	5.5	9	29	48	62	50	11	4.0	2.4
9.....	3.4	4.0	4.0	5.5	9	29	43	57	47	10	3.9	2.4
10.....	3.4	3.9	4.0	5.5	8.5	29	39	55	43	10	3.9	2.4
11.....	3.4	3.9	4.0	5	10	27	37	55	40	10	3.5	2.4
12.....	3.4	3.9	4.0	5.5	16	54	38	63	38	9.5	3.4	2.2
13.....	3.4	3.9	4.0	5.5	15	57	40	65	34	9	2.8	2.1
14.....	3.4	3.9	4.0	5.5	13	40	43	70	32	9	2.8	2.1
15.....	3.4	3.9	4.0	5.5	11	31	46	73	29	8.5	2.5	2.1
16.....	3.2	3.9	4.2	5.5	16	49	46	76	29	8	2.5	2.1
17.....	3.2	3.9	10	5.5	16	59	40	75	26	7.5	2.8	2.1
18.....	3.4	3.9	6.5	6	14	42	36	73	25	7.5	3.4	2.2
19.....	3.5	3.9	12	6.5	12	38	33	73	24	7	3.4	2.2
20.....	3.2	3.9	8.5	7.5	12	39	32	75	23	7	3.0	2.2
21.....	3.7	3.9	7.5	8.5	12	40	32	84	21	7	3.0	2.1
22.....	3.7	3.9	6	7.5	13	35	36	77	20	7	3.0	2.0
23.....	3.7	4.0	6.5	7	15	32	51	76	19	6.5	2.8	2.0
24.....	3.9	4.0	6	6.5	14	28	58	82	18	6.5	2.5	1.9
25.....	3.7	4.0	5.5	6.5	13	26	54	90	18	6	2.1	1.8
26.....	3.7	3.9	5.5	8	14	26	48	92	18	5	2.2	1.7
27.....	3.7	3.9	5.5	12	15	26	47	94	18	5	2.5	1.6
28.....	3.7	4.0	5.5	10	16	39	52	102	18	5	2.5	1.6
29.....	3.7	4.8	5	10	-----	41	58	102	16	5	2.5	1.5
30.....	3.7	10	5	9.5	-----	37	53	98	16	4.8	2.5	1.4
31.....	3.9	-----	5.5	8.5	-----	39	-----	90	-----	4.8	2.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	3.9	3.0	3.43	211
November.....	10	3.7	4.29	255
December.....	12	4.0	5.48	337
January.....	12	5	6.69	411
February.....	16	8	11.9	661
March.....	59	17	33.5	2,060
April.....	60	32	46.1	2,740
May.....	102	53	73.2	4,500
June.....	80	16	35.5	2,110
July.....	15	4.8	8.70	535
August.....	5	2.1	3.31	204
September.....	2.4	1.4	2.09	124
The year.....	102	1.4	19.6	14,100

EAST BAY MUNICIPAL UTILITY DISTRICT AQUEDUCT NEAR VALLEY SPRINGS, CALIF.

LOCATION.—Records show diversion from Pardee Reservoir, on Mokelumne River, 5 miles northeast of Valley Springs, Calaveras County.

RECORDS AVAILABLE.—June 1929 to September 1933.

DISCHARGE.—Maximum mean daily during year, 68 second-feet several days in October 1932; minimum, 0.7 second-foot Sept. 8.

1929-33: Maximum mean daily, 109 second-feet several days in June 1930 and May and June 1932; no flow at times.

REMARKS.—Aqueduct diverts from Pardee Reservoir, on Mokelumne River, and delivers to reservoirs for water supply of cities on east side of San Francisco Bay. Record includes discharge through Venturi meters at Walnut Creek and water occasionally wasted from pipe line. Record of daily discharge furnished by East Bay Municipal Utility District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	68	67	64	62	59	55	53	52	57	66	66	65
2.....	68	67	64	62	58	55	53	52	57	66	66	65
3.....	68	67	64	61	58	55	53	52	57	66	66	65
4.....	68	67	64	61	58	55	53	52	57	66	66	65
5.....	68	67	64	61	58	55	53	52	58	66	66	65
6.....	68	67	64	61	58	54	53	52	58	66	66	65
7.....	68	67	64	61	58	54	53	52	58	66	66	62
8.....	68	67	64	61	58	54	53	52	59	66	66	.7
9.....	68	67	64	61	58	54	53	52	59	66	66	2.4
10.....	68	66	64	61	57	54	53	52	59	66	66	8
11.....	67	66	64	61	57	54	52	52	59	66	66	6
12.....	67	66	64	61	57	54	52	52	60	66	66	19
13.....	67	66	64	61	57	54	52	52	61	66	66	6
14.....	67	66	64	60	57	54	52	52	62	66	66	7
15.....	67	66	64	61	57	54	52	52	62	66	66	7
16.....	67	66	63	60	57	54	52	52	63	66	66	6.5
17.....	67	66	63	60	56	54	52	52	63	66	66	6.5
18.....	68	66	63	60	56	54	52	52	64	66	66	6.5
19.....	67	66	63	60	56	54	52	52	64	66	66	4.8
20.....	68	66	63	60	56	54	52	52	64	66	66	6
21.....	67	66	63	60	56	54	52	53	65	66	66	6.5
22.....	67	66	63	60	56	54	52	53	65	66	66	6.5
23.....	67	65	63	60	56	54	52	53	65	66	66	5.5
24.....	67	65	63	59	56	54	52	53	65	66	66	5.5
25.....	67	65	63	59	55	54	52	53	65	66	66	5.5
26.....	67	65	63	59	55	53	52	54	65	66	66	5.5
27.....	67	65	63	59	55	53	52	54	66	66	66	4.8
28.....	67	65	62	59	55	53	52	54	66	66	66	4.9
29.....	67	65	63	59	-----	53	52	55	66	66	66	5.5
30.....	67	65	62	59	-----	53	52	55	56	66	66	5.5
31.....	67	-----	62	59	-----	53	-----	56	-----	66	66	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	68	67	67.4	4, 140
November.....	67	65	66.0	3, 930
December.....	64	62	63.4	3, 900
January.....	62	59	60.3	3, 710
February.....	59	55	56.8	3, 150
March.....	55	53	54.0	3, 320
April.....	53	52	52.3	3, 110
May.....	56	52	52.7	3, 240
June.....	66	57	61.8	3, 680
July.....	66	66	66.0	4, 060
August.....	66	65	65.5	4, 030
September.....	65	.7	19.8	1, 180
The year.....	68	.7	57.2	41, 400

CAMANCHE CREEK NEAR CAMANCHE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 10, T. 4 N., R. 9 E., a quarter of a mile above mouth and 2 miles northwest of Camanche.

DRAINAGE AREA.—4.9 square miles.

RECORDS AVAILABLE.—October 1932 to September 1933.

DISCHARGE.—Maximum during year, 73 second-feet Jan. 24 (gage height, 2.30 feet); no flow several months.

REMARKS.—Records good. No regulation or diversions.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.
1-----	0	0.1	0	11-----	0	0	0	21-----	0.7	0	0
2-----	0	0	0	12-----	0	1.3	0	22-----	0	0	0
3-----	0	0	0	13-----	0	.4	0	23-----	2.2	0	0
4-----	0	0	0	14-----	0	.1	0	24-----	4.0	0	0
5-----	0	0	0	15-----	0	0	0	25-----	2.0	0	0
6-----	0	0	0	16-----	0	.2	.4	26-----	.2	0	0
7-----	0	0	0	17-----	0	.1	.2	27-----	10	0	0
8-----	0	0	0	18-----	0	0	0	28-----	1.0	0	.1
9-----	0	0	0	19-----	2.2	0	0	29-----	7	-----	0
10-----	0	0	0	20-----	.5	0	0	30-----	.7	-----	0
								31-----	.1	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	10	0	0.99	60.7
February-----	1.3	0	.08	4.4
March-----	.4	0	.08	1.6
The year-----	10	0	.09	66.7

NOTE.—No flow during months omitted.

RABBIT CREEK NEAR CAMANCHE, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 4, T. 4 N., R. 9 E., about 600 feet above mouth and 3 miles northwest of Camanche. Altitude, about 180 feet.

DRAINAGE AREA.—8.5 square miles.

RECORDS AVAILABLE.—January 1932 to September 1933.

DISCHARGE.—Maximum during period January to September 1932, 257 second-feet Feb. 8 (gage height, 2.63 feet); no flow several months.

Maximum during year ending Sept. 30, 1933, 149 second-feet Jan. 27 (gage height, 2.15 feet); no flow several months.

REMARKS.—Records good. Discharge estimated Jan. 8–19, Feb. 18–25, Mar. 10–14, Mar. 29 to Apr. 7, 1932; Feb. 19–22, Apr. 7–16, 1933. No diversions or regulation.

Discharge, in second-feet, 1932–33

Day	1932				1933			
	Jan.	Feb.	Mar.	Apr.	Jan.	Feb.	Mar.	Apr.
1.....	5.5	36	0.3	0.2	0	1.0	0.2	0.2
2.....	17	8.5	.3	.2	0	.7	.2	.2
3.....	4.2	3.1	.3	.1	0	.6	.2	.2
4.....	3.1	2.0	.3	.1	0	.5	.2	.2
5.....	2.9	32	.3	.1	0	.4	.2	.2
6.....	2.6	119	.3	.1	0	.4	.2	.2
7.....	1.1	39	.3	.1	0	.3	.2	.2
8.....	.5	90	.3	0	0	.2	.2	.2
9.....	.5	58	.3	0	0	.2	.2	.2
10.....	.5	11	.3	0	0	.2	.2	.2
11.....	.5	5.5	.3	0	0	.3	.2	.1
12.....	.5	3.7	.3	0	0	.2	.4	.1
13.....	1.1	4.5	.3	0	0	2.3	.4	.1
14.....	.5	2.9	.3	0	0	.9	.3	.1
15.....	.5	1.8	.5	0	0	.6	.3	.1
16.....	.5	1.6	.4	0	0	1.4	11	.1
17.....	.5	1.1	.3	0	0	1.1	3.1	0
18.....	.5	1.0	.3	0	0	.7	1.0	0
19.....	1.5	.9	.2	0	4.8	.6	.6	0
20.....	.5	.8	.2	0	3.7	.5	.4	0
21.....	.5	.7	.2	0	3.1	.4	.3	0
22.....	.4	.6	.2	0	1.7	.3	.2	0
23.....	.4	.5	.2	0	10	.3	.2	0
24.....	.3	.4	.2	0	17	.3	.2	0
25.....	.3	.4	.2	0	16	.3	.2	0
26.....	.2	.4	.2	0	3.1	.3	.2	0
27.....	.4	.4	.2	0	27	.2	.2	0
28.....	.4	.4	.2	0	3.4	.2	.4	0
29.....	.4	.4	.2	0	15	-----	.4	0
30.....	19	-----	.2	0	3.1	-----	.3	0
31.....	58	-----	.2	-----	1.6	-----	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932				
January.....	58	0.2	4.03	248
February.....	119	.4	14.7	846
March.....	.5	.2	.27	16.6
April.....	.2	0	.03	1.8
The period.....	-----	-----	-----	1, 110
1932-33				
January.....	27	0	3.53	217
February.....	4.2	.2	.69	38.5
March.....	11	.2	.73	44.6
April.....	.2	0	.09	5.2
The year.....	27	0	.42	305

NOTE.—No flow May to December 1932 and May to September 1933.

MURPHY CREEK NEAR CLEMENTS, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 6, T. 4 N., R. 9 E., 800 feet above mouth and 4 miles northeast of Clements. Altitude, about 100 feet.

DRAINAGE AREA.—5.2 square miles.

RECORDS AVAILABLE.—January 1932 to September 1933.

DISCHARGE.—Maximum during period of record, 392 second-feet Feb. 8, 1932 (gage height, 3.41 feet); no flow several months each year.

REMARKS.—Records good. Discharge estimated Jan. 1-5, 7-13, 15-21, Mar. 11-15, 28-31, 1932. No regulation or diversions.

Discharge, in second-feet, 1932-33

Day	1932			1933			Day	1932			1933		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.		Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
1-----	5	10	0.4	0	0.4	0.1	16-----	0.5	0.8	0.5	0	0.7	1.8
2-----	10	3.4	.4	0	.2	.2	17-----	.5	.7	.4	0	.9	.9
3-----	2.0	1.8	.4	0	.2	.2	18-----	.5	.6	.4	0.3	.4	.4
4-----	1.0	1.2	.3	0	.1	.2	19-----	1.0	.6	.3	1.6	.2	.2
5-----	.7	14	.4	0	0	.2	20-----	.5	.6	.3	2.1	.2	.1
6-----	.5	116	.4	0	0	.2	21-----	.4	.6	.3	5	.1	.1
7-----	.5	9	.4	0	0	.2	22-----	.4	.6	.2	1.7	.1	0
8-----	.5	85	.4	0	0	.2	23-----	.3	.6	.2	10	.1	0
9-----	.5	24	.5	0	0	.2	24-----	.2	.6	.2	18	.1	0
10-----	.5	6	.5	0	0	.2	25-----	.2	.6	.2	10	.2	0
11-----	.5	3.0	.5	0	0.1	.2	26-----	.1	.5	.2	1.2	.2	.1
12-----	.5	1.8	.5	0	.7	.2	27-----	.3	.5	.1	21	.2	0
13-----	.5	2.6	.5	0	1.5	.2	28-----	.2	.4	.1	3.2	.1	.4
14-----	1.6	1.6	.5	0	.6	.1	29-----	.5	.4	.1	7	-----	.2
15-----	.5	.9	.8	0	.4	0	30-----	16	-----	.1	1.5	-----	0
							31-----	34	-----	.1	.6	-----	0

Month		Maximum	Minimum	Mean	Run-off in acre-feet
1932					
January-----		34	0.1	2.59	159
February-----		116	.4	9.94	572
March-----		.8	.1	.34	21
The period-----					752
1932-33					
January-----		21	0	2.68	165
February-----		1.5	0	.28	15.3
March-----		1.8	0	.22	13.5
The year-----		21	0	.27	194

NOTE.—No flow April to December 1932 and April to September 1933.

WOODBIDGE CANAL AT WOODBRIDGE, CALIF.

LOCATION.—Three water-stage recorders in SE¼ sec. 34, T. 4 N., R. 6 E., at Woodbridge, at point of diversion. Elevation of zero of gage is 32.18 feet above mean sea level.

RECORDS AVAILABLE.—April 1926 to September 1933.

DISCHARGE.—Maximum mean daily during year, 279 second-feet Apr. 19; practically no flow Jan. 8 to Mar. 9.

1926-33: Maximum mean daily, that of Apr. 19, 1933; no flow part of each year.

REMARKS.—Records good. Discharge computed from records of gate openings and effective head as shown by recorders. Canal diverts from reservoir on Mokelumne River in sec. 34, T. 4 N., R. 6 E., in Woodbridge. Water is used for irrigation in territory south and west of Woodbridge.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	172	128	98	14	0	47	213	184	217	231	208
2	166	127	92	14	0	46	195	188	209	245	196
3	171	130	92	13	0	48	215	179	196	242	191
4	166	130	90	13	0	63	208	182	188	242	188
5	164	127	85	14	0	75	202	192	192	233	191
6	153	127	89	14	0	76	206	201	213	230	191
7	139	126	86	4. 7	0	76	188	202	217	220	204
8	139	126	83	0	0	86	180	199	196	226	188
9	139	127	74	0	0	98	182	208	192	238	155
10	146	126	64	0	16	132	180	204	209	230	133
11	139	126	63	0	57	197	180	202	234	233	148
12	139	131	63	0	61	219	178	197	234	226	164
13	137	127	58	0	11	213	178	216	234	220	176
14	137	128	51	0	16	214	171	221	234	200	176
15	144	129	43	0	14	223	162	237	231	216	176
16	139	128	40	0	9	216	146	238	228	220	173
17	139	133	37	0	14	198	178	228	217	212	160
18	141	132	35	0	20	246	198	217	238	226	169
19	146	138	37	0	35	279	203	220	238	233	180
20	149	138	33	0	28	267	199	225	234	212	169
21	160	136	29	0	32	237	179	214	234	204	164
22	155	126	31	0	31	244	188	210	231	212	169
23	152	128	16	0	32	238	179	214	220	200	160
24	154	129	19	0	34	225	188	214	224	208	148
25	154	128	18	0	32	230	179	210	248	197	143
26	151	128	18	0	24	212	175	218	254	191	152
27	147	126	22	0	27	245	175	232	251	184	156
28	145	123	26	0	32	243	192	229	248	165	156
29	139	121	20	0	33	253	194	218	248	197	164
30	128	99	19	0	32	238	156	210	238	212	160
31	128		18	0	36		156		224	221	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	172	128	148	9, 100
November	138	99	128	7, 620
December	98	16	50. 0	3, 070
January	16	0	2. 80	172
March	61	0	20. 2	1, 240
April	279	46	179	10, 700
May	215	146	185	11, 400
June	238	179	210	12, 400
July	254	188	225	13, 800
August	245	165	217	13, 300
September	208	133	170	10, 100
The year	279	0	128	92, 900

NOTE.—No flow during February.

DRY CREEK NEAR GALT, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 34, T. 5 N., R. 6 E., at Southern Pacific Railroad trestle 1 mile south of Galt. Altitude, about 25 feet.

DRAINAGE AREA.—346 square miles.

RECORDS AVAILABLE.—December 1926 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 233 second-feet Mar. 18 (gage height, 6.02 feet); no flow several months.

1926-33: Maximum, 6,760 second-feet Feb. 7, 1932 (gage height, 9.71 feet); maximum stage, 10.2 feet Mar. 26, 1928; no flow several months each year.

REMARKS.—Records good. Small irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1.....	0	48	6	32	16.....	0	32	58	0
2.....	0	28	3.9	23	17.....	0	41	141	0
3.....	0	14	2.6	19	18.....	0	44	168	0
4.....	0	7	1.7	17	19.....	0	29	100	0
5.....	0	2.6	1.3	14	20.....	0	20	73	0
6.....	0	.5	1.2	9	21.....	0	16	54	0
7.....	0	0	1.0	7	22.....	0	11	42	0
8.....	0	0	3.6	6	23.....	0	9	34	0
9.....	0	0	3.1	3.7	24.....	0	8	27	0
10.....	0	0	2.6	2.7	25.....	0.3	6	23	0
11.....	0	0	1.2	2.3	26.....	20	4.2	23	0
12.....	0	0	.3	2.5	27.....	21	2.4	22	0
13.....	0	45	31	.9	28.....	97	3.1	19	0
14.....	0	82	119	.2	29.....	114	-----	44	0
15.....	0	48	82	0	30.....	153	-----	68	0
					31.....	98	-----	45	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	153	0	16.2	996
February.....	82	0	17.9	994
March.....	168	.3	38.8	2,390
April.....	32	0	4.64	276
The year.....	168	0	6.42	4,660

NOTE.—No flow during months omitted.

SUTTER CREEK AT SUTTER CREEK, CALIF.

LOCATION.—Staff gage in sec. 7, T. 6 N., R. 11 E., three-eighths of a mile west of Sutter Creek. Altitude, about 1,100 feet.

DRAINAGE AREA.—53.2 square miles.

RECORDS AVAILABLE.—February 1922 to September 1933.

DISCHARGE.—Maximum recorded during year, 210 second-feet Mar. 16 (gage height, 2.4 feet); minimum, 1.3 second-feet Oct. 4, Sept. 21 (results of discharge measurements).

1922-33: Maximum, about 3,100 second-feet Feb. 6, 1925 (gage height, 7.5 feet); practically no flow, except for town waste, during summer of 1924.

REMARKS.—Records fair. Discharge estimated Oct. 1 to Dec. 15, July to September. Stream regulated to some extent by small dam above town of Sutter Creek and by release of mine water.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1		4.5	12	11	11	5.5	4.1
2		4.5	10	12	10	3.1	3.2
3		4.9	9	12	9.5	3.1	3.0
4		6	8.5	13	9.5	3.1	3.1
5		6	8	13	9	2.6	3.5
6		5.5	9.5	13	8.5	2.8	3.4
7		5.5	11	12	7.5	16	3.2
8		5.5	9	10	7.5	18	2.8
9		5.5	9	10	7	18	2.2
10		5.5	8.5	10	6.5	28	2.5
11		4.9	9.5	9.5	6	20	2.7
12		4.5	41	50	5.5	5.5	2.6
13		4.4	54	114	5.5	14	2.6
14		4.5	31	49	4.9	9.5	2.7
15		4.5	21	29	4.7	8.5	2.1
16		3.5	4.9	25	114	9	1.8
17		3.5	5	23	124	9	2.1
18		3.9	6	18	63	6.5	2.2
19		6	22	16	37	5.5	2.1
20		9.5	20	15	28	5.5	2.0
21		11	14	14	28	4.1	1.8
22		12	10	14	21	3.8	2.2
23		11	24	14	21	3.9	1.8
24		9.5	17	12	20	4.0	1.9
25		8.5	12	12	17	4.0	2.0
26		6	12	11	12	4.2	2.0
27		4.7	36	9	11	4.1	2.0
28		4.7	26	9.5	23	4.0	1.8
29		4.9	36		26	4.9	1.8
30		4.5	26		18	5.5	3.1
31		4.9	17		13		4.0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			1.8	111
November			2.9	173
December	12		4.75	292
January	36	4.4	11.7	719
February	54	8	15.8	878
March	124	9.5	30.4	1,870
April	11	3.8	6.35	378
May	28	2.5	7.67	472
June	4.1	1.8	2.43	145
July			2.3	141
August			2.0	123
September			1.5	89.3
The year	124		7.45	5,390

GOOSE CREEK NEAR ELLIOTT, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 29, T. 5 N., R. 8 E., 1½ miles above mouth and 4½ miles northeast of Elliott. Altitude, about 110 feet.

DRAINAGE AREA.—8.5 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 161 second-feet Jan. 24 (gage height, 4.46 feet); no flow several months during year.

1927-33: Maximum, 726 second-feet Feb. 6, 1932 (gage height, 6.00 feet); no flow several months each year.

REMARKS.—Records good. No diversions.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.	Day	Jan.	Feb.	Mar.
1.....	0	4.4	0.1	11.....	0	0.7	0	21.....	4.1	1.1	0.1
2.....	0	3.1	.1	12.....	0	5.5	0	22.....	5	.7	0
3.....	0	2.7	.1	13.....	0	6	.1	23.....	19	.6	0
4.....	0	2.2	.1	14.....	0	3.1	.2	24.....	33	.4	0
5.....	0	1.6	.1	15.....	0	2.5	.2	25.....	38	.2	0
6.....	0	1.2	.1	16.....	0	4.8	.8	26.....	9	.2	0
7.....	0	.9	.1	17.....	0	5	1.1	27.....	40	.2	0
8.....	0	.6	.1	18.....	0	2.7	.4	28.....	17	.1	0
9.....	0	.5	.1	19.....	.4	2.0	.2	29.....	27	-----	0
10.....	0	.4	0	20.....	8	1.4	.2	30.....	9	-----	.1
								31.....	6	-----	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	40	0	6.95	427
February.....	6	.1	1.96	109
March.....	1.1	0	.14	8.7
The year.....	40	0	.75	545

NOTE.—No flow during months omitted.

NORTH FORK OF COSUMNES RIVER NEAR EL DORADO, CALIF.

LOCATION.—Staff gage in sec. 23, T. 9 N., R. 10 E., at Celio ranch, 5 miles south of El Dorado. Martinez Creek enters 1½ miles above station. Altitude, about 950 feet.

DRAINAGE AREA.—197 square miles.

RECORDS AVAILABLE.—August 1911 to September 1933.

DISCHARGE.—Maximum during year, 462 second-feet May 30, 31 (gage height, 5.68 feet); no flow Sept. 1–26.

1911–33: Maximum, about 7,600 second-feet Mar. 25, 1928 (gage height, 15.2 feet); no flow part of 1924, 1926, 1931, 1933. Average, 22 years (1911–33), 188 second-feet.

REMARKS.—Records fair. Irrigation diversions above station.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.1	3.3	17	10	28	40	174	• 250	385	30	3.0	0
2.....	1.1	4.1	• 12	10	27	45	• 200	264	314	23	3.0	0
3.....	1.1	4.2	8	13	25	55	218	196	264	22	3.0	0
4.....	1.1	6	7	• 14	22	55	240	218	385	22	3.0	0
5.....	1.2	7	• 6.5	15	23	• 58	229	218	207	18	2.8	0
6.....	1.4	5.5	6	• 15	22	61	240	229	240	18	2.8	0
7.....	1.5	5.5	6	• 14	22	67	229	342	252	17	2.7	0
8.....	1.6	5	• 6	• 13	22	81	207	252	229	16	2.4	0
9.....	1.6	5	6	12	22	94	174	218	229	15	2.2	0
10.....	1.7	5	6.5	12	20	91	• 160	264	218	15	2.1	0
11.....	1.7	5	• 5.5	10	22	94	148	276	207	15	1.6	0
12.....	1.8	5.5	4.6	12	97	152	152	218	207	11	.7	0
13.....	1.8	4.6	• 5	12	114	276	163	229	196	11	1.3	0
14.....	1.8	• 4.6	5.5	12	55	163	185	240	152	10	.9	0
15.....	2.0	• 4.6	• 6	12	45	114	207	252	152	10	.9	0
16.....	2.0	• 4.6	7	13	61	288	196	252	138	10	.8	0
17.....	2.0	4.6	8.5	12	87	288	174	288	111	9.5	.8	0
18.....	2.1	4.6	22	12	61	152	142	• 280	91	7.5	.8	0
19.....	2.1	4.6	20	27	40	142	132	276	84	7	.8	0
20.....	2.1	4.6	22	22	36	144	• 125	276	84	7	.7	0
21.....	2.6	• 4.6	• 18	18	36	152	118	328	65	6	.6	0
22.....	2.7	4.6	15	• 20	36	136	118	288	55	6	.6	0
23.....	2.6	• 4.6	• 18	22	38	114	• 160	264	47	6.5	.5	0
24.....	2.8	4.6	21	22	36	100	207	• 275	47	5	.5	0
25.....	3.0	4.6	13	36	36	• 100	207	288	46	4.8	.5	0
26.....	3.0	4.6	13	22	34	100	174	356	36	4.6	.4	0
27.....	3.0	4.6	12	61	36	97	174	356	34	4.6	.3	1.6
28.....	3.3	4.6	12	45	36	218	207	370	36	4.6	.2	1.5
29.....	3.0	4.6	11	67	-----	240	207	370	34	4.6	.1	2.2
30.....	3.3	• 12	10	45	-----	163	196	462	31	4.2	• 1	2.0
31.....	3.3	-----	10	32	-----	152	-----	462	-----	3.0	• 1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	3.3	1.1	2.11	130
November.....	12	3.3	5.04	300
December.....	22	4.6	11.0	676
January.....	67	10	21.4	1,320
February.....	114	20	40.7	2,260
March.....	288	40	130	7,990
April.....	240	118	182	10,800
May.....	462	196	286	17,600
June.....	385	31	153	9,100
July.....	30	3.0	11.2	689
August.....	3.0	.1	1.30	79.9
September.....	2.2	0	.24	14.5
The year.....	462	0	70.4	51,000

• Estimated.

COSUMNES RIVER AT MICHIGAN BAR, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 36, T. 8 N., R. 8 E., at highway bridge at Michigan Bar, 5½ miles southwest of Latrobe. North and Middle Forks unite 12 miles above station. Altitude, about 190 feet.

DRAINAGE AREA.—524 square miles.

RECORDS AVAILABLE.—October 1907 to September 1933.

DISCHARGE.—Maximum during year, 890 second-feet May 30 (gage height, 4.28 feet); minimum, 0.1 second-foot Aug. 31, Sept. 1-9.

1907-33: Maximum, 23,800 second-feet Feb. 6, 1925 (gage height, 11.2 feet); no flow part of 1908, 1918, 1919, 1924-26, 1931. Average, 25 years (1908-33), 453 second-feet.

REMARKS.—Records excellent. Discharge interpolated Oct. 1-2. Diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.7	7	22	26	126	105	380	416	704	83	7.5	0.1
2.....	2.8	7.5	39	26	107	111	416	482	626	76	7	.1
3.....	2.9	7.5	33	29	93	117	464	446	563	72	7	.1
4.....	2.4	7.5	26	32	83	138	528	416	507	68	7.5	.1
5.....	2.4	9.5	22	35	81	143	549	434	468	60	8	.1
6.....	2.6	12	19	36	78	138	535	446	470	56	8.5	.1
7.....	3.7	13	18	32	76	149	521	494	500	53	6.5	.1
8.....	3.5	12	16	30	69	165	482	633	482	50	5.5	.1
9.....	3.5	12	15	28	69	191	434	514	470	48	5.5	.1
10.....	7.5	12	15	28	69	201	380	542	464	44	4.2	.2
11.....	8	11	16	27	68	205	345	482	440	42	3.2	.3
12.....	5.5	11	16	25	177	240	335	464	428	38	2.6	.3
13.....	4.9	11	14	24	295	712	340	458	416	33	2.0	.4
14.....	4.5	11	13	27	194	458	360	458	392	30	1.4	.3
15.....	4.5	11	14	28	143	335	392	500	365	28	1.1	.3
16.....	4.5	11	18	27	165	416	422	556	330	26	1.0	.4
17.....	4.5	11	21	27	201	738	392	584	290	25	.8	.4
18.....	4.5	10	24	30	178	488	350	584	248	24	.7	.4
19.....	4.5	10	40	51	138	380	310	563	224	21	.7	.4
20.....	4.5	10	54	83	113	340	276	556	197	19	.5	.4
21.....	4.9	10	81	66	105	350	266	570	171	16	.5	.4
22.....	5.5	10	62	72	101	345	266	612	154	15	.5	.4
23.....	5.5	10	49	110	97	315	315	549	146	15	.5	.5
24.....	5.5	10	56	118	99	280	392	542	133	13	.4	.5
25.....	5.5	10	53	205	95	244	428	577	124	13	.3	.5
26.....	5.5	10	39	138	90	262	416	633	111	11	.2	.4
27.....	6	10	35	210	92	240	370	656	105	10	.3	.6
28.....	6.5	10	32	302	99	354	392	696	103	9	.3	.7
29.....	7	11	31	329	-----	577	446	747	103	8.5	.3	1.0
30.....	7	14	26	326	-----	446	482	783	92	8	.3	2.0
31.....	7	-----	26	165	-----	380	-----	774	-----	7.5	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	8	2.4	4.83	297
November.....	14	7	10.4	619
December.....	81	13	30.5	1,880
January.....	329	24	86.8	5,340
February.....	295	68	118	6,550
March.....	738	105	308	18,900
April.....	549	266	399	23,700
May.....	783	416	554	34,100
June.....	704	92	327	19,500
July.....	83	7.5	33.0	2,030
August.....	8.5	.2	2.74	168
September.....	2.0	.1	.39	23.2
The year.....	783	.1	156	113,000

GOOSE LAKE BASIN

DREW CREEK NEAR LAKEVIEW, OREG.

LOCATION.—Staff gage in SE¼ sec. 4, T. 40 S., R. 18 E., at highway bridge half a mile below mouth of Willow Creek, 1 mile below Drew Creek Dam, and 13 miles southwest of Lakeview.

DRAINAGE AREA.—211 square miles.

RECORDS AVAILABLE.—January 1909 to September 1920; February to September 1921; October 1925 to September 1933 (incomplete). Records for 1920 and 1922-25 published by State engineer.

DISCHARGE.—Maximum during period, 63 second-feet several days in June and July (gage height, 1.18 feet); no flow at times.

1909-19, 1921, 1925-33: Maximum (estimated), 3,000 second-feet Mar. 1, 2, 1910; no flow at times.

REMARKS.—Records fair. Considerable regulation caused by operation of Drew Creek Reservoir, 1 mile above station. North Drew Canal, of Goose Lake Valley Irrigation Co., diverts water around station. Records furnished by State engineer.

Discharge, in second-feet, 1932-33

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.				3		63		18.0
2.					50	21		17.0
3.			3					15.0
4.								14.0
5.				3	50	8	46	14.0
6.				6				14.0
7.			3			31		14.0
8.				4		35	33	10.0
9.					39	39		
10.			3			43		
11.						46		
12.				4	43	46	33	
13.						46		
14.						46	30	
15.			3	23		46		
16.					54	46		
17.			3			46		
18.						48	32	
19.				23		50	20	
20.					63	52		1.5
21.			3			54	20	
22.					57	56		
23.				31		57		
24.		0	3		63	58		
25.						58	20	
26.				38	63	58		
27.						58		
28.		4	3			58		
29.					63	58	18	
30.				54		58		
31.						58		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April			3.0	179
May			21.0	1,290
June			54.5	3,240
July	63	0	43.3	2,660
August			28.0	1,720
September	18		4.97	296
The period				9,380

NOTE.—No record on days omitted. Monthly mean discharge (except that for May, which is estimated) is mean of days for which records are published.

Monthly stage and contents of Drew Creek Reservoir near Lakeview, Oreg., 1932-33

Date	Gage height in feet	Con- tents in acre-feet	Change in contents during month in acre-feet	Date	Gage height in feet	Con- tents in acre-feet	Change in contents during month in acre-feet
Sept. 30.....		9,596		May 31.....	44.0	24,800	+5,240
Oct. 31.....	36.0	9,310	-286	June 30.....	40.7	17,200	-7,600
Nov. 30.....	36.0	9,310	0	July 31.....	36.0	9,310	-7,890
Dec. 31.....	36.0	9,310	0	Aug. 31.....	29.9	3,419	-5,891
Jan. 31.....	36.0	9,310	0	Sept. 30.....	28.2	2,616	-803
Feb. 28.....	36.0	9,310	0				
Mar. 31.....	37.1	10,900	+1,590	The year.....			-6,980
Apr. 30.....	41.8	19,560	+8,660				

NOTE.—Maximum contents for year, 24,800 acre-feet May 19-31.

Run-off, in acre-feet, of North Drew Canal, Lakeview, Oreg., 1933

May.....	1,950	September.....	476
June.....	4,720		
July.....	4,270	The period.....	15,400
August.....	4,030		

COTTONWOOD CREEK NEAR LAKEVIEW, OREG.

LOCATION.—Water-stage recorder in SW¼ sec. 29, T. 38 S., R. 19 E., 200 yards below Cottonwood Reservoir and 10 miles northwest of Lakeview.

DRAINAGE AREA.—30 square miles.

RECORDS AVAILABLE.—November 1908 to September 1919; October 1925 to September 1933. Records for 1294 published by State engineer.

DISCHARGE.—Maximum during year, 44 second-feet June 8, 9 (gage height, 2.43 feet); probably less than 0.5 second-foot at times during winter.

1908-19, 1925-33: Maximum, 500 to 1,000 second-feet during Apr. 26 to May 1, 1927, when natural mean flow estimated as 170 second-feet was augmented by water escaping from reservoir through break in outlet conduit above control gage; no flow at times. Average, 19 years (1909-19, 1924-33), 21.6 second-feet.

REMARKS.—Records fair except those estimated, which are poor. Considerable regulation since 1923 caused by operation of Cottonwood Reservoir, 200 yards above gage. Records furnished by State engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.5	1.5	2.0	-----	-----	0.5	17	24	-----	22.0	1.4
2.....	1.5	0.5	1.8	-----	-----	.5	17	30	-----	8.0	1.4
3.....	1.5	0.5	1.8	-----	-----	.5	18	34	0.24	2.2	1.5
4.....	1.5	0.30	1.5	-----	-----	1.0	19	34	-----	1.8	1.5
5.....	1.4	5.0	1.4	-----	-----	4.2	19	38	-----	2.0	1.5
6.....	1.5	4.0	1.6	-----	-----	4.2	19	39	-----	2.0	1.4
7.....	1.7	4.8	-----	-----	-----	4.0	19	39	2.4	1.8	1.4
8.....	1.6	3.5	-----	-----	-----	4.0	19	41	2.4	1.6	1.4
9.....	1.5	3.1	-----	-----	-----	4.0	19	43	2.4	1.5	1.4
10.....	1.5	2.7	-----	1.0	-----	4.0	19	43	2.4	1.5	1.4
11.....	1.5	2.2	-----	-----	-----	7.0	19	43	2.4	1.5	1.4
12.....	1.5	2.0	-----	-----	-----	11.0	19	43	2.2	1.5	1.3
13.....	1.5	1.6	0.12	-----	0.5	15.0	19	43	2.2	1.4	1.3
14.....	1.5	1.5	-----	-----	-----	15.0	19	42	2.2	1.4	1.3
15.....	1.6	1.5	-----	-----	-----	15.0	19	42	2.2	1.4	1.3
16.....	1.7	2.0	-----	-----	-----	15.0	19	42	2.4	1.4	1.3
17.....	1.7	2.4	-----	-----	-----	15.0	20	42	2.4	1.4	1.3
18.....	1.7	1.8	-----	-----	-----	15.0	20	41	20.0	1.4	1.3
19.....	1.7	1.6	-----	-----	-----	15.0	20	40	23.0	1.4	1.4
20.....	1.7	1.5	-----	-----	-----	15.0	20	40	23.0	1.4	1.4
21.....	1.7	1.5	1.6	-----	-----	15.0	20	40	23.0	1.4	1.4
22.....	1.7	1.4	-----	-----	-----	15.0	20	39	23.0	1.3	1.5
23.....	1.8	1.3	-----	-----	-----	15.0	20	39	23.0	1.3	1.6
24.....	1.8	1.4	-----	-----	-----	15.0	20	38	28.0	1.3	1.5
25.....	1.8	2.0	-----	-----	-----	15.0	19	38	27.0	1.3	1.5
26.....	1.9	1.6	0.15	-----	-----	16.0	18	38	26.0	1.4	1.4
27.....	1.8	1.8	-----	-----	-----	16.0	19	37	26.0	1.4	1.3
28.....	1.8	1.6	-----	-----	0.7	16.0	19	37	26.0	1.4	1.3
29.....	1.7	1.8	-----	-----	0.6	17.0	19	36	27.0	1.4	1.3
30.....	1.7	2.2	-----	-----	0.6	17.0	19	30	26.0	1.4	1.3
31.....	1.8	-----	-----	-----	0.6	-----	22	-----	26.0	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1.9	1.4	1.64	101
November.....	5.0	.5	2.11	126
December.....	2.0	-----	1.40	86
January.....	-----	-----	1.0	61
February.....	-----	-----	.5	28
March.....	-----	-----	.52	32
April.....	17	.5	10.7	637
May.....	22	17	19.2	1,180
June.....	43	24	38.5	2,290
July.....	28	2.2	12.5	769
August.....	22	1.3	2.37	146
September.....	1.6	1.3	1.39	83
The year.....	43	-----	7.65	5,540

0 Estimated.

SACRAMENTO RIVER BASIN

MAIN STREAM

SACRAMENTO RIVER AT ANTLER, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 13, T. 35 N., R. 5 W., a quarter of a mile below highway bridge at Antler. Gregory Creek enters 1,000 feet above gage and Pit River 14 miles below. Altitude, about 950 feet.

DRAINAGE AREA.—461 square miles.

RECORDS AVAILABLE.—November 1910 to December 1911, April 1919 to September 1933.

DISCHARGE.—Maximum during year, 19,200 second-feet Mar. 27 (gage height, 12.20 feet); minimum, 115 second-feet Oct. 5.

1910-11, 1919-33: Maximum, 34,000 second-feet Mar. 26, 1928 (gage height, 19.4 feet at former station); minimum, 95 second-feet Aug. 19, 28-29, Sept. 3-4, 1931. Average, 14 years (1919-33), 916 second-feet.

REMARKS.—Records good except those for Dec. 11 to Jan. 2, which were estimated. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	119	140	616	260	275	910	2,700	1,730	1,930	402	188	131
2.....	119	162	417	280	271	2,640	2,760	1,480	1,630	380	179	128
3.....	119	162	338	440	283	2,950	3,110	1,260	1,400	366	173	128
4.....	119	152	294	367	306	1,610	3,260	1,220	1,260	352	170	128
5.....	117	167	268	326	367	1,220	2,700	1,260	1,260	339	170	128
6.....	123	167	243	302	426	1,180	2,500	1,140	1,300	322	167	134
7.....	132	162	229	294	440	1,300	2,260	1,350	1,350	314	161	137
8.....	130	154	223	298	408	1,480	1,980	1,260	1,300	322	158	137
9.....	130	147	207	302	372	1,480	1,730	1,220	1,260	310	155	134
10.....	128	144	176	294	338	1,430	1,530	1,180	1,260	290	155	134
11.....	128	142	160	275	334	1,480	1,440	1,140	1,260	280	152	131
12.....	126	144	160	264	330	4,580	1,480	1,140	1,220	269	149	128
13.....	126	144	160	260	314	3,260	1,530	1,180	1,140	262	143	128
14.....	128	144	180	268	306	2,300	1,630	1,260	1,060	252	140	128
15.....	132	147	200	275	314	2,370	1,880	1,300	995	244	134	128
16.....	135	149	210	264	403	6,930	1,880	1,400	888	238	137	128
17.....	135	152	210	250	474	4,120	1,580	1,480	798	227	140	131
18.....	135	152	210	279	460	2,600	1,400	1,350	720	220	143	140
19.....	137	154	300	260	440	2,130	1,260	1,220	659	213	140	146
20.....	137	152	270	236	460	2,020	1,260	1,180	610	210	137	149
21.....	137	152	310	253	484	1,960	1,300	1,220	580	206	134	161
22.....	140	149	300	250	524	1,610	1,530	1,180	555	202	134	161
23.....	144	152	400	268	549	1,380	1,780	1,180	525	199	131	155
24.....	144	152	300	294	564	1,220	1,980	1,300	495	196	131	158
25.....	142	152	260	287	559	1,220	2,100	1,630	480	188	128	182
26.....	144	159	250	287	600	1,260	1,630	1,830	475	185	125	182
27.....	142	175	270	421	637	7,740	1,780	1,880	447	179	125	173
28.....	142	1,630	280	359	664	11,400	2,200	2,040	475	176	128	164
29.....	140	2,520	260	338	-----	5,140	2,320	2,200	447	170	134	158
30.....	140	1,310	250	298	-----	3,630	1,730	2,260	420	170	134	149
31.....	140	-----	260	287	-----	2,970	-----	2,160	-----	170	134	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	144	117	133	8,180
November.....	2,520	140	320	19,000
December.....	616	160	265	16,300
January.....	440	236	296	18,100
February.....	664	271	425	23,600
March.....	11,400	910	2,820	173,000
April.....	3,260	1,260	1,940	115,000
May.....	2,260	1,140	1,440	88,500
June.....	1,930	420	940	55,900
July.....	402	170	253	16,600
August.....	188	125	146	8,980
September.....	182	128	143	8,510
The year.....	11,400	117	762	551,000

SACRAMENTO RIVER AT KENNETT, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 2, T. 33 N., R. 5 W., at highway bridge at Kennett. Altitude, about 620 feet.

DRAINAGE AREA.—6,600 square miles (not including area of Goose Lake).

RECORDS AVAILABLE.—November 1925 to September 1933.

DISCHARGE.—Maximum during year, 44,200 second-feet Mar. 28 (gage height, 15.05 feet); minimum, 2,470 second-feet Oct. 3.

1925-33: Maximum, 94,900 second-feet Mar. 26, 1928 (gage height, 25.1 feet); minimum, 2,370 second-feet Sept. 26, 1931.

REMARKS.—Records excellent. Discharge estimated Jan 6, 8, Aug. 1-4, 16-19, Sept. 2, 21-23. Storage and many diversions above station in Pit River Basin.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2,660	2,660	3,930	3,080	3,670	5,360	12,000	7,420	6,840	3,420	2,760	2,560
2.....	2,610	2,710	3,420	3,080	3,420	10,700	11,500	7,420	6,460	3,300	2,710	2,560
3.....	2,470	2,710	3,190	4,210	3,300	15,900	11,700	6,840	6,080	3,300	2,710	2,520
4.....	2,520	2,710	3,080	3,800	3,420	10,100	12,500	6,460	5,720	3,190	2,660	2,560
5.....	2,560	2,760	2,970	3,420	3,800	8,220	11,200	6,460	5,540	3,190	2,660	2,560
6.....	2,560	2,760	2,970	3,360	4,070	7,220	10,300	6,080	5,540	3,190	2,660	2,610
7.....	2,520	2,760	2,970	3,300	4,070	7,220	9,900	7,030	5,540	3,190	2,710	2,660
8.....	2,610	2,760	2,970	3,300	3,800	8,020	9,050	6,840	5,540	3,190	2,710	2,610
9.....	2,660	2,760	2,920	3,300	3,670	8,630	8,200	6,650	5,540	3,190	2,710	2,610
10.....	2,660	2,710	2,810	3,190	3,540	7,820	7,620	6,650	5,360	3,190	2,710	2,610
11.....	2,660	2,710	2,760	3,190	3,540	7,820	7,220	6,840	5,180	3,080	2,710	2,610
12.....	2,520	2,660	2,710	3,080	3,540	15,900	7,030	7,030	5,180	3,080	2,660	2,560
13.....	2,610	2,710	2,710	3,080	3,540	16,500	7,030	6,650	5,000	3,080	2,660	2,560
14.....	2,610	2,760	2,810	3,080	3,540	14,500	7,030	6,460	4,670	3,080	2,660	2,610
15.....	2,560	2,760	2,810	3,080	3,540	13,000	7,420	6,270	4,670	2,970	2,660	2,610
16.....	2,560	2,760	2,860	3,080	4,210	28,700	7,820	7,030	4,510	2,970	2,660	2,660
17.....	2,560	2,760	2,860	3,080	4,510	21,300	7,030	7,420	4,360	2,970	2,660	2,660
18.....	2,610	2,760	2,920	3,190	4,210	15,100	6,650	7,420	4,210	2,970	2,660	2,610
19.....	2,610	2,810	3,420	3,190	4,070	12,200	6,270	7,220	3,930	2,920	2,660	2,560
20.....	2,610	2,810	3,190	3,080	4,070	11,700	6,270	7,220	3,800	2,860	2,660	2,610
21.....	2,660	2,860	3,420	3,300	4,070	11,000	6,270	7,650	3,800	2,860	2,660	2,610
22.....	2,710	2,860	3,300	3,300	4,210	10,100	6,460	6,650	3,670	2,860	2,660	2,610
23.....	2,660	2,810	3,670	3,420	4,360	9,470	6,650	6,650	3,540	2,860	2,660	2,610
24.....	2,610	2,760	3,300	3,930	4,360	8,630	7,220	6,460	3,670	2,860	2,560	2,660
25.....	2,610	2,810	3,080	3,670	4,210	8,420	7,420	6,650	3,540	2,810	2,560	2,860
26.....	2,610	2,760	3,080	3,670	4,360	9,050	7,030	7,030	3,540	2,810	2,560	2,860
27.....	2,610	2,810	3,080	4,460	4,510	19,100	7,030	7,030	3,420	2,760	2,610	2,860
28.....	2,660	4,400	3,080	4,670	4,670	35,500	7,420	7,030	3,420	2,760	2,610	2,760
29.....	2,660	5,760	3,080	4,360	-----	20,100	7,220	7,220	3,420	2,760	2,610	2,660
30.....	2,660	6,720	2,970	3,930	-----	14,800	7,030	7,420	3,420	2,760	2,610	2,610
31.....	2,710	-----	3,080	3,800	-----	12,700	-----	7,220	-----	2,760	2,560	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,710	2,470	2,610	160,000
November.....	5,760	2,660	3,010	179,000
December.....	3,930	2,710	3,080	189,000
January.....	6,460	3,080	3,540	218,000
February.....	4,670	3,300	3,940	219,000
March.....	35,500	5,360	13,000	799,000
April.....	12,500	6,270	8,140	484,000
May.....	7,420	6,080	6,880	422,000
June.....	6,840	3,420	4,640	276,000
July.....	3,420	2,760	3,010	185,000
August.....	2,760	2,560	2,660	164,000
September.....	2,860	2,520	2,630	156,000
The year.....	35,500	2,470	4,770	3,450,000

SACRAMENTO RIVER NEAR RED BLUFF, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 34, T. 28 N., R. 3 W., at lower end of Iron Canyon, 4 miles northeast of Red Bluff. Altitude, about 250 feet.

DRAINAGE AREA.—9,300 square miles (not including Goose Lake Basin).

RECORDS AVAILABLE.—January 1902 to September 1933. April 1895 to June 1902 at Jelley's Ferry, 12 miles above Red Bluff.

DISCHARGE.—Maximum during year, 53,800 second-feet Mar. 28 (gage height, 12.73 feet); minimum, 2,620 second-feet Aug. 20-27, Sept. 1-3.

1902-33: Maximum, 278,000 second-feet Feb. 3, 1909 (gage height, 35.2 feet); minimum, 2,400 second-feet Aug. 13, 1931. Average, 38 years (1895-1933), 11,400 second-feet.

REMARKS.—Records excellent. Discharge estimated Oct. 10-12, Nov. 1-21. Storage and many diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2,700	2,940	5,520	3,790	6,980	6,340	16,600	8,340	8,340	3,880	2,780	2,620
2.....	2,780	3,020	4,360	3,880	6,220	8,920	15,400	10,500	8,060	3,700	2,860	2,620
3.....	2,780	3,020	3,880	6,070	5,750	23,000	15,000	8,920	7,510	3,700	2,780	2,620
4.....	2,700	3,020	3,700	5,750	5,410	15,800	15,800	8,060	6,980	3,610	2,780	2,700
5.....	2,700	3,180	3,610	4,870	5,860	11,400	15,400	7,780	6,720	3,520	2,780	2,700
6.....	2,780	3,180	3,520	4,360	6,340	9,830	13,900	7,510	6,340	3,440	2,700	2,700
7.....	2,700	3,180	3,520	4,260	6,220	8,920	13,200	8,340	5,300	3,440	2,700	2,700
8.....	2,780	3,180	3,520	4,160	5,750	9,520	12,100	8,920	6,340	2,440	2,780	2,700
9.....	2,780	3,180	3,610	4,070	5,410	10,500	10,800	8,340	6,220	3,440	2,780	2,700
10.....	2,780	3,020	3,440	3,980	5,080	10,100	9,830	8,060	6,100	3,440	2,780	2,700
11.....	2,860	3,020	3,350	3,880	4,870	9,520	9,220	8,060	5,860	3,350	2,780	2,700
12.....	2,860	2,940	3,260	3,880	4,980	12,800	8,630	8,060	5,750	3,260	2,780	2,700
13.....	2,860	3,020	3,260	3,790	5,410	25,300	8,630	8,060	5,520	3,260	2,700	2,700
14.....	2,860	3,180	3,350	3,700	5,080	19,500	8,340	7,510	5,750	3,180	2,700	2,700
15.....	2,860	3,180	3,440	3,790	4,980	17,000	8,340	7,510	5,640	3,180	2,700	2,700
16.....	2,860	3,180	3,440	3,790	5,520	30,000	8,920	7,780	5,410	3,100	2,700	2,700
17.....	2,860	3,180	3,520	3,790	6,720	39,800	8,920	8,340	5,300	3,100	2,700	2,700
18.....	2,860	3,180	3,520	3,790	6,220	24,800	8,060	9,520	4,980	3,100	2,700	2,780
19.....	2,860	3,260	4,260	4,070	5,750	18,300	7,780	8,920	4,760	3,020	2,700	92,700
20.....	2,860	3,260	4,870	4,070	5,640	16,200	7,510	8,340	4,560	3,020	2,620	2,700
21.....	2,860	3,350	4,980	5,190	5,520	15,000	7,240	8,340	4,360	3,020	2,620	2,700
22.....	2,940	3,350	4,660	5,980	5,640	13,900	7,240	7,780	4,260	3,020	2,620	2,780
23.....	2,940	3,260	6,470	7,780	5,750	12,500	7,510	7,780	4,160	2,940	2,620	2,780
24.....	2,940	3,260	5,300	9,630	6,100	11,400	8,060	7,510	4,160	2,940	2,620	2,780
25.....	2,860	3,260	4,260	9,830	5,860	10,500	8,630	7,510	4,070	2,940	2,620	2,940
26.....	2,940	3,180	3,980	6,720	5,750	13,200	8,630	7,780	4,070	2,860	2,620	3,100
27.....	2,940	3,260	3,880	19,900	5,860	13,200	8,060	8,060	3,980	2,860	2,620	3,100
28.....	2,940	3,520	3,880	13,500	6,100	44,800	8,340	8,060	3,880	2,860	2,700	3,020
29.....	2,940	5,300	3,880	16,600	-----	35,600	8,920	8,340	3,880	2,860	2,700	2,940
30.....	2,940	6,980	3,880	10,100	-----	23,500	9,220	8,340	3,880	2,780	2,700	2,860
31.....	2,940	-----	3,790	7,510	-----	18,700	-----	8,630	-----	2,780	2,700	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,940	2,700	2,850	175,000
November.....	6,980	2,940	3,370	201,000
December.....	6,470	3,260	4,000	246,000
January.....	19,900	3,700	6,340	390,000
February.....	6,980	4,870	5,740	319,000
March.....	44,800	6,340	17,400	1,070,000
April.....	16,600	7,240	10,100	601,000
May.....	10,500	7,510	8,230	506,000
June.....	8,340	3,880	5,440	324,000
July.....	3,880	2,780	3,190	196,000
August.....	2,860	2,620	2,710	167,000
September.....	3,100	2,620	2,760	164,000
The year.....	44,800	2,620	6,020	4,360,000

SACRAMENTO RIVER AT BUTTE CITY, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 32, T. 19 N., R. 1 W., a quarter of a mile south of Butte City. Zero of gage is at mean lower low water (United States Army Engineers datum).

RECORDS AVAILABLE.—April 1921 to October 1933 (low-water records only).

DISCHARGE.—Minimum during 1933, 1,350 second-feet Aug. 19-20.

1921-33: Minimum, 1,050 second-feet July 15, 25-26, 1931 (gage height, 67.49 feet).

REMARKS.—Records good. Discharge estimated Aug. 1-4. Storage and many diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	May	June	July	Aug.	Sept.	Oct.
1	2,460	8,440	8,200	2,880	1,520	1,520	2,580
2	2,460	8,200	7,720	2,800	1,500	1,520	2,580
3	2,540	9,460	7,240	2,730	1,500	1,510	2,580
4	2,540	8,200	6,800	2,660	1,520	1,500	2,500
5	2,460	7,720	6,580	2,580	1,510	1,510	2,500
6	2,460	7,480	6,140	2,500	1,510	1,530	2,500
7	2,540	7,240	5,940	2,430	1,460	1,520	2,500
8	2,540	7,960	5,940	2,360	1,430	1,550	2,500
9	2,540	8,200	5,940	2,290	1,430	1,580	2,500
10	2,610	7,960	5,940	2,290	1,420	1,640	2,500
11	2,610	7,720	5,740	2,220	1,420	1,760	2,500
12	2,610	7,720	5,740	2,150	1,420	1,820	2,580
13	2,680	7,720	5,640	2,080	1,410	1,820	2,580
14	2,680	7,480	5,440	2,010	1,390	1,820	2,660
15	2,680	7,240	5,240	2,010	1,360	1,880	2,660
16	2,680	7,240	4,940	1,940	1,380	2,010	2,500
17	2,610	7,480	4,760	1,880	1,390	2,080	2,500
18	2,610	7,720	4,580	1,820	1,370	2,080	2,500
19	2,680	8,680	4,310	1,820	1,350	2,220	2,580
20	2,680	8,200	4,130	1,760	1,360	2,220	2,660
21	2,680	7,960	3,860	1,700	1,360	2,220	2,660
22	2,760	7,720	3,600	1,700	1,360	2,290	2,660
23	2,840	7,240	3,440	1,640	1,400	2,360	2,660
24	2,840	7,240	3,360	1,640	1,410	2,500	2,660
25	2,840	7,020	3,280	1,640	1,400	2,500	2,660
26	2,760	7,020	3,200	1,640	1,400	2,580	2,660
27	2,680	7,240	3,120	1,620	1,410	2,800	2,660
28	2,760	7,480	3,040	1,610	1,480	2,880	2,660
29	2,760	7,720	2,960	1,580	1,510	2,800	2,730
30	2,760	7,960	2,960	1,560	1,530	2,730	2,960
31	2,760	8,200	-----	1,570	1,530	-----	4,850

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932				
October	2,840	2,460	2,650	163,000
1933				
May	9,460	7,020	7,770	478,000
June	8,200	2,960	4,990	297,000
July	2,880	1,560	2,040	125,000
August	1,530	1,350	1,430	87,900
September	2,880	1,500	2,020	120,000
October	4,850	2,500	2,670	164,000
The period	-----	-----	-----	1,270,000

SACRAMENTO RIVER AT COLUSA, CALIF.

LOCATION.—Water-stage recorder at north end of Jimeno grant, just below highway bridge at Colusa, Colusa County. Zero of gage is at mean lower low water (United States Army Engineers datum).

RECORDS AVAILABLE.—April 1921 to October 1933 (low-water records only).

DISCHARGE.—Minimum during summer 1933, 1,320 second-feet Aug. 26.

1921-33: Minimum, 820 second-feet July 25-26, 1931 (gage height, 34.79 feet).

REMARKS.—Records good. Discharge estimated May 14-18. Storage and many diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	May	June	July	Aug.	Sept.	Oct.
1	2,490	8,420	7,870	2,970	1,530	1,500	2,680
2	2,490	8,090	7,760	2,890	1,500	1,500	2,590
3	2,570	8,750	7,340	2,810	1,500	1,500	2,590
4	2,570	8,640	6,940	2,810	1,530	1,460	2,590
5	2,490	7,760	6,440	2,730	1,500	1,460	2,510
6	2,490	7,340	6,140	2,650	1,500	1,530	2,510
7	2,490	7,140	5,840	2,570	1,500	1,530	2,510
8	2,570	7,240	5,840	2,490	1,460	1,530	2,510
9	2,570	7,980	5,840	2,410	1,420	1,570	2,590
10	2,570	7,760	5,740	2,410	1,460	1,640	2,590
11	2,650	7,540	5,740	2,330	1,420	1,720	2,590
12	2,650	7,440	5,640	2,330	1,420	1,800	2,590
13	2,650	7,340	5,540	2,250	1,420	1,870	2,590
14	2,730	7,300	5,340	2,170	1,420	1,840	2,590
15	2,730	7,200	5,140	2,100	1,350	1,880	2,590
16	2,730	7,100	4,940	2,060	1,380	1,950	2,590
17	2,730	7,100	4,670	1,980	1,380	2,030	2,510
18	2,650	7,400	4,490	1,940	1,380	2,070	2,510
19	2,650	7,980	4,310	1,910	1,350	2,150	2,590
20	2,730	8,090	4,130	1,870	1,350	2,190	2,590
21	2,730	7,650	3,860	1,830	1,350	2,270	2,590
22	2,730	7,440	3,690	1,760	1,350	2,270	2,590
23	2,810	7,140	3,530	1,720	1,350	2,350	2,680
24	2,810	6,940	3,370	1,720	1,380	2,430	2,680
25	2,810	6,840	3,290	1,720	1,350	2,510	2,590
26	2,730	6,840	3,290	1,720	1,350	2,510	2,590
27	2,650	7,040	3,210	1,680	1,380	2,770	2,590
28	2,730	7,240	3,130	1,610	1,420	2,860	2,590
29	2,650	7,440	3,050	1,610	1,460	2,860	2,680
30	2,650	7,540	2,970	1,610	1,500	2,770	2,770
31	2,730	7,870	-----	1,570	1,500	-----	3,510

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932				
October	2,810	2,490	2,650	163,000
1933				
May	8,750	6,840	7,540	464,000
June	7,870	2,970	4,970	296,000
July	2,970	1,570	2,140	132,000
August	1,530	1,350	1,420	87,300
September	2,860	1,460	2,010	120,000
October	3,510	2,510	2,620	161,000
The period	-----	-----	-----	1,260,000

SACRAMENTO RIVER BELOW WILKINS SLOUGH, CALIF.

LOCATION.—Water-stage recorder in Jimeno grant, Colusa County, 1,500 feet below Wilkins Slough and 6 miles southeast of Grimes. Zero of gage is at mean lower low water (United States Army Engineers datum).

RECORDS AVAILABLE.—August 1931 to October 1933 (low-water records only).

DISCHARGE.—Minimum during 1933, 670 second-feet Aug. 16.

1931-33: Minimum, 100 second-feet Aug. 1, 1931 (gage height, 14.20 feet).

REMARKS.—Records good. Storage and many diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	May	June	July	Aug.	Sept.	Oct.
1	2,650	7,800	6,940	2,200	805	960	2,870
2	2,650	8,100	7,030	2,160	805	940	2,770
3	2,650	7,800	7,030	2,110	788	980	2,770
4	2,700	8,700	6,670	2,030	805	980	2,770
5	2,650	7,900	6,400	1,950	805	980	2,720
6	2,600	7,120	5,820	1,870	822	1,000	2,670
7	2,600	7,030	5,340	1,830	840	1,080	2,620
8	2,600	6,850	5,040	1,790	788	1,120	2,670
9	2,650	7,500	5,040	1,710	752	1,240	2,670
10	2,700	7,900	4,970	1,630	752	1,360	2,670
11	2,700	7,500	4,970	1,590	752	1,440	2,670
12	2,750	7,300	4,970	1,550	735	1,520	2,670
13	2,750	7,210	4,830	1,440	752	1,600	2,670
14	2,800	7,030	4,620	1,400	752	1,640	2,720
15	2,800	7,030	4,410	1,340	735	1,640	2,770
16	2,800	6,760	4,270	1,300	700	1,780	2,770
17	2,800	6,580	4,020	1,300	700	1,870	2,720
18	2,750	6,760	3,900	1,230	700	1,920	2,670
19	2,700	7,120	3,840	1,200	718	1,970	2,670
20	2,750	7,700	3,600	1,160	718	1,970	2,720
21	2,750	7,400	3,310	1,090	718	2,120	2,770
22	2,750	7,210	3,110	1,060	735	2,220	2,770
23	2,750	6,850	2,910	1,060	718	2,320	2,770
24	2,850	6,670	2,760	985	700	2,420	2,770
25	2,850	6,490	2,610	955	735	2,520	2,770
26	2,850	6,220	2,560	985	718	2,620	2,720
27	2,800	6,220	2,470	955	718	2,670	2,670
28	2,750	6,490	2,380	920	770	2,870	2,670
29	2,750	6,670	2,290	900	805	2,920	2,720
30	2,800	6,490	2,200	900	900	2,920	2,820
31	2,850	6,580	-----	880	960	-----	3,070

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932				
October	2,850	2,600	2,740	168,070
1933				
May	8,700	6,220	7,130	438,070
June	7,030	2,200	4,340	253,070
July	2,200	880	1,400	86,170
August	960	700	765	47,000
September	2,920	940	1,790	107,070
October	3,020	2,620	2,730	168,000
The period	-----	-----	-----	1,100,070

SACRAMENTO RIVER AT KNIGHTS LANDING, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 14, T. 11 N., R. 2 E., just above Southern Pacific Railroad bridge at Knights Landing. Zero of gage is at mean lower low water (United States Army Engineers datum).

RECORDS AVAILABLE.—April 1921 to October 1933 (low-water records only).

DISCHARGE.—Minimum during summer 1933, 920 second-feet Aug. 19.

1921-33: Minimum, 250 second-feet July 23, 1931 (gage height, 7.80 feet).

REMARKS.—Records good. Storage, many diversions, and considerable return water affect flow.

Discharge, in second-feet, 1932-33

Day	Oct.	May	June	July	Aug.	Sept.	Oct.
1.....	2,770	7,390	7,750	2,380	1,020	1,370	3,110
2.....	2,770	8,020	7,840	2,330	980	1,420	2,990
3.....	2,770	7,660	7,750	2,280	1,000	1,500	2,930
4.....	2,770	8,290	7,300	2,230	960	1,500	2,930
5.....	2,710	8,110	6,760	2,130	960	1,500	2,870
6.....	2,650	7,300	6,240	2,080	980	1,460	2,750
7.....	2,650	6,940	5,840	1,980	1,000	1,550	2,750
8.....	2,590	6,580	5,840	1,930	1,020	1,730	2,750
9.....	2,650	6,940	5,680	1,930	1,020	1,880	2,700
10.....	2,650	7,300	5,600	1,880	980	1,830	2,700
11.....	2,710	7,300	5,760	1,830	960	1,880	2,700
12.....	2,710	7,210	5,520	1,780	960	1,980	2,700
13.....	2,770	7,390	5,280	1,680	960	2,030	2,700
14.....	2,890	7,570	5,280	1,640	1,000	2,080	2,700
15.....	3,010	7,210	5,120	1,550	1,020	2,080	2,700
16.....	2,950	6,760	4,830	1,550	980	2,080	2,640
17.....	2,890	6,670	4,550	1,500	960	2,230	2,640
18.....	2,770	6,760	4,340	1,460	940	2,330	2,530
19.....	2,650	7,120	4,200	1,370	920	2,330	2,530
20.....	2,650	7,750	3,990	1,320	940	2,330	2,580
21.....	2,650	7,840	3,650	1,280	980	2,380	2,580
22.....	2,710	7,480	3,470	1,190	980	2,480	2,580
23.....	2,710	7,120	3,290	1,190	980	2,530	2,580
24.....	2,770	7,030	3,110	1,190	1,000	2,640	2,580
25.....	2,770	6,850	2,990	1,100	1,020	2,750	2,640
26.....	2,770	6,490	2,870	1,080	1,040	2,810	2,640
27.....	2,770	6,490	2,700	1,080	1,040	2,870	2,640
28.....	2,710	6,850	2,640	1,080	1,060	2,990	2,580
29.....	2,710	7,030	2,530	1,040	1,100	3,110	2,640
30.....	2,710	7,030	2,380	1,040	1,190	3,230	2,750
31.....	2,770	7,480	-----	1,040	1,280	-----	3,110

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932				
October.....	3,010	2,590	2,740	168,000
1933				
May.....	8,290	6,490	7,220	444,000
June.....	7,840	2,380	4,840	288,000
July.....	2,380	1,040	1,590	97,800
August.....	1,280	920	1,010	62,100
September.....	3,230	1,370	2,160	129,000
October.....	3,110	2,530	2,720	167,000
The period.....	-----	-----	-----	1,190,000

SACRAMENTO RIVER AT VERONA, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 23, T. 11 N., R. 3 E., three-quarters of a mile southeast of Verona and 1 mile below mouth of Feather River. Zero of gage is at mean lower low water level (United States Army Engineers datum).

RECORDS AVAILABLE.—May 1926 to September 1933 (low-water records only, 1926 to 1929).

DISCHARGE.—Maximum during year, 34,000 second-feet Mar. 31 (gage height, 25.51 feet); minimum, 1,400 second-feet Aug. 19.

1926-33: Maximum recorded, 57,400 second-feet Dec. 17, 1929 (gage height, 34.79 feet); minimum, 281 second-feet July 24, 1931 (gage height, 6.93 feet).

REMARKS.—Records good. Storage, many diversions, and considerable return water affect flow.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,550	3,290	5,380	6,640	22,300	9,720	33,700	15,300	21,800	3,660	1,530	1,910
2	3,550	3,420	6,960	6,640	18,600	9,920	32,800	14,800	21,000	3,540	1,480	2,020
3	3,420	3,420	7,120	6,320	15,800	10,400	31,600	14,300	19,300	3,420	1,480	2,200
4	3,290	3,550	6,480	6,640	13,900	11,900	30,100	14,300	16,800	3,420	1,440	2,200
5	3,290	3,550	6,000	7,770	12,600	16,800	28,900	13,700	14,800	3,300	1,440	2,080
6	3,220	3,680	5,840	8,620	11,500	18,600	27,800	12,800	13,200	3,070	1,440	1,960
7	3,220	3,680	5,680	8,450	11,500	17,000	26,800	12,300	13,400	2,960	1,480	2,080
8	3,100	3,810	5,380	7,940	11,700	15,300	25,300	12,300	14,100	2,850	1,530	2,200
9	3,220	3,810	5,530	7,600	11,500	14,600	23,600	12,800	13,900	2,850	1,530	2,510
10	3,420	3,810	5,530	7,280	11,000	14,600	21,600	13,000	13,900	2,850	1,480	2,440
11	3,420	3,810	5,380	7,280	10,800	14,800	19,600	13,000	14,300	2,740	1,440	2,510
12	3,420	3,810	5,380	7,280	10,400	15,100	17,800	12,600	13,400	2,630	1,480	2,640
13	3,680	3,950	5,230	7,120	10,800	16,300	16,600	12,800	12,800	2,630	1,480	2,700
14	3,950	3,950	5,230	7,120	11,200	20,000	15,800	13,200	12,800	2,460	1,580	2,770
15	4,230	3,810	5,380	6,960	11,200	23,600	15,300	13,200	12,300	2,410	1,620	2,770
16	4,230	3,810	5,230	6,960	11,000	24,600	15,100	13,000	11,000	2,360	1,580	2,770
17	3,950	3,950	5,380	6,800	10,800	26,600	15,300	12,800	9,720	2,260	1,530	3,030
18	3,680	3,950	5,680	7,120	10,800	29,200	15,300	13,000	8,720	2,210	1,480	3,160
19	3,420	3,950	5,840	7,120	11,200	31,000	14,300	13,900	7,740	2,110	1,440	3,160
20	3,420	4,090	6,000	7,440	11,000	31,000	13,000	14,300	6,840	2,060	1,480	3,160
21	3,420	4,090	6,960	7,770	10,400	29,500	12,100	14,100	6,160	1,910	1,530	3,290
22	3,420	4,090	7,600	7,940	10,100	27,600	11,200	13,900	5,680	1,760	1,520	3,420
23	3,420	4,090	7,940	8,960	9,920	25,300	11,000	13,900	5,520	1,760	1,580	3,550
24	3,420	4,230	8,280	11,000	9,720	22,800	11,700	13,000	5,040	1,760	1,520	3,810
25	3,420	4,230	8,960	12,600	9,720	20,300	12,300	13,000	4,760	1,710	1,580	4,090
26	3,290	4,230	8,960	14,800	9,720	18,600	13,200	14,100	4,620	1,660	1,580	4,230
27	3,290	4,230	7,770	15,600	9,720	18,000	13,400	15,300	4,340	1,620	1,620	4,230
28	3,290	4,230	6,960	16,000	9,520	18,000	13,000	16,800	4,200	1,620	1,680	4,510
29	3,220	4,510	7,120	20,800	-----	22,800	13,700	18,000	4,060	1,580	1,640	4,790
30	3,220	4,650	6,960	24,000	-----	31,000	15,100	20,800	3,780	1,530	1,690	4,930
31	3,220	-----	6,800	24,300	-----	34,000	-----	21,600	-----	1,530	1,740	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,230	3,100	3,460	213,000
November	4,650	3,290	3,920	233,000
December	8,960	5,230	6,420	395,000
January	24,300	6,320	9,960	612,000
February	22,300	9,520	11,700	650,000
March	34,000	9,720	20,600	1,270,000
April	33,700	11,000	18,900	1,120,000
May	21,600	12,300	14,300	879,000
June	21,800	3,780	10,700	637,000
July	3,660	1,530	2,390	147,000
August	1,740	1,440	1,530	94,100
September	4,930	1,910	3,040	181,000
The year	34,000	1,440	8,880	6,430,000

PIT RIVER BASIN

PIT RIVER NEAR CANBY, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 10, T. 41 N., R. 9 E., at lower end of Warm Spring Valley, about 4 miles southwest of Canby. Altitude, about 4,300 feet.

DRAINAGE AREA.—1,500 square miles.

RECORDS AVAILABLE.—January 1904 to December 1905; May 1929 to September 1933 (incomplete until 1931-32).

DISCHARGE.—Maximum during year, 605 second-feet Mar. 11 (gage height, 3.82 feet); minimum, 0.3 second-foot Aug. 25, 27-28.

1904-5, 1929-33: Maximum recorded, 14,000 second-feet Mar. 8, 1904 (gage height, 14.0 feet, old datum); minimum, that of Aug. 25, 27-28, 1933.

REMARKS.—Records good. Discharge estimated Dec. 8-14, Jan. 16-21, Jan. 28 to Feb. 3, Feb. 7. Storage and many irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sept.
1	6	9	57	55	40	68	138	6	26	16	6.5	25
2	6	15	55	55	46	74	106	12	22	13	6.5	22
3	6	19	55	55	51	91	98	9	13	10	6	16
4	5.5	22	55	57	54	96	114	8	8	8	4.3	14
5	5	40	55	59	55	98	122	8	7	6	3.7	12
6	5	38	54	59	57	106	116	8	7.5	6	3.0	11
7	6.5	46	48	59	61	135	108	21	6.5	21	2.0	9.5
8	4.8	46	35	57	61	183	91	133	7.5	55	1.4	8
9	4.4	46	31	55	59	303	72	81	12	44	1.6	6
10	4.4	46	29	55	63	398	40	94	11	38	1.7	5
11	4.4	46	27	54	59	513	21	119	9.5	36	1.7	4.0
12	4.4	42	25	52	52	502	21	114	9	28	1.7	3.0
13	4.8	51	24	52	44	545	24	106	9	27	1.6	2.7
14	5	53	22	50	44	497	20	133	10	24	1.4	2.4
15	6	68	20	48	48	460	16	135	11	21	1.3	2.4
16	8	78	19	46	48	439	14	138	15	21	1.0	2.4
17	15	81	19	45	48	408	13	138	14	19	1.0	2.4
18	16	63	20	45	48	382	13	130	14	18	.9	3.0
19	8.5	59	22	44	50	368	9.5	119	16	16	.9	4.3
20	6.5	57	22	45	50	368	7.5	119	18	13	.7	4.7
21	6.5	57	24	46	50	387	5	108	18	11	.7	4.7
22	6.5	57	27	46	52	353	4.3	94	16	8.5	.6	4.7
23	6.5	57	30	46	57	248	4.0	84	16	7.5	.4	4.3
24	7	57	32	44	57	204	3.7	101	14	6	.4	4.7
25	7	55	40	41	57	172	7	86	13	4.7	.3	4.7
26	7	55	44	41	57	138	6.5	44	14	4.0	.4	4.7
27	8	55	50	41	59	122	4.3	86	16	5	.3	4.7
28	9	55	52	41	59	133	3.7	55	17	6	.3	6
29	10	55	54	41	-----	183	6	50	19	6	1.1	5.5
30	9	57	55	40	-----	248	8	40	17	6	6.5	3.7
31	9	-----	57	40	-----	197	-----	30	-----	6	16	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	4.4	7.02	432
November	81	9	49.5	2,950
December	57	19	37.4	2,300
January	59	40	48.8	3,000
February	63	40	53.1	2,950
March	545	68	272	16,700
April	138	3.7	40.6	2,420
May	138	6	77.7	4,780
June	26	6.5	13.5	803
July	55	4.0	16.5	1,010
August	16	.3	2.45	151
September	25	2.4	6.92	412
The year	545	.3	52.3	37,900

PIT RIVER AT FALL RIVER MILLS, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 6, T. 36 N., R. 5 E., three-quarters of a mile below mouth of Fall River and town of Fall River Mills. Altitude, about 3,235 feet.

RECORDS AVAILABLE.—March 1921 to September 1933.

DISCHARGE.—Maximum during year, 2,630 second-feet Mar. 13 (gage height, 3.80 feet); minimum, 44 second-feet July 16, 17.

1921-33: Maximum, 10,800 second-feet Mar. 28, 1928 (gage height, 7.89 feet); minimum, 12 second-feet Aug. 5, 1926. Average, 10 years (1923-33), 298 second-feet.

REMARKS.—Records good. Stage-discharge relation slightly affected by ice Dec. 10-17. Entire flow of Fall River is diverted above station; many small storage reservoirs and irrigation diversions; return water from McArthur, Knoch, and other diversions. Gage-height record and results of discharge measurements furnished by Mount Shasta Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	72	63	95	90	98	132	993	161	124	64	64	82
2.....	70	64	93	93	96	182	957	209	110	67	65	88
3.....	70	67	93	100	95	542	898	274	100	65	62	81
4.....	71	64	93	105	98	440	810	200	114	63	63	82
5.....	71	67	96	107	105	350	710	182	120	60	59	82
6.....	86	68	98	108	103	330	580	185	107	60	57	86
7.....	122	67	98	108	98	464	512	203	102	62	63	90
8.....	107	64	96	107	102	725	429	226	102	62	88	84
9.....	96	64	92	105	107	710	390	365	103	63	74	88
10.....	90	72	71	103	105	794	317	653	112	68	62	90
11.....	90	88	68	102	110	842	240	842	100	63	81	87
12.....	88	67	72	102	112	1,730	191	592	100	63	67	88
13.....	88	64	95	102	112	2,330	152	506	90	64	68	90
14.....	87	77	103	100	112	2,260	128	458	93	64	75	86
15.....	87	88	107	100	112	1,980	120	434	84	62	86	86
16.....	75	93	112	102	112	1,730	126	407	80	48	82	86
17.....	67	107	114	100	108	1,860	132	385	71	62	82	86
18.....	65	161	114	100	108	1,790	135	407	68	77	82	87
19.....	65	138	112	103	110	1,610	122	440	64	67	82	87
20.....	65	126	110	100	110	1,400	107	446	60	67	82	86
21.....	67	108	107	105	114	1,310	78	418	68	67	82	84
22.....	67	93	87	107	114	1,200	72	365	74	70	84	84
23.....	67	81	86	107	116	1,120	74	355	67	67	84	86
24.....	65	81	81	108	116	939	87	335	67	63	82	90
25.....	64	98	80	108	114	755	142	274	49	52	82	90
26.....	64	105	80	105	122	653	130	215	63	78	81	72
27.....	64	107	80	108	124	612	110	173	68	70	81	80
28.....	64	103	80	108	124	612	114	188	77	67	81	87
29.....	64	103	81	107	-----	681	108	173	65	67	65	80
30.....	64	102	84	103	-----	850	116	155	62	57	70	78
31.....	64	-----	88	100	-----	914	-----	161	-----	58	86	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	122	64	75.7	4,650
November.....	161	63	88.3	5,250
December.....	114	68	92.5	5,690
January.....	108	90	103	6,330
February.....	124	95	109	6,050
March.....	2,330	132	1,030	63,300
April.....	993	72	303	18,000
May.....	842	155	335	20,600
June.....	124	49	85.5	5,090
July.....	78	48	63.9	3,930
August.....	88	57	74.9	4,610
September.....	90	72	85.1	5,060
The year.....	2,330	48	205	149,000

PIT RIVER BELOW PIT NO. 4 DAM, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 17, T. 36 N., R. 2 E., 1 mile below Pit No. 4 Dam and 3 miles below Screwdriver Creek and Pit No. 3 power house. Altitude, about 2,345 feet.

DRAINAGE AREA.—4,860 square miles.

RECORDS AVAILABLE.—July 1927 to September 1933.

DISCHARGE.—Maximum during year, 7,460 second-feet Mar. 14 (gage height, 10.56 feet); minimum, 1,370 second-feet Oct. 8.

1927-33: Maximum, 14,800 second-feet Mar. 29, 1928 (gage height, 14.20 feet); minimum, 715 second-feet Mar. 21, 1928, caused by regulation.

REMARKS.—Records excellent. Storage, power plants, and many diversions above station. Daily fluctuations reduced by automatic regulator at Pit No. 4 Dam. Gage-height record and results of discharge measurements furnished by Mount Shasta Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	1,650	1,870	1,820	1,760	1,820	2,800	2,050	1,930	1,650	1,600	1,500
2	1,550	1,700	1,820	1,760	1,600	2,050	2,290	2,170	1,990	1,600	1,600	1,500
3	1,550	1,700	1,760	1,870	1,500	2,600	2,470	2,170	1,990	1,600	1,550	1,500
4	1,650	1,700	1,700	1,870	1,460	2,860	2,730	2,230	1,930	1,550	1,550	1,500
5	1,650	1,650	1,700	1,870	1,550	2,600	2,540	2,170	1,870	1,600	1,500	1,550
6	1,550	1,700	1,760	1,870	1,700	2,230	2,350	1,990	1,870	1,650	1,600	1,600
7	1,550	1,760	1,820	1,820	1,700	2,350	2,290	1,870	1,930	1,650	1,600	1,600
8	1,600	1,700	1,760	1,760	1,700	2,930	2,230	1,930	1,930	1,650	1,600	1,550
9	1,650	1,700	1,760	1,820	1,760	2,930	2,230	2,110	1,930	1,700	1,650	1,550
10	1,700	1,700	1,700	1,820	1,700	2,730	2,110	2,410	1,820	1,650	1,650	1,600
11	1,700	1,700	1,650	1,820	1,760	2,800	2,110	2,660	1,760	1,650	1,600	1,550
12	1,650	1,650	1,650	1,820	1,760	3,220	2,050	2,730	1,760	1,650	1,550	1,550
13	1,650	1,650	1,700	1,760	1,770	3,300	1,990	2,230	1,650	1,650	1,550	1,600
14	1,650	1,700	1,700	1,760	1,870	4,440	1,930	2,170	1,650	1,600	1,600	1,600
15	1,600	1,700	1,700	1,760	1,870	4,100	1,990	2,470	1,760	1,800	1,555	1,650
16	1,600	1,700	1,700	1,820	1,820	3,860	1,990	2,470	1,760	1,650	1,500	1,650
17	1,650	1,700	1,760	1,820	1,760	4,100	1,870	2,110	1,760	1,650	1,550	1,600
18	1,650	1,760	1,760	1,820	1,760	3,540	1,990	2,290	1,650	1,600	1,550	1,550
19	1,650	1,760	1,760	1,870	1,820	3,860	1,990	2,540	1,650	1,600	1,550	1,550
20	1,700	1,820	1,820	1,870	1,760	3,780	1,990	2,350	1,600	1,650	1,650	1,550
21	1,760	1,820	1,820	1,820	1,760	3,700	1,930	2,170	1,600	1,650	1,500	1,600
22	1,700	1,820	1,760	1,820	1,760	3,700	1,820	2,290	1,600	1,650	1,500	1,600
23	1,650	1,760	1,870	1,820	1,760	3,700	1,760	2,170	1,650	1,600	1,500	1,600
24	1,650	1,760	1,760	1,820	1,760	3,080	1,760	2,110	1,650	1,600	1,460	1,650
25	1,650	1,766	1,766	1,820	1,760	2,860	1,870	2,116	1,650	1,600	1,500	1,650
26	1,650	1,700	1,820	1,870	1,820	2,860	2,050	2,170	1,600	1,600	1,500	1,700
27	1,650	1,700	1,760	1,930	1,870	3,300	1,990	2,110	1,600	1,600	1,500	1,700
28	1,700	1,760	1,760	1,930	1,820	2,730	1,930	2,050	1,650	1,600	1,500	1,650
29	1,700	1,760	1,760	1,930	-----	2,600	1,990	1,990	1,650	1,600	1,500	1,600
30	1,700	1,870	1,760	1,930	-----	2,540	2,050	1,930	1,760	1,600	1,500	1,600
31	1,700	-----	1,760	1,870	-----	2,600	-----	1,930	-----	1,600	1,500	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,760	1,550	1,650	101,000
November	1,870	1,650	1,730	103,000
December	1,870	1,650	1,760	108,000
January	1,930	1,760	1,840	113,000
February	1,870	1,460	1,740	96,600
March	4,440	1,820	3,090	190,000
April	2,800	1,760	2,100	125,000
May	2,730	1,870	2,200	135,000
June	1,990	1,600	1,750	104,000
July	1,700	1,550	1,620	99,600
August	1,650	1,460	1,550	95,300
September	1,700	1,500	1,590	94,600
The year	4,440	1,460	1,890	1,370,000

PIT RIVER AT BIG BEND, CALIF.

LOCATION.—Water-stage recorder in sec. 31, T. 37 N., R. 1 E., a quarter of a mile above Big Bend. Nelson Creek enters half a mile above and Kosk Creek 1 mile below station. Altitude, about 1,700 feet.

DRAINAGE AREA.—4,920 square miles (not including Goose Lake Basin).

RECORDS AVAILABLE.—September 1910 to September 1933.

DISCHARGE.—Maximum during year, 7,840 second-feet Mar. 14 (gage height, 10.87 feet); minimum, 1,410 second-feet Feb. 4.
1910-33: Maximum, 14,400 second-feet Mar. 29, 1928 (gage height, 13.40 feet); minimum, 664 second-feet July 9-10, 1925 (regulated). Average, 22 years (1911-33), 2,820 second-feet.

REMARKS.—Records excellent. Storage, power plants, and many diversions above station. Daily fluctuations reduced by automatic regulator at Pit No. 4 Dam.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,750	1,690	1,940	1,810	1,810	1,880	3,080	2,370	2,150	1,810	1,630	1,630
2	1,630	1,690	1,810	1,750	1,630	2,220	2,680	2,370	2,220	1,750	1,630	1,570
3	1,570	1,750	1,750	1,680	1,460	2,840	2,840	2,440	2,220	1,690	1,630	1,570
4	1,630	1,750	1,750	1,940	1,460	3,080	3,170	2,440	2,150	1,690	1,630	1,570
5	1,690	1,750	1,750	1,880	1,570	2,840	2,920	2,440	2,010	1,690	1,570	1,570
6	1,630	1,750	1,810	1,880	1,690	2,300	2,760	2,300	2,010	1,750	1,630	1,630
7	1,630	1,810	1,810	1,880	1,750	2,440	2,680	2,080	2,080	1,750	1,690	1,630
8	1,690	1,810	1,810	1,810	1,750	3,000	2,440	2,150	2,080	1,750	1,690	1,630
9	1,690	1,750	1,810	1,810	1,750	3,170	2,440	2,300	2,080	1,810	1,690	1,630
10	1,750	1,750	1,750	1,810	1,690	2,840	2,370	2,600	2,010	1,750	1,690	1,570
11	1,750	1,690	1,690	1,810	1,750	2,920	2,300	2,840	1,940	1,750	1,630	1,570
12	1,690	1,690	1,630	1,810	1,750	3,440	2,300	3,080	1,940	1,750	1,630	1,570
13	1,690	1,690	1,690	1,810	1,810	3,720	2,150	2,600	1,810	1,750	1,630	1,630
14	1,690	1,750	1,690	1,810	1,880	4,820	2,080	2,440	1,810	1,690	1,690	1,630
15	1,630	1,750	1,690	1,810	1,880	4,620	2,150	2,600	1,880	1,690	1,630	1,690
16	1,630	1,750	1,690	1,810	1,810	4,520	2,220	2,840	1,940	1,690	1,570	1,690
17	1,690	1,750	1,690	1,810	1,750	4,620	2,080	2,440	1,880	1,750	1,630	1,630
18	1,690	1,750	1,750	1,810	1,750	3,910	2,150	2,440	1,810	1,690	1,630	1,570
19	1,690	1,810	1,810	1,810	1,810	4,210	2,220	2,840	1,750	1,630	1,630	1,570
20	1,690	1,810	1,810	1,810	1,750	4,210	2,220	2,840	1,750	1,690	1,630	1,570
21	1,810	1,880	1,880	1,810	1,750	4,010	2,150	2,440	1,750	1,690	1,630	1,630
22	1,750	1,810	1,810	1,810	1,750	4,010	2,010	2,600	1,690	1,690	1,690	1,630
23	1,690	1,810	1,880	1,810	1,810	4,010	2,010	2,520	1,750	1,690	1,630	1,630
24	1,690	1,750	1,750	1,880	1,750	3,260	2,080	2,370	1,750	1,690	1,630	1,690
25	1,690	1,750	1,750	1,810	1,750	3,000	2,150	2,440	1,750	1,690	1,630	1,690
26	1,690	1,690	1,810	1,880	1,810	3,080	2,370	2,440	1,690	1,690	1,690	1,750
27	1,690	1,750	1,750	1,940	1,880	3,530	2,300	2,440	1,690	1,630	1,690	1,750
28	1,750	1,810	1,750	1,940	1,880	3,260	2,220	2,370	1,750	1,630	1,690	1,690
29	1,750	1,880	1,750	2,010	-----	2,920	2,300	2,300	1,750	1,630	1,690	1,630
30	1,750	1,940	1,750	2,010	-----	2,760	2,300	2,220	1,810	1,630	1,630	1,630
31	1,750	-----	1,750	1,940	-----	2,840	-----	2,220	-----	1,630	1,630	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,810	1,570	1,690	104,000
November	1,940	1,690	1,770	105,000
December	1,940	1,630	1,770	109,000
January	2,010	1,750	1,850	114,000
February	1,880	1,460	1,750	97,200
March	4,820	1,880	3,360	207,000
April	3,170	2,010	2,370	141,000
May	3,080	2,080	2,480	152,000
June	2,220	1,690	1,900	113,000
July	1,810	1,630	1,700	105,000
August	1,690	1,570	1,650	101,000
September	1,750	1,570	1,630	97,000
The year	4,820	1,460	2,000	1,450,000

PIT RIVER ABOVE HATCHET CREEK, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 5, T. 35 N., R. 1 W., 5 miles upstream from Hatchet Creek and 8 miles southwest of Big Bend. Altitude, about 1,280 feet.

DRAINAGE AREA.—5,040 square miles (not including Goose Lake Basin).

RECORDS AVAILABLE.—November 1925 to September 1933.

DISCHARGE.—Maximum during year not recorded; minimum, 1,550 second-feet Sept. 2.

1925-33: Maximum probably occurred during period of no record in March 1928; minimum not known, probably a momentary drop due to regulation during period of estimated record, 1926-30.

REMARKS.—Records good. No record Feb. 1 to May 17. Daily discharge estimated Jan. 28-31 and Aug. 23-26. Storage, power plants, and many diversions above station. Daily fluctuations reduced by automatic regulator at Pit No. 4 Dam. Gage-height record and results of discharge measurements furnished by Mount Shasta Power Corporation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	May	June	July	Aug.	Sept.
1.....	1,760	1,720	2,000	1,800	-----	2,400	1,880	1,660	1,580
2.....	1,660	1,720	1,880	1,800	-----	2,400	1,800	1,660	1,580
3.....	1,580	1,720	1,800	1,880	-----	2,450	1,760	1,660	1,580
4.....	1,660	1,720	1,800	1,960	-----	2,350	1,760	1,660	1,580
5.....	1,690	1,760	1,800	1,920	-----	2,260	1,760	1,680	1,580
6.....	1,660	1,760	1,800	1,880	-----	2,220	1,800	1,620	1,660
7.....	1,620	1,800	1,840	1,880	-----	2,260	1,800	1,660	1,690
8.....	1,690	1,800	1,840	1,800	-----	2,300	1,800	1,690	1,660
9.....	1,720	1,760	1,800	1,800	-----	2,260	1,840	1,690	1,660
10.....	1,760	1,760	1,760	1,800	-----	2,220	1,800	1,690	1,620
11.....	1,760	1,720	1,690	1,840	-----	2,170	1,800	1,660	1,620
12.....	1,720	1,720	1,660	1,800	-----	2,120	1,800	1,620	1,620
13.....	1,720	1,720	1,690	1,800	-----	2,040	1,800	1,620	1,620
14.....	1,690	1,760	1,760	1,800	-----	1,960	1,760	1,660	1,660
15.....	1,690	1,760	1,720	1,800	-----	2,000	1,720	1,620	1,690
16.....	1,660	1,760	1,720	1,800	-----	2,040	1,760	1,580	1,690
17.....	1,690	1,760	1,720	1,800	-----	2,040	1,760	1,620	1,690
18.....	1,690	1,760	1,800	1,840	2,870	1,960	1,720	1,620	1,620
19.....	1,690	1,800	1,840	1,840	3,090	1,920	1,690	1,660	1,580
20.....	1,720	1,840	1,840	1,840	3,090	1,880	1,690	1,660	1,580
21.....	1,800	1,880	1,880	1,840	2,760	1,840	1,720	1,620	1,620
22.....	1,760	1,880	1,840	1,840	2,870	1,840	1,720	1,620	1,660
23.....	1,760	1,840	1,920	1,840	2,870	1,840	1,720	1,650	1,620
24.....	1,720	1,800	1,760	1,880	2,650	1,880	1,720	1,650	1,690
25.....	1,690	1,800	1,760	1,840	2,700	1,840	1,720	1,650	1,720
26.....	1,690	1,760	1,800	1,880	2,700	1,800	1,720	1,650	1,760
27.....	1,690	1,760	1,800	2,000	2,700	1,800	1,690	1,660	1,760
28.....	1,760	1,800	1,760	2,000	2,650	1,840	1,690	1,620	1,690
29.....	1,760	1,920	1,760	2,100	2,550	1,840	1,690	1,620	1,660
30.....	1,760	2,120	1,760	2,100	2,500	1,880	1,660	1,620	1,620
31.....	1,760	-----	1,760	2,000	2,500	-----	1,660	1,580	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,800	1,580	1,710	105,000
November.....	2,120	1,720	1,790	107,000
December.....	2,000	1,660	1,790	110,000
January.....	2,100	1,800	1,870	115,000
May 18-31.....	3,090	2,500	2,750	76,400
June.....	2,450	1,800	2,060	123,000
July.....	1,880	1,660	1,750	108,000
August.....	1,690	1,580	1,640	101,000
September.....	1,760	1,580	1,650	98,200

PIT RIVER NEAR YDALPOM, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 32, T. 34 N., R. 3 W., at Silverthorne Ferry, 1½ miles southwest of Ydalpom. Squaw Creek enters half a mile above and McCloud River 4 miles below station. Altitude, about 735 feet.

DRAINAGE AREA.—5,350 square miles (not including Goose Lake Basin).

RECORDS AVAILABLE.—November 1910 to September 1933.

DISCHARGE.—Maximum during year, 13,700 second-feet Mar. 16 (gage height, 10.92 feet); minimum, 1,690 second-feet Oct. 7, Sept. 2.

1910-33: Maximum, about 47,000 second-feet Dec. 31, 1913 (gage height, about 20.7 feet, present datum); minimum, 1,000 second-feet July 10, 1925, regulated. Average, 22 years (1911-33), 3,890 second-feet.

REMARKS.—Records excellent. Storage, power plants, and many diversions above station. Daily fluctuations reduced by automatic regulator at Pit No. 4 Dam.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,890	1,890	2,300	2,040	2,350	2,910	5,560	3,670	3,060	2,190	1,890	1,790
2	1,790	1,890	2,140	2,090	2,240	5,800	5,390	3,830	3,060	2,090	1,890	1,740
3	1,740	1,890	2,040	2,640	2,040	7,060	5,050	3,670	2,980	2,040	1,890	1,740
4	1,790	1,890	2,040	2,400	2,040	5,220	5,730	3,590	2,910	2,040	1,890	1,790
5	1,840	1,890	1,990	2,240	2,300	4,470	5,220	3,590	2,840	2,040	1,790	1,740
6	1,840	1,890	1,990	2,190	2,400	3,830	4,880	3,360	2,710	2,040	1,790	1,790
7	1,740	1,940	2,040	2,190	2,400	3,830	4,710	3,830	2,710	2,040	1,840	1,840
8	1,840	1,940	2,090	2,090	2,300	4,310	4,310	3,670	2,780	2,040	1,840	1,840
9	1,890	1,890	2,040	2,090	2,240	4,710	4,070	3,670	2,710	2,040	1,840	1,790
10	1,890	1,890	1,990	2,090	2,190	4,230	3,750	3,830	2,640	2,090	1,890	1,790
11	1,940	1,890	1,940	2,040	2,190	4,310	3,590	4,070	2,520	2,040	1,840	1,790
12	1,890	1,840	1,890	2,040	2,190	6,620	3,590	4,310	2,460	2,040	1,790	1,790
13	1,890	1,840	1,890	2,040	2,240	7,350	3,510	3,910	2,350	2,040	1,790	1,790
14	1,890	1,890	1,940	1,990	2,300	7,160	3,430	3,590	2,300	1,990	1,840	1,790
15	1,840	1,940	1,940	2,040	2,300	6,980	3,430	3,430	2,300	1,940	1,840	1,840
16	1,840	1,940	1,940	2,040	2,640	11,600	3,750	4,070	2,350	1,990	1,790	1,840
17	1,840	1,940	1,940	2,040	2,640	9,640	3,360	3,990	2,350	1,990	1,790	1,840
18	1,840	1,940	1,990	2,090	2,460	7,350	3,280	3,990	2,240	1,940	1,840	1,790
19	1,840	1,940	2,240	2,090	2,460	6,260	3,200	4,070	2,190	1,890	1,790	1,740
20	1,890	1,990	2,090	2,090	2,400	6,440	3,200	4,150	2,140	1,890	1,840	1,740
21	1,990	2,040	2,240	2,190	2,400	5,900	3,200	3,590	2,140	1,940	1,790	1,790
22	1,940	2,040	2,140	2,140	2,460	5,560	3,130	3,670	2,090	1,940	1,790	1,840
23	1,940	1,990	2,300	2,190	2,580	5,390	3,130	3,670	2,140	1,940	1,790	1,790
24	1,890	1,990	2,140	2,460	2,580	4,880	3,280	3,430	2,140	1,940	1,790	1,840
25	1,890	1,990	2,040	2,350	2,520	4,550	3,360	3,430	2,140	1,940	1,790	1,940
26	1,890	1,940	2,090	2,350	2,520	5,220	3,430	3,510	2,090	1,940	1,840	1,940
27	1,890	1,940	2,040	3,990	2,710	6,440	3,510	3,510	2,090	1,890	1,840	1,990
28	1,890	2,040	1,990	2,840	2,640	9,860	3,360	3,360	2,090	1,890	1,840	1,890
29	1,890	2,140	2,040	2,710	-----	7,540	3,510	3,280	2,140	1,890	1,790	1,840
30	1,890	2,580	1,990	2,580	-----	6,080	3,430	3,200	2,140	1,890	1,790	1,790
31	1,940	-----	1,990	2,460	-----	5,560	-----	3,200	-----	1,890	1,790	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,990	1,740	1,870	115,000
November	2,580	1,840	1,960	117,000
December	2,300	1,890	2,050	126,000
January	3,990	1,990	2,280	140,000
February	2,710	2,040	2,380	132,000
March	11,600	2,910	6,030	371,000
April	5,730	3,130	3,880	231,000
May	4,310	3,200	3,680	228,000
June	3,060	2,090	2,430	145,000
July	2,190	1,890	1,980	122,000
August	1,890	1,790	1,820	112,000
September	1,990	1,740	1,820	108,000
The year	11,600	1,740	2,690	1,940,000

SOUTH FORK OF PIT RIVER NEAR LIKELY, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 12, T. 39 N., R. 13 E., below West Valley Creek and 4 miles east of Likely. Altitude, about 4,580 feet.

DRAINAGE AREA.—218 square miles.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum during year, 179 second-feet Apr. 29 (gage height, 3.20 feet); minimum, 6 second-feet July 25.

1928-33: Maximum, 1,060 second-feet Apr. 27, 1932 (gage height, 5.55 feet); minimum, 2.7 second-feet Aug. 4, 1931.

REMARKS.—Records good except those for period of ice effect, Nov. 23 to Feb. 26, which were mostly estimated. Water diverted above station for irrigation in Jess and West Valleys.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	18	31	32	-----	}	40	50	101	140	30	16	14
2.	17	32	32	-----		51	51	104	132	26	18	14
3.	17	32	32	-----		41	54	95	122	24	18	15
4.	16	32	32	-----		34	58	88	118	23	17	14
5.	15	34	30	* 30		34	51	88	115	21	17	15
6.	17	35	24	-----	}	37	53	90	104	19	18	16
7.	20	35	18	-----		39	50	89	98	19	18	15
8.	21	34	12	-----		41	45	81	95	21	17	15
9.	23	35	-----	-----		48	41	79	97	18	14	15
10.	24	33	-----	-----		54	40	104	94	16	14	14
11.	24	32	-----	-----		59	41	102	88	15	14	14
12.	25	33	-----	-----		65	41	69	81	16	14	12
13.	26	33	-----	-----		55	44	60	77	16	14	14
14.	26	33	-----	-----		52	46	57	77	11	14	14
15.	24	32	-----	-----		52	53	68	68	8.5	15	12
16.	25	34	-----	-----	}	52	53	65	59	8	14	11
17.	26	35	-----	-----		50	54	69	60	10	14	10
18.	27	33	-----	-----		53	49	65	61	9.5	17	10
19.	28	33	-----	-----		59	46	59	60	9	16	11
20.	27	33	24	* 37		65	44	60	59	9	16	13
21.	27	32	-----	-----		58	41	70	54	9.5	16	14
22.	28	32	-----	-----		47	44	83	41	10	14	14
23.	28	30	-----	-----		44	48	77	31	10	14	15
24.	27	31	-----	-----		44	57	71	27	9.5	14	18
25.	30	32	-----	-----		44	58	73	26	8	13	21
26.	32	32	-----	-----	}	42	60	93	30	10	12	20
27.	31	32	-----	-----		49	79	95	35	14	12	17
28.	31	32	-----	-----		59	92	104	42	14	12	15
29.	31	32	-----	-----		53	143	116	37	14	12	14
30.	30	32	-----	-----		49	114	133	34	13	10	16
31.	30	-----	-----	-----		53	-----	143	-----	12	15	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	32	15	24.9	1,530
November	35	30	32.7	1,950
December	-----	-----	24.6	1,510
January	-----	-----	32.0	1,970
February	-----	-----	26.6	1,480
March	65	34	49.1	3,020
April	143	40	56.7	3,370
May	143	57	85.5	5,260
June	140	26	72.1	4,290
July	30	8	14.6	898
August	18	10	14.8	910
September	21	10	14.4	857
The year	143	8	37.3	27,000

* Discharge measurement.

HAT CREEK NEAR HAT CREEK, CALIF.

LOCATION.—Water-stage recorder in SE $\frac{1}{4}$ sec. 28, T. 33 N., R. 5 E., 5 miles below Big Springs and 11 miles southeast of Hat Creek. Altitude, about 4,500 feet.

RECORDS AVAILABLE.—July 1926 to September 1933.

DISCHARGE.—Maximum during year, 176 second-feet May 31 (gage height, 3.03 feet); minimum, 69 second-feet Mar. 17, 26, Apr. 23.

1926-33: Maximum, 419 second-feet Mar. 26, 1928 (gage height, 4.00 feet); minimum, 69 second-feet Aug. 17, 1932, Mar. 17, 26, Apr. 23, 1933.

REMARKS.—Records good except those for May 25-28, which were estimated. Small irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	84	82	77	78	81	77	80	149	85	79	72
2	83	86	83	77	78	83	78	78	120	82	78	71
3	83	84	84	77	78	79	79	77	112	80	79	71
4	83	85	84	77	78	76	79	77	108	80	79	71
5	83	86	83	77	78	76	78	77	108	78	79	70
6	85	85	80	77	78	74	76	75	118	78	79	70
7	89	84	81	77	77	75	76	73	133	78	78	70
8	86	84	81	77	77	74	73	74	138	78	78	74
9	85	84	79	77	77	74	73	75	143	77	77	76
10	85	84	79	77	77	73	73	74	141	80	75	76
11	85	83	78	76	77	73	73	76	132	82	74	76
12	85	84	78	76	77	74	73	79	136	80	73	76
13	84	84	78	77	77	70	73	80	143	79	73	76
14	82	83	78	77	78	70	74	83	143	79	73	77
15	82	83	78	77	78	70	75	84	143	78	73	77
16	82	82	78	76	78	70	77	85	130	79	73	77
17	83	82	78	75	78	70	77	86	118	79	74	77
18	84	82	78	76	78	70	75	86	107	79	73	73
19	84	82	78	77	79	70	75	85	101	78	76	71
20	84	82	78	77	79	70	74	86	105	77	78	70
21	84	82	78	77	79	70	73	88	111	76	78	71
22	84	82	78	77	79	70	72	83	109	75	78	71
23	83	82	78	77	80	70	71	83	108	74	78	72
24	83	82	78	77	79	70	71	92	108	74	78	73
25	84	82	78	77	79	70	74	100	107	75	78	73
26	84	82	78	77	80	69	73	110	105	75	78	73
27	84	82	78	78	80	70	74	120	103	73	78	73
28	84	84	78	78	81	72	80	130	103	72	78	75
29	84	85	78	78	-----	71	92	139	100	73	75	77
30	84	83	78	78	-----	72	82	152	92	77	73	76
31	84	-----	78	78	-----	77	-----	153	-----	78	72	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	89	82	83.9	5,160
November	86	82	83.3	4,900
December	84	78	79.2	4,870
January	78	75	77.0	4,730
February	81	77	78.3	4,350
March	83	69	72.7	4,470
April	92	71	75.7	4,500
May	153	73	91.6	5,630
June	149	92	119	7,080
July	85	72	77.7	4,780
August	79	72	76.3	4,690
September	77	70	73.5	4,370
The year	153	69	82.3	59,600

McCLOUD RIVER NEAR McCLOUD, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 34, T. 39 N., R. 2 W., 6 miles southeast of McCloud. Altitude, about 2,750 feet.

DRAINAGE AREA.—388 square miles.

RECORDS AVAILABLE.—April 1931 to September 1933.

DISCHARGE.—Maximum during year, 920 second-feet May 31 (gage height, 1.42 feet); minimum, 524 second-feet Nov. 23-24.

1931-33: Maximum, 934 second-feet May 1, 1932 (gage height, 1.44 feet); minimum, 524 second-feet Nov. 23-24, 1932.

REMARKS.—Records good. Daily discharge estimated Jan. 9, Mar. 15-17. Two small diversions above station. No regulation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	539	534	544	534	549	554	688	782	893	627	570	576
2	539	539	539	534	549	587	694	763	853	627	570	581
3	539	534	539	529	549	587	725	731	827	622	570	581
4	539	534	534	529	549	560	775	718	702	622	570	576
5	539	539	529	529	549	554	769	712	789	616	570	576
6	539	539	529	529	549	554	750	700	802	616	570	576
7	539	534	529	529	549	554	738	700	815	610	576	576
8	539	534	529	529	548	554	706	694	815	610	576	581
9	539	534	529	534	549	554	682	688	808	598	576	581
10	539	534	529	539	549	554	669	682	802	593	570	581
11	539	534	529	539	549	560	663	669	802	593	570	581
12	534	534	534	539	549	622	669	663	802	593	576	581
13	534	534	534	539	549	593	682	663	802	587	576	576
14	534	534	534	539	549	576	694	669	802	587	576	576
15	534	534	534	539	549	600	718	682	789	593	576	576
16	534	534	539	539	549	620	744	706	769	593	576	576
17	534	539	539	539	549	600	725	757	738	587	576	576
18	534	539	539	544	549	581	700	782	712	587	576	576
19	534	534	544	539	549	581	682	757	694	581	570	576
20	534	534	534	539	549	576	682	738	682	581	570	576
21	534	529	534	539	549	576	688	738	675	581	570	576
22	534	529	534	544	549	576	706	731	669	576	570	576
23	534	524	539	544	549	576	725	731	663	576	570	576
24	534	524	539	549	549	570	763	744	657	576	570	576
25	534	529	539	549	549	576	802	769	651	570	570	576
26	534	529	534	544	549	570	782	808	639	570	570	576
27	534	539	534	549	549	675	789	821	645	570	576	576
28	534	560	534	544	549	834	815	834	639	570	576	576
29	534	581	534	549	-----	763	847	853	639	565	576	576
30	534	565	534	544	-----	718	808	900	633	570	576	570
31	534	-----	534	549	-----	694	-----	907	-----	570	581	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	539	534	536	33,000
November	581	524	537	32,000
December	544	529	534	32,800
January	549	529	539	33,100
February	549	549	549	30,500
March	834	554	602	37,000
April	847	663	729	43,400
May	907	663	745	45,800
June	893	633	744	44,300
July	627	565	591	36,300
August	581	570	573	35,200
September	581	570	577	34,300
The year	907	524	605	438,000

MCCLOUD RIVER AT BAIRD, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 22, T. 34 N., R. 4 W., 1½ miles above junction with Pit River. Altitude, about 700 feet.

DRAINAGE AREA.—668 square miles.

RECORDS AVAILABLE.—December 1910 to September 1933.

DISCHARGE.—Maximum during year, 10,400 second-feet Mar. 28 (gage height, 10.80 feet); minimum, 660 second-feet many days in October and November.

1910-33: Maximum, 27,600 second-feet Feb. 2, 1917 (gage height, 14.3 feet at staff gage located 1 mile upstream); minimum, 650 second-feet for several days August to October 1931. Average, 22 years (1911-33), 1,680 second-feet.

REMARKS.—Records excellent. No large diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	660	660	890	735	815	1,240	2,890	1,830	1,690	938	755	690
2	660	690	780	765	815	2,710	2,800	1,720	1,630	915	738	690
3	660	675	750	952	815	3,600	2,800	1,630	1,540	915	738	690
4	660	675	735	870	832	2,200	2,890	1,540	1,480	915	738	690
5	660	690	720	832	890	1,730	2,640	1,540	1,450	892	738	690
6	660	690	705	798	930	1,570	2,480	1,510	1,450	892	720	690
7	660	675	705	780	910	1,600	2,400	1,760	1,450	870	720	690
8	660	675	705	780	890	1,730	2,180	1,690	1,450	870	720	690
9	660	675	690	765	850	1,730	2,040	1,660	1,420	870	720	690
10	660	660	675	765	832	1,660	1,900	1,600	1,390	850	720	690
11	660	660	675	750	832	1,700	1,830	1,540	1,390	850	720	690
12	660	660	675	750	832	4,110	1,800	1,510	1,360	830	720	690
13	660	660	690	735	815	4,040	1,800	1,480	1,360	830	720	690
14	660	675	690	750	798	2,970	1,800	1,480	1,330	830	720	690
15	660	660	690	750	815	2,700	1,830	1,510	1,300	810	720	690
16	660	675	690	735	910	6,400	1,900	1,540	1,270	810	720	690
17	660	675	705	735	998	4,920	1,830	1,720	1,220	810	720	690
18	660	675	705	765	952	3,270	1,690	1,830	1,190	790	720	690
19	660	675	798	750	910	2,610	1,600	1,760	1,130	790	705	690
20	660	675	750	735	910	2,360	1,570	1,690	1,100	790	705	690
21	660	675	798	765	930	2,280	1,540	1,660	1,080	772	705	690
22	660	675	765	765	952	2,040	1,600	1,630	1,060	772	705	690
23	675	675	832	798	952	1,840	1,630	1,570	1,030	772	705	690
24	660	675	765	910	975	1,700	1,720	1,570	1,000	772	705	705
25	660	675	735	850	975	1,840	1,800	1,600	1,000	755	690	720
26	660	690	735	850	998	1,920	1,720	1,630	982	755	690	705
27	660	720	735	1,220	1,020	4,270	1,690	1,630	960	755	690	690
28	660	952	735	975	1,040	8,740	1,760	1,630	960	755	690	690
29	660	1,020	720	930	-----	5,230	1,830	1,660	960	738	690	690
30	660	1,300	720	870	-----	3,700	1,720	1,690	938	738	690	690
31	660	-----	735	832	-----	3,170	-----	1,720	-----	755	690	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	675	660	660	40,600
November	1,300	660	717	42,700
December	890	675	732	45,000
January	1,220	735	815	50,100
February	1,040	798	900	50,000
March	8,740	1,240	2,950	181,000
April	2,890	1,540	1,990	118,000
May	1,830	1,480	1,630	100,000
June	1,690	938	1,260	74,400
July	938	738	820	50,400
August	755	690	714	43,900
September	720	690	692	41,200
The year	8,740	660	1,160	837,000

ELK CREEK NEAR McCLOUD, CALIF.

LOCATION.—Staff gage in sec. 3, T. 39 N., R. 2 W., half a mile upstream from old McCloud-Bartle road crossing and 4 miles east of McCloud. Altitude, about 3,300 feet.

RECORDS AVAILABLE.—March 1927 to October 1932 (discontinued).

DISCHARGE.—1927-32: Maximum mean daily, 60 second-feet Mar. 19, 1932; no flow at times during winter.

REMARKS.—Mud Creek, which is notable for its large load of glacial silt from Mount Shasta, is diverted into Elk Creek above station, and record is practically flow of Mud Creek. Tributary springs added about 10 second-feet to Elk Creek below station. Record of daily discharge furnished by H. L. Haehl.

Discharge, in second-feet, 1932

Day	Oct.	Day	Oct.	Day	Oct.
1.....	3.5	11.....	2.5	21.....	1.8
2.....	4.8	12.....	2.7	22.....	2.7
3.....	4.0	13.....	3.8	23.....	.7
4.....	3.7	14.....	2.6	24.....	1.0
5.....	3.0	15.....	2.8	25.....	1.6
6.....	3.8	16.....	1.7	26.....	2.1
7.....	2.4	17.....	.9	27.....	1.5
8.....	1.8	18.....	.6	28.....	1.9
9.....	2.3	19.....	.6	29.....	1.9
10.....	2.3	20.....	1.0	30.....	3.1
				31.....	2.2

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4.8	0.6	2.30	141

MILL CREEK BASIN

MILL CREEK NEAR LOS MOLINOS, CALIF.

LOCATION.—Water-stage recorder in sec. 6, T. 25 N., R. 1 W., 5 miles northeast of Los Molinos. Altitude, about 420 feet.

DRAINAGE AREA.—173 square miles.

RECORDS AVAILABLE.—September 1909 to September 1913 (fragmentary); October 1928 to September 1933.

DISCHARGE.—Maximum during year, 1,080 second-feet Mar. 16 (gage height, 4.58 feet); minimum, 49 second-feet Dec. 13.

1928-33: Maximum, 6,000 second-feet Dec. 15, 1929 (gage height, 10.05 feet); minimum, 49 second-feet Dec. 13, 1932.

REMARKS.—Records good except those for Dec. 11-14, which were estimated. No large diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	78	97	90	145	133	249	280	455	149	87	70
2	78	81	88	87	145	165	268	270	331	145	84	70
3	77	88	87	92	137	190	308	233	295	141	81	70
4	77	84	87	92	151	147	334	233	270	137	80	70
5	75	88	85	90	175	130	285	249	266	133	78	70
6	77	87	84	88	151	128	268	220	328	126	77	70
7	82	88	84	87	128	133	275	222	370	124	75	70
8	82	84	84	87	115	149	244	211	357	124	73	69
9	81	82	84	87	108	151	207	209	331	120	73	69
10	78	81	77	87	102	143	185	211	370	117	71	69
11	78	80	55	85	106	139	179	213	344	113	71	71
12	78	80	52	84	131	351	183	211	370	108	71	71
13	78	80	52	84	163	305	194	215	384	106	71	71
14	78	81	70	85	131	211	211	226	384	105	71	71
15	78	81	92	85	122	183	240	235	357	103	71	70
16	78	81	100	88	169	568	258	237	315	103	71	70
17	78	81	100	84	155	485	222	244	268	102	71	70
18	78	80	92	94	130	287	192	249	237	100	71	73
19	78	80	139	102	118	224	177	220	215	100	71	75
20	78	80	108	96	115	207	179	215	200	98	70	73
21	78	80	124	128	113	198	183	215	196	97	70	71
22	80	80	100	147	115	177	211	209	194	97	70	71
23	85	80	225	161	117	161	240	202	185	97	70	71
24	81	80	115	233	118	143	292	233	185	96	70	73
25	80	80	96	175	110	141	334	278	181	92	70	87
26	78	80	91	137	113	139	268	334	179	91	70	84
27	77	80	91	492	115	201	302	357	173	88	70	77
28	77	85	91	220	117	662	370	397	171	87	69	73
29	77	94	88	443	-----	440	455	440	165	85	70	71
30	77	124	88	209	-----	313	328	500	157	84	70	71
31	77	77	88	165	-----	261	-----	485	-----	82	70	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	85	75	78.4	4,820
November	124	78	83.6	4,970
December	225	52	94.0	5,780
January	492	84	138	8,480
February	175	102	129	7,160
March	662	128	234	14,400
April	455	177	255	15,200
May	500	202	266	16,400
June	455	157	274	16,300
July	149	82	108	6,640
August	87	69	72.8	4,480
September	87	69	72.0	4,280
The year	662	52	150	109,000

ELDER CREEK BASIN

ELDER CREEK NEAR HENLEYVILLE, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 10, T. 25 N., R. 4 W., at highway bridge on Paskenta-Red Bluff road 6 miles northeast of Henleyville. Altitude, about 310 feet.

RECORDS AVAILABLE.—October 1930 to September 1933.

DISCHARGE.—Maximum during year, 1,150 second-feet Jan. 29 (gage height, 4.1 feet); no flow for several months.

1930-33: Maximum, 4,020 second-feet Dec. 26, 1931 (gage height, 6.35 feet); no flow several months each year.

REMARKS.—Records good except those for high stages, which are fair. No large diversions.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	4.1	57	18	61	48	39	0.4
2.....	0	4.1	44	32	64	68	32	0
3.....	0	5.5	37	70	73	41	27	0
4.....	0	10	32	41	85	35	23	0
5.....	0	8.5	32	29	73	33	22	0
6.....	0	7	30	29	66	32	19	0
7.....	0	6	26	35	64	33	19	0
8.....	0	5.5	23	44	52	30	19	0
9.....	0	5	20	44	44	30	18	0
10.....	0	4.7	17	41	39	27	16	0
11.....	0	4.4	17	35	35	26	14	0
12.....	0	4.1	18	64	32	23	13	0
13.....	0	3.8	18	73	30	22	9	0
14.....	0	3.8	16	57	32	23	7.5	0
15.....	0	4.1	14	48	37	27	5.5	0
16.....	0	4.1	15	165	41	30	5	0
17.....	0	4.1	17	115	39	32	4.5	0
18.....	0	5	17	73	33	32	4.0	0
19.....	5	7	16	64	29	30	3.4	0
20.....	18	7.5	15	66	26	27	3.4	0
21.....	10	19	16	66	26	27	3.0	0
22.....	9	50	16	57	26	26	2.3	0
23.....	65	94	17	48	29	25	1.9	0
24.....	28	119	16	42	39	25	1.2	0
25.....	11	85	15	39	41	27	1.0	0
26.....	7.5	76	14	41	42	32	1.0	0
27.....	5.5	528	17	37	37	35	1.2	0
28.....	4.7	153	17	136	44	37	1.0	0
29.....	4.4	470	-----	85	50	41	1.0	0
30.....	4.1	107	-----	70	46	44	.8	0
31.....	4.1	68	-----	64	-----	42	-----	0
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
December.....	65		0		5.69		350	
January.....	528		3.8		60.6		3,730	
February.....	57		14		21.8		1,210	
March.....	165		18		59.0		3,630	
April.....	85		26		44.5		2,650	
May.....	68		22		32.5		2,000	
June.....	39		.8		10.6		631	
July.....	.4		0		.01		.8	
The year.....	528		0		19.6		14,200	

NOTE.—No flow during months omitted.

THOMAS CREEK BASIN

THOMAS CREEK AT PASKENTA, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 5, T. 23 N., R. 6 W., half a mile upstream from Paskenta.

DRAINAGE AREA.—188 square miles.

RECORDS AVAILABLE.—October 1920 to September 1933.

DISCHARGE.—Maximum during year, 1,140 second-feet Apr. 4 (gage height, 5.00 feet); no flow during part of year.

1920-33: Maximum, about 16,600 second-feet Mar. 26, 1928 (gage height, 10.5 feet at old location); no flow for short periods in 1921, 1922, 1924, 1926, 1929-32. Average, 12 years (1921-33), 212 second-feet.

REMARKS.—Records good. Discharge estimated Nov. 29 to Dec. 21, Aug. 22-30. No diversions.

Discharge, in second-feet, 1932-33

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	8	24	37	146	388	345	442	64	4.3	0
2	0	7	22	35	254	594	303	354	58	3.0	0
3	0	7	66	34	437	855	256	303	55	4.5	0
4	0	6	59	38	220	930	290	263	51	5	0
5	0	6	37	43	178	768	342	253	47	4.3	0
6	1.5	5	31	54	256	722	286	290	44	3.7	0
7	3.4	5	31	63	256	660	273	311	41	3.3	0
8	4.5	5	29	60	328	500	246	306	40	2.9	0
9	3.8	5	32	55	331	375	235	293	37	2.5	0
10	3.4	4	36	48	304	311	226	290	33	2.2	0
11	3.0	4	31	48	268	303	228	293	29	2.0	0
12	3.0	5	27	50	437	333	237	288	26	1.8	0
13	2.8	6	24	49	354	348	266	286	24	1.6	0
14	2.6	6	27	44	278	425	330	278	22	1.3	0
15	2.4	6	33	44	246	552	348	256	20	.9	0
16	2.4	10	31	51	363	500	357	212	19	.9	0
17	2.4	12	23	74	326	369	351	180	17	.8	0
18	2.4	10	23	70	258	296	330	152	16	.7	0
19	2.6	60	24	64	302	253	293	134	14	.6	0
20	2.6	30	24	61	469	260	286	124	12	.6	0
21	2.6	33	29	66	469	253	290	118	11	.5	0
22	2.6	22	34	74	345	311	270	114	10	.5	0
23	2.6	40	37	81	281	381	286	110	9.5	.5	0
24	2.6	22	49	81	233	456	325	104	9	.4	0
25	2.6	17	44	74	213	508	428	99	8	.4	0
26	2.8	15	49	89	192	360	439	95	7	.3	.3
27	3.2	14	114	113	196	381	468	90	6	.2	.5
28	4.8	16	65	107	484	552	532	84	5.5	.1	.4
29	10	18	102	-----	363	576	616	74	5	.1	.3
30	9	18	46	-----	320	375	604	68	4.5	.1	.1
31	-----	24	42	-----	326	-----	532	-----	4.5	0	-----
Month	Maximum				Minimum		Mean		Run-off in acre-feet		
November	10				0		2.85		170		
December	60				4		14.4		885		
January	114				22		40.2		2,470		
February	113				34		61.0		3,390		
March	484				146		304		18,700		
April	930				253		463		27,600		
May	616				226		343		21,100		
June	442				68		209		12,400		
July	64				4.5		24.2		1,490		
August	5				0		1.64		101		
September	.5				0		.05		3.2		
The year	930				0		122		88,300		

NOTE.—No flow during October.

DEER CREEK BASIN

DEER CREEK NEAR VINA, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 23, T. 25 N., R. 1 W., three-quarters of a mile above concrete diversion dam and 9 miles northeast of Vina. Altitude, about 500 feet.

DRAINAGE AREA.—200 square miles.

RECORDS AVAILABLE.—October 1911 to December 1915, March 1920 to September 1933.

DISCHARGE.—Maximum during year, 1,200 second-feet Mar. 12 (gage height, 3.41 feet); minimum, 43 second-feet Dec. 13.

1911-15, 1920-33: Maximum, 12,200 second-feet Mar. 26, 1928 (gage height, 15.0 feet at location three-quarters of a mile downstream); minimum, that of Dec. 13, 1932. Average, 16 years (1912-15, 1920-33), 269 second-feet.

REMARKS.—Records good. Discharge estimated Oct. 18 to Nov. 6, July 2-17. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	66	68	94	85	133	180	346	254	243	83	70	62
2.....	66	70	82	83	128	243	346	293	216	81	70	62
3.....	66	80	79	89	128	309	363	257	200	80	68	62
4.....	66	75	78	92	133	213	381	238	189	79	68	62
5.....	65	80	76	86	160	178	346	257	182	78	68	64
6.....	66	80	75	85	152	171	332	235	178	78	68	64
7.....	68	79	73	83	135	180	332	254	171	77	68	64
8.....	72	75	75	83	122	203	300	254	167	77	67	64
9.....	71	73	76	82	113	198	254	247	164	76	67	64
10.....	67	73	70	80	106	187	221	257	158	76	67	64
11.....	66	72	65	79	113	182	213	260	150	75	66	64
12.....	66	72	65	79	131	603	216	254	143	75	66	64
13.....	67	72	52	79	145	490	221	249	139	74	66	64
14.....	68	72	71	79	131	319	227	246	133	74	66	64
15.....	68	73	89	80	126	272	246	246	126	73	66	64
16.....	68	73	94	83	167	706	257	246	130	73	66	64
17.....	68	73	97	80	178	538	240	254	116	72	66	65
18.....	68	72	88	88	150	370	208	275	113	72	66	66
19.....	68	72	145	97	131	296	194	238	107	72	65	67
20.....	68	72	113	88	131	269	187	224	106	71	64	67
21.....	70	72	115	122	130	254	187	224	102	70	62	67
22.....	72	72	96	131	135	224	203	216	99	70	62	67
23.....	75	72	321	147	143	200	218	205	96	70	62	67
24.....	72	71	113	196	143	182	246	210	94	70	62	68
25.....	70	71	91	160	131	178	275	227	92	68	62	75
26.....	68	72	88	120	137	173	243	238	91	68	62	78
27.....	66	72	88	438	145	250	252	240	91	68	62	72
28.....	66	79	86	208	152	905	272	246	89	67	62	68
29.....	66	85	85	451	-----	620	319	254	88	67	62	67
30.....	66	122	85	203	-----	450	293	257	86	66	62	66
31.....	66	-----	85	154	-----	374	-----	254	-----	67	62	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	75	65	67.9	4,180
November.....	122	68	75.5	4,490
December.....	321	52	93.9	5,770
January.....	451	79	129	7,930
February.....	178	106	137	7,610
March.....	905	171	320	19,700
April.....	381	187	265	15,800
May.....	293	205	246	15,100
June.....	243	86	135	8,030
July.....	83	66	73.1	4,490
August.....	70	62	65.2	4,010
September.....	78	62	65.9	3,920
The year.....	905	52	139	101,000

CHICO CREEK BASIN
CHICO CREEK NEAR CHICO, CALIF.

LOCATION.—Water-stage recorder in Arroyo Chico grant, 1 mile above golf clubhouse in Municipal Park and 6 miles northeast of Chico, Butte County. Altitude, about 400 feet.

DRAINAGE AREA.—68.3 square miles.

RECORDS AVAILABLE.—May 1930 to September 1933.

DISCHARGE.—Maximum during year, 900 second-feet Mar. 12 (gage height, 5.41 feet); minimum, 10 second-feet Dec. 11.

1930-33: Maximum, 3,110 second-feet Dec. 24, 1931 (gage height, 9.99 feet); minimum, that of Dec. 11, 1932.

REMARKS.—Records good except those for period of ice effect, Dec. 11-14, and those for July 11-18, which were estimated. No diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	20	27	25	58	120	210	50	35	22	18	17
2	18	23	23	25	53	183	193	80	34	21	18	17
3	18	24	22	43	51	240	185	74	33	21	18	17
4	18	22	22	47	51	185	174	67	32	20	17	17
5	18	23	22	35	56	144	151	64	32	20	17	17
6	18	22	22	32	61	140	134	59	32	20	17	17
7	18	21	22	29	59	152	120	96	32	20	17	17
8	19	21	22	28	53	180	106	139	31	20	16	16
9	18	21	22	28	48	174	92	129	30	20	16	16
10	18	20	20	27	45	151	82	126	28	20	17	16
11	18	20	18	26	47	146	75	118	28	20	17	16
12	18	20	18	26	59	507	70	112	27	19	16	16
13	18	20	19	25	87	451	66	115	26	19	16	16
14	18	21	20	25	72	284	64	105	25	19	16	16
15	18	21	20	25	71	228	61	93	25	18	16	16
16	18	21	22	27	76	579	61	86	25	18	16	17
17	18	21	24	25	99	507	65	82	25	18	16	17
18	18	21	23	36	86	306	61	83	25	17	16	17
19	18	21	46	37	71	230	60	71	25	17	16	18
20	18	21	40	34	69	204	58	66	24	17	16	18
21	18	21	38	54	69	191	55	61	24	17	16	18
22	20	21	30	51	75	159	54	59	23	17	16	18
23	21	21	53	61	84	134	53	55	23	17	16	18
24	20	21	37	87	88	112	53	51	22	17	16	18
25	20	21	28	64	82	108	53	48	22	17	16	20
26	20	21	27	48	88	106	52	45	22	16	16	22
27	20	21	26	160	92	121	50	43	22	16	16	19
28	20	24	26	114	98	616	47	41	22	16	16	18
29	20	28	25	200	-----	465	50	39	23	16	16	18
30	20	41	25	99	-----	320	48	38	22	17	17	18
31	20	-----	25	71	-----	251	-----	36	-----	17	17	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	21	17	18.7	1,150
November	41	20	22.1	1,320
December	53	18	26.3	1,620
January	200	25	52.1	3,200
February	99	45	69.6	3,870
March	616	106	248	15,200
April	210	47	86.8	5,160
May	139	36	75.2	4,620
June	35	22	26.6	1,580
July	22	16	18.4	1,130
August	18	16	16.5	1,010
September	22	16	17.4	1,040
The year	616	16	56.6	40,900

STONY CREEK BASIN

STONY CREEK NEAR STONYFORD, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 35, T. 18 N., R. 7 W., at East Park feed-canal diversion dam, 3 miles west of Stonyford.

DRAINAGE AREA.—97 square miles.

RECORDS AVAILABLE.—April 1913 to December 1914, November 1918 to September 1933.

DISCHARGE.—Average, 14 years (1913-14, 1919-20, 1921-33), 140 second-feet.

REMARKS.—East Park feed canal diverts at dam and empties into East Park Reservoir. This flow is included in discharge records. Daily-discharge record furnished by United States Bureau of Reclamation, through R. C. E. Weber, project manager.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	32	33	27	32	64	163	235	136	193	68	37	29
2.....	32	32	28	29	61	220	253	154	159	68	37	29
3.....	32	32	29	111	55	277	288	136	149	68	37	29
4.....	32	32	29	76	55	209	319	132	136	64	37	29
5.....	32	32	29	61	64	188	301	127	136	61	37	29
6.....	32	30	28	51	84	179	265	127	141	60	37	29
7.....	32	30	28	51	91	179	235	136	154	58	37	29
8.....	32	28	28	48	88	214	225	127	159	55	37	29
9.....	32	27	27	40	76	204	204	132	163	55	34	29
10.....	32	27	27	40	72	198	188	132	159	55	34	29
11.....	32	27	27	40	72	184	188	136	154	51	34	27
12.....	32	27	28	40	68	411	174	136	154	48	34	27
13.....	33	27	28	40	68	360	163	141	154	48	34	27
14.....	33	27	28	37	68	289	168	154	154	48	34	27
15.....	34	27	29	37	68	260	174	154	149	46	34	27
16.....	34	27	29	37	84	511	163	159	132	46	32	27
17.....	34	27	29	37	99	395	159	163	123	46	32	27
18.....	34	27	29	37	84	367	154	179	123	46	32	27
19.....	34	27	142	37	76	277	136	168	111	43	32	27
20.....	34	27	84	37	76	283	127	159	107	43	32	27
21.....	34	27	64	37	76	250	123	154	99	43	32	27
22.....	34	27	61	40	76	215	123	149	95	43	32	27
23.....	34	27	190	40	84	190	123	141	91	43	32	27
24.....	34	27	76	72	88	180	127	141	91	43	32	27
25.....	34	27	43	72	88	170	132	159	88	43	29	27
26.....	34	27	40	64	95	160	132	163	84	40	29	27
27.....	34	27	37	403	111	136	132	174	80	40	29	27
28.....	34	27	37	137	111	370	149	184	80	40	29	27
29.....	34	27	37	91	-----	315	163	204	76	37	29	27
30.....	34	27	37	76	-----	270	145	220	72	37	29	27
31.....	33	-----	29	68	-----	230	-----	209	-----	37	29	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	34	32	33.1	2,040
November.....	33	27	28.1	1,670
December.....	190	27	44.6	2,740
January.....	403	29	65.1	4,000
February.....	111	55	78.6	4,370
March.....	511	136	253	15,600
April.....	319	123	182	10,800
May.....	220	127	154	9,470
June.....	193	72	126	7,500
July.....	68	37	49.1	3,020
August.....	37	29	33.1	2,040
September.....	29	27	27.7	1,650
The year.....	511	27	89.7	64,900

STONY CREEK NEAR ELK CREEK, CALIF.

LOCATION.—Staff gage in NE¼ sec. 16, T. 20 N., R. 6 W., at Stony Gorge Dam, 1½ miles south of Elk Creek.

DRAINAGE AREA.—301 square miles.

RECORDS AVAILABLE.—May 1919 to September 1933.

DISCHARGE.—1919-33: Maximum, about 10,200 second-feet Jan. 31, 1921 (gage height, 7.80 feet at site 1 mile upstream); no flow part of July to October 1924. Average, 14 years (1919-33), 195 second-feet.

REMARKS.—Water is stored in East Park Reservoir, on Little Stony Creek, and since November 1928 in Stony Gorge Reservoir; released during irrigating season. Daily-discharge record furnished by United States Bureau of Reclamation, through R. C. E. Weber, project manager.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	10	15	21	40	95	128	200	125	175	49	14	2
2-----	10	15	21	35	85	175	220	180	155	44	11	3
3-----	10	16	21	40	80	180	235	140	144	40	263	7
4-----	10	61	20	105	75	335	280	130	132	42	363	8
5-----	11	71	19	95	70	205	245	135	125	45	361	7
6-----	12	71	19	75	65	165	225	130	120	30	362	7
7-----	12	34	19	60	100	195	230	136	120	27	361	9
8-----	11	18	19	45	95	180	225	145	144	26	360	11
9-----	197	19	19	40	85	200	200	140	143	28	359	9
10-----	202	19	19	40	80	165	165	140	142	37	358	10
11-----	201	20	19	40	75	175	160	135	140	28	359	12
12-----	201	20	19	40	75	190	150	130	140	23	359	9
13-----	199	20	19	38	75	400	150	136	144	23	359	9
14-----	199	20	19	38	75	325	145	165	134	23	360	11
15-----	194	58	19	38	85	280	170	165	125	26	359	10
16-----	32	78	19	36	90	250	160	160	115	20	359	5
17-----	9	79	20	35	100	460	150	155	105	17	359	5
18-----	9	79	25	55	100	350	140	155	95	15	358	5
19-----	10	79	35	35	100	300	130	155	89	13	358	6
20-----	10	79	150	40	100	280	120	150	86	12	358	9
21-----	10	79	100	40	85	270	115	145	79	12	358	8
22-----	10	79	70	50	80	250	111	143	72	13	358	9
23-----	10	80	65	75	90	220	110	140	73	14	358	9
24-----	10	62	185	85	95	200	135	145	75	16	358	9
25-----	10	61	85	250	95	185	135	165	72	12	357	11
26-----	12	61	55	105	100	175	135	170	71	10	23	13
27-----	14	61	45	200	105	160	150	175	64	8	19	12
28-----	15	61	40	510	110	250	160	180	59	7	14	12
29-----	15	61	40	300	-----	260	175	185	55	10	6	11
30-----	15	40	40	175	-----	295	150	190	53	12	2	8
31-----	15	-----	40	125	-----	260	-----	195	-----	18	2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	202	9	54.4	3,340
November-----	80	15	50.5	3,000
December-----	185	19	42.1	2,590
January-----	510	35	93.1	5,720
February-----	110	65	88.0	4,890
March-----	460	128	241	14,800
April-----	280	110	169	10,100
May-----	195	125	153	9,410
June-----	175	53	108	6,430
July-----	49	7	22.6	1,390
August-----	363	2	266	16,400
September-----	13	2	8.53	508
The year-----	510	2	108	78,600

STONY CREEK NEAR ORLAND, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 7, T. 22 N., R. 4 W., at county road bridge near Simpson ranch, 10 miles northwest of Orland.

DRAINAGE AREA.—636 square miles.

RECORDS AVAILABLE.—January 1920 to September 1933.

DISCHARGE.—1920-33: Maximum, 19,500 second-feet Jan. 30, 1921 (gage height, 10.3 feet); no flow Nov. 11, 1920, Aug. 24 to Sept. 30, 1924. Average, 13 years (1920-33), 329 second-feet.

REMARKS.—Water is stored in East Park Reservoir, on Little Stony Creek, and since November 1928 in Stony Gorge Reservoir; released during irrigating season. Daily-discharge record furnished by United States Bureau of Reclamation, through R. C. E. Weber, project manager.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	168	5	2	5	56	100	205	196	273	252	292	222
2.....	166	25	2	5	54	145	236	185	249	258	279	222
3.....	164	30	2	5	52	220	310	157	233	256	258	222
4.....	162	31	2	62	50	205	366	145	223	250	250	224
5.....	162	30	2	38	47	155	325	159	218	246	250	215
6.....	163	20	2	15	47	155	284	162	218	242	250	201
7.....	163	10	2	10	50	160	277	143	228	242	248	201
8.....	150	7	2	5	45	185	235	135	228	240	245	198
9.....	140	5	2	5	40	195	195	135	228	235	245	197
10.....	138	3	2	5	32	180	174	146	222	231	245	196
11.....	138	2	2	5	33	170	158	150	220	250	245	195
12.....	138	2	2	5	35	210	146	165	218	264	245	194
13.....	138	2	2	5	32	290	145	183	231	270	245	194
14.....	139	2	2	5	40	220	225	194	235	268	245	192
15.....	139	2	2	5	48	195	253	206	259	274	262	192
16.....	75	20	2	5	55	295	218	224	259	272	268	190
17.....	57	20	2	5	62	335	169	230	250	260	266	189
18.....	50	20	2	5	55	243	141	231	250	264	268	188
19.....	45	20	2	5	50	215	130	208	243	266	264	186
20.....	40	20	2	5	48	240	146	199	234	270	264	183
21.....	34	20	4	8	47	244	176	208	241	276	268	180
22.....	28	20	6	12	47	212	192	212	240	276	262	179
23.....	28	20	60	54	48	185	202	212	238	266	242	176
24.....	20	20	45	47	48	167	212	220	234	258	233	173
25.....	15	20	30	115	48	150	210	214	233	256	231	170
26.....	11	20	15	70	50	145	174	224	229	252	233	165
27.....	10	20	10	250	60	136	146	230	226	248	231	160
28.....	9	20	6	225	80	203	176	235	217	246	231	157
29.....	8	10	5	325	-----	213	207	259	212	268	229	170
30.....	7	4	5	125	-----	190	206	314	237	283	227	178
31.....	6	-----	5	70	-----	185	-----	325	-----	290	224	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	168	6	87.5	5,390
November.....	31	2	15.0	893
December.....	60	2	7.45	458
January.....	325	5	48.6	2,990
February.....	80	32	48.5	2,690
March.....	335	100	198	12,200
April.....	366	130	208	12,400
May.....	325	135	200	12,300
June.....	273	212	234	13,900
July.....	290	231	259	15,900
August.....	292	224	250	15,400
September.....	224	157	190	11,300
The year.....	366	2	146	106,000

LITTLE STONY CREEK NEAR LODOGA, CALIF.

LOCATION.—Staff gage at East Park Reservoir Dam, 4 miles above junction with Stony Creek and $3\frac{1}{2}$ miles northwest of Lodoga, Colusa County. Also staff gage and weir at head of reservoir, 3 miles above dam.

DRAINAGE AREA.—102 square miles.

RECORDS AVAILABLE.—January 1908 to September 1933.

DISCHARGE.—1908-33: Maximum, 7,060 second-feet Feb. 2, 1909 (gage height, 11.8 feet); no flow during parts of nearly every year. Average, 24 years (1908-10, 1911-33), 59.2 second-feet.

REMARKS.—Water is stored in East Park Reservoir. Daily-discharge record furnished by United States Bureau of Reclamation, through R. C. E. Weber, project manager.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	2	35	25	65	24	26	3
2.....	0	2	35	24	64	26	25	2.5
3.....	0	4	30	30	62	30	23	2.5
4.....	0	20	20	35	60	31	22	2
5.....	0	15	15	35	59	30	21	2
6.....	0	14	20	32	58	29	20	1.5
7.....	0	12	35	30	57	28	20	1.5
8.....	0	10	25	28	56	27	19	1.5
9.....	0	10	20	25	55	27	18	1
10.....	0	8	20	25	52	27	17	1
11.....	0	6	15	25	47	27	16	1
12.....	0	5	15	50	43	28	14	1
13.....	0	4	15	115	41	28	13	1
14.....	0	4	15	90	40	28	12	1
15.....	0	4	15	165	38	29	11	1
16.....	0	6	20	90	35	29	11	.5
17.....	0	6	20	130	31	30	11	.5
18.....	0	6	20	125	29	30	11	.5
19.....	1	6	20	100	28	30	10	.5
20.....	2	6	20	70	28	29	9	.5
21.....	15	10	20	70	28	29	8	.5
22.....	18	15	20	65	28	28	8	.5
23.....	20	30	20	65	28	27	8	.5
24.....	23	60	20	60	27	26	8	.5
25.....	10	145	20	50	27	25	6	.5
26.....	5	100	20	50	26	27	6	.5
27.....	5	175	25	55	25	30	6	0
28.....	4	145	25	72	24	34	5	0
29.....	4	120	-----	70	23	32	4	0
30.....	3	110	-----	68	23	29	4	0
31.....	2	55	-----	67	-----	27	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	23	0	3.61	222
January.....	175	2.0	36.0	2,210
February.....	35	15	21.4	1,190
March.....	165	24	62.6	3,850
April.....	65	23	40.2	2,890
May.....	34	24	28.4	1,750
June.....	26	4	13.1	780
July.....	3.0	0	.94	57.5
The year.....	175	0	17.2	12,400

NOTE.—No flow during months omitted.

BUTTE CREEK BASIN

BUTTE CREEK NEAR CHICO, CALIF.

LOCATION.—Water-stage recorder in sec. 25, T. 22 N., R. 2 E., half a mile below junction with Little Butte Creek and $7\frac{1}{2}$ miles east of Chico. Altitude, about 350 feet.

DRAINAGE AREA.—148 square miles.

RECORDS AVAILABLE.—November 1930 to September 1933.

EXTREMES.—Maximum discharge during year, 1,100 second-feet Mar. 28 (gage height, 4.44 feet); minimum, 56 second-feet Sept. 7.

1930-33: Maximum discharge, 4,070 second-feet Dec. 24, 1931 (gage height, 7.75 feet); minimum discharge recorded, 36 second-feet some time in September 1931.

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 12-14; discharge estimated. Butte Creek receives considerable water from West Branch of Feather River via De Sabla and Centerville power plants. Pacific Gas & Electric Co. has furnished the following record of this flow for 1933:

Month	Mean monthly discharge in sec- ond-feet	Run-off in acre- feet	Month	Mean monthly discharge in sec- ond-feet	Run-off in acre- feet
October.....	56	3,440	May.....	80	4,920
November.....	28	1,670	June.....	68	4,050
December.....	21	1,290	July.....	19	1,170
January.....	13	799	August.....	38	2,340
February.....	0	0	September.....	30	1,790
March.....	10	615			
April.....	45	2,680	The year.....	34	24,800

Discharge, in second-feet, of Butte Creek near Chico, Calif., 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	100	134	124	111	143	182	433	372	400	130	107	87
2.....	93	141	96	109	134	249	441	404	364	128	107	87
3.....	107	143	105	154	128	307	487	344	341	126	102	87
4.....	111	136	103	147	126	252	474	352	325	109	105	87
5.....	109	139	105	130	132	215	433	364	311	107	103	87
6.....	109	136	103	124	132	223	404	348	314	105	102	89
7.....	111	136	100	105	130	239	384	429	307	102	102	87
8.....	115	126	102	105	122	275	356	392	296	100	102	87
9.....	116	120	102	120	116	279	300	356	289	100	102	87
10.....	118	94	98	113	111	258	272	376	279	94	100	86
11.....	111	89	82	111	120	262	262	372	265	94	98	86
12.....	109	89	70	102	145	670	265	368	258	91	98	86
13.....	113	87	70	105	185	552	272	380	249	84	98	87
14.....	111	84	75	103	152	400	318	368	239	70	93	86
15.....	116	87	86	100	139	352	352	344	226	70	93	86
16.....	122	87	96	126	152	720	333	348	217	75	96	86
17.....	120	87	116	109	168	620	333	388	209	70	96	87
18.....	120	87	113	122	152	449	307	388	203	68	96	87
19.....	118	87	185	118	139	384	296	337	201	68	89	89
20.....	115	82	136	122	134	372	282	364	195	69	89	89
21.....	115	94	154	152	132	356	293	333	190	69	87	87
22.....	124	98	126	170	139	307	293	329	182	68	84	87
23.....	124	100	188	175	145	275	318	337	154	70	84	89
24.....	124	98	136	216	145	242	314	364	152	70	87	91
25.....	118	87	120	175	139	245	372	360	145	72	87	102
26.....	122	87	116	147	147	233	329	404	136	86	87	111
27.....	128	87	115	384	152	265	368	400	136	84	87	98
28.....	134	93	113	269	156	890	356	376	136	86	86	93
29.....	124	115	113	411	-----	645	429	412	132	87	86	91
30.....	91	170	111	226	-----	517	360	424	132	98	87	91
31.....	100	-----	111	168	-----	449	-----	420	-----	102	89	-----
Month	Maximum					Minimum		Mean		Run-off in acre-feet		
October.....	134					91		114		7,010		
November.....	170					82		107		6,370		
December.....	188					70		112		6,890		
January.....	411					100		156		9,590		
February.....	185					111		140		7,780		
March.....	890					182		377		23,200		
April.....	487					262		348		20,700		
May.....	429					329		373		22,900		
June.....	400					132		233		13,900		
July.....	130					68		88.8		5,460		
August.....	107					84		94.5		5,310		
September.....	111					86		89.3		5,310		
The year.....	890					68		186		135,000		

FEATHER RIVER BASIN

LAKE ALMANOR NEAR PRATTVILLE, CALIF.

LOCATION.—Staff gage (not water-stage recorder as previously published) in sec. 28, T. 27 N., R. 8 E., at dam on North Fork of Feather River 9 miles above mouth of Butt Creek and 5 miles southeast of Prattville. Elevation of crest of dam, 4,515 feet.

RECORDS AVAILABLE.—October 1930 to September 1933.

REMARKS.—Lake Almanor, which has capacity of 1,308,000 acre-feet, is main storage unit of Feather River system of Pacific Gas & Electric Co. Water is diverted by tunnel to Butt Valley Reservoir and a small amount released down natural channel of North Fork of Feather River. On Sept. 30, 1932, storage in Butt Valley Reservoir was 37,307 acre-feet; on Sept. 30, 1933, 24,734 acre-feet. (See North Fork of Feather River near Prattville, Calif.) Daily storage record furnished by Pacific Gas & Electric Co.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	285, 581	308, 800	311, 192	318, 409	299, 775	314, 231	354, 641	396, 423	446, 690	474, 972	437, 118	392, 542
2	286, 200	310, 075	309, 915	317, 443	299, 303	315, 354	356, 158	399, 431	449, 095	474, 024	435, 652	391, 310
3	286, 819	311, 032	308, 959	316, 478	298, 674	316, 800	358, 016	400, 496	450, 949	472, 886	434, 006	390, 081
4	287, 438	311, 991	308, 163	315, 354	297, 888	317, 926	359, 878	401, 206	452, 806	471, 750	432, 361	388, 502
5	288, 368	313, 270	307, 050	314, 712	296, 947	319, 215	361, 914	402, 983	453, 736	470, 426	431, 084	386, 751
6	289, 454	313, 911	305, 939	313, 911	296, 006	319, 860	363, 105	403, 872	455, 597	469, 481	429, 626	385, 527
7	291, 165	314, 552	304, 987	312, 950	294, 754	320, 829	364, 297	407, 082	457, 836	468, 349	428, 170	384, 305
8	291, 944	315, 033	304, 037	312, 150	294, 441	321, 637	365, 661	407, 975	459, 331	467, 029	426, 715	382, 911
9	292, 723	315, 996	303, 721	310, 872	294, 285	322, 770	366, 686	409, 763	460, 642	465, 710	425, 263	381, 518
10	293, 348	316, 639	304, 670	309, 756	295, 223	323, 418	367, 712	411, 106	462, 328	464, 582	423, 993	380, 128
11	293, 972	317, 443	305, 463	308, 800	296, 163	325, 040	368, 911	412, 631	464, 958	463, 642	422, 544	378, 913
12	294, 754	318, 248	306, 097	308, 004	297, 290	328, 131	370, 283	413, 708	466, 464	462, 516	421, 097	377, 873
13	295, 380	318, 893	306, 732	307, 050	298, 517	329, 110	371, 486	414, 786	467, 783	461, 016	419, 832	376, 488
14	296, 163	319, 860	307, 209	306, 415	299, 618	330, 253	372, 519	415, 866	469, 670	460, 080	418, 388	375, 451
15	296, 790	320, 829	307, 845	305, 621	300, 563	331, 561	373, 208	417, 126	471, 182	458, 957	417, 306	375, 796
16	297, 574	321, 799	308, 481	304, 670	301, 824	333, 035	374, 242	418, 749	472, 129	457, 649	416, 046	376, 315
17	298, 360	322, 123	309, 437	303, 721	302, 614	334, 512	376, 834	421, 097	473, 076	456, 530	414, 607	377, 007
18	298, 831	321, 476	310, 234	302, 772	303, 721	335, 499	378, 219	422, 363	474, 024	455, 225	413, 349	377, 699
19	299, 303	320, 829	313, 751	302, 140	304, 670	336, 981	379, 260	423, 450	474, 972	454, 294	411, 734	378, 219
20	299, 932	319, 860	314, 552	301, 509	305, 463	337, 805	380, 128	424, 719	475, 922	452, 992	410, 121	378, 739
21	300, 563	318, 713	315, 354	300, 878	306, 415	338, 795	380, 996	425, 807	476, 682	451, 691	408, 511	379, 433
22	301, 666	317, 765	316, 318	300, 247	307, 368	339, 787	382, 214	427, 261	477, 824	450, 207	407, 082	380, 128
23	302, 614	316, 639	318, 893	300, 247	308, 481	341, 111	383, 259	428, 716	478, 586	448, 910	405, 832	380, 649
24	303, 404	315, 515	319, 699	300, 405	309, 756	342, 437	384, 654	439, 990	479, 539	447, 614	404, 407	381, 170
25	304, 037	314, 712	320, 345	300, 405	310, 553	343, 267	385, 702	431, 449	480, 301	446, 320	403, 161	381, 692
26	304, 670	313, 751	320, 991	300, 563	311, 511	345, 096	387, 276	433, 457	480, 301	445, 027	401, 561	382, 214
27	305, 304	312, 950	321, 637	300, 563	312, 310	346, 263	388, 853	435, 286	480, 301	443, 367	400, 318	382, 388
28	305, 939	312, 150	320, 991	300, 405	313, 110	348, 934	390, 256	437, 851	478, 776	441, 894	398, 546	381, 518
29	306, 891	312, 310	320, 345	300, 563	-----	350, 274	392, 014	439, 687	477, 443	440, 442	397, 130	380, 301
30	307, 686	311, 991	319, 699	300, 563	-----	351, 615	394, 304	441, 701	476, 492	439, 320	395, 893	378, 739
31	308, 163	-----	319, 054	299, 932	-----	352, 790	-----	444, 658	-----	438, 402	394, 304	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
September 30	284, 964	-----	May 31	444, 658	+50, 354
October 31	308, 163	+23, 199	June 30	476, 492	+31, 834
November 30	311, 991	+3, 828	July 31	438, 402	-38, 090
December 31	319, 054	+7, 063	August 31	394, 304	-44, 098
January 31	299, 932	-19, 122	September 30	378, 739	-15, 565
February 28	313, 110	+13, 178			
March 31	352, 790	+39, 680	The year	-----	+93, 776
April 30	394, 304	+41, 514			

NORTH FORK OF FEATHER RIVER NEAR PRATTVILLE, CALIF.

LOCATION.—Discharge obtained by combining flow released through Lake Almanor Dam and discharge of diversion tunnel from Lake Almanor to Butt Valley Reservoir. Dam is 5 miles southeast of Prattville and 9 miles above mouth of Butt Creek.

DRAINAGE AREA.—506 square miles.

RECORDS AVAILABLE.—June 1905 to September 1933.

DISCHARGE.—1905-33: Maximum, 10,000 second-feet Mar. 19, 1907 (gage height, 16.2 feet at river gage, previous to dam construction); no flow Apr. 15-16, 1914, parts of January to April 1919, Apr. 21, 1923. Average, 27 years (1905-10, 1911-33), 884 second-feet.

REMARKS.—Daily-discharge record furnished by Pacific Gas & Electric Co. (See Lake Almanor near Prattville, Calif., for storage record.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	23	19	866	862	864	24	22	23	23	905	906	977
2.....	22	23	866	862	864	26	22	23	23	907	906	977
3.....	23	24	874	862	864	25	22	23	23	908	921	962
4.....	23	23	866	863	863	26	22	23	23	909	931	962
5.....	22	23	866	863	863	26	22	23	23	908	947	962
6.....	23	23	866	863	863	26	22	23	23	907	947	961
7.....	19	22	866	862	827	28	22	23	23	907	962	961
8.....	20	22	690	862	46	28	22	23	23	907	962	961
9.....	20	22	26	862	15	28	22	23	23	908	962	961
10.....	20	22	23	861	17	28	22	23	23	910	962	961
11.....	19	22	22	861	25	27	22	23	23	910	962	962
12.....	19	22	18	860	25	28	22	23	23	904	962	961
13.....	19	22	15	859	27	28	22	23	23	903	962	775
14.....	19	22	13	860	26	28	22	23	23	904	962	28
15.....	20	22	12	860	27	28	22	23	23	905	962	22
16.....	19	230	15	861	26	27	22	23	23	904	962	22
17.....	20	867	17	859	25	26	22	23	23	903	962	22
18.....	20	867	18	859	24	25	23	23	23	903	962	22
19.....	21	867	19	860	23	26	23	23	23	905	962	21
20.....	20	867	19	861	23	26	22	23	23	905	962	21
21.....	21	867	19	862	24	27	22	22	23	907	962	21
22.....	19	867	19	865	23	27	22	22	23	907	962	21
23.....	19	867	20	863	23	24	22	22	22	907	962	21
24.....	22	867	19	864	22	24	22	22	22	907	963	17
25.....	21	867	20	865	21	21	22	23	263	920	963	17
26.....	21	867	186	862	21	19	22	23	895	920	978	189
27.....	19	874	863	862	22	16	22	23	895	922	978	959
28.....	19	873	863	863	22	24	22	23	895	923	977	976
29.....	19	877	863	864	-----	24	22	23	895	924	977	976
30.....	19	871	863	865	-----	25	22	23	912	922	977	976
31.....	19	-----	864	864	-----	26	-----	23	-----	919	977	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	23	19	20.3	1,250.
November.....	877	19	424	25,200.
December.....	874	12	373	22,900.
January.....	865	859	862	53,000.
February.....	864	15	233	12,900.
March.....	28	16	25.5	1,570.
April.....	23	22	22.1	1,320.
May.....	23	22	22.8	1,400.
June.....	912	22	177	10,500.
July.....	924	903	910	56,000.
August.....	978	906	958	58,900.
September.....	977	17	556	33,100.
The year.....	978	12	384	278,000.

NOTE.—Daily discharge computed to 5 p.m. instead of midnight.

FEATHER RIVER AT OROVILLE, CALIF.

LOCATION.—Water-stage recorder in sec. 8, T. 19 N., R. 4 E., just below highway bridge at Oroville. Altitude, about 140 feet.

DRAINAGE AREA.—3,640 square miles.

RECORDS AVAILABLE.—January 1902 to September 1933.

DISCHARGE.—Maximum during year, 8,860 second-feet May 30 (gage height, 5.90 feet); minimum, 546 second-feet Oct. 3 (gage height, -1.01 feet).

1902-33: Maximum, 211,000 second-feet Mar. 26, 1928 (gage height, 26.08 feet); minimum, 300 second-feet (estimated) Nov. 9, 1931 (gage height, -1.7 feet). Average, 31 years (1902-33), 6,050 second-feet.

REMARKS.—Records excellent except those for Oct. 29 to Nov. 3, Dec. 25-27, 31, Jan. 1-2, Feb. 8 to Mar. 6, which were estimated. Lake Almanor, Bucks, and other storage reservoirs above station; also small diversions. Operation of Big Bend plant of Pacific Gas & Electric Co. causes diurnal fluctuations in stage, especially during extremely low water.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	605	750	1,180	1,160	1,950	1,460	4,610	4,740	6,920	1,660	1,560	1,170
2	600	800	1,130	800	2,110	1,820	4,880	5,020	5,620	1,460	1,529	1,140
3	577	830	1,130	1,800	1,920	2,340	5,300	4,350	5,160	1,520	1,490	1,110
4	615	739	1,150	1,930	1,530	2,250	5,780	4,100	4,480	1,560	1,490	1,110
5	665	717	1,390	1,730	1,750	1,920	5,780	4,480	4,480	1,560	1,490	1,140
6	745	712	1,200	1,820	1,960	1,820	5,620	4,220	4,880	1,600	1,460	1,140
7	888	695	1,380	1,840	2,040	1,910	5,300	4,610	5,020	1,630	1,460	1,140
8	766	685	1,300	1,610	1,980	2,160	5,160	4,350	4,740	1,630	1,420	1,110
9	792	685	1,320	1,480	2,120	2,360	4,480	3,980	4,740	1,660	1,460	1,170
10	786	685	1,280	1,770	1,880	2,280	3,860	3,980	4,610	1,630	1,460	1,140
11	1,090	812	1,210	1,810	1,980	2,370	3,620	3,860	4,220	1,660	1,460	1,140
12	1,090	836	1,330	1,750	1,970	4,240	3,620	3,860	4,350	1,630	1,460	1,140
13	1,070	782	1,430	1,670	1,830	5,750	3,860	3,980	4,220	1,630	1,460	1,140
14	1,030	774	1,190	1,660	2,030	4,480	3,980	4,220	3,980	1,660	1,460	1,140
15	826	824	1,430	1,610	2,050	3,610	4,480	4,350	3,740	1,630	1,420	1,110
16	635	854	1,370	1,670	1,940	5,320	4,610	4,480	3,180	1,630	1,420	1,050
17	635	973	1,490	1,730	1,860	4,920	4,220	4,610	2,780	1,600	1,420	1,080
18	645	824	1,510	1,830	1,400	4,140	3,740	4,880	2,460	1,600	1,420	1,140
19	746	1,060	1,710	2,070	1,240	3,670	3,180	4,610	2,170	1,560	1,420	1,230
20	774	832	1,760	1,990	1,700	3,430	3,070	4,350	2,170	1,560	1,420	1,170
21	690	950	1,890	2,000	1,720	3,340	2,960	4,740	2,250	1,560	1,420	1,170
22	660	853	1,420	2,060	1,240	3,070	3,620	4,880	2,210	1,560	1,390	1,170
23	670	1,050	1,890	2,200	1,350	2,810	4,350	4,170	2,050	1,560	1,390	1,110
24	675	862	1,570	2,400	1,350	2,620	4,610	4,680	2,010	1,560	1,360	1,050
25	660	808	900	2,370	1,260	2,630	5,300	5,620	1,770	1,600	1,320	1,050
26	635	740	700	2,120	1,150	2,580	4,610	6,370	1,770	1,560	1,209	1,290
27	645	734	1,200	3,120	1,360	2,690	4,740	6,720	1,930	1,560	1,260	1,390
28	650	872	1,430	2,580	1,320	6,520	5,460	7,140	1,770	1,520	1,230	1,460
29	720	1,340	1,390	2,830	-----	6,880	6,720	7,600	1,850	1,520	1,230	1,420
30	750	1,520	1,150	2,460	-----	5,300	5,620	7,840	1,770	1,520	1,200	1,360
31	750	-----	1,190	2,240	-----	4,610	-----	7,600	-----	1,560	1,170	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,090	577	745	45,800
November	1,520	685	853	50,800
December	1,890	700	1,340	82,400
January	3,120	800	1,940	119,000
February	2,120	1,150	1,710	95,000
March	6,850	1,480	3,400	209,000
April	6,720	2,960	4,570	272,000
May	7,840	3,860	4,980	305,000
June	6,920	1,770	3,440	205,000
July	1,660	1,460	1,590	97,800
August	1,560	1,170	1,400	86,100
September	1,460	1,050	1,170	69,600
The year	7,840	577	2,260	1,640,000

FEATHER RIVER AT NICOLAUS, CALIF.

LOCATION.—Water-stage recorder two-fifths of a mile downstream from highway bridge at Nicolaus, Sutter County. Zero of gage is at mean lower low water (United States Army Engineers datum).

RECORDS AVAILABLE.—June 1921 to October 1933 (low-water records only).

DISCHARGE.—Minimum May to October, 194 second-feet Sept. 9 (gage height, 21.35 feet).

1921-33: No flow Aug. 2-18, 1924, July 11-22, 24, 26, Aug. 1, 1931.

REMARKS.—Records good. Large diversions above station by Western Canal, Sutter Butte Canal, and others; also many storage reservoirs and power plants.

Discharge, in second-feet, 1932-33

Day	Oct.	May	June	July	Aug.	Sept.	Oct.
1.....	650	7,900	13,600	1,140	317	232	1,140
2.....	584	6,620	12,200	1,100	337	232	1,180
3.....	494	6,620	10,300	940	317	232	1,100
4.....	435	5,570	8,890	898	317	236	1,180
5.....	435	5,120	7,580	814	305	218	1,270
6.....	425	5,420	7,100	758	309	215	1,270
7.....	425	5,270	8,060	706	313	209	1,220
8.....	465	6,020	8,220	688	309	200	1,180
9.....	614	5,870	8,060	706	301	206	1,100
10.....	692	5,570	8,220	700	297	243	1,020
11.....	706	5,270	8,060	658	297	268	1,060
12.....	755	4,970	7,260	628	301	274	1,100
13.....	1,050	4,830	7,260	700	309	260	1,100
14.....	1,120	5,270	7,260	598	353	285	1,080
15.....	1,200	5,570	6,620	562	341	285	1,060
16.....	1,080	5,720	5,720	510	321	297	1,020
17.....	874	6,020	4,970	470	313	317	948
18.....	692	6,320	4,270	436	289	305	964
19.....	664	6,470	3,450	401	289	313	1,020
20.....	638	6,320	2,620	373	309	357	1,060
21.....	650	6,170	2,320	345	305	465	1,020
22.....	678	6,320	2,320	345	293	485	1,060
23.....	734	6,320	2,200	389	305	530	1,060
24.....	671	5,570	2,040	385	297	628	1,000
25.....	560	6,170	1,870	357	297	694	1,100
26.....	536	7,580	1,610	369	282	694	1,100
27.....	518	8,890	1,360	353	268	730	1,140
28.....	494	9,570	1,410	325	250	972	1,180
29.....	465	11,000	1,220	313	232	1,100	-----
30.....	455	12,800	1,140	317	232	1,140	-----
31.....	440	13,800	-----	317	236	-----	-----
Month		Maximum	Minimum	Mean	Run-off in acre-feet		
1932							
October.....		1,200	425	652	40,100		
1933							
May.....		13,800	4,830	6,800	418,000		
June.....		13,600	1,140	5,570	331,000		
July.....		1,140	313	568	34,900		
August.....		353	232	298	18,300		
September.....		1,140	200	421	25,100		
October 1-28.....		1,270	948	1,100	61,100		

INDIAN CREEK NEAR CRESCENT MILLS, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 25, T. 26 N., R. 9 E., 4 miles above mouth of Spanish Creek and about 1½ miles below Crescent Mills. Altitude, about 3,500 feet.

DRAINAGE AREA.—746 square miles.

RECORDS AVAILABLE.—January 1906 to December 1909, September 1911 to March 1918, October 1930 to September 1933.

DISCHARGE.—Maximum during year, 834 second-feet Apr. 4 (gage height, 5.00 feet); minimum, 2.2 second-feet Sept. 17.

1906-9, 1911-18, 1930-33: Maximum, about 11,700 second-feet Mar. 19, 1907 (gage height, 20.2 feet, old datum); minimum, 1.7 second-feet Aug. 25, 1931.

REMARKS.—Records good. Diversions for irrigation in Indian and Genesee Valleys.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	31	56	55	57	149	476	432	412	26	7.5	2.6
2	3.2	29	45	58	57	241	552	461	365	26	6.5	3.8
3	3.2	32	41	64	54	404	666	465	328	26	4.4	3.3
4	3.0	28	40	71	57	374	774	429	300	24	4.3	3.2
5	2.8	28	39	75	60	299	774	484	278	25	4.6	3.3
6	3.0	29	39	71	61	261	708	484	273	26	5	2.8
7	3.5	29	39	65	58	261	682	476	250	39	5.5	2.5
8	3.0	40	39	59	59	270	593	513	239	36	5.5	2.4
9	6	34	38	55	64	258	446	509	229	29	6.5	2.4
10	7.5	31	36	52	57	249	368	522	223	28	6.5	2.4
11	16	31	32	51	63	256	333	509	205	28	6.5	2.3
12	7	31	30	51	64	458	326	497	193	26	6	2.3
13	6.5	31	32	49	64	505	328	488	186	25	5.5	2.3
14	8	32	30	52	64	336	311	484	176	25	4.8	2.5
15	10	32	31	51	65	267	336	497	157	24	4.4	2.7
16	12	32	31	51	69	293	374	492	142	19	4.4	2.5
17	12	32	32	51	72	382	360	488	124	11	3.5	2.4
18	12	32	32	47	72	286	321	501	114	11	2.9	2.4
19	13	32	46	51	70	245	284	461	104	12	2.7	2.5
20	14	32	65	50	70	237	258	432	92	13	2.6	3.3
21	14	34	63	51	71	252	247	432	86	14	2.7	2.9
22	17	38	52	51	75	250	256	436	81	13	2.9	2.9
23	22	35	46	52	78	235	284	419	51	12	3.2	2.8
24	22	34	42	52	80	211	365	403	35	12	3.5	3.0
25	21	33	40	52	80	203	446	436	36	7	3.8	3.3
26	22	33	41	51	85	221	382	473	47	7	3.3	3.6
27	23	33	43	57	95	219	362	469	20	7	3.5	3.8
28	24	34	45	55	108	362	391	465	28	6.5	3.0	3.6
29	24	37	47	60	-----	488	473	465	29	7	2.8	3.5
30	24	57	49	56	-----	454	476	484	26	8	2.7	3.3
31	26	-----	50	56	-----	426	-----	461	-----	7	2.6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	26	2.8	12.5	769
November	57	28	33.2	1,980
December	65	30	41.6	2,560
January	75	47	55.5	3,410
February	108	54	68.9	3,830
March	505	149	302	18,600
April	774	247	432	25,700
May	522	403	470	28,900
June	412	20	161	9,580
July	39	6.5	18.7	1,150
August	7.5	2.6	4.31	265
September	3.8	2.3	2.89	172
The year	774	2.3	134	96,900

SPANISH CREEK AT KEDDIE, CALIF.

LOCATION.—Staff gage in SW¼ sec. 22, T. 25 N., R. 9 E., 250 feet below highway bridge at Keddle and 2 miles above junction with Indian Creek. Altitude, about 3,200 feet.

DRAINAGE AREA.—196 square miles.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum during year, 995 second-feet Mar. 28 (gage height, 6.75 feet); minimum, 7.5 second-feet Sept. 13–17.

1911–33: Maximum, about 11,000 second-feet Mar. 26, 1928 (gage height, 15.5 feet); minimum 5.5 second-feet several days in August 1931. Average, 20 years (1911–19, 1921–33), 230 second-feet.

REMARKS.—Records fair. Discharge estimated Oct. 1–8, Apr. 26, Aug. 15 to Sept. 7. Water diverted above station for irrigation in American Valley.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	23	32	72	65	65	118	296	276	276	34	12	10
2.....	23	34	70	70	90	142	338	256	236	34	12	
3.....	23	47	44	90	49	296	380	236	198	32	11	
4.....	23	47	44	90	65	216	425	276	180	30	11	
5.....	24	47	44	65	65	216	338	317	150	30	11	
6.....	25	47	44	65	65	180	296	276	198	30	12	10
7.....	25	44	44	65	65	180	296	296	165	30	12	
8.....	26	44	44	61	65	236	296	296	160	34	12	
9.....	26	47	44	61	65	236	296	276	150	30	12	
10.....	26	47	44	65	78	236	256	276	144	30	12	
11.....	23	47	38	65	78	236	216	256	136	30	12	12
12.....	23	47	38	65	90	862	256	256	122	25	10	12
13.....	26	47	38	65	55	425	216	256	122	25	10	7.5
14.....	26	47	38	65	65	296	216	276	98	25	10	7.5
15.....	29	47	38	65	65	236	296	276	87	22		7.5
16.....	26	47	38	65	78	296	317	276	87	18		7.5
17.....	26	47	38	65	65	380	236	276	87	18		7.5
18.....	29	47	45	65	65	296	216	276	76	18		8
19.....	29	47	85	65	65	256	216	276	68	18		9
20.....	32	47	118	65	65	236	198	276	59	18		11
21.....	32	47	90	65	65	236	180	276	52	18		16
22.....	32	47	65	65	65	216	216	276	48	18		14
23.....	32	47	65	65	78	180	296	256	40	18	10	16
24.....	32	47	65	65	65	148	317	288	34	15		18
25.....	32	47	56	65	65	148	317	288	34	15		21
26.....	32	47	55	65	65	180	225	296	34	15		21
27.....	32	47	65	65	90	180	276	296	34	15		19
28.....	32	47	65	65	104	995	296	296	34	15		19
29.....	32	47	65	65	-----	475	475	296	34	12		19
30.....	32	80	65	65	-----	338	296	296	34	12		20
31.....	32	-----	65	65	-----	296	-----	296	-----	12		-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	32	23	27.9	1,720
November.....	80	32	47.0	2,800
December.....	118	38	55.7	3,420
January.....	90	61	66.5	4,090
February.....	104	49	70.0	3,890
March.....	995	118	289	17,800
April.....	475	180	283	16,800
May.....	317	236	279	17,200
June.....	276	34	106	6,310
July.....	34	12	22.5	1,380
August.....	12	-----	10.6	652
September.....	21	7.5	12.6	750
The year.....	995	7.5	106	76,800

BUCKS CREEK STORAGE RESERVOIR NEAR BUCKS RANCH, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 33, T. 24 N., R. 7 E., at dam on Bucks Creek 2 miles northwest of original Bucks Ranch and 15 miles west of Quincy. Elevation of crest of dam is 5,168 feet above mean sea level.

DRAINAGE AREA.—28 square miles.

RECORDS AVAILABLE.—October 1928 to September 1933.

REMARKS.—This reservoir, which has a capacity of 101,930 acre-feet, is main storage unit of Grizzly Creek project of Pacific Gas & Electric Co. Released water flows down Bucks Creek to diversion dam, where it enters tunnel which discharges into Grizzly Creek. Record of daily contents furnished by Pacific Gas & Electric Co.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	84,960	84,960	79,800	80,390	69,390	61,990	63,620	70,360	80,470	90,230	87,540	80,050
2.....	84,960	84,960	79,880	80,390	68,990	61,690	63,860	70,600	81,060	90,320	87,200	80,050
3.....	84,960	84,960	79,880	80,640	68,590	61,610	64,090	70,840	81,560	90,410	86,510	80,050
4.....	84,960	84,960	79,880	80,720	68,040	61,610	64,330	71,080	81,990	90,670	86,330	80,050
5.....	84,960	84,960	79,880	80,550	67,800	61,610	64,480	71,330	82,410	90,760	86,250	80,050
6.....	84,960	84,960	79,970	80,390	67,480	61,610	64,640	71,490	82,750	90,840	86,250	80,050
7.....	64,960	84,960	80,050	80,140	67,400	61,610	64,790	71,730	83,090	90,930	86,250	80,050
8.....	84,960	84,960	80,050	79,880	67,000	61,610	64,870	71,970	83,430	91,020	86,250	80,050
9.....	84,960	84,960	80,050	79,630	66,690	61,690	64,950	72,220	83,770	91,100	86,250	80,050
10.....	84,960	84,960	80,050	79,210	66,370	61,760	65,030	72,460	84,620	91,190	86,160	80,050
11.....	84,960	84,960	80,050	78,710	66,050	61,760	65,190	72,620	85,990	91,190	85,990	80,050
12.....	84,960	84,960	79,880	78,210	65,740	61,840	65,420	72,780	86,510	91,190	85,820	79,970
13.....	84,960	84,960	79,630	77,550	65,660	61,920	65,580	72,950	87,020	91,280	85,560	79,970
14.....	84,960	84,880	79,380	77,050	65,500	61,960	65,740	73,190	87,540	91,280	84,880	79,970
15.....	84,960	84,450	79,380	76,560	65,580	61,990	65,900	73,360	88,060	91,280	84,450	79,970
16.....	84,960	84,110	79,380	75,960	65,660	62,150	66,050	73,600	88,410	91,280	84,020	79,880
17.....	84,960	83,770	79,380	75,570	65,740	62,230	66,210	74,010	88,580	91,370	83,450	79,880
18.....	84,960	83,260	79,380	75,240	65,740	62,380	66,290	74,250	88,750	91,370	82,920	79,880
19.....	84,960	82,660	79,380	74,750	65,740	62,540	66,450	74,420	89,100	91,370	82,410	79,880
20.....	84,910	82,240	79,380	74,250	65,500	62,570	66,530	74,660	89,270	91,370	81,900	79,880
21.....	84,910	81,820	79,470	73,760	64,950	62,610	66,690	74,910	89,530	91,370	81,400	79,880
22.....	84,910	81,400	79,550	73,270	64,640	62,610	67,160	75,070	89,710	91,370	80,890	79,880
23.....	84,960	81,140	79,630	72,950	64,250	62,610	67,480	75,400	89,800	91,370	80,470	79,880
24.....	84,960	80,890	79,720	72,460	63,940	62,690	67,880	75,890	89,880	91,370	80,300	79,880
25.....	84,960	80,550	79,800	72,140	63,550	62,770	68,030	76,230	89,970	91,020	80,050	79,880
26.....	84,960	80,220	79,880	71,730	63,080	62,850	68,270	76,640	90,060	90,840	80,050	79,880
27.....	84,960	79,880	79,880	71,490	62,610	62,850	68,670	77,050	90,140	90,320	80,050	79,880
28.....	84,960	79,720	80,050	71,080	62,300	62,920	69,070	77,800	90,140	89,620	80,050	79,880
29.....	84,960	79,720	80,220	70,680	-----	63,000	69,630	78,380	90,230	89,100	80,050	79,880
30.....	84,960	79,720	80,390	70,200	-----	63,230	70,040	79,210	90,230	88,670	80,050	79,880
31.....	84,960	-----	80,390	69,790	-----	63,390	-----	79,880	-----	88,150	80,050	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30.....	84,960	-----	May 31.....	79,880	+9,840
Oct. 31.....	84,960	0	June 30.....	90,230	+10,350
Nov. 30.....	79,720	-5,240	July 31.....	88,150	-2,080
Dec. 31.....	80,390	+670	Aug. 31.....	80,050	-8,100
Jan. 31.....	69,790	-10,600	Sept. 30.....	79,880	-170
Feb. 28.....	62,300	-7,490			
Mar. 31.....	63,390	+1,090	The year.....	-----	-5,080
Apr. 30.....	70,040	+6,650			

WEST BRANCH OF FEATHER RIVER NEAR YANKEE HILL, CALIF.

LOCATION.—Water-stage recorder in sec. 5, T. 21 N., R. 4 E., at highway bridge 2 miles west of Yankee Hill. Altitude, about 1,100 feet.

DRAINAGE AREA.—145 square miles.

RECORDS AVAILABLE.—September 1930 to September 1933.

DISCHARGE.—Maximum during year, 1,380 second-feet Mar. 28 (gage height, 7.72 feet); minimum, 5 second-feet Dec. 13.

1930-33: Maximum, 3,910 second-feet Dec. 24, 1931 (gage height, 12.10 feet); minimum, 3.1 second-feet Oct. 4, 1931.

REMARKS.—Records excellent. Discharge interpolated Oct. 30 to Nov. 1, Nov. 3-8. Three canals divert water above station for power and irrigation. Lake Wilenor on Concow Creek has storage capacity of about 8,000 acre-feet. (See records for Spring Valley Ditch and Butte Creek.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	10	8	27	11	88	123	364	364	474	44	12	9
2.....	11	12	26	10	82	166	405	364	374	39	12	9
3.....	11	12	22	59	78	201	474	276	374	32	12	9
4.....	11	11	9	43	82	161	510	285	324	42	10	9
5.....	11	11	7.5	26	101	140	474	384	334	44	9.5	10
6.....	10	10	7.5	19	98	152	474	294	394	41	10	10
7.....	11	10	7	17	83	163	438	474	344	40	9.5	10
8.....	11	9	7	15	71	193	416	334	314	41	9	10
9.....	12	9	6.5	15	74	196	334	294	324	36	9	10
10.....	11	8.5	6.5	14	66	179	294	276	334	30	8.5	10
11.....	11	8	6.5	11	79	184	304	249	314	30	8.5	9.5
12.....	10	7.5	5.5	10	158	554	334	267	324	24	8.5	9.5
13.....	10	7.5	6	10	203	438	344	285	314	20	8.5	9
14.....	10	8	6.5	10	127	294	344	314	285	20	9	9
15.....	10	8.5	7.5	11	106	267	394	344	201	19	8.5	9
16.....	10	9	9	12	128	743	405	344	180	20	9	9
17.....	10	9	13	12	131	462	294	334	153	18	9	9
18.....	9	9	10	15	109	304	229	334	125	18	9	9
19.....	9	8.5	48	24	94	267	190	294	106	16	9	9
20.....	8.5	9	44	26	91	267	203	314	88	12	9	9
21.....	8	9	40	36	89	249	219	354	66	11	9	8
22.....	8	9	26	62	95	216	314	285	51	10	8.5	8
23.....	9	9	67	86	100	190	416	276	61	10	9	8
24.....	8	9	35	92	96	164	394	394	72	10	9	8
25.....	8	9	17	89	89	171	486	486	78	9.5	9	9.5
26.....	7.5	9	13	78	97	166	324	523	71	9	9	12
27.....	8	9.5	11	252	100	187	462	549	66	9	9	10
28.....	8	10	11	150	107	923	616	588	61	8.5	9	8.5
29.....	8	18	11	240	-----	536	674	616	55	8.5	9	8
30.....	8	82	10	167	-----	394	405	602	50	9.5	9.5	7.5
31.....	8	-----	10	104	-----	354	-----	549	-----	11	9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	12	7.5	9.52	585
November.....	82	7.5	11.9	708
December.....	67	5.5	17.2	1,060
January.....	252	10	55.7	3,420
February.....	203	66	101	5,610
March.....	923	123	290	17,800
April.....	674	190	384	22,800
May.....	616	249	376	23,100
June.....	474	50	210	12,500
July.....	44	8.5	22.3	1,370
August.....	12	8.5	9.31	572
September.....	12	7.5	9.15	544
The year.....	923	5.5	12.5	90,100

CONCOW CREEK NEAR YANKEE HILL, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 16, T. 22 N., R. 4 E., at diversion dam for Spring Valley Ditch 300 feet below Lake Wilenor Dam and 4 miles north of Yankee Hill post office. Altitude, about 1,850 feet.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum during year, 73 second-feet Mar. 28 (gage height, 0.83 foot); no flow most of year.

1927-33: Maximum, 1,840 second-feet Mar. 26, 1928 (gage height, 5.9 feet); no flow many months each year.

REMARKS.—Storage in Lake Wilenor above station; on Sept. 30, 1932, storage was 3,000 acre-feet, and on Sept. 30, 1933, was 3,750 acre-feet. For total flow, add that of Spring Valley Ditch, which diverts water around station (see p. 282). Gage-height record furnished by Table Mountain and Thermalito Irrigation Districts.

Discharge, in second-feet, 1932-33

Day	Mar.	Apr.	May	Day	Mar.	Apr.	May	Day	Mar.	Apr.	May
1.....	0	0.2	0	11.....	0.4	1.0	0	21.....	0.4	1.4	0
2.....	0	0	0	12.....	.4	1.8	0	22.....	.4	1.4	0
3.....	0	0	0	13.....	.4	1.8	0	23.....	.4	1.4	0
4.....	0	0	0	14.....	.4	1.4	0	24.....	.4	1.3	0
5.....	0	0	0	15.....	.4	1.4	0	25.....	.4	0	0
6.....	0	.4	.1	16.....	.4	2.6	0	26.....	.4	0	0
7.....	0	1.4	1.8	17.....	.4	3.0	0	27.....	.4	0	0
8.....	0	1.4	.2	18.....	.4	2.2	0	28.....	13	0	0
9.....	.4	.9	8	19.....	.4	1.8	0	29.....	1.0	0	0
10.....	.4	.7	2.9	20.....	.4	1.4	0	30.....	.8	0	0
								31.....	.7		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March.....	13	0	0.75	45.8
April.....	3.0	0	.96	57.3
May.....	8	0	.42	25.8
The year.....	13	0	.18	129

NOTE.—No flow during months omitted.

SPRING VALLEY DITCH NEAR YANKEE HILL, CALIF.

LOCATION.—Staff gage in NE¼ sec. 16, T. 22 N., R. 4 E., just below diversion dam 4 miles north of Yankee Hill post office. Altitude, about 1,970 feet.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum mean daily during year, 35 second-feet Aug. 26-27; no flow several months.

1927-33: Maximum mean daily, 49 second-feet Oct. 25-27, 1928; no flow several months each year.

REMARKS.—Records good. Discharge estimated May 12. Canal diverts from left bank of Concow Creek 300 feet below Lake Wilenor Reservoir; water used for power and irrigation. Gage-height record and results of discharge measurements furnished by Table Mountain and Thermalito Irrigation Districts.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	34	18	0.4	0.4	0.4	0.4	0.3	2.3	5.5	1.3	24	34
2.....	32	18	.4	.4	.4	.4	.5	7	5	1.5	21	34
3.....	30	18	.4	.4	.4	.4	7	1.8	4.8	1.5	20	34
4.....	30	14	.4	.4	.4	.4	11	1.6	4.7	1.5	19	34
5.....	30	11	.4	.4	.4	.4	13	15	4.7	1.5	18	34
6.....	29	10	.4	.4	.4	.4	4.5	15	4.6	1.5	18	33
7.....	30	8.5	.4	.4	.4	.4	0	6	1.2	15	18	32
8.....	30	8	.4	.4	.4	.4	0	6	1.2	20	21	31
9.....	30	8	.4	.4	.4	0	0	11	1.2	18	23	31
10.....	30	8	.4	.4	.4	0	0	10	1.2	16	23	31
11.....	30	8.5	.4	.4	.4	0	0	11	4.8	15	24	31
12.....	30	8.5	.4	.4	.4	0	0	12	4.3	15	26	29
13.....	30	8.5	.4	.4	.4	0	0	12	4.3	15	27	29
14.....	30	8.5	.4	.4	.4	0	0	19	1.3	15	27	29
15.....	27	8.5	.4	.4	.4	0	0	14	12	15	27	29
16.....	25	8.5	.4	.4	.4	0	0	9	3.1	15	28	27
17.....	25	8	.4	.4	.4	.4	0	11	1.4	17	30	25
18.....	24	8	.4	.4	.4	0	0	13	1.3	17	30	25
19.....	24	8	.4	.4	.4	0	0	9.5	1.3	13	29	25
20.....	24	8	.4	.4	.4	0	0	9.5	1.3	11	29	24
21.....	24	8	.4	.4	.4	0	0	9	1.3	13	30	23
22.....	24	8	.4	.4	.4	0	0	16	1.3	17	33	20
23.....	24	8	.4	.4	.4	0	0	15	1.3	18	34	17
24.....	21	8	.4	.4	.4	0	1.0	5	1.3	18	34	17
25.....	17	8	.4	.4	.4	0	1.0	.7	1.3	19	34	17
26.....	12	8	.4	.4	.4	0	1.0	1.7	1.3	21	35	17
27.....	12	8	.4	.4	.4	0	1.0	4.2	1.3	23	35	17
28.....	12	8	.4	.4	.4	0	1.0	6	1.3	24	34	18
29.....	12	8	.4	.4	-----	0	7.5	5.5	1.3	25	34	17
30.....	16	4.1	.4	.4	-----	0	7.5	5	1.3	27	34	17
31.....	18	-----	.4	.4	-----	0	-----	5	-----	27	34	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	34	12	24.7	1,520
November.....	18	4.1	9.35	556
December.....	.4	.4	.40	24.6
January.....	.4	.4	.40	24.6
February.....	.4	.4	.40	22.2
March.....	.4	0	.10	6.3
April.....	13	0	1.88	112
May.....	19	.7	8.67	533
June.....	12	1.2	2.74	163
July.....	27	1.3	14.8	910
August.....	35	18	27.5	1,090
September.....	34	17	26.0	1,550
The year.....	35	0	9.82	7,110

MIDDLE FORK OF FEATHER RIVER NEAR CLIO, CALIF.

LOCATION.—Water-stage recorder in center of sec. 23, T. 22 N., R. 12 E., half a mile above Frazier Creek and $1\frac{1}{2}$ miles northwest of Clio. Altitude, about 4,500 feet.

DRAINAGE AREA.—699 square miles.

RECORDS AVAILABLE.—October 1925 to September 1933.

DISCHARGE.—Maximum during year, 970 second-feet Mar. 12 (gage height, 4.78 feet); minimum, 7.5 second-feet Aug. 27.

1925-33: Maximum, 11,000 second-feet Mar. 26, 1928 (gage height, 12.0 feet); minimum, 4.8 second-feet Sept. 6, 1931.

REMARKS.—Records good. Discharge estimated Nov. 30 to Dec. 14 and for periods of ice effect, Dec. 24-26, Jan. 14-15, 18-19, 24-27, Feb. 8. Numerous small irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	18	20	21	24	25	32	333	170	126	29	14	9
2.....	18	24	21	24	25	40	302	209	116	28	14	9.5
3.....	18	24	21	24	25	53	289	200	102	25	13	9.5
4.....	18	22	21	24	24	47	294	180	93	24	12	9.5
5.....	18	22	21	24	25	44	286	189	89	23	12	8.5
6.....	18	22	21	23	25	47	308	209	89	21	12	8.5
7.....	19	22	20	23	25	61	319	221	88	21	12	9
8.....	21	22	20	23	25	82	292	221	89	21	12	9.5
9.....	19	22	20	23	25	95	257	250	87	19	12	10
10.....	18	21	20	24	24	110	221	257	84	18	12	10
11.....	18	21	20	24	26	447	216	254	78	17	11	9.5
12.....	18	21	20	24	24	820	245	257	78	16	10	10
13.....	18	22	20	24	24	665	254	254	82	14	10	10
14.....	18	22	20	24	24	573	262	218	82	14	9.5	10
15.....	18	22	20	24	24	450	299	197	80	13	10	9.5
16.....	18	22	20	24	24	414	299	180	76	12	10	9.5
17.....	18	22	24	24	24	375	223	186	70	13	10	9.5
18.....	18	22	31	24	25	342	166	228	63	12	10	10
19.....	18	22	59	24	24	375	131	206	59	12	10	9.5
20.....	18	21	39	24	24	354	137	162	54	11	8	9.5
21.....	18	21	31	24	24	324	158	148	59	10	8	9.5
22.....	19	22	28	24	24	324	166	144	51	11	8	9.5
23.....	21	24	28	24	25	336	162	133	46	11	8	10
24.....	20	24	27	25	26	284	233	124	43	11	8.5	9.5
25.....	19	24	26	25	25	250	195	129	41	10	8	10
26.....	19	23	25	26	25	240	142	129	42	10	8	10
27.....	20	21	25	27	27	252	133	128	40	12	8	10
28.....	20	21	24	27	29	425	142	118	38	12	8.5	10
29.....	20	21	24	27	-----	360	166	124	33	12	8.5	10
30.....	20	21	24	26	-----	390	168	133	30	12	9	12
31.....	20	-----	24	26	-----	384	-----	133	-----	13	9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	21	18	18.7	1,150
November.....	24	20	22.0	1,310
December.....	59	20	24.7	1,520
January.....	27	23	24.4	1,500
February.....	29	24	24.9	1,380
March.....	820	32	290	17,800
April.....	331	131	227	13,500
May.....	267	118	194	11,800
June.....	126	30	70.3	4,180
July.....	29	10	15.7	965
August.....	14	8	10.2	627
September.....	12	8.5	9.68	576
The year.....	820	8	77.1	55,800

MIDDLE FORK OF FEATHER RIVER AT BIDWELL BAR, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 32, T. 20 N., R. 5 E., at highway bridge at Bidwell Bar, 2 miles above junction with North Fork and 7 miles northeast of Oroville. Altitude, about 290 feet.

DRAINAGE AREA.—1,350 square miles.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum during year, 5,050 second-feet May 30 (gage height, 7.56 feet); minimum, 100 second-feet Dec. 13.

1911-33: Maximum, about 100,000 second-feet Mar. 26, 1928 (gage height, 22.8 feet); minimum, 90 second-feet Aug. 27, 1931. Average, 22 years (1911-33), 1,660 second-feet.

REMARKS.—Records good except those for Aug. 1-6, Aug. 8 to Sept. 6, which were estimated. Small reservoirs and diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	171	182	336	268	378	461	1,940	2,300	3,800	594	202	144
2	173	202	268	253	354	533	2,020	2,300	3,100	558	200	143
3	173	234	242	413	332	730	2,200	1,980	2,700	533	198	142
4	171	226	231	354	332	715	2,400	1,900	2,400	513	195	141
5	171	216	229	296	357	622	2,300	1,980	2,350	485	192	140
6	171	216	226	262	357	612	2,250	1,900	2,580	461	190	139
7	176	212	219	259	336	658	2,200	2,060	2,700	445	187	138
8	182	207	219	248	315	812	2,100	1,900	2,640	441	185	138
9	184	202	219	250	312	900	1,860	1,820	2,580	421	183	136
10	184	195	209	245	296	870	1,620	1,740	2,460	401	181	136
11	178	191	187	237	322	930	1,540	1,700	2,250	382	179	136
12	178	193	150	234	445	2,200	1,580	1,740	2,200	360	177	134
13	178	193	133	245	473	2,150	1,700	1,820	2,200	343	175	133
14	176	193	167	248	378	1,660	1,820	1,940	2,060	332	173	133
15	178	193	234	253	343	1,500	2,020	2,020	1,940	322	171	131
16	178	193	248	262	437	2,020	2,250	2,060	1,740	305	176	131
17	178	193	271	234	465	1,980	1,980	2,200	1,540	286	174	131
18	178	193	256	259	397	1,540	1,700	2,300	1,360	277	171	131
19	180	193	375	364	374	1,430	1,460	2,250	1,220	265	168	134
20	178	193	433	322	360	1,430	1,400	2,300	1,120	256	166	134
21	176	193	378	340	364	1,430	1,430	2,460	1,020	248	164	134
22	180	193	309	360	378	1,290	1,620	2,250	990	242	162	134
23	207	191	397	401	397	1,180	2,020	2,150	900	237	160	134
24	202	193	309	413	401	1,120	2,250	2,460	840	231	158	134
25	189	195	262	453	374	1,120	2,580	3,030	785	224	156	156
26	182	209	256	350	378	1,120	2,060	3,520	758	216	154	176
27	182	212	253	666	397	1,120	2,150	3,660	730	212	152	162
28	182	216	256	513	433	2,570	2,640	4,020	715	209	150	165
29	182	248	248	666	-----	2,700	3,520	4,250	666	204	148	152
30	182	437	245	497	-----	2,060	2,700	4,400	626	202	146	146
31	182	-----	245	409	-----	1,940	-----	4,250	-----	200	145	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	207	171	180	11, 100
November	437	182	210	12, 500
December	433	133	258	15, 900
January	666	234	341	21, 000
February	473	296	374	26, 800
March	2, 700	461	1, 340	82, 400
April	3, 520	1, 400	2, 040	121, 000
May	4, 400	1, 700	2, 470	152, 000
June	3, 800	626	1, 770	105, 000
July	594	200	336	20, 700
August	202	145	172	10, 600
September	176	131	141	8, 390
The year	4, 400	131	803	581, 000

SOUTH FORK OF FEATHER RIVER NEAR LA PORTE, CALIF.

LOCATION.—Water-stage recorder near center of sec. 31, T. 22 N., R. 9 E., at lower end of Little Grass Valley, 800 feet below old log crib dam and 3 miles northwest of La Porte.² Altitude, about 4,900 feet.

DRAINAGE AREA.—27.3 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933 (discontinued).

DISCHARGE.—Maximum during year, 495 second-feet May 28 (gage height, 4.55 feet); minimum, 0.9 second-foot Sept. 8.

1927-33: Maximum, 2,600 second-feet Mar. 26, 1928 (gage height, 7.00 feet); minimum, 0.6 second-foot Nov. 12, 1929.

REMARKS.—Records good except those for Sept. 9-30, which were estimated. Stage-discharge relation slightly affected by ice Dec. 23 to Jan. 2. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	1.5	3.4	3.0	3.4	3.9	42	164	355	32	3.1	1.0
2	1.6	2.3	3.0	3.4	3.4	4.6	51	142	305	30	2.9	1.0
3	1.5	2.2	2.9	3.8	3.4	6	61	122	267	28	2.8	1.0
4	1.4	2.0	2.8	3.8	3.5	5.5	70	125	238	26	2.6	1.0
5	1.4	2.3	2.7	3.8	3.5	6	71	125	248	23	2.4	1.0
6	1.5	2.1	2.5	3.8	3.5	6.5	78	110	275	21	2.4	1.0
7	1.6	2.0	2.4	3.8	3.5	8	76	103	278	21	2.3	1.0
8	1.6	1.9	2.4	3.8	3.6	10	70	91	270	19	2.1	1.0
9	1.6	1.9	2.4	3.8	3.6	12	60	84	275	17	2.0	
10	1.6	1.8	2.4	3.8	3.6	13	57	77	258	15	1.9	
11	1.6	1.8	2.4	3.8	3.6	16	61	79	248	14	1.9	
12	1.6	1.8	2.4	3.7	3.6	14	70	83	253	11	1.8	
13	1.6	1.8	2.4	3.7	3.6	17	82	92	243	10	1.7	
14	1.6	1.7	2.4	3.7	3.6	14	100	107	224	9.5	1.6	
15	1.6	1.7	2.4	3.7	3.6	13	122	125	200	8.5	1.5	
16	1.6	1.8	2.4	3.7	3.6	12	119	140	166	8	1.6	
17	1.6	1.8	2.4	3.7	3.6	10	97	166	139	7	1.5	
18	1.6	1.8	2.4	3.7	3.6	9.5	80	170	117	6.5	1.5	
19	1.6	1.8	2.3	3.8	3.6	12	72	178	98	6	1.4	
20	1.6	1.8	2.8	3.8	3.6	15	74	198	86	5.5	1.4	
21	1.6	1.8	2.8	3.8	3.6	16	80	198	77	5	1.3	
22	2.0	1.7	2.8	3.6	3.6	15	110	178	70	5	1.2	
23	2.0	1.7	2.8	3.4	3.6	13	146	191	63	4.6	1.2	
24	1.6	1.7	2.8	3.6	3.6	11	168	236	57	4.4	1.2	
25	1.5	1.8	2.8	3.5	3.5	11	168	293	54	4.2	1.2	
26	1.4	1.8	2.8	3.4	3.5	11	155	229	50	4.0	1.1	
27	1.4	1.8	2.8	3.4	3.5	16	182	355	47	3.7	1.1	
28	1.4	2.6	2.8	3.3	3.5	37	221	399	42	3.4	1.0	
29	1.4	4.9	2.8	3.1	-----	38	250	423	38	3.3	1.0	
30	1.4	4.5	2.8	3.1	-----	36	193	423	35	3.1	1.1	
31	1.5	-----	2.8	3.3	-----	38	-----	416	-----	3.1	1.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.0	1.4	1.56	95.9
November	4.9	1.5	2.07	123
December	3.4	2.3	2.65	163
January	3.8	3.0	3.60	221
February	3.6	3.4	3.55	197
March	38	3.9	14.5	892
April	250	42	106	6,310
May	423	77	191	11,700
June	355	35	169	10,109
July	32	3.1	11.7	719
August	3.1	1.0	1.71	105
September	-----	1.0	1.05	62.5
The year	423	1.0	42.4	30,700

² Previously incorrectly published.

SOUTH FORK OF FEATHER RIVER AT ENTERPRISE, CALIF.

LOCATION.—Water-stage recorder in sec. 6, T. 19 N., R. 6 E., 1 mile above highway bridge at Enterprise. Altitude, about 550 feet. From 1911 to 1930 station was half a mile downstream.

DRAINAGE AREA.—134 square miles.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum during year, 890 second-feet May 30 (gage height, 6.67 feet); minimum, 0.7 second-foot Oct. 27.

1911-33: Maximum, about 15,200 second-feet Mar. 26, 1928 (gage height, 16.0 feet at old station); minimum, 0.2 second-foot Aug. 11, 1917. Average, 22 years (1911-33), 280 second-feet.

REMARKS.—Records good. Discharge estimated Dec. 2-3, Mar. 25-26, Aug. 1 to Sept. 6. Storage and irrigation diversions above station (see records for Palermo Canal).

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1	0.8	0.8	33	28	56	73	318	455	620	50	1.2
2	.8	1.5	27	26	54	83	352	455	455	45	1.2
3	.8	2.8	25	45	51	99	402	352	415	42	1.2
4	.8	2.1	24	40	52	102	440	329	365	39	1.2
5	.8	2.1	24	33	54	91	415	352	365	36	1.2
6	.8	2.3	22	30	53	93	415	318	415	32	1.2
7	.8	2.0	22	28	50	104	390	365	428	30	1.2
8	.9	1.8	22	28	49	119	365	329	415	28	1.2
9	.9	1.7	22	28	46	121	307	307	402	26	1.2
10	.9	1.5	21	27	40	116	276	286	378	22	1.2
11	.9	1.2	21	26	46	126	266	276	329	19	1.2
12	.9	1.1	20	28	53	304	276	266	329	17	1.2
13	.9	2.3	21	32	63	227	296	276	318	14	1.2
14	.9	4.0	22	32	55	170	329	296	286	12	1.2
15	.9	4.0	21	32	51	158	378	329	256	11	1.1
16	.9	4.0	22	33	64	349	415	352	224	9.5	1.1
17	.9	3.8	26	30	73	307	365	402	191	9	1.1
18	.9	3.5	26	40	61	210	296	428	166	8	1.2
19	.9	3.5	59	48	53	186	256	415	146	6.5	1.4
20	.8	3.5	57	42	53	180	251	440	128	4.2	1.2
21	.8	3.3	46	44	53	162	245	470	114	2.5	1.1
22	.8	3.3	37	45	55	144	276	415	105	2.1	1.1
23	1.4	3.3	57	50	59	119	390	390	96	2.1	1.1
24	1.7	3.3	38	57	59	104	440	455	87	2.1	1.2
25	1.0	8	30	57	55	150	485	545	80	2.0	1.3
26	.8	19	28	50	57	150	390	605	75	1.8	1.4
27	.8	19	27	91	62	163	428	635	70	1.8	3.1
28	.8	20	27	76	67	501	500	702	65	1.8	6.5
29	.8	28	26	93	---	470	620	755	61	1.8	6.5
30	.8	52	25	73	---	340	500	772	56	1.7	6.5
31	.8	---	26	62	---	318	---	720	---	1.8	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.7	0.8	0.89	55.0
November	52	.8	6.56	414
December	59	20	29.2	1,800
January	93	26	43.7	2,690
February	73	40	55.1	3,060
March	501	73	188	11,600
April	620	245	369	22,000
May	772	266	435	26,700
June	620	56	248	14,800
July	50	1.7	15.5	953
August	---	---	1.5	92.2
September	6.5	1.1	1.79	107
The year	772	.8	116	84,300

LOST CREEK NEAR CLIPPER MILLS, CALIF.

LOCATION.—Water-stage recorder in sec. 24, T. 20 N., R. 7 E., 1,000 feet below Lost Creek Dam and 2 miles north of Clipper Mills. Altitude, about 3,050 feet.

DRAINAGE AREA.—30.1 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum during year, 261 second-feet Mar. 28 (gage height, 2.62 feet); minimum, 0.1 second-foot at times during October, December, January, July.

1927-33: Maximum, 2,900 second-feet Mar. 26, 1928 (gage height, 6.10 feet); minimum (regulated), 0.1 second-foot at times 1931-33.

REMARKS.—Records good. Discharge estimated Dec. 24 to Jan. 11, Jan. 16-18, Jan. 24 to Mar. 11. For total flow at this point add Forbestown Ditch near Clipper Mills, which diverts above station. Storage in Lost Creek Reservoir above station on Oct. 1, 1932, was 2,660 acre-feet; on Sept. 30, 1933, 2,150 acre-feet.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.1	2.2	0.1	0.6	110	130	44	3.4	0.5	0.4
2	1.0	1.2	2.2	.1		130	144	13	3.4	.5	.4
3	1.0	1.1	2.2	.1		151	103	18	3.4	.5	.4
4	1.0	1.1	2.2	.1		165	92	25	3.2	.5	.4
5	1.0	1.2	2.2	.1		166	94	49	3.2	.5	.3
6	1.0	1.2	2.2	.1		151	86	51	3.2	.5	.3
7	1.0	1.2	2.2	.1		143	113	49	3.0	.5	.3
8	1.0	1.2	2.2	.1		132	104	45	2.9	.5	.3
9	1.0	1.2	2.2	.1		101	99	40	2.6	.5	.3
10	1.1	1.2	2.2	.1		81	93	29	2.2	.5	.3
11	1.1	1.2	2.2	.1	4.5	80	82	15	1.9	.5	.3
12	1.1	1.2	2.2	.8	3.5	84	76	14	1.8	.5	.3
13	1.1	1.2	2.2	1.4	2.6	95	82	12	1.8	.5	.3
14	1.1	1.2	2.2	1.4	2.3	105	88	11	1.7	.5	.3
15	1.1	1.2	2.2	1.4	2.3	120	95	11	1.6	.5	.4
16	1.1	1.2	2.2	1.4	3.5	125	100	9.5	1.4	.5	.4
17	1.1	1.2	2.0	1.4	2.9	106	125	8.5	1.4	.4	.4
18	1.2	1.2	1.8	1.4	2.3	82	125	8	1.2	.5	.4
19	1.2	1.2	2.2	1.4	2.0	72	108	6.5	1.1	.4	.4
20	1.2	1.2	1.9	1.4	1.8	65	108	6.5	1.0	.4	.4
21	1.2	1.2	1.1	1.4	1.0	65	110	6	.9	.4	.4
22	1.2	1.2	1.0	1.4	.6	81	96	5.5	.7	.4	.4
23	.9	1.2	.8	1.4	.4	109	90	5	.6	.4	.4
24	.1	1.2	.1		28	120	103	5	.4	.4	.5
25	.2	1.2	.1		52	129	118	4.8	.2	.4	.5
26	1.0	1.2	.1		56	104	125	4.5	.5	.4	.5
27	1.1	1.2	.1	.6	58	112	126	4.2	.8	.4	.5
28	1.1	1.2	.1		203	139	132	3.8	.8	.4	.5
29	1.1	1.3	.1		151	179	130	3.8	.8	.4	.5
30	1.1	.6	.1		109	126	123	3.5	.8	.4	.5
31	1.1		.1		103		110		.6	.4	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.2	0.1	1.01	62.1
November	1.3	.6	1.17	69.6
December	2.2	.1	1.51	92.8
January	1.4	.1	.71	48.8
February			.6	33.3
March	203	.4	25.7	1,580
April	179	65	114	6,780
May	144	76	107	6,580
June	51	3.5	17.0	1,010
July	3.4	.2	1.69	104
August	.5	.4	.45	28.0
September	.5	.3	.39	23.2
The year	203	.1	22.6	16,400

FORBESTOWN DITCH NEAR CLIPPER MILLS, CALIF.

LOCATION.—Staff gage at Parshall flume in sec. 24, T. 20 N., R. 7 E., 1,100 feet below Lost Creek Dam, at mouth of tunnel outlet, and 2 miles north of Clipper Mills. Previous to Oct. 24, 1932, gage was 100 feet upstream.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum mean daily during year, 38 second-feet several days during August; no flow at times.

1927-33: Maximum mean daily, 39 second-feet July 10-12, 1931; no flow at times.

REMARKS.—Records good. Discharge estimated May 8-10, June 29-30. Canal diverts from left bank of Lost Creek Reservoir. Water is used for irrigation in Oroville-Wyandotte irrigation district in Butte County.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	36	26	17	0	0	0	21	26	32	36	36
2.....	36	26	23	0	0	0	13	26	32	36	36
3.....	36	26	23	0	0	0	22	26	32	36	36
4.....	36	26	23	0	0	0	22	26	32	36	36
5.....	36	26	22	0	0	0	22	26	32	36	35
6.....	36	25	22	0	0	0	22	26	32	36	35
7.....	36	25	22	0	0	0	22	26	32	36	35
8.....	36	25	22	0	0	0	27	31	36	35	35
9.....	36	25	22	0	0	15	22	26	31	36	35
10.....	36	25	22	0	16	15	21	26	31	36	36
11.....	36	25	22	18	10	15	21	26	31	38	36
12.....	36	25	22	25	10	15	21	26	31	38	35
13.....	36	24	22	25	10	15	21	27	31	37	36
14.....	36	24	12	25	10	15	21	27	31	37	37
15.....	36	24	12	25	10	15	21	27	33	38	37
16.....	36	24	12	25	10	15	21	27	33	38	37
17.....	36	24	12	25	17	15	10	27	33	38	30
18.....	36	24	12	25	17	15	10	27	33	37	30
19.....	36	24	12	0	17	15	21	27	33	38	29
20.....	36	24	0	0	17	26	21	29	33	38	29
21.....	35	24	0	0	0	26	21	29	33	38	34
22.....	35	24	0	0	0	26	21	29	33	38	34
23.....	35	24	0	0	0	26	23	29	35	37	34
24.....	0	23	0	0	0	26	23	29	35	37	34
25.....	0	23	0	0	0	21	23	29	35	38	33
26.....	27	23	0	0	0	21	23	29	35	38	33
27.....	27	23	0	0	0	21	23	29	35	38	33
28.....	27	23	0	0	0	21	23	29	35	38	33
29.....	27	23	0	0	0	21	23	30	35	37	33
30.....	26	0	0	0	0	21	26	32	35	37	33
31.....	26	---	0	0	0	---	26	---	35	36	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	36	0	31.8	1,960
November.....	26	0	23.6	1,400
December.....	23	0	11.5	707
January.....	25	0	6.23	383
March.....	17	0	4.65	286
April.....	26	0	14.0	833
May.....	26	10	21.0	1,290
June.....	32	26	27.5	1,640
July.....	35	31	32.9	2,020
August.....	38	36	37.1	2,280
September.....	37	29	34.1	2,030
The year.....	38	0	20.5	14,800

NOTE.—No flow during February.

PALERMO CANAL AT ENTERPRISE, CALIF.

LOCATION.—Staff gage in sec. 6, T. 19 N., R. 6 E., 400 feet below intake at diversion dam on South Fork of Feather River and 1 mile southeast of Enterprise. Previous to Nov. 17, 1932, gage was about 1 mile downstream.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum mean daily during year, 28 second-feet May 26; no flow Nov. 26 to May 13.

1911-33: Maximum recorded, 43 second-feet July 25, 1927; no flow during periods of every year. Average, 22 years (1911-33), 19.5 second-feet.

REMARKS.—Records good. Canal diverts from left bank of South Fork of Feather River 1 mile above Enterprise. Water is used for irrigation below Oroville.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
1	18	18	0	20	25	23	16
2	19	20	0	20	25	23	16
3	18	21	0	21	25	23	16
4	18	21	0	20	24	23	16
5	18	21	0	20	24	23	16
6	18	20	0	20	25	23	16
7	20	20	0	20	26	22	16
8	20	20	0	20	24	22	15
9	20	20	0	20	24	22	15
10	20	20	0	20	24	22	15
11	20	19	0	20	24	21	15
12	19	19	0	19	24	21	15
13	19	18	0	19	24	21	16
14	19	17	12	19	24	21	15
15	20	17	15	20	24	21	15
16	20	17	15	20	25	21	16
17	20	17	15	21	24	21	16
18	20	17	15	20	24	21	16
19	20	17	15	20	25	21	15
20	20	17	15	21	25	20	15
21	19	17	16	25	26	20	15
22	20	16	16	25	25	20	15
23	22	17	16	24	25	20	15
24	21	16	17	24	25	20	15
25	19	12	18	24	25	20	18
26	18	0	28	25	24	20	22
27	17	0	20	24	24	17	20
28	18	0	20	25	24	17	12
29	19	0	20	24	23	16	9.5
30	19	0	20	24	23	16	9.5
31	19		20		23	16	
Month	Maximum	Minimum	Mean	Run-off in acre-feet			
October	22	17	19.3	1,190			
November	21	0	15.1	898			
May	28	0	10.1	621			
June	25	19	21.5	1,280			
July	26	23	24.4	1,500			
August	23	16	20.5	1,260			
September	22	9.5	15.4	916			
The year	28	0	10.6	7,660			

NOTE.—No flow during months omitted.

MIDDLE FORK OF YUBA RIVER AT MILTON, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 12, T. 19 N., R. 12 E., at diversion dam of Nevada Irrigation District at old town site of Milton, 8 miles above South Fork of Middle Fork of Yuba River. Altitude, about 5,700 feet.

DRAINAGE AREA.—41 square miles.

RECORDS AVAILABLE.—December 1925 to September 1933.

DISCHARGE.—Maximum during year, 749 second-feet May 29 (gage height, 1.09 feet); practically all flow diverted most of year.

1926-33: Maximum, 4,070 second-feet Mar. 25, 1928 (gage height, 9.45 feet at station below dam); practically all flow diverted after May 23, 1928, except during high stages.

REMARKS.—Records fair. Daily discharge estimated May 25 to June 1. Records show flow over diversion dam. Diversion above station through Milton-Bowman Tunnel to Bowman Lake began May 21, 1928; practically all flow diverted except at high water (see tunnel record). Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Discharge, in second-feet, 1932-33

Day	May	June	Day	May	June	Day	May	June
1.....	0	350	11.....	0	46	21.....	0	0
2.....	0	361	12.....	0	90	22.....	0	0
3.....	0	134	13.....	0	81	23.....	0	0
4.....	0	0	14.....	0	56	24.....	0	0
5.....	0	4.9	15.....	0	17	25.....	134	0
6.....	0	120	16.....	0	0	26.....	241	0
7.....	0	115	17.....	0	0	27.....	328	0
8.....	0	110	18.....	0	0	28.....	368	0
9.....	0	110	19.....	0	0	29.....	440	0
10.....	0	69	20.....	0	0	30.....	460	0
						31.....	413	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May.....	460	0	76.9	4,730
June.....	361	0	55.5	3,300
The year.....	460	0	11.1	8,030

NOTE.—No flow during months omitted.

MIDDLE FORK OF YUBA RIVER NEAR NORTH SAN JUAN, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 32, T. 18 N., R. 8 E., about 1 mile below highway bridge at Freemans Crossing and 1 mile north of North San Juan. Oregon Creek enters about 1 mile above station. Altitude, about 1,350 feet.

DRAINAGE AREA.—207 square miles.

RECORDS AVAILABLE.—July to October 1900, October 1910 to September 1933.

DISCHARGE.—Maximum during year, 1,700 second-feet May 30 (gage height, 5.53 feet); minimum, 21 second-feet several days in August and September. 1910-33: Maximum, 26,000 second-feet Mar. 25, 1928 (gage height, 15.3 feet at former staff-gage station); minimum, 14 second-feet Aug. 24-28, 1931.

REMARKS.—Records good. Daily discharge estimated Nov. 15 and Dec. 10-22. Diversion above station through Milton-Bowman Tunnel to Bowman Lake; other small diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	31	34	53	49	73	159	485	475	1,040	102	38	22
2.....	31	41	42	47	75	185	562	510	885	97	37	22
3.....	31	47	39	90	77	242	638	404	894	92	36	22
4.....	32	41	38	83	80	239	680	382	460	86	34	22
5.....	32	39	37	64	95	207	620	408	412	83	33	23
6.....	33	39	36	56	97	233	608	374	495	80	33	24
7.....	34	38	34	53	90	287	540	426	590	77	32	24
8.....	36	37	34	52	86	318	490	412	579	77	31	24
9.....	37	37	36	52	78	315	404	426	557	72	30	24
10.....	36	36	33	52	72	287	350	399	546	69	29	24
11.....	34	34	32	56	86	301	326	374	455	64	28	24
12.....	34	34	32	60	121	596	332	390	465	61	28	24
13.....	34	34	33	51	147	485	362	417	520	59	28	24
14.....	34	36	33	48	121	322	386	470	465	57	27	24
15.....	34	36	33	49	106	280	455	485	412	56	26	23
16.....	34	36	34	48	147	505	485	510	336	53	26	23
17.....	36	36	38	41	172	535	417	530	284	52	27	23
18.....	36	34	38	66	134	362	343	515	248	51	27	24
19.....	34	33	90	56	113	318	301	495	218	48	26	24
20.....	33	33	80	60	106	340	287	500	201	46	25	24
21.....	33	32	70	59	110	343	298	530	185	43	24	23
22.....	36	32	60	59	121	287	350	480	172	42	24	22
23.....	45	32	73	60	134	248	412	440	159	41	23	22
24.....	40	32	59	64	125	215	490	475	150	41	23	22
25.....	37	32	51	63	111	218	500	574	142	39	23	32
26.....	36	32	48	66	123	326	417	759	134	39	22	33
27.....	36	32	48	106	142	308	435	801	125	37	22	28
28.....	34	34	47	95	154	991	515	976	121	36	22	26
29.....	34	42	46	100	-----	745	632	1,140	113	34	22	25
30.....	36	81	45	86	-----	525	495	1,300	108	32	22	24
31.....	33	-----	45	80	-----	465	-----	1,250	-----	34	22	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	45	31	34.7	2,130
November.....	81	32	37.2	2,210
December.....	90	32	45.7	2,810
January.....	106	41	63.6	3,910
February.....	172	72	111	6,190
March.....	991	159	361	22,200
April.....	680	287	454	27,000
May.....	1,300	374	569	35,000
June.....	1,040	108	382	22,700
July.....	102	32	58.1	3,570
August.....	38	22	27.4	1,680
September.....	33	22	24.2	1,440
The year.....	1,300	22	181	131,000

YUBA RIVER AT SMARTVILLE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 22, T. 16 N., R. 6 E., at Narrows, 1 mile below mouth of Deer Creek and 1 mile north of Smartville. Altitude, about 280 feet.

DRAINAGE AREA.—1,220 square miles.

RECORDS AVAILABLE.—June 1903 to September 1933.

DISCHARGE.—Maximum during year, 9,350 second-feet May 30 (gage height, 12.94 feet); minimum, 141 second-feet Dec. 9.

1903-33: Maximum, 120,000 second-feet Mar. 26, 1928 (gage height, 26.0 feet); minimum, 71 second-feet (regulated flow) July 30, 1924. Average, 30 years (1903-33), 3,000 second-feet.

REMARKS.—Records good. Storage and diversions for power and irrigation above station. Lake Spaulding has a capacity of 70,500 acre-feet, Bowman Lake, 67,000 acre-feet, and Fordyce Lake, 42,000 acre-feet.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	257	271	349	314	590	635	2,420	2,600	6,800	735	274	238
2.....	257	290	300	310	555	680	2,600	2,780	5,400	680	278	238
3.....	260	304	290	496	545	779	3,050	2,260	4,500	650	274	235
4.....	271	300	278	446	545	818	3,330	2,100	3,430	610	271	235
5.....	268	300	278	378	555	730	3,140	2,260	3,230	595	268	238
6.....	268	300	230	352	545	746	2,960	2,100	3,980	545	268	241
7.....	268	294	265	342	522	960	2,780	2,420	4,360	522	268	244
8.....	268	290	268	335	490	1,400	2,600	2,260	4,100	508	264	244
9.....	274	290	207	332	476	1,570	2,180	2,340	4,360	499	264	241
10.....	271	287	232	324	445	1,500	1,900	2,180	4,500	468	257	229
11.....	271	284	257	314	472	1,500	1,740	2,060	3,980	494	257	223
12.....	268	274	246	307	960	2,400	1,780	2,020	3,960	605	257	214
13.....	268	271	246	300	990	2,960	1,940	2,180	4,220	499	260	212
14.....	271	284	265	297	735	2,060	2,100	2,340	3,980	445	257	195
15.....	268	294	274	297	630	1,680	2,420	2,510	3,230	336	260	192
16.....	268	290	294	300	695	3,150	2,690	2,600	2,960	328	260	184
17.....	268	284	321	294	818	3,230	2,420	2,780	2,600	328	260	178
18.....	300	265	314	352	675	2,260	2,020	2,670	2,180	324	257	170
19.....	268	262	370	428	580	1,820	1,740	2,690	1,710	320	250	165
20.....	268	260	500	394	565	1,780	1,600	2,780	1,540	310	250	165
21.....	268	251	455	419	575	1,860	1,640	2,960	1,400	328	247	168
22.....	271	248	386	500	580	1,680	1,860	2,780	1,320	400	244	158
23.....	284	240	486	580	580	1,460	2,260	2,510	1,260	299	244	165
24.....	294	237	414	680	585	1,260	2,600	2,690	1,220	285	244	165
25.....	284	240	338	820	530	1,150	2,870	3,330	1,050	285	241	173
26.....	284	240	328	600	530	1,860	2,420	3,860	930	278	244	180
27.....	281	240	328	1,410	580	1,710	2,510	4,100	900	274	241	184
28.....	281	248	321	970	625	4,710	3,050	5,080	845	271	238	173
29.....	281	265	310	1,820	-----	4,500	3,630	6,800	818	271	238	173
30.....	268	366	307	872	-----	3,050	2,960	8,000	784	268	238	168
31.....	268	-----	304	650	-----	2,600	-----	7,800	-----	274	238	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	300	257	272	16,700
November.....	366	237	276	16,400
December.....	500	207	315	19,400
January.....	1,820	294	523	32,200
February.....	990	445	606	33,700
March.....	4,710	635	1,890	116,000
April.....	3,630	1,600	2,440	145,000
May.....	8,000	2,020	3,160	194,000
June.....	6,800	784	2,850	170,000
July.....	735	268	420	25,800
August.....	278	238	255	15,700
September.....	244	158	200	11,900
The year.....	8,000	158	1,100	797,000

MILTON-BOWMAN TUNNEL AT OUTLET, CALIF.

LOCATION.—Water-stage recorder in sec. 3, T. 18 N., R. 12 E., near upper end of Bowman Lake. Altitude, about 5,600 feet.

RECORDS AVAILABLE.—May 1928 to September 1930, October 1931 to September 1933.

DISCHARGE.—Maximum mean daily during year, 428 second-feet June 14–15; minimum, 2.1 second-feet Oct. 13–22.

1928–33: Maximum mean daily, 452 second-feet May 10–12 and June 11–13, 1932; minimum, 1.8 second-feet several days in November and December 1929.

REMARKS.—Records good except those for Nov. 4–16, Aug. 1–4, Sept. 13–28, 30, which were estimated. Water is diverted by this tunnel from Middle Fork of Yuba River at Milton in sec. 12, T. 19 N., R. 12 E., and discharged into Bowman Lake storage reservoir, from which it is conveyed to Lake Spaulding. During low and medium stages practically entire flow of Middle Fork of Yuba River is diverted. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.4	5.5	5.5	5	6	6	17	160	312	69	7	3.4
2.....	2.3	5.5	5.5	5	6	5.5	24	128	155	62	6.5	3.1
3.....	2.3	5.5	5	5.5	6	6	30	109	297	57	6.5	2.7
4.....	2.3	5.5	5	5	5.5	6	37	114	391	52	6.5	2.4
5.....	2.9	5.5	5	5	5.5	6.5	40	127	379	49	6.5	2.3
6.....	2.7	5.5	5	5	5.5	6.5	48	109	415	44	6.5	2.3
7.....	2.9	5.5	5	5	5.5	7	50	98	415	40	6	2.3
8.....	2.9	5.5	5	5	5	8.5	52	89	415	38	6	2.3
9.....	2.6	5.5	5.5	5.5	5.5	9.5	48	84	415	34	6	2.4
10.....	2.2	5	5.5	5.5	5.5	11	44	77	415	17	5.5	2.6
11.....	2.2	5	5.5	5.5	5.5	12	46	74	415	6.5	5.5	2.6
12.....	2.2	5	5.5	5.5	5.5	12	52	84	415	6.5	5	2.6
13.....	2.1	5	5	5.5	5.5	11	65	92	415	6.5	5	2.6
14.....	2.1	5	4.8	5.5	5.5	11	79	114	428	6.5	4.8	2.6
15.....	2.1	5	4.8	5.5	5.5	10	109	133	428	6.5	4.6	2.6
16.....	2.1	5	4.6	5.5	5.5	9	119	150	391	6.5	4.6	2.6
17.....	2.1	5	5	5.5	5.5	9	88	143	294	6.5	4.8	2.6
18.....	2.1	5	5.5	5.5	5.5	8.5	65	135	239	7	4.8	2.6
19.....	2.1	4.8	6	6	5.5	8	56	158	201	9	4.8	2.6
20.....	2.1	4.8	6	5.5	5.5	9	59	207	176	10	4.8	2.6
21.....	2.1	4.6	5.5	5.5	5.5	10	75	241	165	11	4.8	2.6
22.....	2.1	4.3	5.5	5.5	5.5	10	103	195	150	11	4.8	2.6
23.....	2.2	4.1	5.5	5.5	5.5	10	130	201	135	11	4.8	2.6
24.....	2.2	3.9	5.5	6	5.5	9	233	283	122	10	4.8	2.6
25.....	2.2	3.9	5	6	5.5	9	243	319	115	9.5	4.6	2.6
26.....	2.2	3.9	5	6	5.5	9	178	314	110	9	4.6	2.6
27.....	2.2	3.9	5	6	6	9	235	312	105	9	4.6	70
28.....	3.6	3.8	5	6	6	10	283	305	98	8	4.3	31
29.....	21	3.9	5	6	-----	12	300	300	87	7.5	4.3	7
30.....	9	5.5	5.5	6	-----	12	245	307	77	7	4.3	7
31.....	6.5	-----	5	6	-----	13	-----	314	-----	7	3.9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	36	2.1	4.34	267
November.....	5.5	3.8	4.86	289
December.....	6	4.6	5.23	322
January.....	6	5	5.53	340
February.....	6	5	5.57	309
March.....	13	5.5	9.19	565
April.....	300	17	105	6,250
May.....	319	74	177	10,900
June.....	428	77	272	16,200
July.....	69	6.5	20.4	1,250
August.....	7	3.9	5.21	320
September.....	70	2.3	6.08	362
The year.....	428	2.1	51.6	37,400

OREGON CREEK NEAR NORTH SAN JUAN, CALIF.

LOCATION.—Staff gage in SE¼ sec. 28, T. 18 N., R. 8 E., 1,100 feet above junction with Middle Fork of Yuba River and 2 miles northeast of North San Juan. Altitude, about 1,400 feet.

DRAINAGE AREA.—36.1 square miles.

RECORDS AVAILABLE.—October 1910 to September 1933.

DISCHARGE.—Maximum recorded during year, 520 second-feet Mar. 28 (gage height, 5.7 feet); minimum, 1.1 second-feet Aug. 30, Sept. 1, 15.

1910-33: Maximum, about 5,200 second-feet Mar. 25, 1928 (gage height, 9.5 feet at old gage); minimum, 0.7 second-foot several days in July and August 1931. Average, 22 years (1911-33), 71.4 second-feet.

REMARKS.—Records fair. Discharge estimated Oct. 1-6, 8-20, Dec. 19-20, July 19-22, Aug. 14-24. Small diversions for irrigation and mining above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	2.7	6	6	12	26	120	88	59	9.5	1.9	1.1
2	2.7	3.2	4.6	6	11	30	127	78	54	9.5	1.9	1.7
3	2.7	4.2	4.5	15	14	40	143	88	50	8	1.9	1.7
4	2.6	4.1	4.2	11	9	50	161	78	42	8	1.9	2.0
5	2.6	4.2	4.3	10	10	36	152	68	39	9	1.9	1.7
6	2.6	4.2	4.1	9	12	45	127	68	36	9.5	1.9	2.0
7	2.6	4.2	3.6	7.5	12	59	127	100	33	7	1.9	1.4
8	2.6	4.1	3.4	6.5	12	68	113	88	33	7.5	1.9	1.7
9	2.6	4.1	3.3	6.5	12	64	100	78	30	7.5	1.9	1.9
10	2.6	3.7	4.2	6	12	58	78	78	25	7	1.8	1.7
11	2.6	3.5	4.3	6	11	68	68	68	23	6.5	1.9	1.7
12	2.5	3.6	4.1	5.5	17	235	68	73	23	6	1.9	2.0
13	2.5	3.6	4.3	6	24	106	68	94	23	5.5	1.9	1.7
14	2.5	3.6	4.2	6	19	68	78	100	24	4.2	1.7	1.7
15	2.5	4.1	4.2	6.5	16	64	88	100	25	4.6	1.1	1.1
16	2.5	4.1	4.1	6	21	235	100	94	24	4.1	1.7	1.7
17	2.5	4.2	4.1	4.6	25	152	73	106	23	4.0	1.1	1.1
18	2.5	3.6	4.2	5.5	22	83	68	100	23	3.9	1.7	1.7
19	2.5	3.2	7	7	18	78	68	100	21	3.5	1.9	1.8
20	2.5	3.4	25	8	17	68	59	94	21	3.0	1.8	1.8
21	2.4	3.2	12	8	17	88	54	100	19	2.5	2.2	2.2
22	2.6	3.3	5	8	20	68	64	88	18	2.5	2.2	2.2
23	3.9	3.2	12	10	21	56	73	68	17	2.7	2.4	2.4
24	2.5	3.3	7	10	20	54	94	68	16	2.3	2.4	2.4
25	2.4	3.3	6	10	18	39	100	83	14	1.6	2.4	2.8
26	2.4	3.3	5.5	9.5	19	83	83	88	14	1.8	1.7	3.9
27	2.7	3.3	5.5	12	25	143	78	88	14	1.2	1.7	2.4
28	3.0	4.2	5.5	12	25	520	94	83	12	1.9	1.7	2.1
29	2.8	4.3	6	15	193	120	78	12	1.9	1.4	1.9	1.9
30	2.4	13	6	14	127	100	68	11	1.9	1.1	2.4	2.4
31	2.5	6	13	13	120	68	68	1.9	1.7	1.7	1.7	1.7

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.9	2.4	2.61	160
November	13	2.7	4.02	239
December	25	3.3	5.94	365
January	15	4.6	8.58	528
February	25	9	16.8	933
March	520	26	101	6,210
April	161	54	94.9	5,650
May	106	68	84.5	5,200
June	59	11	25.9	1,540
July	9.5	1.6	4.86	299
August	1.1	1.1	1.85	114
September	3.9	1.1	1.93	115
The year	520	1.1	29.5	21,400

NORTH FORK OF YUBA RIVER NEAR SIERRA CITY, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 32, T. 20 N., R. 12 E., 2½ miles below mouth of South Fork of North Fork of Yuba River and 1½ miles west of Sierra City. Altitude, about 4,100 feet (revised).

DRAINAGE AREA.—93.4 square miles.

RECORDS AVAILABLE.—1911-13 (fragmentary); December 1923 to September 1933.

DISCHARGE.—Maximum during year, 1,060 second-feet May 29 (gage height, 4.58 feet); minimum, 38 second-feet Sept. 17.

1923-33: Maximum, about 5,920 second-feet Mar. 25, 1928 (gage height, 8.50 feet); minimum, 26 second-feet Oct. 15, 1931.

REMARKS.—Records good except those for high water, which are fair, and those for Nov. 20 to Dec. 22, Dec. 25 to Jan. 5, Mar. 1-8, 10-17, Apr. 2 to May 10, which were estimated. Small diversions for mining above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	51			45		138		670	165	52	41
2	45	57			45				602	154	53	41
3	44	56		50	45				520	144	52	41
4	44	54			45				484	136	50	41
5	43	57			46	70		250	540	131	49	41
6	45	60		49	46				602	125	48	41
7	48	55		50	46				602	123	47	41
8	49	52		50	46				602	118	46	40
9	46	51		50	46	84			625	110	46	40
10	44	50		49	46				580	104	46	40
11	44	50		47	47			170	580	100	45	40
12	44	50		47	48			184	602	93	45	40
13	44	50		48	48			201	602	90	44	40
14	45	49		47	47	75		235	602	87	45	40
15	45	49		46	48			261	580	83	45	39
16	45	51		46	49			274	500	80	46	39
17	47	51		45	48			274	426	77	46	39
18	47	50		46	48	69		261	375	72	45	39
19	47	50		48	47	74		300	334	68	45	39
20	47			46	48	83		346	309	64	46	39
21	47			47	49	87		337	286	63	44	39
22	53			46	50	82		303	269	61	44	39
23	59		48	46	50	77		356	256	59	44	39
24	54		46	45	49	73		464	238	58	44	40
25	55	52		47	48	74		560	226	56	44	44
26	54			47	49	75		602	218	56	43	43
27	53			48	51	82		670	214	55	43	40
28	51			46	51	114		720	198	54	43	40
29	52			47		102		795	186	50	42	40
30	51			45		105		795	176	48	42	39
31	51			45		117		720		50	41	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	59	43	48.0	2,950
November	60		52.2	3,110
December			50.0	3,070
January		45	47.5	2,920
February	51	45	47.5	2,640
March	117		79.3	4,880
April			210	12,500
May	795		365	22,400
June	670	176	433	25,800
July	165	48	88.2	5,420
August	53	41	45.6	2,800
September	44	39	40.1	2,390
The year	795	39	126	90,900

NORTH FORK OF YUBA RIVER BELOW GOODYEARS BAR, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 11, T. 19 N., R. 9 E., 4 miles southwest of Goodyears Bar. Altitude, about 2,450 feet.

DRAINAGE AREA.—244 square miles.

RECORDS AVAILABLE.—December 1930 to September 1933.

DISCHARGE.—Maximum during year, 3,440 second-feet May 29 (gage height, 7.96 feet); minimum, 105 second-feet Sept. 30.

1930-33: Maximum, 4,120 second-feet May 12, 1932 (gage height, 8.60 feet); minimum, 69 second-feet Aug. 26, 1931.

REMARKS.—Records excellent. Stage-discharge relation slightly affected by ice Dec. 12-16 and by a temporary dam Sept. 18-30. Several small irrigation and mining diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	129	127	137	134	138	198	605	912	2,140	382	156	115
2.....	128	143	142	133	138	225	720	822	1,810	358	156	114
3.....	126	145	142	160	138	292	868	720	1,560	348	154	114
4.....	124	136	131	148	142	260	935	740	1,350	328	151	114
5.....	123	138	129	141	149	239	845	800	1,420	319	149	115
6.....	125	142	126	138	150	268	868	700	1,700	301	146	115
7.....	132	139	124	137	146	319	822	720	1,770	301	143	114
8.....	135	135	126	137	143	359	720	660	1,770	292	141	114
9.....	129	132	124	140	141	359	605	640	1,810	276	139	112
10.....	126	130	119	136	137	338	536	622	1,700	260	138	112
11.....	124	129	126	131	144	359	536	588	1,590	253	135	111
12.....	124	128	120	132	151	585	588	622	1,660	239	133	110
13.....	123	127	120	133	155	474	640	680	1,700	232	131	110
14.....	123	126	120	135	162	359	720	780	1,620	225	129	109
15.....	123	125	120	133	151	328	890	845	1,520	218	127	109
16.....	123	127	125	129	174	460	912	890	1,320	211	130	109
17.....	124	126	139	126	174	489	720	958	1,060	204	129	109
18.....	124	126	128	131	166	382	588	890	935	198	127	109
19.....	123	124	210	143	157	348	520	912	822	192	125	108
20.....	122	124	164	136	157	382	536	1,030	760	186	124	108
21.....	122	123	146	139	161	382	605	1,080	720	186	124	107
22.....	129	123	135	136	168	338	740	935	660	180	122	107
23.....	142	123	149	138	174	310	845	958	622	180	122	106
24.....	129	122	139	137	168	276	1,000	1,230	588	174	122	108
25.....	125	123	134	134	163	276	1,000	1,560	553	174	121	115
26.....	127	125	133	149	168	319	845	1,730	536	167	119	112
27.....	126	125	133	157	186	328	1,060	1,970	504	164	118	106
28.....	126	125	133	148	192	880	1,320	2,180	474	162	117	106
29.....	127	142	132	152	-----	780	1,420	2,500	446	156	117	106
30.....	127	180	133	143	-----	605	980	2,600	406	151	117	105
31.....	126	-----	134	140	-----	570	-----	2,410	-----	154	116	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	142	122	126	7,750
November.....	180	122	131	7,800
December.....	210	119	134	8,240
January.....	160	126	139	8,550
February.....	192	137	157	8,720
March.....	880	198	390	24,000
April.....	1,420	520	800	47,600
May.....	2,600	588	1,120	68,900
June.....	2,140	406	1,180	70,200
July.....	382	151	231	14,200
August.....	156	116	132	8,120
September.....	115	105	110	6,550
The year.....	2,600	105	388	281,000

ROCK CREEK AT GOODYEARS BAR, CALIF.

LOCATION.—Staff gage in SW $\frac{1}{4}$ sec. 5, T. 19 N., R. 10 E., 600 feet above mouth at footbridge at Goodyears Bar. Woodruff Creek enters 350 feet above station. Altitude, about 2,700 feet.

DRAINAGE AREA.—10.8 square miles.

RECORDS AVAILABLE.—October 1910 to September 1933 (discontinued).

DISCHARGE.—Maximum recorded during year, 135 second-feet Mar. 28 (gage height, 5.5 feet); minimum, 0.8 second-foot many days in July, August, September.

1910-33: Maximum, about 1,600 second-feet Mar. 25, 1928 (gage height, 10.0 feet); minimum, 0.2 second-foot Aug. 10-14, 1924. Average, 23 years (1910-33), 24.6 second-feet.

REMARKS.—Records fair. Discharge estimated Oct. 1 to Dec. 31, Jan. 10-20, Apr. 3-6, Aug. 14-21. Diversions above station. Gage-height record furnished by United States Forest Service.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.8	3.2	4.8	39	49	55	1.8	0.8	0.8
2.....	1.8	2.6	16	44	44	49	1.8	.8	.8
3.....	3.5	2.6	12	50	41	44	1.8	.8	.8
4.....	2.6	2.6	8	60	39	31	1.8	.8	.8
5.....	1.8	2.6	10	50	37	30	1.8	1.0	.8
6.....	1.8	2.6	12	44	35	28	1.8	1.0	.8
7.....	1.8	2.6	16	37	33	27	1.8	1.0	.8
8.....	1.8	2.6	19	31	31	26	1.8	1.0	.8
9.....	1.8	2.6	16	25	28	25	1.8	1.0	.8
10.....		1.8	14	25	27	22	1.8	1.0	.8
11.....		2.6	14	25	28	22	1.8	1.0	.8
12.....		3.5	49	30	28	14	1.8	1.0	.8
13.....		3.5	28	30	31	14	1.8	1.0	.8
14.....		3.5	19	30	31	14	1.8		.8
15.....	1.8	3.5	16	30	35	12	1.8		.8
16.....		4.8	31	25	40	10	1.3		.8
17.....		4.8	25	25	60	9	1.3	.9	.8
18.....		4.8	22	25	40	8	1.3		.8
19.....		4.8	19	28	49	7	1.3		.8
20.....		4.8	19	28	61	7	.9		.8
21.....	1.8	4.8	19	28	55	6	.8		.8
22.....	1.8	4.8	16	35	50	6	.8	.8	.8
23.....	2.6	4.0	16	44	50	6	.8	.8	.8
24.....	2.6	4.0	12	49	60	6	.8	.8	.8
25.....	2.6	4.0	13	39	75	6	.8	.8	.8
26.....	3.5	4.8	15	44	75	5.5	.8	.8	.8
27.....	3.5	4.8	15	49	93	4.8	.8	.8	.8
28.....	4.0	4.8	124	61	103	4.0	.8	.8	.8
29.....	4.3		49	75	93	3.5	.8	.8	.8
30.....	3.2		35	61	93	2.6	.8	.8	.8
31.....	2.3		31		75		.8	.8	.8

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....			1.2	73.8
November.....			1.2	71.4
December.....			2.5	154
January.....	4.3		2.28	140
February.....	4.8	1.8	3.66	203
March.....	124	4.8	23.1	1,420
April.....	75	25	38.9	2,310
May.....	103	27	51.3	3,150
June.....	55	2.6	16.8	1,000
July.....	1.8	.8	1.35	83.0
August.....	1.0	.8	.88	54.4
September.....	.8	.8	.80	47.6
The year.....	124		12.0	8,710

GOODYEARS CREEK AT GOODYEARS BAR, CALIF.

LOCATION.—Staff gage in NW¼ sec. 5, T. 19 N., R. 10 E., 300 feet above junction with North Fork of Yuba River and half a mile north of Goodyears Bar. Altitude, about 2,700 feet.

DRAINAGE AREA.—12.2 square miles.

RECORDS AVAILABLE.—October 1910 to September 1933 (discontinued).

DISCHARGE.—Maximum recorded during year, 204 second-feet May 28–30 (gage height, 3.7 feet); minimum, probably about 2.0 second-feet in September.

1910–33: Maximum, about 1,800 second-feet Mar. 25, 1928 (gage height, 9.5 feet); minimum, 1.0 second-foot Oct. 1–6, 1927, Aug. 23 to Sept. 1, 1929.

Average, 23 years (1910–33), 39.4 second-feet.

REMARKS.—Records fair. Discharge estimated Oct. 1 to Nov. 30, Dec. 3–8, 24–31, Jan. 10–20, May 15–19, 22–24, Aug. 14 to Sept. 30. Several small irrigation ditches head above station. Gage-height record furnished by United States Forest Service.

Discharge, in second-feet, 1932–33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	6	4.7	6	8.5	73	73	172	8	5
2	6	4.7	6	28	73	64	157	8	5
3	5.5	9	6.5	14	116	56	142	8	5.5
4	5.5	7	6.5	11	129	56	116	7.5	5.5
5	5	5	6.5	14	116	49	93	7.5	5.5
6	5	5.5	6.5	17	116	45	85	7.5	5.5
7	4.5	5	6.5	20	93	42	75	7.5	5.5
8	4.5	5	6.5	28	73	40	65	7.5	5.5
9	4.1	5	6.5	29	49	40	56	7.5	5
10	4.1	5	6	27	49	39	49	7.5	4.6
11	4.1	5	7.5	27	49	42	42	7.5	4.6
12	3.6	5	8.5	67	53	42	36	7	4.6
13	3.6	5	8.5	39	53	48	31	7	4.1
14	3.6	5.5	8.5	26	53	49	29	7	
15	3.6	5.5	8.5	23	53	50	28	7	
16	3.6	5.5	9	49	42	55	26	7	
17	13	6	9	37	42	60	27	6.5	
18	8	6	8.5	29	42	55	25	5.5	
19	8	6.5	8.5	29	42	73	23	5.5	
20	6	6.5	8.5	29	49	93	20	5.5	
21	6	6.5	8.5	29	56	83	20	5	
22	4.7	6.5	8.5	25	73	70	18	5	3.0
23	6	6.5	7.5	21	73	70	17	5	
24	5.5	6.5	7.5	21	93	100	16	5	
25	5.5	6.5	7.5	23	81	137	16	5	
26	5.5	7.5	7.5	26	93	172	15	5	
27	5	7.5	8.5	27	157	188	14	5	
28	5	8.5	8.5	138	116	204	12	5	
29	4.8	9		73	142	204	10	5	
30	4.8	7.5		56	93	204	9	5	
31	4.8	6		64		172		5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			4	246
November			4	238
December	13	3.6	5.32	327
January	9	4.7	6.16	379
February	9	6	7.59	422
March	138	8.5	34	2,090
April	157	42	78.1	4,650
May	204	39	86.3	5,310
June	172	9	48.1	2,860
July	8	5	6.35	390
August	5.5		3.87	238
September			2	119
The year	204		23.8	17,300

CANYON CREEK BELOW BOWMAN LAKE, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 7, T. 18 N., R. 12 E., 1 mile below Bowman Lake and 3 miles above Texas Creek. Altitude, about 5,100 feet.

RECORDS AVAILABLE.—January 1927 to September 1933.

DISCHARGE.—Maximum during year, 85 second-feet June 19 (gage height, 1.90 feet); minimum, 0.1 second-foot Aug. 9–15, 26–27.

1927–33: Maximum, 960 second-feet May 31, 1930 (gage height, 4.13 feet); practically no flow at times when there is little or no leakage from dams above.

REMARKS.—Records good. Discharge estimated Oct. 1 to Mar. 10, Sept. 12–14. Flow completely regulated by storage in Bowman Lake and diversion into Bowman-Spaulding Canal. On Sept. 30, 1932, storage in Bowman Lake was about 36,400 acre-feet; on Sept. 30, 1933, it was about 35,000 acre-feet. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Discharge, in second-feet, 1932–33

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		3.9	3	1.9	0.3	0.2	0.2
2		4.8	3.2	1.7	.3	.2	.2
3		5.5	3.7	2.6	.3	.2	.2
4		6	6	2.5	.3	.2	.2
5		6	4.6	1.4	.2	.2	.2
6	2	5	3.4	1.3	.2	.2	.2
7		4.6	3.2	1.4	.2	.2	.2
8		3.4	2.6	6	.2	.2	.2
9		2.6	2.6	7.5	.2	.1	.4
10		2.8	2.4	7	.2	.1	.2
11	2.6	3.4	2.8	2	.2	.1	.2
12	2.5	3.9	3.5	1	.2	.1	.2
13	2.2	4.1	4.3	8	.2	.1	.2
14	1.8	5	4.6	10	.2	.1	.2
15	1.6	5	5	11	.2	.1	.2
16	1.6	3.7	4.4	12	.2	.2	.2
17	1.4	2.9	7	12	.2	.2	.2
18	1.6	2.4	6.5	13	.2	.2	.2
19	2.2	2.5	6	25	.2	.2	.2
20	2.9	3.4	6.5	19	.2	.2	.3
21	2.8	4.1	5.5	10	.2	.2	.4
22	2.2	4.8	5	.6	.2	.2	.3
23	1.7	4.4	5	.4	.2	.2	.3
24	1.6	4.4	4.8	.4	.2	.2	.4
25	1.6	3.4	3	.3	.2	.2	.5
26	1.7	2.9	3	.4	.2	.1	.5
27	1.8	3.9	5.5	.3	.2	.1	.4
28	3.9	4.3	5.5	.2	.2	.2	.4
29	2.6	3.9	4.8	.3	.2	.2	.4
30	2.9	2.9	2.4	.4	.2	.2	.4
31	3.5		2.2		.2	.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			0.6	36.9
November			.6	35.7
December			.5	30.7
January			.5	30.7
February			.5	27.8
March	3.9		1.83	113
April	6	2.4	4	238
May	7	2.2	4.26	262
June	25	.2	5.32	317
July	.3	.2	.21	13.1
August	.2	.1	.17	10.5
September	.5	.2	.28	16.5
The year	25	.1	1.56	1,130

BOWMAN-SPAULDING CANAL AT INTAKE, CALIF.

LOCATION.—Water-stage recorder in sec. 8, T. 18 N., R. 12 E., a quarter of a mile below Bowman rock-fill dam and 150 feet below intake. Altitude, about 5,400 feet.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum mean daily during year, 247 second-feet July 9, Sept. 22-25; no flow several months.

1927-33: Maximum mean daily, 262 second-feet Aug. 2-9, 29, Sept. 10-13, 1928; no flow at times each year.

REMARKS.—Records good. Canal diverts from left bank of Canyon Creek below Bowman Lake. Water is delivered to Fuller Lake and then to Lake Spaulding and is used for irrigation in Nevada irrigation district after passing through several power houses. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.
1.....	245	245	176	97	2.1	20	46	0	231	246	244
2.....	246	244	176	97	0	26	64	0	235	245	244
3.....	247	245	176	96	0	26	39	0	239	245	244
4.....	245	245	175	96	0	27	5	0	241	245	245
5.....	245	245	173	96	0	31	3.5	0	244	246	244
6.....	246	244	165	95	0	47	1.0	0	246	245	231
7.....	246	244	163	95	8.5	55	0	0	246	245	229
8.....	245	245	162	94	29	75	0	0	246	245	113
9.....	245	245	162	95	54	134	0	0	247	244	237
10.....	245	245	164	96	25	172	0	0	246	245	245
11.....	246	245	163	96	54	186	0	0	245	245	244
12.....	246	246	164	97	54	200	0	0	245	246	244
13.....	244	244	164	97	66	199	0	0	245	245	243
14.....	246	239	163	98	10	93	0	0	245	246	242
15.....	245	223	164	97	14	53	0	0	245	246	242
16.....	245	222	164	97	30	52	0	0	243	245	241
17.....	245	222	164	97	15	41	0	0	246	245	243
18.....	246	222	102	114	18	34	0	0	246	246	244
19.....	246	223	135	143	17	30	0	0	245	243	245
20.....	245	224	107	113	8	40	0	0	245	243	245
21.....	246	224	103	110	5	96	0	31	244	244	246
22.....	247	223	75	120	18	43	0	42	243	243	247
23.....	246	221	116	103	24	38	0	13	243	243	247
24.....	245	219	75	88	24	34	0	10	243	244	247
25.....	245	219	75	92	15	34	0	12	244	243	247
26.....	244	119	75	63	17	35	0	10	245	243	246
27.....	244	219	88	74	18	34	0	12	245	243	244
28.....	245	220	98	75	18	45	0	127	244	244	244
29.....	246	220	98	42	-----	44	0	86	245	245	244
30.....	246	206	98	8.5	-----	46	0	65	245	244	244
31.....	244	-----	97	2.6	-----	47	-----	-----	246	244	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	247	244	245	15,100
November.....	246	206	232	13,800
December.....	176	75	135	8,300
January.....	143	2.6	89.8	5,520
February.....	66	0	19.4	1,080
March.....	200	20	65.7	4,040
April.....	64	0	5.28	314
June.....	127	0	13.6	809
July.....	247	231	244	15,000
August.....	246	243	245	15,100
September.....	247	113	239	14,200
The year.....	247	0	129	93,300

NOTE.—No flow during May.

BEAR RIVER NEAR WHEATLAND, CALIF.

LOCATION.—Water-stage recorder in sec. 3, T. 13 N., R. 5 E., 1 mile southeast of Wheatland and 12 miles above mouth. Altitude, about 85 feet.

DRAINAGE AREA.—295 square miles.

RECORDS AVAILABLE.—October 1928 to September 1933.

DISCHARGE.—Maximum during year, 2,720 second-feet Mar. 28 (gage height, 4.87 feet); minimum, 0.2 second-foot Aug. 24–25.

1928–33: Maximum, 10,300 second-feet Mar. 5, 1930 (gage height, 9.50 feet); minimum, 0.2 second-foot Aug. 24–25, 1933.

REMARKS.—Records good except those for Dec. 10–24, Jan. 5–24, Aug. 26 to Sept. 11, which were estimated. Storage, diversions, and inflow from Yuba River Basin above station.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	22	127	62	235	79	151	4.8	36	3.2	3.5	2.0
2	25	13	94	58	211	77	128	7.5	43	4.2	3.5	2.0
3	25	13	63	101	181	75	112	27	56	3.8	3.8	2.0
4	24	16	52	130	142	73	163	23	57	3.2	3.8	3.0
5	23	18	47		125	73	115	22	51	4.5	3.8	3.5
6	25	21	41		114	66	36	22	36	3.5	3.8	4.0
7	29	23	40		107	66	8.5	73	30	3.2	3.5	4.0
8	28	23	38		94	70	4.8	226	24	3.2	3.5	4.0
9	32	25	37		86	66	2.2	160	16	3.2	2.9	4.0
10	30	24			84	62	2.5	214	7	3.2	2.5	4.0
11	34	29			88	60	4.5	151	5.5	3.2	2.5	4.0
12	34	32			255	105	4.8	118	8	3.2	2.1	37
13	90	30			376	239	4.8	181	5.5	3.5	1.8	31
14	122	21			255	160	2.9	246	5.5	3.5	1.4	21
15	133	15		105	192	125	3.2	181	5.5	3.8	1.1	22
16	136	15			207	818	15	103	5.5	3.8	1.1	23
17	136	15	85		298	666	80	77	4.5	3.8	.8	24
18	130	15			203	293	77	68	4.8	4.2	.8	24
19	130	15			151	199	41	71	8.5	4.5	.7	23
20	127	22			130	154	24	64	4.8	4.8	.5	16
21	120	27			122	130	16	56	4.5	4.8	.5	15
22	98	25			120	96	8.5	43	2.5	4.8	.3	13
23	88	23			112	10	7	39	2.9	5.5	.4	12
24	86	22			114	6	5.5	42	4.5	5.5	.2	14
25	80	21	104	298	100	4.0	5.5	37	3.5	5.5	.2	15
26	79	20	79	227	96	3.7	4.5	35	2.9	5.5	1.0	16
27	71	16	75	373	86	3.0	4.8	34	2.5	5.5	4.0	17
28	50	17	71	486	84	997	5	60	2.5	4.2	4.0	19
29	34	20	66	747		687	5	66	2.9	3.8	4.0	36
30	29	60	63	516		302	4.5	60	2.5	3.8	4.0	66
31	24		62	302		187		48		3.5	4.0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	136	23	67.6	4,160
November	60	13	21.9	1,300
December			75.3	4,630
January	747		174	10,700
February	376	84	156	8,660
March	997	3.0	192	11,800
April	163	2.2	34.9	2,080
May	246	4.8	82.6	5,080
June	57	2.5	14.8	881
July	5.5	3.2	4.06	250
August	4.0	.2	2.26	139
September	66	2.0	16.0	952
The year	997	.2	70.0	50,600

BEAR RIVER CANAL NEAR COLFAX, CALIF.

LOCATION.—Water-stage recorder in sec. 28, T. 15 N., R. 9 E., just below lower spillway gates, $1\frac{1}{2}$ miles below diversion dam on Bear River, and 2 miles northwest of Colfax. Altitude, about 1,950 feet.

RECORDS AVAILABLE.—January 1912 to September 1933.

DISCHARGE.—Maximum mean daily during year, 457 second-feet Aug. 3; no flow Apr. 11-14.

1912-33: Maximum mean daily recorded, that of Aug. 3, 1933; no flow at times. Average, 19 years (1914-33), 189 second-feet.

REMARKS.—Canal diverts from left bank of Bear River in sec. 22, T. 15 N., R. 9 E. Water is used to develop power at Halsey power house and Wise power house and is then distributed for irrigation. Record of daily discharge furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	360	438	444	392	242	389	409	172	422	198	452	453
2.....	356	438	446	334	293	423	417	231	435	243	453	381
3.....	352	436	445	246	257	430	333	163	444	276	457	164
4.....	352	434	442	210	224	375	351	164	451	272	426	1.3
5.....	348	391	440	192	142	247	291	300	447	271	224	1.1
6.....	351	434	438	158	131	298	276	352	450	271	179	1.1
7.....	351	440	442	97	143	408	247	324	452	248	283	1.1
8.....	350	442	438	95	120	296	224	327	451	230	434	90
9.....	350	439	444	95	104	284	168	406	444	220	443	164
10.....	345	442	440	90	114	293	1.4	392	443	206	370	179
11.....	348	445	443	83	127	283	0	440	444	230	454	195
12.....	343	446	445	84	214	393	0	453	438	302	403	206
13.....	341	454	456	84	224	427	0	445	426	325	266	214
14.....	369	452	448	88	162	309	0	444	395	325	453	222
15.....	422	450	443	86	140	315	38	432	432	258	452	230
16.....	444	447	440	84	216	333	180	442	443	214	328	234
17.....	193	444	430	85	222	380	244	445	430	260	281	244
18.....	354	444	447	107	188	410	198	451	416	360	396	251
19.....	432	436	418	192	172	356	180	443	426	386	338	263
20.....	434	444	400	140	169	335	275	436	416	318	234	269
21.....	438	443	397	114	190	310	275	450	364	376	228	269
22.....	434	447	390	124	305	287	281	453	349	306	289	267
23.....	436	447	447	155	388	230	310	448	337	174	363	268
24.....	437	443	425	145	336	198	306	456	320	375	236	268
25.....	411	451	409	149	178	206	320	448	245	386	335	266
26.....	294	447	406	159	180	352	202	455	260	381	451	268
27.....	378	444	403	192	194	388	163	453	276	437	444	275
28.....	439	445	398	176	338	319	139	452	249	455	447	287
29.....	280	428	400	195	-----	430	170	454	207	304	353	287
30.....	241	417	393	214	-----	427	147	445	180	192	320	287
31.....	382	-----	392	210	-----	392	-----	450	-----	301	442	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	444	193	367	22,600
November.....	454	391	440	26,200
December.....	456	390	427	26,300
January.....	392	83	154	9,470
February.....	388	104	204	11,300
March.....	430	198	339	20,800
April.....	417	0	205	12,200
May.....	456	163	394	24,200
June.....	452	180	353	22,800
July.....	455	174	294	18,100
August.....	457	179	362	22,300
September.....	453	1.1	217	12,900
The year.....	457	0	317	229,000

AMERICAN RIVER BASIN

NORTH FORK OF AMERICAN RIVER NEAR COLFAX, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 30, T. 14 N., R. 10 E., 50 feet downstream from bridge on Colfax-Forest Hill road, 200 feet below mouth of Shirttail Canyon Creek, and 5 miles southeast of Colfax. Zero of gage is 897.43 feet above mean sea level.

DRAINAGE AREA.—308 square miles.

RECORDS AVAILABLE.—August 1911 to September 1933.

DISCHARGE.—Maximum during year, 3,520 second-feet May 29 (gage height, 7.12 feet); minimum, 29 second-feet Sept. 30.

1911-33: Maximum, about 55,000 second-feet Mar. 25, 1928 (gage height, 25.2 feet, present datum); minimum, 15 second-feet July 22 to Aug. 7, Aug. 12-15, 1924, Aug. 28, 1931. Average, 21 years (1911-13, 1914-33), 603 second-feet.

REMARKS.—Records good. Discharge estimated Dec. 10-15, Aug. 31 to Sept. 11. Small storage and diversion above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	35	74	63	146	217	769	902	1,940	240	56	37
2	35	37	63	56	139	236	888	888	1,640	226	55	36
3	35	47	55	76	130	309	1,040	707	1,350	211	55	36
4	35	44	55	83	128	309	1,170	783	1,110	196	55	36
5	35	44	53	71	134	267	1,060	916	1,210	186	53	36
6	33	43	46	64	139	293	1,090	741	1,510	173	53	36
7	33	44	44	60	139	364	954	839	1,600	163	52	36
8	43	46	50	68	130	373	825	797	1,560	163	50	35
9	37	42	46	80	123	399	674	811	1,600	148	49	35
10	36	42	46	76	119	387	539	755	1,510	139	50	35
11	35	39	45	63	130	401	595	720	1,380	132	47	35
12	35	39	45	60	196	672	631	839	1,460	119	46	35
13	35	39	42	58	226	662	714	909	1,420	117	44	34
14	35	39	45	58	196	508	797	1,080	1,330	108	43	34
15	36	39	46	58	175	420	1,020	1,170	1,210	102	43	32
16	36	37	46	60	211	823	1,020	1,250	1,020	94	42	32
17	37	39	58	56	246	1,020	734	1,160	832	89	42	32
18	37	37	60	69	186	655	601	1,070	707	83	40	32
19	37	36	107	112	163	565	524	1,110	619	80	40	32
20	36	37	134	108	158	583	541	1,210	553	78	40	32
21	36	36	83	106	158	631	637	1,330	524	74	39	34
22	35	35	73	100	163	530	830	1,040	480	71	39	32
23	39	36	89	117	186	440	930	994	435	68	39	34
24	40	36	78	128	178	373	1,460	1,330	406	68	39	34
25	39	36	63	153	160	351	1,210	1,690	378	64	37	36
26	36	36	60	134	173	470	867	1,890	360	63	37	44
27	37	36	60	211	188	435	1,160	1,940	334	60	37	37
28	46	36	61	173	208	1,120	1,380	2,220	342	58	37	34
29	37	43	58	226	-----	1,040	1,510	2,440	301	56	39	31
30	35	91	58	188	-----	769	954	2,440	267	53	37	30
31	35	-----	55	160	-----	714	-----	2,220	-----	55	37	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	46	33	36.5	2,240
November	91	35	40.9	2,430
December	134	42	61.2	3,760
January	226	56	99.8	6,140
February	246	119	165	9,160
March	1,120	217	527	32,400
April	1,510	524	906	53,900
May	2,440	707	1,230	75,600
June	1,940	267	984	58,600
July	240	53	114	7,010
August	56	37	44.8	2,720
September	44	30	34.5	2,050
The year	2,440	30	354	256,000

NORTH FORK OF AMERICAN RIVER AT RATTLESNAKE BRIDGE, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 9, T. 11 N., R. 8 E., at Rattlesnake Bridge, 6 miles south of Auburn. Altitude, about 350 feet.

DRAINAGE AREA.—999 square miles.

RECORDS AVAILABLE.—November 1930 to September 1933.

DISCHARGE.—Maximum during year, 11,600 second-feet May 30 (gage height, 9.24 feet); minimum, 31 second-feet Sept. 6, 11.

1930-33: Maximum, 12,900 second-feet May 12, 1932 (gage height, 9.70 feet); minimum, 6.5 second-feet Aug. 15, 1931.

REMARKS.—Records good. Daily discharge estimated Oct. 4-8. Storage and regulation above station. From July to September water from Bear River and Yuba River drainage basins entered the stream above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	194	362	485	473	660	828	2,440	2,980	7,640	844	230	269
2.....	205	373	473	406	584	844	2,740	3,140	6,470	828	315	172
3.....	213	389	461	352	585	908	3,390	2,440	5,210	780	330	139
4.....	213	400	444	396	526	1,070	3,820	2,370	4,440	738	313	34
5.....	213	400	406	304	450	860	3,560	2,900	3,990	682	156	33
6.....	215	395	395	250	464	844	3,560	2,820	5,410	647	140	32
7.....	220	395	389	187	444	1,120	3,300	2,660	6,030	608	136	33
8.....	240	395	411	211	426	1,200	2,820	2,660	5,610	575	226	33
9.....	238	395	433	213	386	1,190	2,160	2,740	5,820	533	242	33
10.....	246	389	428	241	370	1,230	1,810	2,520	5,610	493	210	33
11.....	242	384	428	234	386	1,260	1,730	2,370	5,110	466	262	32
12.....	238	384	428	212	620	1,600	1,900	2,520	5,410	460	235	38
13.....	242	384	422	211	776	2,300	2,160	2,590	5,410	420	186	40
14.....	250	384	406	216	644	1,720	2,440	3,140	5,110	395	262	42
15.....	362	384	400	214	560	1,450	3,060	3,730	4,820	375	260	72
16.....	311	384	400	202	713	2,160	3,300	4,080	4,260	351	213	72
17.....	229	351	416	183	840	3,480	2,520	3,820	3,480	338	121	92
18.....	167	368	491	266	796	2,300	2,100	3,730	2,900	410	158	94
19.....	336	362	557	460	542	1,820	1,840	3,730	2,440	370	215	94
20.....	373	362	745	448	590	1,720	1,710	4,080	2,100	344	102	108
21.....	378	373	634	383	548	1,870	2,030	4,540	1,900	364	108	118
22.....	378	362	557	422	592	1,700	2,740	4,080	1,800	238	117	100
23.....	384	362	575	449	731	1,460	3,060	3,640	1,660	217	112	124
24.....	389	378	582	538	788	1,220	4,440	4,350	1,520	258	134	111
25.....	395	373	503	629	564	1,090	4,170	5,820	1,360	308	162	146
26.....	311	368	438	559	482	1,350	3,140	6,930	1,290	298	208	154
27.....	299	373	411	697	654	1,370	3,480	6,700	1,260	290	236	168
28.....	378	373	461	950	746	2,800	4,630	7,880	1,280	283	259	170
29.....	250	384	491	1,130	-----	3,560	5,210	8,600	1,060	282	222	182
30.....	171	450	467	1,030	-----	2,520	3,560	9,350	940	160	158	158
31.....	252	-----	438	746	-----	2,230	-----	8,600	-----	184	-----	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	395	167	275	16,900
November.....	450	351	381	22,700
December.....	745	389	470	28,900
January.....	1,130	183	426	26,200
February.....	840	370	588	32,700
March.....	3,560	828	1,650	101,000
April.....	5,210	1,710	2,960	176,000
May.....	9,350	2,370	4,240	261,000
June.....	7,640	940	3,710	221,000
July.....	844	160	437	26,900
August.....	330	102	201	12,400
September.....	269	32	97.5	5,800
The year.....	9,350	32	1,290	932,000

AMERICAN RIVER AT FAIR OAKS, CALIF.

LOCATION.—Water-stage recorder just above highway bridge at Fair Oaks, Sacramento County, 10 miles below South Fork. Altitude, about 72 feet.

DRAINAGE AREA.—1,910 square miles.

RECORDS AVAILABLE.—November 1904 to September 1933.

DISCHARGE.—Maximum during year, 16,500 second-feet May 30 (gage height, 11.52 feet); minimum, 30 second-feet Sept. 14.

1904-33: Maximum, 182,000 second-feet Mar. 25, 1928 (gage height, 31.45 feet, present datum); minimum, 3.6 second-feet Aug. 16, 1924. Average, 28 years (1905-33), 3,670 second-feet.

REMARKS.—Records excellent. Storage, power plants, and many diversions above station. Some inflow from Bear and Yuba River Basins.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	302	466	758	640	1,130	1,170	3,150	4,120	10,600	1,430	234	290
2.....	307	498	686	660	1,050	1,210	3,540	4,280	9,110	1,380	359	237
3.....	290	530	650	545	975	1,210	4,280	3,540	7,760	1,250	413	265
4.....	256	550	610	522	905	1,520	4,780	3,340	6,500	1,210	366	124
5.....	298	560	595	566	842	1,380	4,960	3,820	5,710	1,050	298	85
6.....	295	590	506	458	814	1,170	4,780	3,820	7,330	975	216	59
7.....	329	565	526	369	800	1,480	4,610	3,680	8,650	933	210	61
8.....	360	502	545	364	710	1,710	4,120	3,820	8,200	842	194	56
9.....	379	522	585	422	670	1,710	3,340	3,680	8,420	828	272	63
10.....	323	580	600	325	645	1,760	2,790	3,540	8,420	722	324	75
11.....	341	540	590	370	615	1,810	2,550	3,340	7,760	672	289	148
12.....	324	530	540	391	993	1,960	2,730	3,340	7,980	664	358	98
13.....	311	526	565	331	1,480	3,410	3,030	3,540	8,200	600	224	38
14.....	332	526	560	344	1,210	2,730	3,410	4,120	7,540	526	281	32
15.....	434	462	570	359	1,090	2,220	4,120	4,780	7,120	506	280	144
16.....	452	502	600	365	1,130	2,530	4,610	5,330	6,500	477	303	131
17.....	436	526	625	344	1,520	4,960	3,970	5,140	5,330	463	204	118
18.....	234	502	776	349	1,430	3,540	3,150	4,960	4,440	442	154	72
19.....	391	506	863	686	1,050	2,730	2,790	4,780	3,820	501	188	130
20.....	443	522	1,090	828	940	2,380	2,440	5,140	3,280	416	261	146
21.....	524	458	1,130	746	940	2,610	2,670	6,100	3,030	420	156	162
22.....	500	458	884	842	863	2,500	3,410	5,900	2,970	390	148	168
23.....	510	454	856	975	1,090	2,280	4,120	4,960	2,730	325	157	124
24.....	491	522	1,010	940	1,130	1,910	5,230	5,710	2,500	314	164	174
25.....	480	514	807	1,250	975	1,710	5,330	7,540	2,330	317	178	173
26.....	421	462	692	1,050	770	1,910	4,440	9,110	2,060	368	205	192
27.....	434	514	580	1,150	884	2,060	4,280	9,110	2,060	370	280	222
28.....	532	502	655	1,900	1,050	2,970	5,900	10,600	2,160	347	282	240
29.....	392	470	734	2,240	-----	5,140	6,500	11,600	1,860	398	295	252
30.....	410	630	660	2,280	-----	3,540	5,140	12,700	1,610	274	241	210
31.....	274	-----	620	1,380	-----	3,090	-----	11,900	-----	220	206	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	532	234	381	23,400
November.....	630	454	516	30,700
December.....	1,130	506	693	42,600
January.....	2,280	325	776	47,700
February.....	1,520	615	989	54,900
March.....	5,140	1,170	2,330	143,000
April.....	6,500	2,440	4,010	239,000
May.....	12,700	3,340	5,720	352,000
June.....	10,600	1,610	5,530	329,000
July.....	1,430	220	633	38,900
August.....	413	148	250	15,400
September.....	290	32	143	8,510
The year.....	12,700	32	1,830	1,330,000

MIDDLE FORK OF AMERICAN RIVER NEAR EAST AUBURN, CALIF.

LOCATION.—Water-stage recorder in sec. 5, T. 12 N., R. 9 E., at Mountain Quarry Co.'s plant 1.7 miles above junction with North Fork of American River and $3\frac{1}{2}$ miles northeast of East Auburn. Altitude, about 580 feet.

DRAINAGE AREA.—622 square miles.

RECORDS AVAILABLE.—October 1911 to September 1933.

DISCHARGE.—Maximum during year, 6,770 second-feet May 30 (gage height, 11.6 feet); minimum, 37 second-feet Oct. 6.

1911-33: Maximum, about 100,000 second-feet Mar. 25, 1928 (gage height, 35.6 feet at gage used to 1928); minimum, 20 second-feet Sept. 6, 1931. Average, 22 years (1911-33), 1,310 second-feet.

REMARKS.—Records good. Storage reservoirs and diversions above station are small.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	51	55	124	101	204	267	1,290	1,650	4,490	625	107	48
2.....	51	61	96	104	190	283	1,590	1,700	3,800	568	106	48
3.....	51	72	83	116	192	351	2,000	1,320	3,140	550	102	47
4.....	51	80	75	133	187	426	2,310	1,400	2,640	515	99	47
5.....	52	72	71	121	194	370	2,180	1,700	2,400	480	96	46
6.....	50	70	70	112	200	382	2,180	1,400	3,410	450	93	47
7.....	50	70	68	106	197	481	2,000	1,420	3,600	435	91	48
8.....	53	68	68	104	186	516	1,700	1,380	3,410	405	88	45
9.....	57	65	68	103	176	572	1,440	1,300	3,410	362	82	46
10.....	59	64	70	104	168	592	1,240	1,150	3,320	324	80	45
11.....	56	64	70	102	172	634	1,190	1,080	3,050	301	77	44
12.....	53	62	68	100	247	898	1,290	1,150	3,230	280	73	44
13.....	52	61	62	98	283	1,160	1,490	1,280	3,320	268	73	44
14.....	52	61	70	101	249	768	1,640	1,650	3,140	258	71	43
15.....	52	60	72	102	223	612	2,120	1,900	2,960	246	66	42
16.....	52	61	72	104	260	1,020	2,240	2,140	2,640	232	64	42
17.....	52	60	96	102	342	1,590	1,640	1,960	2,140	218	62	41
18.....	52	59	141	116	281	1,020	1,320	1,900	1,750	201	62	41
19.....	52	58	161	220	241	815	1,090	1,960	1,500	187	61	41
20.....	52	58	260	174	222	840	1,060	2,200	1,320	178	60	42
21.....	50	56	178	158	218	965	1,290	2,560	1,280	167	62	42
22.....	52	57	143	167	222	915	1,760	2,200	1,180	157	58	42
23.....	56	57	160	181	231	745	2,060	1,960	1,080	150	55	42
24.....	60	56	153	181	245	592	2,680	2,480	1,010	146	55	42
25.....	62	56	119	209	222	534	2,520	3,320	942	139	54	50
26.....	59	56	106	184	218	655	1,880	3,910	920	132	51	65
27.....	57	55	102	252	237	612	2,240	3,910	852	124	51	66
28.....	57	55	101	332	260	1,320	3,080	4,610	888	118	51	59
29.....	57	60	100	409	-----	1,580	2,960	5,130	785	113	50	51
30.....	56	103	97	337	-----	1,160	1,960	5,520	705	109	50	46
31.....	55	-----	97	233	-----	1,090	-----	5,130	-----	106	49	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	62	50	53.9	3,310
November.....	103	55	63.1	3,750
December.....	260	62	104	6,400
January.....	409	98	160	9,840
February.....	342	168	224	12,400
March.....	1,590	267	767	47,200
April.....	3,080	1,080	1,850	110,000
May.....	5,520	1,080	2,330	143,000
June.....	4,490	705	2,280	136,000
July.....	625	106	276	17,000
August.....	107	49	70.9	4,360
September.....	66	41	46.5	2,770
The year.....	5,520	41	685	496,000

SOUTH FORK OF AMERICAN RIVER NEAR KYBURZ, CALIF.

LOCATION.—Water-stage recorder in S½ sec. 29, T. 11 N., R. 15 E., on Lincoln Highway half a mile below intake of El Dorado Canal and 2 miles west of Kyburz. Altitude, about 4,030 feet.

DRAINAGE AREA.—196 square miles.

RECORDS AVAILABLE.—August to December 1907; October 1922 to September 1933.

DISCHARGE.—Maximum during year, 2,440 second-feet May 29 (gage height, 5.96 feet); minimum, 0.7 second-foot Mar. 25.

1922-33: Maximum, 5,020 second-feet Mar. 25, 1928 (gage height, 7.60 feet); minimum, 0.3 second-foot Nov. 9-11, 1929. Average, 11 years (1922-33), 218 second-feet.

REMARKS.—Records good except those for Dec. 21 to Jan. 15, which were estimated because of ice. Storage and irrigation diversions above station. For total flow at this point add flow of El Dorado Canal, which diverts above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	2.1	1.4	1.3	7	1.0	80	274	1,390	204	2.5	2.2
2	1.5	3.6	1.4	1.2	5	1.1	144	226	1,210	161	2.6	2.2
3	1.6	3.4	1.5	1.1	2.8	1.2	212	194	1,040	146	2.6	2.4
4	2.6	2.6	1.4	.9	1.8	1.1	281	271	831	111	2.6	2.2
5	2.9	1.7	1.4	.8	1.6	1.1	232	298	852	100	2.5	2.2
6	2.7	1.4	1.4	.8	1.4	1.3	264	215	1,290	92	2.5	2.2
7	2.6	1.2	1.4	.8	2.8	.8	210	194	1,340	88	2.5	2.5
8	2.7	1.2	1.5	.8	4.3	.8	150	173	1,440	80	2.5	2.5
9	2.0	1.3	1.4	.8	1.4	.8	110	154	1,500	64	2.6	2.5
10	2.2	1.2	1.4	.8	3.7	.8	85	138	1,440	50	2.4	2.5
11	2.4	1.2	1.4	.8	2.1	.8	97	130	1,440	37	2.4	2.5
12	2.5	1.3	1.5	.8	1.5	1.4	123	148	1,500	28	2.4	2.4
13	2.5	1.3	12	.8	1.5	1.1	178	204	1,440	25	2.5	2.5
14	2.6	1.3	22	.8	2.0	.9	245	322	1,390	20	2.4	2.5
15	2.4	1.3	20	.8	2.9	.8	342	346	1,290	15	2.5	2.5
16	2.6	1.3	34	.8	2.2	1.6	302	338	1,100	6.5	2.5	2.5
17	2.4	1.3	28	1.1	3.3	1.4	164	302	866	1.7	2.5	2.4
18	2.5	1.3	3.9	1.1	1.7	1.0	105	264	622	2.8	2.4	2.5
19	2.7	1.4	11	9.5	3.1	.9	80	330	488	3.1	2.4	2.5
20	2.1	1.4	5.5	44	1.7	3.7	92	460	478	2.7	2.9	2.5
21	2.1	1.4	1.4	12	2.2	8	159	535	535	2.8	2.6	2.5
22	2.1	1.4	1.3	2.7	2.6	3.4	271	378	465	2.5	2.4	2.5
23	2.2	1.4	1.3	1.1	1.9	.8	318	424	412	2.6	2.2	2.5
24	2.2	1.4	1.3	1.1	1.5	.7	386	646	407	2.5	2.1	2.6
25	2.5	1.4	2.7	1.2	2.9	.7	358	904	366	2.6	2.5	2.6
26	2.6	1.4	1.9	27	1.4	.7	271	1,010	314	2.7	2.4	2.5
27	2.6	1.4	1.6	26	1.0	.7	438	1,240	412	2.6	2.4	2.5
28	3.8	1.4	1.4	2.5	1.0	4.5	535	1,500	314	2.5	2.5	2.5
29	3.5	1.6	1.3	6	-----	2.8	510	1,770	245	2.2	2.4	2.5
30	2.2	3.8	1.3	4.1	-----	1.0	302	1,720	210	2.7	2.4	2.6
31	2.2	-----	1.3	9	-----	28	-----	1,500	-----	2.5	2.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.8	1.5	2.44	150
November	3.8	1.2	1.65	98.2
December	34	1.3	5.49	338
January	44	.8	5.24	322
February	7	1.0	2.44	136
March	28	.7	2.42	149
April	535	80	235	14,000
May	1,770	130	536	33,000
June	1,500	210	888	52,800
July	204	1.7	40.8	2,510
August	2.9	2.1	2.47	152
September	2.6	2.2	2.45	146
The year	1,770	.7	143	104,000

SOUTH FORK OF AMERICAN RIVER NEAR CAMINO, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 25, T. 11 N., R. 11 E., 1 mile below intake of South Fork of American River flume, 300 feet above mouth of Iowa Canyon Creek, and 3 miles northwest of Camino. Altitude, about 1,640 feet.

DRAINAGE AREA.—497 square miles.

RECORDS AVAILABLE.—October 1922 to September 1933.

DISCHARGE.—Maximum during year, 5,930 second-feet May 30 (gage height, 11.50 feet); minimum, 3.8 second-feet July 31.

1922-33: Maximum, 31,500 second-feet Mar. 25, 1928 (gage height, 24.4 feet); minimum, 1.2 second-feet Aug. 24, 1931. Average, 11 years (1922-33), 635 second-feet.

REMARKS.—Records good. There are four storage reservoirs and three diversions above station; flow completely regulated at low water. For total flow at this point add flow of South Fork of American River flume. (See also records for El Dorado Canal and Fannon Reservoir outlet.)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	68	74	97	60	216	163	632	930	3,140	428	42	22
2-----	40	76	69	42	200	160	716	950	2,560	382	26	14
3-----	52	96	72	56	156	294	900	800	2,110	360	20	10
4-----	50	82	34	60	129	266	1,070	870	1,720	320	20	11
5-----	54	114	36	51	153	164	1,060	990	1,540	284	34	14
6-----	78	33	58	44	141	205	1,140	818	2,640	275	17	12
7-----	70	40	43	56	114	246	1,120	852	2,800	248	25	12
8-----	36	93	70	47	128	303	896	765	2,640	257	26	12
9-----	36	82	57	54	142	309	730	765	2,720	202	11	12
10-----	28	68	22	43	118	279	678	695	2,800	202	10	10
11-----	19	53	21	28	142	332	660	660	2,640	180	11	8
12-----	44	60	44	43	171	457	730	695	2,720	171	11	13
13-----	44	28	56	42	205	509	835	782	2,640	132	20	14
14-----	54	44	93	47	170	408	950	990	2,480	132	14	12
15-----	76	72	111	39	138	342	1,180	1,080	2,320	120	9	12
16-----	40	74	122	28	206	470	1,200	1,160	2,040	98	10	14
17-----	58	44	187	25	248	625	890	1,080	1,660	92	14	8
18-----	50	94	142	22	200	444	695	1,030	1,280	72	15	9
19-----	61	46	135	38	216	330	644	1,030	1,030	50	12	10
20-----	66	22	146	90	221	419	613	1,280	890	39	9	14
21-----	76	48	112	155	219	462	660	1,600	950	38	17	11
22-----	38	74	62	139	216	409	870	1,230	870	56	21	14
23-----	43	70	122	104	165	346	950	1,180	800	36	20	12
24-----	51	32	88	98	200	315	1,100	1,480	748	26	16	17
25-----	66	54	61	125	208	273	1,100	2,110	695	40	13	18
26-----	81	66	74	163	195	260	870	2,480	628	28	22	28
27-----	96	22	97	232	160	265	1,080	2,640	660	28	18	23
28-----	72	45	100	240	204	426	1,480	3,230	695	32	13	18
29-----	79	84	46	240	-----	504	1,540	3,700	538	28	16	16
30-----	26	117	74	210	-----	487	1,030	3,900	480	24	18	18
31-----	68	-----	68	194	-----	522	-----	3,500	-----	32	18	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	96	19	55.5	3,410
November-----	117	22	63.6	3,780
December-----	187	21	81.3	5,000
January-----	240	22	90.8	5,580
February-----	248	114	178	9,890
March-----	625	160	355	21,800
April-----	1,540	613	934	55,600
May-----	3,900	660	1,480	89,800
June-----	3,140	480	1,710	102,000
July-----	428	24	142	8,730
August-----	42	9	17.7	1,090
September-----	28	8	13.9	827
The year-----	3,900	8	425	308,000

SOUTH FORK OF AMERICAN RIVER AT COLOMA, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 17, T. 11 N., R. 10 E., at highway bridge at Coloma. Altitude, about 830 feet.

DRAINAGE AREA.—635 square miles.

RECORDS AVAILABLE.—October 1929 to September 1933.

DISCHARGE.—Maximum during year, 6,000 second-feet May 30 (gage height, 13.20 feet); minimum, 36 second-feet Sept. 22.

1929-33: Maximum, 6,680 second-feet Feb. 6, 1932 (gage height, 13.50 feet); minimum, 17 second-feet Aug. 25, 1931.

REMARKS.—Records good except those for July 30 to Sept. 11, which were estimated. Flow partly regulated by four storage reservoirs and two power plants above station; some irrigation diversion also.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1.....	130	150	190	171	276	246	738	1,130	3,470	625	66
2.....	150	153	181	148	252	249	826	1,210	2,920	614	
3.....	91	157	146	139	237	304	990	990	2,390	534	
4.....	130	160	148	164	225	364	1,170	1,060	2,020	549	
5.....	123	171	97	167	246	311	1,210	1,170	1,770	424	
6.....	130	162	136	143	237	276	1,250	1,060	2,760	415	
7.....	141	93	146	141	214	351	1,250	1,100	3,100	382	
8.....	132	132	125	166	203	392	1,100	1,020	2,980	369	
9.....	105	166	155	116	228	405	955	1,020	3,040	351	
10.....	89	153	132	143	211	405	1,060	955	3,100	262	
11.....	97	146	85	125	228	424	1,170	890	2,920	279	56
12.....	89	139	118	121	360	529	1,100	890	3,100	252	
13.....	123	134	148	132	378	796	1,490	990	3,040	228	
14.....	118	72	190	136	300	569	1,490	1,250	2,820	214	
15.....	132	136	206	141	266	466	1,130	1,330	2,700	211	
16.....	148	155	176	132	335	620	1,370	1,450	2,340	206	59
17.....	91	146	228	121	424	955	1,060	1,410	2,020	162	65
18.....	132	136	228	125	311	687	826	1,370	1,570	178	50
19.....	118	150	195	185	272	504	738	1,390	1,290	153	50
20.....	132	116	262	190	262	494	688	1,570	1,130	148	59
21.....	143	59	208	231	259	574	766	1,940	1,170	141	58
22.....	141	134	171	249	252	574	990	1,570	1,100	141	53
23.....	123	146	195	214	211	524	1,170	1,450	990	148	58
24.....	101	148	193	208	228	475	1,250	1,810	955	112	54
25.....	130	85	173	211	246	438	1,290	2,490	922	121	70
26.....	141	134	143	206	259	447	1,060	2,920	826	134	78
27.....	162	155	169	279	217	428	1,250	2,980	826	123	87
28.....	164	74	195	347	240	667	1,730	3,600	922	121	74
29.....	160	146	157	461	-----	766	1,770	4,020	738	123	65
30.....	134	214	148	343	-----	656	1,330	4,170	672	120	58
31.....	83	-----	162	252	-----	646	-----	3,880	-----	119	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	164	83	125	7,690
November.....	214	59	137	8,150
December.....	262	85	168	10,300
January.....	461	116	190	11,700
February.....	424	203	263	14,600
March.....	955	246	501	30,800
April.....	1,770	688	1,140	67,800
May.....	4,170	890	1,740	107,000
June.....	3,470	672	1,990	118,000
July.....	625	110	256	15,700
August.....	-----	-----	98	6,030
September.....	-----	50	64.1	3,810
The year.....	4,170	50	556	402,000

ECHO LAKE FLUME NEAR VADE, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 6, T. 11 N., R. 18 E., half a mile below intake and 2 miles northeast of Phillips, Vade post office. Altitude, about 7,500 feet.

RECORDS AVAILABLE.—August 1923 to September 1933.

DISCHARGE.—Maximum mean daily during year, 24 second-feet Sept. 8–12, 14–17; no flow most of year.

1923–33: Maximum mean daily, 25 second-feet Sept. 16–18, 1930; no flow most of each year.

REMARKS.—Records fair. Discharge estimated Oct. 15–23. Flume diverts water from Echo Lake in Truckee River Basin into South Fork of American River Basin.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Sept.
1.....	0	8.5	14
2.....	0	7.5	21
3.....	0	8	21
4.....	0	7.5	21
5.....	0	6.5	21
6.....	0	6	21
7.....	9.5	5	23
8.....	17	4.8	24
9.....	16	4.4	24
10.....	15	4.2	24
11.....	14	3.8	24
12.....	14	3.5	24
13.....	13	3.3	23
14.....	11	3.2	24
15.....		1.9	24
16.....		0	24
17.....		0	24
18.....		0	12
19.....		0	0
20.....	6	0	0
21.....		0	0
22.....		0	0
23.....		0	0
24.....	8.5	0	0
25.....	10	0	0
26.....	9.5	0	0
27.....	9	0	0
28.....	8	0	0
29.....	7	0	0
30.....	8.5	0	0
31.....	9		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	17	0	7.52	462
November.....	8.5	0	2.60	155
September.....	24	0	13.1	780
The year.....	24	0		1,400

NOTE.—No flow during months omitted.

MEDLEY LAKES OUTLET NEAR VADE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 29, T. 12 N., R. 17 E., 1 mile below main dam at Medley Lakes and 5 miles northwest of Phillips, Vade post office. Altitude, about 8,100 feet.

DRAINAGE AREA.—6.2 square miles.

RECORDS AVAILABLE.—September 1922 to September 1933.

DISCHARGE.—Maximum during year, 90 second-feet Aug. 15 (gage height, 2.25 feet); practically no flow at times.

1922-33: Maximum, 202 second-feet June 15-16, 1929 (gage height, 3.42 feet); no flow at times.

REMARKS.—Records good. No record but practically no flow Nov. 1 to Mar. 31. Discharge estimated Apr. 1-13 and June 11. No diversions. Available storage in Medley Lakes on Sept. 30, 1932, about 800 acre-feet; on Sept. 30, 1933, none.

Discharge, in second-feet, 1932-33

Day	Oct.	Apr.	May	June	July	Aug.	Sept.
1.....	60		1.4	8	35	63	13
2.....	62		1.6	6.5	34	63	8
3.....	58		1.2	4.8	22	66	6
4.....	51		1.2	3.6	14	73	4.6
5.....	43		1.0	5.5	19	72	3.4
6.....	31		.8	10	22	71	2.6
7.....	15	2	1.0	8.5	24	71	2.2
8.....	10		.9	10	22	74	1.9
9.....	7.5		.8	10	21	79	1.6
10.....	5.5		.7	9	19	79	1.4
11.....	4.9		.6	9	18	78	1.2
12.....	4.2		.6	9.5	19	77	1.2
13.....	3.6		.6	9	22	76	1.0
14.....	3.0	3.0	.9	10	25	82	.9
15.....	2.5	2.5	1.0	12	25	90	.7
16.....	2.2	2.0	.9	10	22	88	.7
17.....	1.9	1.3	.7	8	16	86	.6
18.....	1.6	.9	.6	6	14	83	.6
19.....	1.4	.7	.7	11	13	82	.6
20.....	1.2	.7	1.8	31	20	80	.6
21.....	1.0	.9	2.3	41	32	78	.6
22.....	.8	1.3	1.4	52	30	76	.6
23.....	.8	1.2	2.0	61	32	69	.6
24.....	.7	1.3	4.4	55	50	60	.7
25.....	.7	1.3	8	53	41	58	.9
26.....	.7	1.0	8	51	41	56	.8
27.....	.6	2.1	7	59	44	53	.7
28.....	.6	4.0	7.5	54	53	48	.7
29.....	.6	4.3	8.5	46	58	43	.7
30.....	.6	2.2	10	39	64	36	.8
31.....	.6		9		64	25	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	62	0.6	12.2	750
April.....	4.3	.7	1.89	112
May.....	10	.6	2.81	173
June.....	61	3.6	23.4	1,390
July.....	64	13	30.2	1,860
August.....	90	25	68.9	4,240
September.....	13	.6	2.00	119

SILVER LAKE OUTLET NEAR KIRKWOOD, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 32, T. 10 N., R. 17 E., 1,000 feet below Silver Lake Dam and 3 miles southwest of Kirkwood. Altitude, about 7,200 feet.

DRAINAGE AREA.—14.9 square miles.

RECORDS AVAILABLE.—September 1922 to September 1933.

DISCHARGE.—Maximum during year, 265 second-feet May 30 (gage height, 3.59 feet); minimum, 0.1 second-foot several days in December, February, and March, when gate was closed.

1922-33: Maximum, 374 second-feet July 1, 1932 (gage height, 4.28 feet); minimum, 0.1 second-foot during part of nearly every year, when gate was closed. Average, 11 years (1922-33), 28.2 second-feet.

REMARKS.—Records excellent except those for Jan. 16 to Feb. 1, which were estimated. Storage in Silver Lake on Sept. 30, 1932, was 1,250 acre-feet; on Sept. 30, 1933, 3,100 acre-feet. In addition to water released from controlled outlet, some water escapes from Silver Lake through porous rock formation. For total flow add seepage from Silver Lake near Kirkwood, Calif.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	30	2.6	0.2	0.2	0.2	0.1	0.2	18	166	22	2.6	7
2.....	28	2.4	.2	.2	.2	.1	.2	18	85	6.5	3.0	7
3.....	28	1.6	.2	.2	.2	.1	.2	18	23	6.5	3.6	21
4.....	25	.2	.2	.2	.2	.1	.2	18	31	6	2.8	34
5.....	28	.2	.2	.2	.2	.2	.2	18	16	5.5	2.8	32
6.....	25	.2	.1	.2	.2	.2	.2	19	88	5.5	3.6	32
7.....	21	.9	.1	.2	.2	.2	.2	19	188	6.5	3.0	32
8.....	18	2.0	.1	.2	.2	.2	.2	19	222	7.5	2.4	32
9.....	16	1.8	.1	.2	.2	.2	.2	19	222	6.5	2.4	31
10.....	14	1.6	.1	.2	.2	.2	.2	19	222	5.5	2.6	32
11.....	13	1.4	.1	.2	.2	.2	.2	19	228	4.8	2.2	42
12.....	11	1.4	.1	.2	.1	.2	.2	19	234	4.2	2.6	48
13.....	11	1.2	.1	.2	.1	.2	.3	18	234	3.3	3.3	46
14.....	9.5	1.0	.1	.2	.1	.2	.4	16	240	3.6	3.9	40
15.....	9	.8	.1	.2	.1	.2	.4	16	216	4.5	5	37
16.....	8	.8	.1		.1	.2	.4	16	178	3.9	4.5	34
17.....	8	1.0	.2		.1	.2	.4	16	129	3.0	4.5	34
18.....	3.5	.5	.2		.1	.2	.5	16	47	3.3	4.8	46
19.....	.2	.4	.2		.1	.2	.6	16	9	3.9	9.5	54
20.....	.2	.4	.2		.1	1.2	.8	16	36	4.2	17	53
21.....	.3	.4	.2		.1	1.0	2.4	16	97	4.8	16	54
22.....	.4	.3	.2		.1	.7	42	17	48	4.2	11	54
23.....	.2	.2	.2		.1	.6	93	18	38	4.8	8	53
24.....	.2	.2	.2	.2	.1	.4	59	18	73	4.8	8	53
25.....	.2	.2	.2		.1	.3	53	20	35	3.6	8	49
26.....	1.4	.2	.2		.1	.2	54	53	46	2.6	8	46
27.....	3.9	.2	.2		.1	.2	36	138	38	3.0	8	46
28.....	3.6	.2	.2		.1	.2	18	216	11	3.6	7.5	45
29.....	3.3	.2	.2			.2	18	240	7	2.6	8	45
30.....	3.0	.2	.2			.2	18	94	31	3.0	8	46
31.....	2.8		.2			.2		74		3.6	7.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	30	0.2	10.5	646
November.....	2.6	.2	.82	49.0
December.....	.2	.1	.16	10.1
January.....	.2	.2	.20	12.3
February.....	.2	.1	.14	7.7
March.....	1.2	.1	.28	17.5
April.....	93	.2	13.3	791
May.....	240	16	40.5	2,490
June.....	240	7	108	6,430
July.....	22	2.6	5.07	312
August.....	17	2.2	5.94	365
September.....	54	7	39.5	2,350
The year.....	240	.1	18.6	13,500

SEEPAGE FROM SILVER LAKE NEAR KIRKWOOD, CALIF.

LOCATION.—Staff gage in SW¼ sec. 32, T. 10 N., R. 17 E., just above road crossing half a mile northeast of Silver Lake Dam. Altitude, about 7,200 feet.

RECORDS AVAILABLE.—October 1929 to September 1933.

DISCHARGE.—Maximum during year, 19 second-feet June 26 to July 17; no flow during most of year.

1929-33: Maximum, 25 second-feet June 9, 1930; no flow during most of each year.

REMARKS.—Records good. Discharge estimated July 23 and Sept. 17-21. No flow when Silver Lake gage height is below 14.0 feet. This record shows amount of largest and only important seepage from Silver Lake through the porous rock formation. (See Silver Lake outlet.)

Discharge, in second-feet, 1932-33

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1.....	0	9	19	14	5.5	16.....	0	18	19	9	0.3
2.....	0	10	19	14	5.5	17.....	0	18	19	9	.2
3.....	0	11	19	14	5.5	18.....	0	18	18	9	.1
4.....	0	12	19	14	4.0	19.....	0	18	18	9	.1
5.....	0	16	19	12	3.0	20.....	0	18	16	9	.1
6.....	0	16	19	12	3.0	21.....	0	18	16	9	.1
7.....	0	17	19	12	2.0	22.....	0	18	16	9	0
8.....	0	17	19	12	2.0	23.....	0	18	16	7	0
9.....	0	18	19	12	2.0	24.....	0	18	16	7	0
10.....	0	18	19	12	1.4	25.....	0	18	16	7	0
11.....	0	18	19	12	1.4	26.....	0	19	16	5.5	0
12.....	0	18	19	12	1.4	27.....	0	19	16	5.5	0
13.....	0	18	19	10	.9	28.....	0	19	16	5.5	0
14.....	0	18	19	10	.9	29.....	0	19	14	5.5	0
15.....	0	18	19	9	.6	30.....	3.0	19	14	5.5	0
						31.....	3.6		14	5.5	
Month						Maximum	Minimum	Mean	Run-off in acre-feet		
May.....						3.6	0	0.21	13.1		
June.....						19	9	17.0	1,010		
July.....						19	14	17.6	1,080		
August.....						14	5.5	9.61	591		
September.....						5.5	0	1.33	79.1		
The year.....						19	0	3.83	2,770		

NOTE.—No flow during months omitted.

SILVER FORK OF SOUTH FORK OF AMERICAN RIVER NEAR KYBURZ, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 34, T. 11 N., R. 15 E., 2 miles above mouth and 2 miles southeast of Kyburz. Altitude, about 4,850 feet.

DRAINAGE AREA.—108 square miles.

RECORDS AVAILABLE.—August 1924 to September 1933.

DISCHARGE.—Maximum during year, 1,650 second-feet May 29 (gage height, 4.79 feet); minimum, 24 second-feet Jan. 16.

1924-33: Maximum, 3,620 second-feet Mar. 25, 1928 (gage height, 6.54 feet); minimum, 1.4 second-feet Dec. 6, 1929.

REMARKS.—Records good except those estimated. Stage-discharge relation affected by ice Dec. 10-19, 22-25, 30-31, Jan. 17-31. No diversions. Storage in Twin and Silver Lakes.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	94	81	60	* 80	* 60	87	229	801	147	38	74
2	43	95	81	48	* 80	* 60	117	211	644	116	36	53
3	41	95	81	46	* 80	* 60	143	196	512	110	36	56
4	41	95	80	45	* 80	* 55	168	241	458	102	35	63
5	54	95	80	45	* 80	* 55	164	254	448	98	34	56
6	60	85	80	49	* 80	* 50	172	202	675	92	32	52
7	56	81	80	49	* 80	* 46	147	190	706	88	30	52
8	53	81	80	47	* 80	* 42	124	180	789	89	29	54
9	49	80	77	45	* 80	* 36	105	170	755	81	27	63
10	56	80	* 77	45	* 80	* 36	94	158	722	77	27	68
11	64	80	* 90	47	* 81	* 36	100	155	722	73	26	71
12	69	81	* 94	48	* 81	* 36	113	160	757	68	26	72
13	74	81	* 92	46	* 81	* 28	138	178	714	67	26	67
14	76	81	* 94	42	* 81	* 26	170	249	691	63	26	64
15	76	81	* 94	41	* 81	* 26	212	275	616	62	25	55
16	74	80	* 100	41	* 82	* 30	189	272	549	61	26	52
17	74	80	* 102	* 43	* 82	* 28	127	251	439	57	27	49
18	81	80	* 84	* 40	* 82	* 28	103	234	303	54	26	54
19	89	78	* 84	* 66	* 82	* 32	90	275	232	54	26	69
20	89	78	66	* 110	* 82	* 40	100	350	222	52	35	66
21	89	78	68	* 95	* 82	49	140	397	283	50	38	69
22	89	78	* 74	* 68	* 82	47	189	286	236	49	38	66
23	89	78	* 85	* 65	84	41	230	316	209	48	29	68
24	89	78	* 88	* 65	81	35	265	469	222	47	28	67
25	89	78	* 87	* 65	* 80	34	248	623	198	46	44	67
26	89	78	82	* 65	* 76	33	205	683	174	44	52	62
27	91	78	80	* 86	* 70	37	290	870	209	42	50	57
28	94	78	72	* 86	* 60	44	372	1,090	160	41	55	58
29	94	80	62	* 81	-----	44	329	1,190	140	40	56	56
30	94	85	* 66	* 80	-----	45	239	1,050	139	39	67	56
31	94	-----	* 64	* 80	-----	62	-----	810	-----	39	76	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	94	41	73.1	4,490
November	95	78	82.3	4,900
December	102	62	81.5	5,010
January	110	40	59.3	3,650
February	84	60	79.6	4,420
March	62	26	41.3	2,540
April	372	87	172	10,200
May	1,190	155	394	24,200
June	801	139	457	27,200
July	147	39	67.6	4,160
August	76	25	36.3	2,230
September	74	49	61.5	3,660
The year	1,190	25	134	96,700

* Estimated.

TWIN LAKES OUTLET NEAR KIRKWOOD, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 18, T. 10 N., R. 18 E., 500 feet below main dam and outlet gate of Twin Lakes and 1 mile east of Kirkwood. Altitude, about 7,900 feet.

DRAINAGE AREA.—12.4 square miles.

RECORDS AVAILABLE.—September 1922 to September 1933.

DISCHARGE.—Maximum during year, 88 second-feet Dec. 11-16 (gage height, 1.35 feet); minimum, 1.3 second-feet Sept. 4.

1922-33: Maximum, 176 second-feet May 25-28, 1928 (gage height, 1.95 feet); minimum, 0.2 second-foot leakage at various times. Average, 11 years (1922-33), 25.4 second-feet.

REMARKS.—Records excellent. No diversions. For total flow add flow of Twin Lakes spillway near Kirkwood. There was 20,400 acre-feet of water in Twin Lakes on Sept. 30, 1932, and 16,700 acre-feet on Sept. 30, 1933.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.9	82	71	45	71	44	1.5	1.5	2.0	1.5	1.5	36
2.....	2.6	82	71	40	71	45	1.5	1.5	2.0	1.5	1.5	28
3.....	5.5	82	71	40	71	34	1.5	1.5	1.7	1.5	1.5	13
4.....	19	82	71	40	71	30	1.5	1.5	1.5	1.5	1.5	1.3
5.....	24	78	71	40	71	27	1.5	1.5	2.0	1.5	1.5	1.4
6.....	23	71	71	40	71	19	1.5	1.5	2.2	1.5	1.5	1.4
7.....	23	71	71	40	71	8.5	1.5	1.5	2.2	1.5	1.5	5
8.....	24	71	71	40	71	1.5	1.5	1.5	2.0	1.5	1.5	18
9.....	30	71	71	40	71	1.5	1.5	1.5	1.5	1.5	1.5	18
10.....	38	71	84	40	71	1.5	1.5	1.5	1.5	1.5	1.5	18
11.....	50	71	88	40	71	1.5	1.5	1.5	1.5	1.5	1.5	7.5
12.....	52	71	88	40	71	1.5	1.5	1.5	1.5	1.5	1.5	1.5
13.....	60	71	88	36	71	1.5	1.5	1.5	1.5	1.5	1.5	1.5
14.....	60	71	88	34	71	1.5	1.4	1.5	1.5	1.5	1.5	1.5
15.....	60	71	88	34	71	1.5	.8	1.5	1.5	1.5	1.5	1.5
16.....	60	71	88	34	70	1.5	1.3	1.5	1.5	1.5	1.5	1.5
17.....	68	71	79	34	70	1.5	1.5	1.5	1.5	1.5	1.4	1.5
18.....	78	71	71	56	71	1.5	1.5	1.5	1.5	1.5	1.5	1.5
19.....	82	71	62	84	71	1.5	1.5	1.5	1.5	1.5	1.5	1.5
20.....	82	71	56	80	71	1.5	1.5	1.7	1.5	1.5	1.5	1.5
21.....	82	71	67	59	71	1.5	1.5	1.7	1.5	1.5	1.5	1.5
22.....	82	71	74	50	69	1.5	1.5	1.5	1.5	1.5	1.5	1.5
23.....	82	71	82	50	64	1.5	1.5	1.5	1.5	1.5	4.9	1.5
24.....	82	71	82	50	64	1.5	1.5	2.0	1.5	1.5	15	1.5
25.....	82	71	76	60	60	1.5	1.5	2.2	1.5	1.5	24	1.5
26.....	82	71	71	71	54	1.5	1.7	2.4	1.5	1.5	24	1.5
27.....	82	71	68	71	49	1.5	2.2	2.4	1.5	1.5	27	1.5
28.....	82	71	55	71	43	1.5	1.5	2.4	1.5	1.5	31	1.5
29.....	82	71	58	71	-----	1.5	1.5	2.4	1.5	1.5	36	1.5
30.....	82	71	60	71	-----	1.5	1.5	2.2	1.5	1.5	51	1.5
31.....	82	-----	58	71	-----	1.5	-----	2.2	-----	1.5	51	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	82	2.6	56.3	3,460
November.....	82	71	72.7	4,330
December.....	88	55	73.2	4,500
January.....	84	34	50.7	3,120
February.....	71	43	67.6	3,750
March.....	45	1.5	7.85	483
April.....	2.2	.8	1.50	89.3
May.....	2.4	1.5	1.71	105
June.....	2.2	1.5	1.62	96.4
July.....	1.5	1.5	1.50	92.2
August.....	51	1.4	9.57	588
September.....	36	1.3	5.87	349
The year.....	88	.8	29.0	21,000

TWIN LAKES SPILLWAY NEAR KIRKWOOD, CALIF.

LOCATION.—Staff gage in NE¼ sec. 22, T. 10 N., R. 17 E., 300 feet below Twin Lakes Reservoir auxiliary dam, half a mile southeast of Kirkwood, and 1 mile southwest of Twin Lakes Reservoir main dam. Altitude, about 7,900 feet.

RECORDS AVAILABLE.—June 1925 to September 1933.

DISCHARGE.—1925-33: Maximum, 260 second-feet June 21, 1932 (gage height, 3.10 feet); no flow most of each year.

REMARKS.—See record for Twin Lakes outlet. There was no flow over spillway during year ending Sept. 30, 1933.

EL DORADO CANAL NEAR KYBURZ, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 29, T. 11 N., R. 15 E., 400 feet below intake and 2 miles west of Kyburz. Altitude, about 4,100 feet.

RECORDS AVAILABLE.—October 1922 to September 1933.

DISCHARGE.—Maximum mean daily during year, 122 second-feet July 5-16; no flow at times.

1922-33: Maximum mean daily, 158 second-feet June 18, 1931; no flow at times each year. Average, 11 years (1922-33), 93.9 second-feet.

REMARKS.—Records excellent except those estimated for periods of ice effect, Dec. 8-14, Jan. 10-12. Canal diverts from left bank of South Fork of American River 2 miles below Kyburz; water used for power and irrigation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104	102	86	72	101	83	92	107	107	120	111	99
2	107	102	85	60	101	84	89	107	107	120	108	80
3	100	102	86	59	100	89	84	107	33	120	108	84
4	92	104	85	60	100	78	83	107	50	121	113	90
5	100	106	84	58	99	78	94	107	113	122	113	80
6	99	96	84	60	99	88	104	107	113	122	112	76
7	82	90	82	62	90	87	108	107	113	122	110	74
8	77	89	84	58	96	84	106	107	113	122	107	78
9	76	88	83	58	93	74	103	107	113	122	113	90
10	78	88	83	58	92	76	104	107	113	122	113	90
11	84	86	96	58	97	77	104	107	113	122	111	92
12	86	88	98	58	97	75	105	99	114	122	108	95
13	90	88	86	58	96	60	104	79	114	122	107	86
14	92	86	78	54	94	57	105	89	113	122	105	84
15	88	86	81	53	97	56	106	107	113	122	116	74
16	84	86	82	49	99	64	106	107	113	122	119	72
17	78	82	90	51	98	60	107	107	116	116	116	70
18	86	82	86	50	99	60	107	107	116	106	114	74
19	92	80	82	66	97	66	106	108	117	97	113	82
20	92	80	70	93	97	84	106	108	117	92	119	70
21	91	80	78	98	100	97	107	107	117	101	120	68
22	91	80	81	82	101	94	106	107	117	102	117	68
23	91	80	98	79	97	82	107	108	119	98	107	66
24	92	80	93	74	92	70	107	107	119	108	96	66
25	99	80	89	80	93	69	107	107	120	107	107	72
26	102	81	86	87	90	66	107	107	120	100	111	69
27	108	81	88	96	90	72	107	107	120	97	107	62
28	104	80	83	106	83	82	106	107	119	103	108	61
29	102	82	74	104	-----	84	106	107	119	104	106	58
30	102	96	78	103	-----	88	107	107	120	110	109	58
31	108	-----	78	102	-----	93	-----	107	-----	111	110	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	107	76	92.5	5,690
November	105	86	87.5	5,210
December	98	70	84.4	5,190
January	106	49	71.2	4,380
February	101	83	96.0	5,330
March	97	56	76.7	4,720
April	107	83	103	6,130
May	108	79	105	6,460
June	120	33	110	6,550
July	122	92	113	6,950
August	120	96	111	6,820
September	99	58	76.3	4,540
The year	122	33	93.8	68,000

ALDER CREEK NEAR WHITEHALL, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 36, T. 11 N., R. 14 E., three-quarters of a mile above mouth and 2 miles southeast of Whitehall. Altitude, about 4,000 feet.

DRAINAGE AREA.—22.8 square miles.

RECORDS AVAILABLE.—October 1922 to September 1933.

DISCHARGE.—Maximum during year, 168 second-foot May 29 (gage height, 2.49 feet); minimum, 0.1 second-foot many days in October, August, and September. 1922-33: Maximum, about 2,060 second-foot Mar. 25, 1923 (gage height, 7.1 feet); minimum, 0.1 second-foot at times in 1924, 1926, 1931, 1933. Average, 11 years (1922-33), 25.6 second-foot.

REMARKS.—Records good except those for Dec. 12 to Apr. 4, which include estimated flow in pipe line diverting just above station and are fair. No other diversions. Stage-discharge relation affected by ice Dec. 12 to Jan. 31.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.2	1.0	1.6	5	38	63	118	9	0.6	0.1
2	.1	.3	.7	1.7	5.5	47	60	103	8	.6	.1
3	.1	.4	.6	1.8	6.5	59	59	91	7.5	.6	.1
4	.1	.4	.6	1.9	6.5	64	68	79	7	.6	.1
5	.1	.4	.6	2.0	7	66	69	74	6	.5	.1
6	.1	.5	.5	2.1	9.5	66	63	77	6	.5	.1
7	.1	.6	.4	2.1	10	62	62	74	5.5	.4	.1
8	.1	.6	.4	2.2	12	55	55	71	4.6	.3	.1
9	.1	.5	.4	2.2	12	45	49	66	4.2	.3	.1
10	.1	.5	.4	2.3	11	40	47	59	3.8	.3	.1
11	.1	.5	.4	2.3	10	39	46	55	3.8	.2	.1
12	.1	.5		2.3	12	41	47	50	3.0	.2	.1
13	.1	.5		2.4	11	47	53	47	2.8	.2	.1
14	.1	.5		2.4	9.5	52	66	41	2.6	.2	.1
15	.1	.5		2.4	9.5	60	77	36	2.6	.2	.1
16	.2	.5		2.5	10	57	81	30	2.3	.2	.1
17	.2	.5		2.6	10	47	82	26	2.1	.2	.1
18	.2	.4		2.6	9.5	39	82	23	1.9	.2	.1
19	.2	.4		2.5	11	35	82	21	1.7	.2	.1
20	.2	.4		2.8	18	35	88	19	1.5	.1	.1
21	.2	.4	.4	3.5	22	38	98	17	1.5	.1	.1
22	.2	.4		3.9	20	47	91	16	1.2	.1	.1
23	.2	.4		3.9	18	49	93	14	1.2	.1	.1
24	.2	.4		3.9	17	55	101	13	1.0	.1	.1
25	.2	.4		3.9	17	57	113	12	.8	.1	.2
26	.2	.4		4.0	17	52	122	12	.8	.1	.2
27	.2	.4		4.3	17	60	127	12	.7	.1	.2
28	.2	.4		5	21	71	139	13	.7	.1	.1
29	.2	.5			22	76	146	11	.6	.1	.1
30	.2	1.2			23	62	146	10	.6	.1	.1
31	.2				30		133		.6	.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.15	9.3
November	1.2	.2	.47	27.8
December			.45	27.8
January			1.5	92.2
February	5	1.6	2.75	153
March	30	5	13.5	830
April	76	35	52.0	3,090
May	146	46	84.1	5,170
June	118	10	43.0	2,560
July	9	.6	3.08	189
August	.6	.1	.25	15.2
September	.2	.1	.11	6.5
The year	146	.01	16.8	12,200

PLUM CREEK NEAR RIVERTON, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 32, T. 11 N., R. 14 E., 1½ miles above mouth and 2 miles southeast of Riverton. Altitude, about 4,100 feet.

DRAINAGE AREA.—6.8 square miles.

RECORDS AVAILABLE.—November 1922 to September 1933.

DISCHARGE.—Maximum during year, 62 second-feet Mar. 16 (gage height, 1.70 feet); minimum, 0.1 second-foot parts of August and September.

1922-33: Maximum, 635 second-feet Mar. 25, 1928 (gage height, 4.10 feet); minimum, 0.1 second-foot at times during 1924-26, 1930-33. Average, 11 years (1922-33), 6.79 second-feet.

REMARKS.—Records good except those estimated Dec. 23 to Feb. 13, Feb. 22-27. Stage-discharge relation affected by ice Dec. 23 to Feb. 13. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.2	0.3	0.6		4.8	21	9.5	7.5	0.7	0.2	0.2
2.....	.2	.4	.6		5.5	24	14	6.5	.7	.2	.2
3.....	.2	.3	.6		9	27	14	5.5	.7	.2	.2
4.....	.2	.3	.6		7.5	26	14	5.5	.7	.2	.2
5.....	.2	.3	.5		7.5	22	13	5.0	.6	.2	.1
6.....	.2	.3	.5		9.5	21	12	4.9	.6	.2	.1
7.....	.2	.3	.4	1.5	10	18	18	4.3	.6	.1	.1
8.....	.2	.3	.4		13	16	20	3.8	.5	.1	.1
9.....	.2	.3	.4		11	13	20	3.4	.5	.1	.1
10.....	.2	.3	.4		11	10	20	3.0	.4	.1	.1
11.....	.2	.3	.4		9.5	9	22	2.7	.4	.1	.1
12.....	.2	.3	.4		18	8.5	25	2.3	.3	.1	.1
13.....	.2	.3	.4		15	8.5	26	2.1	.3	.1	.1
14.....	.2	.3	.4	1.9	12	9.5	26	1.8	.3	.1	.1
15.....	.2	.3	.4	1.9	10	10	25	1.6	.3	.1	.1
16.....	.2	.2	.4	1.9	37	9.5	22	1.5	.3	.1	.1
17.....	.2	.3	.4	2.5	32	8	21	1.4	.3	.1	.1
18.....	.2	.3	.4	2.5	22	7.5	20	1.4	.3	.1	.1
19.....	.2	.3	.4	2.5	20	6	18	1.1	.3	.1	.2
20.....	.2	.3	.7	2.5	23	6	16	1.0	.3	.2	.2
21.....	.2	.3	.6	2.5	23	5.5	18	1.0	.3	.2	.2
22.....	.2	.3	.3	2.5	18	6	16	.9	.3	.2	.2
23.....	.3	.3	.3	2.5	14	7	16	.9	.3	.2	.2
24.....	.3	.3	.3	2.5	11	8	16	.8	.3	.2	.2
25.....	.3	.3	.3	3.0	9.5	8	15	.8	.3	.2	.3
26.....	.3	.3	.3	3.5	9.5	7	14	.8	.2	.2	.3
27.....	.3	.3	.3	4.0	10	7	13	.9	.2	.2	.3
28.....	.3	.3	.3	4.6	22	8	12	1.0	.2	.2	.2
29.....	.3	.4	.3		22	9.5	11	.9	.2	.2	.2
30.....	.3	1.1	.3		17	8	10	.8	.2	.2	.2
31.....	.3		.3		18		9.5		.2	.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.3	0.2	0.23	14.1
November.....	1.1	.3	.33	19.8
December.....	.7	.3	.42	25.6
January.....			.70	43.0
February.....	4.6		2.15	119
March.....	37	4.8	14.9	916
April.....	27	5.5	11.8	702
May.....	26	9.5	17.0	1,050
June.....	7.5	.8	2.50	149
July.....	.7	.2	.38	23.4
August.....	.2	.1	.16	9.7
September.....	.3	.1	.16	9.7
The year.....	37	.1	4.25	3,080

SILVER CREEK AT UNION VALLEY, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 20, T. 12 N., R. 14 E., 1 mile below junction of North and Middle Forks of Silver Creek, near lower end of Union Valley. Altitude, about 4,530 feet.

DRAINAGE AREA.—82.7 square miles.

RECORDS AVAILABLE.—October 1924 to September 1933.

DISCHARGE.—Maximum during year, 1,970 second-feet May 29 (gage height, 6.52 feet); minimum, 4.5 second-feet Sept. 15.

1924-33: Maximum, about 9,600 second-feet Mar. 25, 1928 (gage height, 14.7 feet); minimum, 1.9 second-feet Aug. 27-28, 1931.

REMARKS.—Records excellent. No diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sept.
1	5	5.5	11	14	17	20	124	294	892	100	9.5	5
2	5.5	8	9	14	17	20	164	260	707	94	9	4.8
3	5.5	8.5	8	14	17	20	214	282	550	87	9	4.8
4	5.5	7	8	14	17	20	274	280	472	80	9	4.8
5	5	7	7.5	14	17	20	298	311	583	73	9	4.8
6	5	7.5	7	14	17	20	311	236	915	67	8.5	4.8
7	5	7.5	6.5	14	17	20	294	206	785	63	8	4.8
8	5	7	6.5	14	17	20	230	206	765	59	7.5	4.8
9	5.5	6.5	6	14	17	21	191	185	785	52	7.5	4.8
10	5.5	6.5	7	14	17	22	171	171	745	48	7	4.8
11	5.5	6	7	14	17	22	191	169	726	44	6.5	4.8
12	5.5	6	7	14	17	23	234	183	765	40	6	4.8
13	5.5	6	7.5	15	17	24	278	214	688	37	6	4.8
14	5.5	6	7.5	16	17	24	329	302	652	35	6	4.8
15	5.5	6	8	16	18	25	416	329	600	32	6	4.8
16	5.5	6	8.5	16	18	26	366	327	487	30	6	4.8
17	5.5	6	12	16	18	26	338	300	403	27	5.5	4.8
18	5.5	6	14	16	18	28	180	287	329	25	5.5	5
19	5	6	15	16	18	34	166	331	280	22	5.5	5
20	5	6	16	17	19	42	192	458	258	20	5	5
21	5	6	15	17	19	46	260	502	246	18	5	5
22	5	6	14	17	19	47	366	340	222	16	5	5
23	5.5	6	14	17	19	44	338	366	202	15	5	5
24	5.5	6	14	17	19	40	354	566	183	14	5	5
25	5.5	6	14	17	19	38	354	785	171	13	5	8
26	5.5	6	14	17	19	37	274	825	162	12	5	7.5
27	5.5	6	14	17	20	40	458	915	158	12	5	6
28	5.5	6	14	17	20	55	583	1,060	157	11	5	6
29	5.5	6.5	14	17	-----	66	502	1,160	131	10	5	6
30	5.5	14	14	17	-----	61	307	1,160	114	9.5	5	5.5
31	5.5	-----	14	17	-----	85	-----	1,040	-----	9.5	5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5.5	5	5.35	329
November	14	5.5	6.65	396
December	16	6	10.8	664
January	17	14	15.6	959
February	20	17	17.9	994
March	85	20	33.2	2,040
April	583	124	288	17,100
May	1,160	169	452	27,800
June	915	114	471	28,000
July	100	9.5	37.9	2,330
August	9.5	5	6.35	390
September	8	4.8	5.19	306
The year	1,160	4.8	112	81,300

SILVER CREEK NEAR PLACERVILLE, CALIF.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 13, T. 11 N., R. 12 E., a quarter of a mile above mouth and 12 miles northeast of Placerville. Altitude, about 2,250 feet.

DRAINAGE AREA.—176 square miles.

RECORDS AVAILABLE.—December 1921 to September 1933.

DISCHARGE.—Maximum during year, 3,040 second-feet May 30 (gage height, 7.20 feet); minimum, 18 second-feet Sept. 16.

1921-33: Maximum, about 16,900 second-feet Mar. 25, 1928 (gage height, 18.0 feet); minimum, 6 second-feet Aug. 25, 1931. Average, 11 years (1922-33), 319 second-feet.

REMARKS.—Records good except those of low water, which are fair. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	24	49	35	48	79	340	601	1,630	198	31	23
2	25	28	41	35	49	87	403	582	1,300	185	30	23
3	25	32	37	38	49	112	468	488	1,040	170	29	23
4	25	29	35	38	52	117	544	563	870	156	29	23
5	25	28	35	38	57	114	601	620	870	145	28	23
6	25	29	35	37	59	127	626	522	1,470	138	28	22
7	25	29	33	37	56	143	640	515	1,400	129	26	22
8	26	29	34	37	53	156	537	471	1,260	125	26	22
9	27	28	34	37	51	172	448	468	1,360	114	26	22
10	26	28	33	37	49	185	391	433	1,330	110	26	22
11	25	28	33	36	51	196	400	421	1,220	106	25	21
12	25	28	33	35	59	249	436	445	1,330	97	25	20
13	25	28	33	35	62	232	491	464	1,220	94	24	20
14	25	28	33	36	58	187	563	582	1,120	93	23	20
15	25	28	33	37	55	166	702	660	1,060	89	22	19
16	25	28	33	37	69	216	681	681	896	82	22	19
17	25	28	51	35	75	260	494	620	746	79	23	20
18	25	28	50	42	64	202	391	620	640	70	23	22
19	25	28	59	40	59	194	360	640	544	65	23	23
20	24	28	59	42	58	220	885	770	494	60	23	24
21	24	28	46	43	58	242	442	923	474	56	23	25
22	24	28	38	43	59	227	601	681	430	54	23	27
23	25	28	43	44	62	209	601	660	394	51	23	28
24	24	28	37	44	60	168	646	870	360	46	23	29
25	24	29	35	42	58	166	660	1,190	340	43	23	38
26	24	29	36	42	62	170	519	1,360	320	42	23	42
27	23	29	36	62	66	170	660	1,440	295	39	23	39
28	23	29	35	53	72	273	923	1,070	323	35	23	36
29	23	32	35	55	-----	278	950	1,850	267	34	23	35
30	23	56	34	49	-----	247	640	1,950	232	32	23	33
31	23	-----	34	49	-----	273	-----	1,800	-----	31	23	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	27	23	24.6	1,510
November	56	24	29.3	1,740
December	59	33	38.5	2,370
January	62	35	41.0	2,520
February	75	48	58.2	3,230
March	278	79	168	11,600
April	950	340	551	32,800
May	1,950	421	825	50,700
June	1,630	232	841	50,000
July	198	31	89.3	5,490
August	81	22	24.7	1,520
September	42	19	25.5	1,520
The year	1,950	19	228	165,000

SOUTH FORK OF SILVER CREEK NEAR ICE HOUSE, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 1, T. 11 N., R. 14 E., 8 miles northeast of Riverton and 1½ miles northeast of Ice House. Altitude, about 5,300 feet.

DRAINAGE AREA.—28.4 square miles.

RECORDS AVAILABLE.—October 1924 to September 1933; July to October 1922 at site 1 mile upstream.

DISCHARGE.—Maximum during year, 692 second-feet May 30 (gage height, 3.65 feet); minimum, 0.3 second-foot Sept. 21.

1924-33: Maximum, 1,620 second-feet Mar. 26, 1928 (gage height, 5.35 feet); minimum, 0.1 second-foot Aug. 21 to Sept. 6, 1931.

REMARKS.—Records good except those for Dec. 10 to Mar. 25, July 9-18, which were estimated. Stage-discharge relation affected by ice Dec. 10 to Mar. 25. No diversions.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.8	2.3		16	88	431	67	4.4	0.6
2	.8	1.2	2.1		19	78	350	63	4.4	.6
3	.8	1.2	2.1		25	69	268	61	4.1	.6
4	.7	1.2	2.1		32	78	226	57	3.8	.6
5	.7	1.2	2.1		54	82	260	54	3.5	.6
6	.5	1.3	1.8		82	69	416	51	3.2	.6
7	.5	1.3	1.8		110	57	399	48	3.2	.6
8	.7	1.2	1.6		79	64	406	44	2.9	.6
9	.7	1.2	1.5		59	58	413	41	2.6	.6
10	.5	1.2			48	53	399	38	2.3	.6
11	.5	1.2			43	51	396	35	2.0	.6
12	.5	1.2			48	51	409	32	2.0	.5
13	.5	1.2		6	58	54	389	29	2.0	.5
14	.5	1.2			72	73	360	27	1.8	.5
15	.5	1.2			99	81	321	25	1.8	.5
16	.5	1.2			101	80	271	23	1.7	.5
17	.5	1.3			66	73	224	21	1.7	.5
18	.5	1.3			52	69	184	19	1.5	.5
19	.5	1.5			46	82	152	17	1.5	.5
20	.7	1.5	2.5		50	115	134	15	1.5	.5
21	.7	1.5			67	137	126	14	1.3	.5
22	.7	1.5			91	101	118	12	1.3	.5
23	.7	1.5			87	104	108	11	1.2	.6
24	.8	1.6			99	178	101	10	1.2	.6
25	.8	1.6			95	260	96	9	1.2	1.2
26	.8	1.6		9	78	312	92	8	1.0	1.3
27	.8	1.6		9.5	118	350	97	7.5	1.0	1.0
28	.8	1.6		10	170	424	93	6	1.0	.8
29	.8	1.8		10	156	490	82	5.5	.8	.6
30	.8	2.8		12	103	519	73	5	.8	.6
31	.8			14		498		4.7	.8	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.8	0.5	0.65	39.8
November	2.8	.8	1.39	82.7
December			2.34	144
January			3.0	184
February			3.0	167
March			6.92	425
April	170	16	74.1	4,410
May	519	51	155	9,530
June	481	73	246	14,600
July	67	4.7	27.7	1,700
August	4.4	.8	2.05	126
September	1.3	.5	.63	37.3
The year	519	.5	43.5	31,400

FINNON RESERVOIR OUTLET NEAR PLACERVILLE, CALIF.

LOCATION.—Staff gage in SE¼ sec. 16, T. 11 N., R. 11 E., at weir 400 feet below Finnon Reservoir and 10 miles northeast of Placerville. Altitude, about 2,450 feet.

RECORDS AVAILABLE.—October 1922 to September 1933.

DISCHARGE.—Maximum mean daily during year, 12 second-feet Mar. 28–29, Sept. 1; no flow for several months.

1922–33: Maximum, 106 second-feet Mar. 21, 1925 (gage height, 2.60 feet); water is usually turned out of canal part of each day. Average, 11 years (1922–33), 3.25 second-feet.

REMARKS.—Records good. Discharge estimated Jan. 11 to Feb. 23, Sept. 19–30. Water is diverted into Finnon Reservoir from One Eye and Slab Creeks. Outlet flow used for power development.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	1.5	2.7	2.7	1.7	1.5	7	5.5	5.5	5.5	2.4	3.8
2	1.5	1.5	2.7	2.7	1.0	1.5	5.5	5.5	5.5	5.5	2.4	0
3	1.5	1.5	2.7	2.7	1.0	1.5	5.5	5.5	5.5	5.5	2.4	0
4	1.5	1.5	2.7	2.7	1.0	1.5	5.5	5.5	5.5	5.5	2.4	0
5	1.5	1.5	2.7	2.7	1.0	1.5	5.5	5.5	5.5	2.2	2.4	1.8
6	1.5	1.5	2.7	2.7	1.0	.9	1.5	5.5	5.5	5.5	2.4	1.8
7	1.5	1.5	2.7	2.7	1.0	.9	1.5	5.5	5.5	5.5	2.4	1.8
8	1.5	1.5	2.7	2.7	1.0	.9	1.5	6	5.5	5.5	2.4	1.8
9	1.5	1.5	2.7	2.7	1.0	.9	5.5	7	5.5	5.5	2.4	0
10	1.5	1.5	2.7	2.7	1.0	.9	5.5	7	5.5	5.5	1.7	0
11	1.5	1.5	.9	2.0	1.0	.9	5.5	7	5.5	5.5	2.3	1.8
12	1.5	1.5	3.1	2.0	1.0	.9	5.5	7	5.5	5.5	2.3	1.8
13	1.5	1.5	8.5	2.0	1.0	.9	5.5	7	5.5	2.4	0	1.8
14	1.5	1.5	6.5	2.0	1.0	.9	5.5	7	5.5	2.4	2.3	1.8
15	1.5	1.5	2.0	2.0	1.0	.9	5.5	7	5.5	2.4	2.3	1.8
16	1.5	1.5	1.8	2.0	1.0	2.0	5.5	7	5.5	2.4	2.3	0
17	1.5	1.5	0	2.0	1.0	2.4	5.5	7	5.5	2.4	2.3	0
18	1.5	1.5	0	2.0	1.0	2.4	5.5	7	5.5	2.4	2.3	2.4
19	1.5	1.5	0	2.0	1.0	2.4	5.5	5.5	5.5	2.4	2.3	2.4
20	1.5	1.5	0	2.0	1.0	2.4	5.5	5.5	5.5	2.4	2.3	2.4
21	1.5	1.5	0	2.0	1.0	2.4	5.5	5.5	5.5	2.4	2.3	2.4
22	1.5	1.5	0	2.0	1.0	2.4	5.5	5.5	5.5	2.4	2.3	2.4
23	1.5	1.5	0	2.0	1.0	2.4	5.5	5.5	5.5	2.4	2.3	2.4
24	1.5	1.5	0	2.0	1.5	2.4	5.5	5.5	5.5	2.4	2.3	2.4
25	1.5	1.5	0	2.0	1.5	2.4	5.5	5.5	5.5	2.4	2.3	2.4
26	1.5	1.5	0	2.0	1.5	2.4	5.5	5.5	5.5	2.4	0	0
27	1.5	1.5	0	2.0	1.5	2.4	5.5	5.5	5.5	2.4	0	0
28	1.5	1.5	0	2.0	1.5	9	5.5	5.5	5.5	2.4	2.3	0
29	1.5	2.7	0	2.0	-----	7	5.5	5.5	5.5	2.4	2.3	0
30	1.5	2.7	.6	2.0	-----	5.5	5.5	5.5	5.5	2.3	2.3	0
31	1.5	-----	2.7	2.0	-----	5.5	-----	5.5	-----	2.3	2.3	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.5	1.5	1.50	92.2
November	2.7	1.5	1.58	94.0
December	8.5	0	1.71	105
January	2.7	2.0	2.23	137
February	1.7	1.0	1.11	61.6
March	9	.9	2.32	143
April	7	1.5	5.15	306
May	7	5.5	6.00	369
June	5.5	5.5	5.50	327
July	5.5	2.2	3.60	215
August	2.4	0	2.10	129
September	3.8	0	1.71	102
The year	9	0	2.88	2,080

SOUTH FORK OF AMERICAN RIVER FLUME NEAR CAMINO, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 25, T. 11 N., R. 11 E., 1 mile below diversion dam and 3 miles northwest of Camino. Altitude, about 1,710 feet.

RECORDS AVAILABLE.—November 1922 to September 1933.

DISCHARGE.—Maximum mean daily during year, 102 second-feet July 14, 15, 18; no flow at times.

1922-33: Maximum mean daily, 124 second-feet Jan. 20, 1931; no flow at times each year. Average, 11 years (1922-33), 89.3 second-feet.

REMARKS.—Records good. Flume diverts from South Fork of American River in SW¼ sec. 24, T. 11 N., R. 11 E., and is used to develop power in SW¼ sec. 20, T. 11 N., R. 11 E., just above mouth of Rock Creek, where water is returned to river.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	76	76	75	0	66	6	78	92	92	88	71
2	76	80	78	72	0	60	6	80	90	92	82	57
3	72	83	76	76	42	6	5.5	78	85	92	80	52
4	78	82	66	75	64	56	4.8	75	78	94	80	50
5	80	85	64	74	68	74	21	74	85	92	97	52
6	78	64	78	74	69	76	6	78	90	94	85	50
7	82	69	76	74	76	78	8.5	76	90	92	80	59
8	74	80	78	69	68	39	50	76	92	94	85	74
9	76	78	78	74	74	32	59	80	92	92	87	44
10	64	75	62	72	64	76	0	82	90	94	83	48
11	62	74	68	72	70	38	0	82	82	94	80	41
12	76	78	75	72	66	0	0	82	90	96	82	56
13	75	62	63	74	28	12	9.5	78	94	99	76	52
14	75	62	60	74	51	0	0	78	92	102	82	50
15	78	78	58	76	75	0	0	85	92	102	70	48
16	74	76	58	78	44	0	1.5	87	90	99	70	64
17	69	70	62	75	11	0	0	92	87	99	83	43
18	72	78	60	72	28	0	0	94	83	102	88	40
19	72	74	64	80	0	0	0	92	87	97	80	47
20	75	52	70	76	0	8	0	92	90	96	78	50
21	76	60	70	76	0	6	44	90	90	96	77	36
22	72	76	70	76	0	50	72	90	88	96	79	47
23	69	75	72	75	0	72	72	70	87	82	80	35
24	74	64	70	75	0	75	34	81	88	90	69	49
25	76	66	66	33	0	74	61	90	87	90	68	53
26	76	74	70	0	0	69	70	92	90	90	74	59
27	80	58	76	0	37	74	72	88	90	92	64	56
28	76	58	76	0	16	74	75	92	90	88	65	49
29	82	72	72	0	-----	32	76	82	92	87	67	48
30	60	76	75	0	-----	6	78	90	90	80	67	42
31	74	-----	75	0	-----	6	-----	88	-----	78	73	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	82	60	74.2	4,560
November	85	52	71.8	4,270
December	78	58	69.7	4,290
January	80	0	58.7	3,610
February	76	0	34.0	1,890
March	78	0	37.4	2,300
April	78	0	27.7	1,650
May	94	70	83.6	5,140
June	94	78	88.8	5,280
July	102	78	93.0	5,720
August	97	64	78.0	4,800
September	74	35	50.7	3,020
The year	102	0	64.3	46,500

CACHE CREEK BASIN

CLEAR LAKE AT LAKEPORT, CALIF.

LOCATION.—Staff gage at municipal wharf on north side of Third Street, at Lakeport, Lake County. Capacity, about 420,000 acre-feet. Altitude, about 1,320 feet.

DRAINAGE AREA.—420 square miles, including water surface of lake (65 square miles).

EXTREMES.—Maximum gage height during year, 2.60 feet Apr. 4-8; minimum, -0.10 foot Nov. 2-10, 17-18, Dec. 6-22.

1913-33: Maximum gage height, 11.12 feet Jan. 28, 1914; minimum, -3.50 feet Sept. 24-27, 1920.

REMARKS.—Gage-height record furnished by Clear Lake Water Co. Record Aug. 20 to Sept. 30 is that at Clear Lake Dam adjusted to Lakeport gage datum.

Gage height, in feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.40	-0.05	-0.05	0.15	1.25	1.65	2.50	2.45	2.30	1.82	1.20	0.45
2	.40	-.10	-.05	.15	1.30	1.70	2.55	2.45	2.30	1.80	1.18	.41
3	.40	-.10	-.05	.20	1.30	1.65	2.55	2.40	2.28	1.78	1.15	.39
4	.40	-.10	-.05	.20	1.30	1.65	2.60	2.45	2.25	1.75	1.02	.35
5	.40	-.10	-.05	.20	1.30	1.70	2.60	2.40	2.28	1.75	.98	.32
6	.40	-.10	-.10	.20	1.30	1.65	2.60	2.40	2.28	1.72	.98	.35
7	.35	-.10	-.10	.20	1.35	1.70	2.60	2.45	2.25	1.60	1.05	.31
8	.35	-.10	-.10	.20	1.35	1.70	2.60	2.45	2.20	1.70	1.05	.29
9	.30	-.10	-.10	.20	1.35	1.65	2.58	2.48	2.18	1.68	1.00	.21
10	.30	-.10	-.10	.20	1.35	1.70	2.55	2.42	2.18	1.68	1.01	.23
11	.30	-.05	-.10	.20	1.40	1.70	2.55	2.45	2.18	1.65	1.02	.21
12	.30	-.05	-.10	.20	1.40	1.70	2.60	2.45	2.18	1.65	1.03	.21
13	.25	-.05	-.10	.20	1.45	1.75	2.50	2.45	2.18	1.60	1.03	.20
14	.25	-.05	-.10	.20	1.50	1.80	2.55	2.45	2.15	1.60	.95	.21
15	.20	-.05	-.10	.20	1.50	1.85	2.55	2.45	2.15	1.58	.90	.17
16	.20	-.05	-.10	.20	1.50	2.00	2.50	2.45	2.10	1.58	.90	.13
17	.15	-.10	-.10	.20	1.55	2.05	2.50	2.40	2.08	1.55	.85	.17
18	.15	-.10	-.10	.20	1.60	2.10	2.50	2.40	2.05	1.50	.85	.17
19	.15	-.05	-.10	.20	1.60	2.20	2.50	2.40	2.00	1.50	.81	.15
20	.10	-.05	-.10	.20	1.60	2.30	2.50	2.40	2.00	1.50	.69	.15
21	.05	-.05	-.10	.25	1.65	2.30	2.50	2.38	2.00	1.45	.68	.15
22	.00	-.05	-.10	.30	1.60	2.30	2.50	2.40	1.98	1.40	.68	.15
23	.00	-.05	0	.35	1.55	2.35	2.50	2.40	1.95	1.38	.63	.15
24	.00	-.05	.15	.40	1.65	2.35	2.50	2.38	1.95	1.38	.64	.10
25	.00	-.05	.15	.45	1.65	2.35	2.45	2.35	1.95	1.38	.58	.10
26	.00	-.05	.15	.50	1.65	2.40	2.50	2.45	1.90	1.38	.57	.10
27	.00	-.05	.15	.75	1.65	2.45	2.50	2.35	1.90	1.28	.58	.10
28	.00	-.05	.15	.90	1.65	2.45	2.50	2.35	1.85	1.28	.53	.05
29	.00	-.05	.15	.95	-----	2.50	2.40	2.35	1.85	1.28	.49	.05
30	.00	-.05	.15	1.10	-----	2.50	2.45	2.35	1.85	1.25	.45	.05
31	.00	-----	.15	1.20	-----	2.50	-----	2.35	-----	1.25	.46	-----

CACHE CREEK AT YOLO, CALIF.

LOCATION.—Water-stage recorder 800 feet above highway bridge, 1,000 feet above Southern Pacific Co.'s railroad bridge, and half a mile south of Yolo, Yolo County. Altitude, about 60 feet.

DRAINAGE AREA.—1,230 square miles.

RECORDS AVAILABLE.—January 1903 to September 1933.

DISCHARGE.—Maximum during year, 2,210 second-feet Jan. 28 (gage height, 6.38 feet); no flow for several months.

1903-33: Maximum, 21,100 second-feet Feb. 2, 1915 (gage height, 29.8 feet, present datum); no flow for periods in nearly every year. Average, 30 years (1903-33), 509 second-feet.

REMARKS.—Records good. Numerous irrigation diversions above station; storage at Clear Lake.

Discharge, in second-feet, 1932-33

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1.....	0	196	7.5	93	16.....	0	70	164	0
2.....	0	155	6.5	89	17.....	0	64	582	0
3.....	0	127	6.5	71	18.....	0	77	448	0
4.....	0	105	20	56	19.....	0	59	312	0
5.....	0	87	32	38	20.....	0	51	214	0
6.....	0	97	15	22	21.....	0	48	152	0
7.....	0	109	2.8	19	22.....	0	38	117	0
8.....	0	97	0	13	23.....	0	25	77	0
9.....	0	81	0	8	24.....	0	29	77	0
10.....	0	64	0	.8	25.....	32	30	70	0
11.....	0	52	0	0	26.....	164	25	79	0
12.....	0	51	0	0	27.....	202	18	81	0
13.....	0	64	13	0	28.....	1,450	14	148	0
14.....	0	83	252	0	29.....	702	-----	348	0
15.....	0	87	190	0	30.....	664	-----	214	0
					31.....	308	-----	149	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	1,450	0	114	7,010
February.....	196	14	71.5	3,970
March.....	582	0	122	7,500
April.....	93	0	13.7	815
The year.....	1,450	0	26.6	19,300

NOTE.—No flow during months omitted.

NORTH FORK OF CACHE CREEK NEAR LOWER LAKE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 31, T. 14 N., R. 6 W., 3 miles above mouth and 7 miles northeast of Lower Lake. Altitude, about 1,050 feet.

RECORDS AVAILABLE.—July 1930 to September 1933.

DISCHARGE.—Maximum during year, 2,540 second-feet Jan. 27 (gage height, 5.40 feet); no flow several months.

1930-33: Maximum, about 14,300 second-feet Dec. 26, 1931 (gage height, 9.65 feet); no flow several months each year.

REMARKS.—Records good except those for high stages, which are fair. Several small diversions above gage.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	0	12	148	107	175	47	34	6
2	0	12	130	146	168	69	34	6
3	0	48	120	210	146	57	33	4.8
4	0	64	120	158	136	51	32	4.5
5	0	38	158	124	122	47	31	3.9
6	0	30	166	111	113	46	30	3.5
7	0	24	146	109	107	69	27	3.2
8	0	20	122	111	100	100	25	2.8
9	0	19	103	109	93	82	24	2.6
10	0	16	91	102	87	74	24	2.4
11	0	15	91	96	84	69	21	2.0
12	0	14	124	295	79	69	20	1.6
13	0	14	172	500	75	66	19	1.4
14	0	14	143	369	72	62	16	1.1
15	0	14	122	308	71	59	14	1.0
16	0	14	136	711	69	57	13	.9
17	0	13	161	578	68	58	13	.7
18	.4	20	133	400	65	71	13	.5
19	21	31	111	312	62	65	13	.5
20	9.5	27	102	260	59	61	12	.4
21	17	32	98	226	58	59	12	.4
22	11	40	94	195	58	58	10	.3
23	210	57	93	172	62	54	10	.3
24	87	134	93	148	54	52	9.5	.3
25	42	161	87	150	53	48	9.5	.2
26	27	109	91	148	51	47	9	.2
27	20	1,150	98	140	48	45	8	.1
28	17	401	98	409	46	42	8	0
29	15	365	-----	278	45	38	7.5	0
30	14	226	-----	230	44	36	7	0
31	13	166	-----	198	-----	35	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	210	0	16.3	1,000
January	1,150	12	106	6,520
February	172	87	120	6,660
March	711	96	239	14,700
April	175	44	82.0	4,880
May	100	35	57.8	3,660
June	34	7	18.0	1,070
July	6	0	1.66	102
The year	1,150	0	53.2	38,500

NOTE.—No flow during months omitted.

PUTAH CREEK BASIN

PUTAH CREEK NEAR GUENOC, CALIF.

LOCATION.—Water-stage recorder in sec. 22, T. 11 N., R. 6 W., just above dam site $3\frac{1}{2}$ miles downstream from highway bridge at Guenoc, Lake County. Altitude, about 925 feet.

DRAINAGE AREA.—112 square miles.

RECORDS AVAILABLE.—February 1904 to July 1906; July 1930 to September 1933.

DISCHARGE.—Maximum during year, 6,320 second-feet Jan. 27 (gage height, 11.16 feet); minimum, 0.6 second-foot Oct. 4.

1904-6, 1930-33: Maximum, 24,600 second-feet Mar. 10, 1904 (gage height, 20.1 feet, former gage datum); minimum, 0.6 second-foot Sept. 30, Oct. 4, 1932.

REMARKS.—Records excellent for low and medium stages, good for high stages. Small diversions above gage.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.0	1.5	1.5	10	262	59	191	42	22	7.5	5	3.5
2.....	1.5	1.5	1.5	9.5	210	60	168	63	22	8	5	3.5
3.....	1.1	1.5	1.5	102	179	82	154	48	22	8	5	3.5
4.....	1.0	1.5	1.4	87	159	72	140	41	22	8	5	3.5
5.....	1.0	1.5	1.4	52	152	65	128	37	21	7	3.9	3.5
6.....	1.6	1.5	1.4	38	144	60	120	36	20	7	5	3.5
7.....	1.7	1.5	1.4	31	128	56	112	139	19	7	3.7	3.5
8.....	1.7	1.5	1.4	26	119	54	104	115	18	7	3.0	3.4
9.....	1.7	1.5	1.4	23	108	51	98	88	17	7.5	3.7	3.4
10.....	1.7	1.4	1.4	20	98	49	92	75	17	7	3.5	3.4
11.....	1.7	1.4	1.4	19	104	49	87	67	16	7	3.5	3.4
12.....	1.7	1.4	1.3	18	190	244	82	63	14	7.5	3.2	3.2
13.....	1.7	1.4	1.3	17	179	504	78	61	14	7.5	4.3	3.0
14.....	1.6	1.4	1.3	16	144	272	74	55	13	6.5	3.2	2.9
15.....	1.6	1.4	1.3	16	127	292	71	50	12	6	3.0	2.9
16.....	1.5	1.4	1.4	16	128	1,540	68	47	11	7	4.3	2.9
17.....	1.5	1.3	1.3	15	123	661	67	50	11	6	3.7	2.9
18.....	1.5	1.4	1.2	40	112	379	65	56	12	5.5	4.1	2.9
19.....	1.5	1.4	2.3	145	101	276	61	50	11	5	3.9	2.9
20.....	1.4	1.5	7.5	88	95	274	58	47	11	4.4	3.9	2.9
21.....	1.5	1.5	2.2	109	90	190	55	43	11	4.8	3.9	2.8
22.....	1.5	1.5	3.8	140	82	168	52	41	10	5.5	3.9	2.7
23.....	1.5	1.5	251	258	78	150	50	37	10	5.5	3.7	2.7
24.....	1.4	1.5	96	931	74	135	47	36	9.5	5.5	3.7	2.8
25.....	1.4	1.5	44	706	68	147	43	34	9.5	5.5	3.7	2
26.....	1.4	1.5	27	342	65	147	41	32	9	5.5	3.4	1.8
27.....	1.4	1.6	20	2,910	63	184	38	30	9	5	3.5	1.7
28.....	1.4	1.6	16	792	61	883	37	29	9	5	3.5	1.6
29.....	1.4	1.8	13	1,340	-----	371	36	28	8.5	5	3.5	1.6
30.....	1.4	1.7	12	539	-----	270	36	25	9	4.8	3.5	1.7
31.....	1.5	-----	11	342	-----	220	-----	23	-----	5	3.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1.7	1.0	1.47	99.4
November.....	1.8	1.3	1.49	88.7
December.....	251	1.2	17.1	1,000
January.....	2,910	9.5	267	18,309
February.....	262	61	123	6,830
March.....	1,540	49	257	15,800
April.....	191	36	81.8	4,870
May.....	139	23	51.2	3,150
June.....	22	8.5	14.0	533
July.....	8	4.4	6.24	384
August.....	5	3.0	3.86	237
September.....	3.5	1.6	2.90	173
The year.....	2,910	1.0	71.5	51,800

PUTAH CREEK NEAR WINTERS, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 28, T. 8 N., R. 2 W., 6 miles west of Winters. Altitude, about 160 feet.

RECORDS AVAILABLE.—June 1930 to September 1933. Records 1905-31 for Putah Creek at Winters are practically comparable.

DISCHARGE.—Maximum during year, 10,500 second-feet Jan. 27 (gage height, 14.67 feet); minimum, 0.7 second-foot Sept. 3.

1930-33: Maximum, 30,000 second-feet Dec. 27, 1931 (gage height, 21.8 feet); minimum, 0.3 second-foot Aug. 23-24, 26-27, 1931.

REMARKS.—Records good except those for Dec. 9-20, Dec. 22 to Jan. 16, July 24 to Aug. 19, which were estimated. Several small irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	3.6	5.5	15	645	90	420	67	32	9	3.0	2.0
2	3.4	3.6	5.5	15	495	87	355	76	31	9	2.9	2.0
3	3.3	3.8	5	100	392	86	312	83	30	9	2.8	1.7
4	3.2	3.8	5	160	320	94	276	84	29	9	2.7	2.3
5	3.3	4.2	5	100	271	99	246	74	28	8	2.6	2.2
6	3.3	4.5	4.8	60	246	90	220	68	28	8	2.5	2.4
7	3.3	4.3	4.6	50	222	84	205	68	26	8	2.4	2.3
8	3.5	4.2	4.6	40	197	80	188	117	26	8	2.3	2.1
9	3.6	4.2	4.6	35	173	76	173	164	20	7.5	2.2	2.0
10	3.5	4.0	4.6	30	160	73	160	132	20	7.5	2.1	1.7
11	3.4	3.9	4.6	30	154	72	150	115	20	7.5	2.1	1.7
12	3.3	3.9	4.6	28	242	85	142	107	19	6.5	2.0	1.9
13	3.4	3.9	4.6	25	320	308	133	103	18	6.5	2.0	1.9
14	3.5	4.0	4.6	25	278	585	126	97	16	6.5	1.9	1.9
15	3.6	4.3	4.6	24	224	380	119	88	13	5.5	1.9	1.8
16	3.6	4.3	4.6	24	199	1,630	115	79	13	5.5	1.8	1.7
17	3.4	4.2	4.6	22	194	1,660	111	74	12	5.5	1.8	1.4
18	3.0	4.2	4.6	26	183	840	111	71	12	5.5	1.7	1.4
19	2.8	4.0	9	53	165	585	107	73	12	5.5	1.7	1.4
20	2.8	4.2	11	153	150	450	103	72	11	5.5	1.6	1.4
21	2.8	4.3	9	150	139	368	99	70	11	4.6	1.7	1.5
22	2.9	4.5	7.5	280	132	310	95	66	10	4.2	1.7	1.6
23	3.2	4.5	180	555	124	271	90	63	10	3.9	1.7	1.7
24	3.3	4.5	170	769	115	238	86	60	10	3.8	1.8	1.7
25	3.2	4.5	120	2,500	106	218	82	56	10	3.7	1.8	1.8
26	2.9	4.5	75	963	101	240	79	52	10	3.6	1.8	1.8
27	2.9	4.6	50	4,100	97	234	76	49	10	3.5	1.9	1.8
28	3.2	4.8	30	2,660	94	1,780	74	46	10	3.4	1.9	1.7
29	3.3	5.5	25	3,580	-----	1,180	71	42	9.5	3.3	2.0	1.5
30	3.4	6	20	1,730	-----	698	68	38	9.5	3.2	2.1	1.5
31	3.5	-----	16	900	-----	525	-----	35	-----	3.1	2.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.6	2.8	3.27	201
November	6	3.6	4.29	255
December	180	4.6	26.1	1,690
January	4,100	15	619	38,100
February	645	94	219	12,200
March	1,780	72	436	26,800
April	420	68	153	9,100
May	164	35	77.1	4,740
June	32	9.5	17.2	1,020
July	9	3.1	5.91	363
August	3.0	1.6	2.08	128
September	2.4	1.4	1.79	107
The year	4,100	1.4	131	94,600

NAPA RIVER BASIN

CONN CREEK NEAR ST. HELENA, CALIF.

LOCATION.—Water-stage recorder in sec. 3, T. 7 N., R. 5 W., a quarter of a mile upstream from highway bridge and 4 miles southeast of St. Helena. Altitude, about 180 feet.

DRAINAGE AREA.—52.0 square miles.

RECORDS AVAILABLE.—November 1929 to September 1933.

DISCHARGE.—Maximum during year, 768 second-feet Jan. 29 (gage height, 5.55 feet); no flow Oct. 1 to Dec. 18 and June 8 to Sept. 30.

1930-33: Maximum, 2,720 second-feet Dec. 27, 1931 (gage height, 8.31 feet); no flow several months each year.

REMARKS.—Records good. Small diversions for irrigation above station.

Discharge, in second-feet, 1932-33

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	0.8	32	4.5	19	2.9	0.1
2	0	.8	23	4.2	16	3.9	.1
3	0	1.6	17	4.5	14	2.9	.3
4	0	3.8	14	4.5	14	2.9	.8
5	0	2.3	11	4.5	11	2.6	.9
6	0	1.8	9.5	4.5	11	2.3	.5
7	0	1.3	9	4.2	11	4.5	.1
8	0	1.1	7	4.2	9	3.9	0
9	0	.9	8	4.2	8.5	3.2	0
10	0	1.0	6	3.9	8	2.9	0
11	0	.8	9.5	3.9	7	2.9	0
12	0	.6	20	7	6.5	3.9	0
13	0	.6	12	9	6.5	3.9	0
14	0	.5	9.5	6.5	5.5	3.2	0
15	0	.6	8.5	7	5	2.9	0
16	0	.7	9	78	5.5	2.6	0
17	0	.7	9	37	5	2.6	0
18	0	1.3	8	24	4.5	2.6	0
19	1.6	9.5	7	19	4.5	2.3	0
20	3.8	6.5	6.5	15	4.2	1.9	0
21	3.8	12	6.5	14	3.9	1.9	0
22	3.3	20	6.5	11	3.5	1.9	0
23	18	42	6.5	11	3.9	1.9	0
24	7	86	6	9.5	3.5	1.6	0
25	3.0	82	6	11	3.5	1.6	0
26	1.8	32	5.5	10	3.5	1.3	0
27	1.2	268	5	9.5	2.9	1.3	0
28	1.1	90	5	128	2.6	1.0	0
29	1.0	259	-----	44	2.9	.7	0
30	.8	72	-----	31	2.6	.4	0
31	.9	43	-----	23	-----	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	18	0	1.53	94.1
January	268	.5	33.7	2,070
February	32	5	10.1	561
March	128	3.9	17.8	1,090
April	19	2.6	6.95	414
May	4.5	.2	2.41	148
June	.9	0	.09	5.6
The year	268	0	6.06	4,380

NOTE.—No flow during months omitted.

EEL RIVER BASIN

LAKE PILLSBURY AT HULLVILLE, CALIF.

LOCATION.—Staff gage on line between sec. 14 and 23, T. 18 N., R. 10 W., at Scott Dam, on Eel River, at Hullville. Elevation of crest of dam is 1,900 feet above mean sea level.

RECORDS AVAILABLE.—October 1922 to September 1933.

REMARKS.—Lake Pillsbury, which has a capacity of 73,200 acre-feet, is a storage reservoir of Pacific Gas & Electric Co. Water is released to operate power plant at Potter Valley, after which part is used for irrigation and remainder wasted into East Fork of Russian River. Daily gage-height record furnished by Pacific Gas & Electric Co.

Contents, in acre-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69,470	57,560	41,200	32,860	43,410	57,910	93,720	93,960	94,200	90,720	77,990	60,230
2	69,280	57,080	40,770	32,980	43,560	59,510	94,430	94,430	93,960	90,400	77,360	59,510
3	69,080	56,510	40,200	34,370	43,700	63,540	94,430	94,200	93,960	90,260	76,740	58,800
4	68,880	55,810	39,630	35,150	44,310	65,610	94,430	93,960	93,720	90,030	76,320	58,260
5	68,690	55,290	38,790	35,670	45,220	66,950	94,200	93,960	93,720	89,800	75,700	57,740
6	68,490	54,780	38,510	35,940	46,140	68,300	94,200	93,960	93,720	89,580	75,300	57,030
7	68,100	54,270	38,100	36,200	46,760	69,280	93,960	94,200	93,490	89,350	74,470	56,330
8	67,520	53,580	37,560	36,340	47,390	70,460	93,720	94,430	93,490	89,120	73,660	56,160
9	67,140	53,250	36,870	36,600	47,860	71,650	93,720	94,430	93,720	88,890	73,260	55,640
10	66,760	52,580	36,340	36,730	48,180	72,650	93,720	94,200	93,720	88,670	72,850	54,950
11	66,180	51,910	35,800	36,870	48,660	73,660	93,720	94,200	93,720	88,440	72,040	54,610
12	65,800	51,420	35,150	37,000	49,620	77,360	93,720	94,200	93,720	88,220	71,650	53,930
13	65,040	50,760	34,630	37,140	50,760	82,030	93,960	94,200	93,720	87,770	71,250	53,250
14	64,470	50,270	34,110	37,280	51,420	83,120	93,960	94,200	93,490	87,320	70,460	52,580
15	63,910	49,620	33,480	37,410	51,910	84,460	93,960	94,200	93,490	86,870	70,060	51,910
16	63,350	48,980	32,980	37,550	52,410	84,430	93,960	94,200	93,260	86,420	69,280	51,580
17	62,800	48,460	32,480	37,690	53,250	83,770	93,960	94,430	93,260	85,980	68,880	51,580
18	62,610	48,020	31,980	37,820	53,930	81,820	93,960	94,430	93,260	85,540	68,100	51,420
19	62,240	47,390	32,480	37,960	54,270	81,170	93,720	94,430	93,030	84,650	67,520	51,420
20	62,060	46,760	33,480	37,690	54,610	81,820	93,720	94,430	92,800	84,210	66,950	51,250
21	61,690	46,140	33,480	37,140	54,950	82,900	93,490	94,200	92,560	83,770	66,180	51,250
22	61,320	45,680	33,230	36,870	55,120	84,210	93,490	94,200	92,330	82,900	65,800	51,090
23	60,590	45,220	34,500	36,600	55,490	85,310	93,490	94,200	92,100	82,460	65,040	51,090
24	60,050	44,610	35,280	36,340	55,640	85,760	93,720	94,200	91,870	82,030	64,660	50,920
25	59,510	44,000	35,150	36,600	55,990	86,640	93,720	94,200	91,640	81,390	64,280	50,920
26	59,330	43,410	34,760	36,340	56,330	87,540	93,720	94,200	91,400	80,960	63,540	50,920
27	59,160	42,810	34,240	38,790	56,680	88,220	93,720	94,200	91,400	80,530	62,980	50,920
28	58,980	42,220	33,990	41,060	57,200	92,330	93,720	94,200	91,180	80,100	62,420	50,920
29	58,800	41,780	33,610	42,080	-----	94,200	93,720	94,200	90,950	79,470	61,690	50,760
30	58,440	41,640	33,230	42,810	-----	93,720	93,960	94,200	90,950	78,830	60,960	50,760
31	58,090	-----	32,730	43,260	-----	93,030	-----	94,200	-----	78,410	60,590	-----

Date	Contents	Change in contents during month	Date	Contents	Change in contents during month
Sept. 30	69,860	-----	May 31	94,200	+240
Oct. 31	58,090	-11,770	June 30	90,950	-3,250
Nov. 30	41,640	-16,450	July 31	78,410	-12,540
Dec. 31	32,730	-8,910	Aug. 31	60,590	-17,820
Jan. 31	43,260	+10,530	Sept. 30	50,760	-9,830
Feb. 28	57,200	+13,940			
Mar. 31	93,030	+35,830	The year	-----	-19,100
Apr. 30	93,960	+930			

EEL RIVER AT HULLVILLE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 22, T. 18 N., R. 10 W., half a mile downstream from Scott Dam and half a mile west of Hullville. Altitude, about 1,800 feet.

RECORDS AVAILABLE.—November 1922 to September 1933.

DISCHARGE.—Maximum during year, 3,110 second-feet Mar. 16 (gage height, 9.39 feet); minimum, 1.7 second-feet Jan. 9.

1922-33: Maximum, 32,600 second-feet Mar. 26, 1928 (gage height, 21.0 feet, present datum); practically no flow at times due to regulation. Average, 10 years (1923-33), 348 second-feet.

REMARKS.—Records good. Discharge computed from needle valve rating at Scott Dam Oct. 11-18, Nov. 3-18, Dec. 24-31. See record for Lake Pillsbury, which stores water above station. Gage-height record furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	315	288	3.6	285	179	354	376	402	157	279	256
2	110	318	288	2.8	238	70	665	462	370	157	288	312
3	109	320	294	4.2	98	17	950	406	389	157	270	312
4	109	320	306	2.8	10	33	1,000	370	321	155	270	309
5	108	320	306	2.6	10	74	950	354	306	147	263	303
6	108	320	288	2.4	73	116	875	342	303	142	345	297
7	220	310	245	2.2	59	143	732	465	248	140	345	207
8	208	310	303	2.0	74	150	540	520	216	140	258	185
9	212	310	303	1.8	93	150	532	476	218	139	228	294
10	212	305	300	2.5	65	152	409	448	218	145	288	294
11	250	310	300	3.8	17	126	357	430	218	167	255	297
12	315	310	306	4.0	18	42	367	420	218	200	242	300
13	300	310	312	3.8	51	419	378	409	216	198	250	303
14	300	310	312	3.8	64	1,590	388	420	216	198	294	300
15	260	305	312	3.6	117	1,500	412	426	206	196	294	270
16	275	305	318	3.6	190	2,160	423	430	196	206	294	121
17	170	300	309	3.6	149	2,710	406	486	196	309	294	26
18	78	300	306	3.8	124	1,900	381	548	196	306	294	29
19	102	309	185	145	145	992	357	508	196	312	294	37
20	96	309	184	297	180	636	345	476	196	300	294	37
21	172	306	252	282	198	271	339	448	196	285	294	37
22	294	306	306	262	204	73	309	423	196	265	294	37
23	294	303	118	282	204	336	282	406	196	262	235	34
24	294	306	100	230	204	250	288	406	194	282	196	29
25	177	315	270	208	204	126	300	412	194	264	244	29
26	96	312	315	248	204	86	306	420	157	248	306	26
27	96	312	300	132	204	228	306	423	133	248	306	26
28	99	312	270	42	204	145	321	430	133	252	306	26
29	197	309	320	42	-----	869	348	437	149	264	306	26
30	107	297	315	41	-----	1,230	345	448	157	241	306	26
31	225	-----	170	160	-----	766	-----	430	-----	249	238	-----
Month	Maximum		Minimum		Mean		Run-off in		acre-feet			
October	315	78	181	11,100								
November	320	297	310	18,400								
December	320	100	273	16,800								
January	297	1.8	78.3	4,810								
February	285	10	132	7,330								
March	2,710	17	566	34,800								
April	1,000	282	466	27,700								
May	548	342	434	26,700								
June	402	133	233	13,300								
July	312	139	217	13,300								
August	345	196	280	17,200								
September	312	26	160	9,520								
The year	2,710	1.8	278	201,000								

EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.—Staff gage in NE¼ sec. 30, T. 18 N., R. 11 W., 500 feet below Van Arsdale Dam and 5 miles north of Potter Valley. Altitude, about 1,400 feet.

RECORDS AVAILABLE.—November 1909 to September 1933 (monthly discharge only for combination of this station and Snow Mountain Water & Power Co.'s tailrace near Potter Valley, 1909-22).

DISCHARGE.—Maximum during year, 3,420 second-feet Mar. 17 (gage height, 11.0 feet); minimum, 0.6 second-foot Aug. 15-17.

1909-33: Maximum, about 40,000 second-feet Mar. 26, 1928 (gage height, 27.0 feet); minimum, 0.4 second-foot Oct. 12-13, 1931. Average, 10 years (1922-26, 1927-33), 149 second-feet.

REMARKS.—Records fair. Water diverted from Van Arsdale Reservoir to power plant in Potter Valley, after which part is used for irrigation and remainder turned into Russian River. Records show flow passing dam and down Eel River. Gage-height record furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	3.2	4.7	2.9	1.6	9	232	94	245	3.5	0.7	2.2
2	5	3.2	4.7	3.2	10	73	393	232	196	3.5	.7	1.1
3	5	2.7	5	7	12	111	770	169	162	5	.7	1.1
4	5.5	2.7	5	7	12	15	842	122	142	5	.7	1.1
5	6	2.7	4.7	6	10	10	770	107	116	4.1	.7	1.1
6	5.5	3.2	5	6	10	8.5	698	113	107	1.6	.7	1.1
7	4.7	2.9	5	6	15	8.5	628	476	89	2.4	1.0	1.8
8	4.7	2.7	4.7	6	13	9.5	347	526	43	2.4	4.4	2.4
9	4.7	2.7	4.7	6	13	9	245	492	47	2.4	9.5	1.3
10	4.7	2.2	4.7	6	13	7.5	220	413	37	2.4	5	.8
11	5	1.8	4.4	5.5	8	7.5	120	353	35	2.4	32	1.0
12	4.7	1.8	4.4	5.5	7	398	124	393	32	2.4	10	1.0
13	4.7	2.2	4.7	4.1	7	460	128	297	26	1.3	2.0	1.1
14	4.7	2.2	5	4.1	7	1,820	134	297	25	1.0	.7	2.7
15	5	2.2	5	4.1	7	1,560	163	297	26	.7	.6	2.7
16	4.7	2.2	5	4.1	7	2,400	128	310	16	.7	.6	.8
17	5	2.2	4.7	3.2	8	3,180	128	398	19	.7	.6	.7
18	12	2.7	4.4	2.4	9	2,240	128	476	3.2	.7	5	.7
19	5	3.5	51	1.0	8	994	100	428	2.2	.7	5	.7
20	3.8	3.8	4.4	.8	9	628	88	393	2.7	.7	1.6	.7
21	3.2	3.2	3.5	.8	8.5	297	80	353	2.0	2.9	1.6	.7
22	3.2	3.2	3.8	3.5	8	310	78	310	1.1	2.9	1.6	.7
23	3.2	3.2	51	3.5	8	30	49	264	1.0	1.0	1.6	.7
24	3.2	2.9	4.4	2.9	9	30	27	271	1.0	.7	3.5	.7
25	3.2	2.7	2.9	2.9	8	61	66	258	1.0	.7	3.2	1.0
26	3.2	2.7	2.7	4.1	9	6	40	258	1.3	.7	6	1.4
27	3.2	2.9	2.7	396	9.5	12	40	258	1.3	.7	4.4	1.4
28	3.2	3.8	2.7	46	9	258	46	258	1.3	.7	3.5	1.4
29	3.2	4.7	2.9	7	-----	526	62	245	1.3	.7	3.2	1.4
30	3.2	5	2.9	2.0	-----	1,150	71	258	1.3	.7	3.2	1.4
31	3.2	-----	2.9	.8	-----	918	-----	245	-----	.7	3.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	12	3.2	4.54	279
November	5	1.8	2.90	178
December	51	2.7	7.21	443
January	398	.8	18.1	1,110
February	15	1.6	9.13	507
March	3,150	6	565	34,700
April	842	27	230	18,700
May	526	94	302	18,600
June	245	1.0	45.8	2,730
July	5	.7	1.81	111
August	32	.6	3.79	233
September	2.7	.7	1.23	73.2
The year	3,150	.6	100	72,700

EEL RIVER AT SCOTIA, CALIF.

LOCATION.—Staff gage in sec. 7, T. 1 N., R. 1 E., at Wildwood Bridge, half a mile north of Scotia. Altitude, about 50 feet.

DRAINAGE AREA.—3,070 square miles.

RECORDS AVAILABLE.—December 1910 to February 1915, October 1916 to September 1933.

DISCHARGE.—Maximum during year, 58,100 second-feet Mar. 17 (gage height, 26.10 feet); minimum, 41 second-feet Oct. 5, 8, 10.

1911-33: Maximum, about 290,000 second-feet Feb. 2, 1915 (gage height, 55.5 feet); minimum, 10 second-feet Aug. 12-14, 1924. Average, 20 years (1911-14, 1916-33), 5,570 second-feet.

REMARKS.—Records good. Flow partly regulated by storage in Lake Pillsbury Reservoir. Diversions for power and irrigation near Potter Valley above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	46	69	1,400	2,280	13,300	7,840	13,100	4,280	4,740	900	231	100
2.....	46	93	1,210	2,210	12,000	17,000	11,600	6,280	4,500	768	222	96
3.....	43	93	820	12,600	10,400	42,500	10,600	6,000	4,060	768	218	96
4.....	43	96	515	18,400	9,080	22,900	11,200	4,740	3,640	725	214	96
5.....	43	138	400	8,440	9,720	17,000	10,900	4,980	3,240	640	205	96
6.....	46	123	365	5,800	10,000	12,300	9,740	5,480	2,860	640	188	96
7.....	43	127	330	4,080	9,720	10,400	9,140	6,560	3,040	640	188	96
8.....	43	164	318	2,840	8,140	9,400	7,960	14,700	3,240	640	188	96
9.....	45	155	282	2,670	6,940	8,440	7,120	14,400	2,860	599	181	96
10.....	43	164	260	2,510	6,080	8,140	5,740	10,600	2,860	599	181	96
11.....	48	155	225	2,140	5,540	7,840	5,220	9,140	2,680	558	173	93
12.....	49	147	201	1,790	10,400	16,300	4,980	7,680	2,520	558	169	91
13.....	53	147	182	1,660	14,600	37,000	4,740	7,120	2,520	558	158	93
14.....	59	147	191	1,530	12,300	26,100	4,740	6,560	2,520	520	158	96
15.....	53	138	182	1,530	9,080	21,700	4,980	6,280	2,360	482	152	91
16.....	49	130	191	1,530	10,400	44,500	5,480	6,000	2,200	454	145	93
17.....	45	123	206	1,400	12,600	53,600	4,980	6,560	2,040	433	145	96
18.....	45	123	235	1,400	10,400	29,300	4,280	6,840	1,900	412	145	100
19.....	46	123	6,080	2,140	8,440	19,100	3,840	6,560	1,760	386	139	100
20.....	48	120	14,300	2,510	7,240	15,300	3,640	6,840	1,630	361	139	100
21.....	55	116	9,080	2,510	6,640	13,100	3,240	6,280	1,390	348	129	116
22.....	69	116	6,080	3,640	6,360	11,800	3,240	6,000	1,280	325	126	116
23.....	65	116	17,000	6,080	6,080	9,740	3,240	5,740	1,340	313	121	121
24.....	74	110	16,300	9,400	6,080	8,840	3,640	6,000	1,280	302	116	126
25.....	80	110	5,020	16,300	5,800	8,840	3,840	6,000	1,280	290	113	129
26.....	69	110	6,940	12,900	5,020	10,000	4,080	6,000	1,130	280	110	126
27.....	65	120	4,780	51,400	5,020	23,300	3,640	5,740	990	270	105	132
28.....	72	306	3,640	39,700	5,540	49,800	3,240	5,740	990	260	105	126
29.....	69	1,790	2,840	27,300	-----	30,100	4,080	5,480	900	250	100	116
30.....	72	1,790	2,440	22,500	-----	21,300	4,600	5,740	900	240	100	121
31.....	69	-----	2,070	15,000	-----	16,000	-----	5,220	-----	240	100	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	80	43	54.7	3,360
November.....	1,790	69	242	14,400
December.....	17,000	182	3,360	207,000
January.....	51,400	1,400	9,230	568,000
February.....	14,600	5,020	8,680	482,000
March.....	53,600	7,840	20,300	1,250,000
April.....	13,100	3,240	6,020	358,000
May.....	14,700	4,280	6,820	419,000
June.....	4,740	900	2,290	136,000
July.....	900	240	476	29,300
August.....	231	100	154	9,470
September.....	132	91	105	6,250
The year.....	53,600	43	4,810	3,480,000

POTTER VALLEY POWER HOUSE TAILRACE NEAR POTTER VALLEY, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 6, T. 17 N., R. 11 W., at power house of Pacific Gas & Electric Co. 3 miles northwest of Potter Valley. Altitude, about 1,000 feet.

RECORDS AVAILABLE.—October 1922 to September 1933.

DISCHARGE.—Maximum mean daily during year, 321 second-feet Aug. 26; minimum, 14 second-feet Jan. 11–16.

1922–33: Maximum mean daily, that of Aug. 26, 1933; no flow several days in October 1924. Average, 11 years (1922–33), 213 second-feet.

REMARKS.—Records fair. Water is diverted from Eel River above Van Arsdale Dam. After passing through power plant part is used for irrigation in Potter Valley and remainder flows into Russian River. Irrigation water diverted from tailrace above gage is included in tables of discharge. Gage-height record for tailrace and daily-discharge record for irrigation ditches furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	301	297	39	302	302	298	307	203	151	310	179
2	114	299	298	26	296	303	297	306	204	152	315	314
3	114	298	298	235	145	302	295	303	203	152	315	317
4	115	297	299	77	89	302	295	303	196	153	216	316
5	115	298	299	17	107	303	294	295	204	153	313	316
6	115	298	301	15	233	303	295	287	208	155	317	314
7	236	296	214	19	226	305	297	203	204	149	317	272
8	213	296	299	16	229	306	300	211	209	154	195	174
9	185	296	302	16	229	305	302	160	189	154	196	319
10	209	298	302	15	157	303	300	183	208	156	316	317
11	220	296	302	14	150	303	303	201	206	189	215	317
12	276	298	305	14	196	303	300	190	207	221	314	319
13	302	297	303	14	228	303	302	210	209	219	315	319
14	297	297	303	14	249	303	302	209	210	219	317	318
15	301	296	303	14	312	302	302	207	204	220	316	216
16	226	294	301	14	309	301	302	208	205	219	297	307
17	278	295	298	15	305	303	263	208	201	318	319	30
18	110	250	299	180	306	298	309	209	205	316	217	30
19	100	297	299	190	306	293	310	209	203	316	318	30
20	130	296	299	267	308	291	309	208	203	316	317	30
21	111	297	299	268	306	289	309	208	202	219	314	30
22	306	297	280	266	306	246	299	207	203	312	315	29
23	305	297	299	309	308	98	302	207	204	316	315	25
24	301	299	305	308	310	299	315	201	205	313	180	25
25	213	298	305	306	306	299	272	204	205	313	141	25
26	84	297	305	306	305	284	312	205	145	243	321	25
27	86	297	302	305	303	303	305	204	148	316	320	25
28	84	298	212	301	302	299	306	202	145	219	318	25
29	78	298	272	302	-----	299	308	204	145	311	315	25
30	85	296	302	301	-----	297	310	203	148	312	315	25
31	195	-----	201	292	-----	297	-----	198	-----	194	315	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	306	78	181	11, 100
November	301	250	296	17, 600
December	305	201	290	17, 800
January	309	14	144	8, 850
February	312	89	255	14, 200
March	306	98	292	18, 000
April	315	263	300	17, 900
May	307	160	221	15, 600
June	210	145	194	11, 600
July	318	149	231	14, 200
August	321	141	288	17, 700
September	319	25	167	9, 940
The year	321	14	238	172, 000

KLAMATH RIVER BASIN

WILLIAMSON RIVER BELOW SPRAGUE RIVER, NEAR CHILOQUIN, OREG.

LOCATION.—Water-stage recorder in sec. 3, T. 35 S., R. 7 E., a quarter of a mile below mouth of Sprague River and three-quarters of a mile southwest of Chiloquin.

DRAINAGE AREA.—3,000 square miles.

RECORDS AVAILABLE.—June 1917 to September 1933.

DISCHARGE.—Maximum during year, 1,520 second-feet Apr. 8-10 (gage height, 3.55 feet); minimum, 430 second-feet Aug. 24, 25, 31 (gage height, 2.22 feet). 1917-33: Maximum, about 7,000 second-feet Apr. 27, 1917 (sum of discharges on that date at stations on Sprague River at Chiloquin, 4,490 second-feet, and Williamson River at Chiloquin (estimated), 2,500 second-feet); minimum, 320 second-feet Oct. 14, 1920. Average, 16 years, 844 second-feet.

REMARKS.—Records good. Discharge interpolated Sept. 17. Diversions for irrigation above station. Manipulation of gates at dams above causes considerable fluctuation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	492	573	592	573	549	567	864	916	907	543	508	476
2	492	579	592	604	543	573	907	943	1,080	537	508	476
3	520	573	585	585	537	573	934	1,010	1,130	543	503	492
4	549	573	585	573	549	573	994	1,060	1,160	611	503	503
5	460	585	579	573	537	579	1,130	1,080	1,310	618	503	492
6	460	637	598	573	537	579	1,260	1,040	1,360	604	503	481
7	460	630	720	573	520	579	1,420	916	1,310	604	508	481
8	445	592	573	567	549	585	1,520	952	1,260	598	508	476
9	450	585	503	567	520	598	1,520	952	1,250	543	508	503
10	466	585	503	579	498	604	1,520	934	1,230	549	503	531
11	816	585	492	543	508	611	1,210	898	1,200	543	492	514
12	579	585	525	537	543	664	1,030	880	1,140	585	486	503
13	549	520	537	555	543	706	970	889	1,090	573	498	498
14	549	525	508	561	531	784	970	880	1,060	543	508	492
15	543	573	492	555	561	824	970	848	1,040	537	508	486
16	549	585	498	555	561	816	1,310	800	988	531	498	486
17	555	579	514	525	555	816	1,160	768	880	555	514	489
18	549	573	520	549	555	840	1,110	699	840	549	525	492
19	549	592	549	543	555	856	1,120	728	824	531	503	492
20	549	637	561	537	555	880	1,120	776	816	520	503	498
21	549	611	561	567	561	889	1,100	832	784	514	498	498
22	561	585	567	561	567	889	1,090	848	768	508	481	502
23	573	555	579	561	567	889	1,090	848	713	508	440	602
24	567	555	573	561	561	880	1,070	824	671	508	430	508
25	567	573	567	555	561	880	1,010	768	637	508	430	508
26	567	573	585	555	567	848	952	776	618	508	435	531
27	561	579	585	537	567	792	925	768	611	508	445	549
28	567	579	579	555	567	784	925	776	573	508	455	537
29	579	585	585	555	555	768	925	907	549	508	460	525
30	579	592	592	549	549	808	916	1,040	543	508	455	520
31	573	585	585	555	555	840	840	1,130	568	465	465	520

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	816	445	542	33,200
November	637	520	582	34,600
December	720	492	561	34,500
January	604	525	559	34,400
February	567	498	547	30,400
March	889	567	738	45,400
April	1,520	864	1,100	65,500
May	1,130	699	887	54,500
June	1,360	543	945	56,200
July	618	503	542	33,300
August	525	430	487	29,900
September	549	476	501	29,800
The year	1,520	430	666	482,000

UPPER KLAMATH LAKE NEAR KLAMATH FALLS, OREG.

LOCATION.—Water-stage recorder in SW¼ sec. 19, T. 38 S., R. 9 E., 1 mile above outlet of Upper Klamath Lake and 2 miles (corrected) northwest of Klamath Falls. Zero of gage is 4,135.93 feet above mean sea level, United States Bureau of Reclamation datum, and 4,134.15 feet, United States Coast and Geodetic Survey datum, by 1929 general adjustment. Elevations given are referred to United States Bureau of Reclamation datum.

RECORDS AVAILABLE.—May 1904 to September 1933.

EXTREMES.—Maximum elevation during year, 4,143.25 feet May 21; minimum, 4,138.60 feet Nov. 1.

1904-33: Maximum elevation recorded, 4,144.98 feet about Apr. 20, 1904, determined from high-water marks; minimum (estimated), 4,135.9 feet Nov. 2, 1928.

REMARKS.—Gage heights are very much affected by wind. Considerable regulation caused by dam at outlet of lake since Apr. 15, 1919. Gage-height record furnished by The California Oregon Power Co.

Elevation, in feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39.65	39.48	40.16	40.56	41.31	41.47	42.16	42.27	42.70	42.42	41.71	40.99
2	39.63	39.79	40.18	40.69	41.31	41.52	42.18	42.77	42.60	42.40	41.70	40.94
3	39.65	39.80	40.23	40.64	41.30	41.55	42.26	42.48	42.70	42.44	41.68	40.90
4	39.66	39.69	40.19	40.64	41.30	41.57	42.40	42.74	42.76	42.49	41.76	40.85
5	39.62	39.73	40.29	40.65	41.30	41.59	42.33	42.75	42.79	42.51	41.65	40.74
6	39.60	40.04	40.20	40.67	41.25	41.59	42.48	42.48	42.78	42.48	41.70	40.97
7	39.70	39.99	40.38	40.68	41.24	41.61	42.50	42.60	42.68	42.39	41.64	40.90
8	39.59	40.01	40.80	40.71	41.25	41.61	42.51	42.67	42.39	42.30	41.56	40.89
9	39.55	40.10	40.30	40.74	41.28	41.61	42.46	42.85	42.51	42.39	41.54	40.81
10	39.55	40.20	40.27	40.76	41.27	41.61	42.38	42.89	42.68	42.35	41.53	40.77
11	39.56	40.10	40.26	40.77	41.27	41.62	42.47	42.85	42.73	42.33	41.55	40.80
12	39.56	40.08	40.26	40.79	41.28	41.67	42.46	42.77	42.78	42.29	41.57	40.76
13	39.46	40.16	40.24	40.81	41.30	41.70	42.41	42.73	42.75	42.30	41.54	40.75
14	39.48	40.16	40.19	40.81	41.31	41.72	42.39	42.71	42.76	42.31	41.49	40.80
15	39.54	40.07	40.16	40.83	41.32	41.72	42.54	42.80	42.73	42.33	41.46	40.61
16	39.73	40.22	40.16	40.90	41.36	41.75	42.57	42.68	42.83	42.29	41.53	40.55
17	39.78	40.22	40.16	40.91	41.36	41.76	42.66	42.70	42.78	42.23	41.39	40.49
18	39.71	40.24	40.16	40.92	41.37	41.78	42.61	42.72	42.68	42.24	41.44	40.49
19	39.71	49.21	40.21	40.96	41.37	41.80	42.57	42.63	42.71	42.15	41.44	40.48
20	39.70	40.21	40.26	40.97	41.37	41.82	42.50	42.78	42.73	42.16	41.43	40.42
21	39.64	40.26	40.29	41.01	41.37	41.84	42.56	42.92	42.69	42.14	41.34	40.34
22	39.70	40.27	40.29	41.03	41.37	41.85	42.58	42.60	42.62	42.05	41.32	40.51
23	39.79	40.28	40.35	41.06	41.40	41.87	42.59	42.68	42.58	42.03	41.25	40.39
24	39.80	40.26	40.38	41.10	41.41	41.88	42.54	42.73	42.51	41.98	41.23	40.43
25	39.77	40.26	40.41	41.16	41.42	41.90	42.76	42.75	42.45	41.97	41.29	40.36
26	39.78	40.23	40.44	41.20	41.43	41.95	42.73	42.81	42.48	41.96	41.18	40.38
27	39.80	39.80	40.47	41.25	41.43	41.90	42.68	42.75	42.43	41.97	41.15	40.37
28	39.84	39.89	40.49	41.26	41.45	42.01	42.77	42.76	42.58	41.93	41.10	40.36
29	39.90	39.68	40.52	41.29	-----	42.05	42.88	42.79	42.55	41.85	41.11	40.48
30	39.89	40.19	40.54	41.32	-----	42.05	42.48	42.86	42.59	41.88	41.01	40.48
31	39.77	-----	40.57	41.30	-----	42.15	-----	42.87	-----	41.80	41.02	-----

NOTE.—Add 4,100.00 feet to obtain elevations above mean sea level.

Monthly elevation and contents, 1932-33

Date	Eleva- tion in feet	Con- tents in acre-feet	Change in contents during month in acre-feet	Date	Eleva- tion in feet	Con- tents in acre-feet	Change in contents during month in acre-feet
Sept. 30	4, 139. 65	280, 700		May 31	4, 142. 75	534, 000	+11, 500
Oct. 31	4, 139. 77	288, 000	+7, 300	June 30	4, 142. 47	509, 200	-24, 800
Nov. 30	4, 140. 22	320, 300	+32, 300	July 31	4, 141. 79	449, 700	-59, 500
Dec. 31	4, 140. 55	346, 800	+26, 500	Aug. 31	4, 141. 01	383, 400	-65, 300
Jan. 31	4, 141. 30	407, 800	+61, 000	Sept. 30	4, 140. 38	332, 600	-50, 800
Feb. 28	4, 141. 47	422, 200	+14, 400	The year			
Mar. 31	4, 142. 12	478, 500	+56, 300				+51, 900
Apr. 30	4, 142. 62	522, 500	+44, 000				

• Estimated.

NOTE.—To compensate for wind effect, elevation given for last day of month is mean of elevations for last days of month and first 3 days of following month. Contents given are those above elevation 4,135 feet.

LINK RIVER AT KLAMATH FALLS, OREG.

LOCATION.—Water-stage recorder in sec. 32, T. 38 S., R. 9 E., 200 yards above outlet of Keno Canal and three-eighths of a mile above Main Street Bridge, at Klamath Falls. Zero of gage is 4,085.50 feet above mean sea level, United States Bureau of Reclamation datum, and 4,083.71 feet, United States Coast and Geodetic Survey datum, by 1929 general adjustment.

DRAINAGE AREA.—3,800 square miles.

RECORDS AVAILABLE.—May 1904 to Septmeber 1933.

DISCHARGE.—Maximum combined discharge of Link River and Keno Canal, 2,450 second-feet May 12; minimum, 28 second-feet Nov. 5.

1904-33: Maximum combined discharge, 9,400 second-feet May 12, 1904 (gage height at bridge, 7.30 feet); minimum, 22 second-feet Aug. 30, 1918. Average, 29 years (1904-33), 1,690 second-feet.

REMARKS.—Records good. Regulation caused by storage of water in Upper Klamath Lake since April 1919. Water diverted above station by the main or "A" Canal and Keno Canal. Other small diversions above lake. Discharge tables include flow of Keno Canal. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	869	608	1,300	607	1,360	689	666	337	459	559	655	1,280
2	981	424	1,330	667	1,360	603	326	384	537	233	629	738
3	980	321	1,340	938	1,360	500	385	406	439	506	627	340
4	971	320	1,310	836	1,360	607	212	391	529	245	495	336
5	971	136	1,070	830	1,360	309	765	405	537	559	238	1,260
6	967	36	505	617	1,360	839	1,370	984	569	569	71	1,280
7	977	276	273	571	1,000	498	1,390	415	666	535	515	1,260
8	963	274	284	51	1,000	776	1,380	913	643	626	434	1,260
9	523	359	1,120	439	1,000	746	1,360	1,050	685	389	602	1,220
10	722	356	1,390	445	1,000	739	1,350	1,830	541	678	581	325
11	971	221	1,320	450	1,010	470	1,590	2,440	350	433	713	1,280
12	1,000	307	1,280	445	1,010	514	1,870	1,910	557	533	514	1,320
13	846	38	2,200	505	877	647	1,660	1,230	516	447	210	1,420
14	295	386	2,040	347	879	290	1,130	282	841	422	746	1,430
15	302	561	1,340	51	1,060	555	753	904	732	545	789	1,390
16	217	746	1,340	368	1,140	554	638	896	1,060	129	743	1,410
17	361	769	1,120	363	966	642	577	1,030	1,160	560	843	1,410
18	397	1,090	933	428	1,010	553	920	1,360	723	591	761	1,410
19	399	1,080	475	429	1,010	284	1,170	1,360	994	521	457	1,410
20	524	1,080	120	356	1,010	461	771	1,190	999	577	225	1,410
21	568	996	814	80	879	460	416	298	911	542	722	1,410
22	651	617	935	59	879	460	332	777	950	703	1,020	1,430
23	555	1,090	250	355	745	460	152	558	865	225	1,130	1,410
24	638	1,080	139	302	745	453	339	892	750	862	1,280	1,420
25	638	1,070	812	224	742	232	294	915	504	747	1,280	1,410
26	568	1,080	239	372	742	39	331	917	891	770	701	1,420
27	568	1,120	887	414	739	218	274	916	779	784	471	1,420
28	806	1,310	426	547	741	39	298	556	451	770	1,140	1,420
29	971	1,300	398	61	-----	661	350	874	195	598	1,280	1,420
30	302	1,340	265	784	-----	926	343	419	499	336	1,280	1,420
31	937	-----	376	1,360	-----	661	-----	355	-----	783	1,280	-----

Month	River, including Keno Canal				River, including Keno and "A" Canals			
	Maxi- mum	Mini- mum	Mean	Run-off in acre- feet	Maxi- mum	Mini- mum	Mean	Run-off in acre- feet
October	1,000	217	692	42,500	1,000	217	692	42,500
November	1,340	36	680	40,500	1,340	36	680	40,500
December	2,200	120	891	54,800	2,200	120	891	54,800
January	1,360	51	461	28,300	1,360	51	461	28,300
February	1,360	739	1,010	56,100	1,360	739	1,010	56,100
March	926	39	513	31,500	926	39	513	31,500
April	1,870	152	780	46,400	1,870	212	886	52,700
May	2,440	282	877	53,900	2,600	490	1,140	70,100
June	1,160	195	678	40,300	2,060	875	1,470	87,500
July	862	129	541	33,300	1,700	720	1,280	78,700
August	1,280	71	724	44,500	1,890	682	1,370	84,200
September	1,430	325	1,250	74,400	1,850	684	1,580	94,000
The year	2,440	36	755	546,000	2,600	36	997	721,000

KLAMATH RIVER AT KENO, OREG.

LOCATION.—Water-stage recorder in SE¼ sec. 35, T. 39 S., R. 7 E., 5 miles above mouth of Spencer Creek and 2 miles west of Keno (description revised).

RECORDS AVAILABLE.—June 1904 to December 1913; January 1930 to September 1933.

DISCHARGE.—Maximum during year, 2,380 second-feet May 10–12 (gage-height, 6.6 feet); minimum, 70 second-feet Apr. 3 (gage height, 1.71 feet).

1904–13, 1930–33: Maximum, 5,220 second-feet Apr. 19, 20, 1907; minimum, 65 second-feet July 13, 15, 1932 (gage height, about 1.65 feet). Average, 12 years (1904–13, 1930–33), 1,770 second-feet.

Maximum discharge known, 9,250 second-feet about May 10, 1904.

REMARKS.—Records good. Diversions for irrigation above station. Lost River Diversion Canal enters or diverts from Klamath River above station (see diversion records, pp. 348 and 349). Following diversions in acre-feet through Klamath Strait into Lower Klamath Lake estimated from gate openings at Ady by United States Bureau of Reclamation: October, 836; November, 60; December, 1,960; January, 154; April, 1,040; May, 1,990; June, 2,170; July, 424; August, 535; September, 137; the year, 9,310. Flow regulated by storage in Upper Klamath Lake since April 1919 and in Lake Ewauna and Klamath River above Keno since September 1931. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1932–33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	735	809	1,440	628	1,520	788	846	247	213	215	319	1,170*
2.....	860	593	1,480	736	1,510	694	356	241	404	212	366	770
3.....	1,040	430	1,480	1,050	1,490	619	312	241	156	210	393	282
4.....	1,150	412	1,440	904	1,500	562	146	241	156	218	395	277
5.....	1,120	243	1,260	926	1,500	458	669	241	156	241	251	972
6.....	1,150	182	648	783	1,480	989	1,220	748	152	358	106	1,120
7.....	1,100	381	354	710	1,150	1,060	1,150	225	156	358	376	1,180
8.....	1,040	374	364	138	916	1,070	1,080	776	150	337	358	1,170
9.....	624	360	974	464	1,040	958	593	922	152	354	504	1,080
10.....	726	444	1,620	503	1,080	970	560	1,690	154	383	440	288
11.....	1,060	326	*1,600	510	1,090	758	926	2,380	156	346	480	1,000
12.....	1,050	352	*1,470	534	1,110	688	1,240	1,960	156	143	310	1,290
13.....	942	131	*2,100	635	1,100	910	1,130	1,240	156	253	105	1,350
14.....	467	468	*2,180	518	994	420	644	235	172	265	597	1,350
15.....	440	601	*1,560	102	932	690	258	802	212	304	576	1,380
16.....	*326	910	*1,460	414	1,300	718	259	797	462	151	593	1,380
17.....	*418	877	1,260	469	1,190	885	271	806	314	425	580	1,380
18.....	*503	1,200	1,020	550	1,170	469	788	1,260	202	307	703	1,410
19.....	*446	1,210	574	577	1,150	447	1,210	1,260	212	312	387	1,410
20.....	512	1,240	150	506	1,100	628	832	1,210	212	316	93	1,380
21.....	654	1,210	806	176	974	671	262	265	215	316	544	1,380
22.....	583	621	1,070	164	975	616	256	702	218	307	770	1,250
23.....	592	1,150	427	430	855	629	238	514	220	149	1,020	1,410
24.....	628	1,150	139	403	838	603	235	762	223	408	1,140	1,460
25.....	624	1,150	990	392	796	811	229	858	218	318	1,140	1,510
26.....	658	1,180	282	492	796	653	212	873	259	328	755	1,410
27.....	634	1,200	916	488	808	634	166	846	277	331	274	1,530
28.....	844	1,410	638	616	834	216	263	520	271	497	841	1,510
29.....	1,220	1,410	536	224	-----	754	247	772	247	265	1,140	1,610
30.....	208	1,440	386	841	-----	1,150	250	355	208	162	1,220	1,510
31.....	1,120	-----	462	1,480	-----	826	-----	225	-----	250	1,150	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,220	308	760	46,700
November.....	1,440	131	785	46,700
December.....	2,180	139	1,000	61,500
January.....	1,480	102	560	34,400
February.....	1,520	796	1,110	61,600
March.....	1,150	216	730	44,900
April.....	1,240	146	560	33,300
May.....	2,380	225	783	48,100
June.....	462	150	215	12,800
July.....	497	143	292	18,000
August.....	1,220	93	578	35,500
September.....	1,530	277	1,200	71,400
The year.....	2,380	93	712	515,000

* Estimated from staff-gage readings at Keno power plant.

KLAMATH RIVER BELOW FALL CREEK, NEAR COPCO, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 36, T. 48 N., R. 5 W., 500 feet below mouth of Fall Creek, half a mile below The California Oregon Power Co.'s Copco no. 2 plant, and 1 mile south of Copco post office.

DRAINAGE AREA.—4,320 square miles.

RECORDS AVAILABLE.—October 1928 to September 1933. At station above Fall Creek from October 1923 to September 1928.

DISCHARGE.—Maximum during year, 3,510 second-feet May 12 (gage height, 4.70 feet); minimum, 58 second-feet Nov. 12 (gage height, 0.92 foot).

1923-33: Maximum, 6,950 second-feet above Fall Creek Mar. 26, 1928; minimum, about 10 second-feet several times in 1925 and 1926. Average, 10 years (1923-33), 1,350 second-feet, including Fall Creek.

REMARKS.—Records good. Discharge estimated from output of power plant May 23-29. Diversions and regulation above station. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,330	1,220	2,510	670	1,670	1,490	1,210	726	850	710	1,040	1,610
2.....	413	909	1,620	988	903	1,380	100	913	841	97	684	822
3.....	1,220	790	1,510	1,350	1,610	1,040	1,200	824	704	482	750	194
4.....	1,310	924	662	1,410	1,900	545	713	782	96	93	734	298
5.....	1,670	597	1,550	1,040	1,040	507	771	823	649	629	419	1,430
6.....	1,600	114	1,170	1,010	1,870	1,280	1,560	560	661	750	97	1,490
7.....	1,069	626	886	958	1,930	964	1,890	182	580	736	809	1,350
8.....	1,030	869	1,100	336	1,730	1,900	1,970	725	619	703	858	1,580
9.....	354	898	1,950	909	1,650	1,690	1,540	1,360	591	93	822	1,190
10.....	1,240	1,060	921	816	1,090	1,300	1,170	1,750	561	561	876	93
11.....	1,090	394	723	767	1,590	762	1,040	1,990	98	830	836	1,140
12.....	1,106	390	2,020	689	324	970	1,250	2,380	634	726	339	1,630
13.....	1,070	380	2,450	886	1,400	1,650	1,140	2,120	629	799	275	2,250
14.....	531	1,190	2,350	440	1,380	1,620	898	604	590	670	942	1,690
15.....	911	1,130	1,970	98	1,370	1,530	609	856	610	256	748	2,160
16.....	349	682	1,860	704	1,390	1,140	96	1,500	732	206	833	1,660
17.....	1,070	1,450	716	1,100	1,670	1,620	638	2,230	522	553	807	100
18.....	1,050	1,900	666	980	1,700	1,950	924	1,680	96	550	904	1,850
19.....	962	1,280	482	533	1,170	314	1,560	1,750	604	631	352	2,130
20.....	1,050	608	714	572	1,590	1,090	1,050	1,480	612	667	92	2,240
21.....	1,040	1,500	1,460	645	1,360	1,360	721	650	620	832	872	1,930
22.....	801	1,330	1,280	392	980	1,050	438	874	672	258	1,180	1,660
23.....	390	2,160	340	798	1,270	1,100	96	953	782	98	1,350	1,390
24.....	928	926	398	856	1,450	1,010	569	888	606	644	1,650	97
25.....	1,000	1,480	1,440	982	1,220	1,180	590	919	238	844	1,540	2,010
26.....	1,140	1,490	598	814	106	117	300	1,090	507	668	782	2,610
27.....	1,090	784	1,520	875	1,060	817	646	1,610	550	595	236	1,860
28.....	1,170	1,860	883	702	783	1,030	611	530	593	543	764	2,120
29.....	1,160	1,510	1,600	272	-----	1,200	353	918	574	262	1,160	1,860
30.....	291	1,630	966	1,120	-----	1,380	152	387	594	99	1,450	1,870
31.....	514	-----	678	1,270	-----	1,670	-----	731	-----	638	1,670	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,670	291	966	59,400
November.....	2,160	114	1,070	63,700
December.....	2,510	340	1,260	77,500
January.....	1,410	98	805	49,500
February.....	1,930	106	1,350	75,000
March.....	1,950	117	1,180	72,600
April.....	1,970	96	860	51,200
May.....	2,380	182	1,120	68,900
June.....	850	96	568	33,800
July.....	844	93	523	32,200
August.....	1,670	92	835	51,300
September.....	2,610	93	1,480	88,100
The year.....	2,610	92	999	723,000

KLAMATH RIVER AT SOMES BAR, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 3, T. 11 N., R. 6 E., 300 feet below mouth of Salmon River and 1 mile west of Somes Bar post office. Altitude, about 450 feet.

DRAINAGE AREA.—8,430 square miles.

RECORDS AVAILABLE.—October 1927 to September 1933.

DISCHARGE.—Maximum during year, 19,900 second-feet June 9 (gage height, 13.01 feet); minimum, 680 second-feet Sept. 12.

1927-33: Maximum, 60,300 second-feet Mar. 26, 1928 (gage height, 27.9 feet); minimum, 218 second-feet Aug. 26, 1931.

A stage of about 50.8 feet occurred on Feb. 21, 1927 (discharge not computed).

REMARKS.—Records good except those for Sept. 14-30, which were estimated. Large diversions for irrigation and considerable regulation by power plants above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,940	984	5,910	3,620	4,330	7,000	10,900	10,600	14,200	7,260	1,560	2,310
2.....	2,260	2,000	5,700	5,870	4,620	8,320	11,700	9,900	13,700	7,260	2,450	2,800
3.....	1,460	2,260	4,520	10,200	3,880	11,200	13,400	9,240	12,800	6,840	2,380	2,120
4.....	1,220	1,940	4,150	7,000	4,240	9,260	14,700	9,460	12,100	6,240	2,050	1,150
5.....	1,870	3,130	3,290	5,910	4,620	7,660	13,500	9,240	12,300	6,240	2,180	858
6.....	2,400	5,300	3,290	5,100	4,060	6,780	13,300	8,800	13,000	6,040	2,120	1,660
7.....	2,540	3,450	3,130	4,620	4,710	7,880	13,300	9,020	13,300	6,240	1,660	2,380
8.....	1,940	2,000	2,680	4,330	4,710	7,880	12,300	9,240	13,300	6,040	1,300	2,120
9.....	1,690	2,260	2,540	3,620	4,520	8,780	11,100	9,240	17,300	5,840	2,050	2,450
10.....	1,580	2,470	3,210	3,450	4,330	9,020	9,900	9,240	17,600	4,890	2,180	1,980
11.....	1,280	2,260	2,330	3,620	4,330	8,780	9,020	9,460	16,000	4,350	1,980	1,450
12.....	1,870	2,000	1,870	3,450	4,330	12,600	9,020	9,900	16,500	4,710	2,120	1,020
13.....	1,750	1,460	2,980	3,130	3,620	13,100	9,240	10,600	16,500	4,620	1,740	2,310
14.....	1,940	1,360	3,970	3,370	3,540	11,900	10,100	10,900	16,300	4,440	1,360	3,000
15.....	1,690	1,690	3,880	3,290	4,240	10,900	11,600	9,460	15,500	4,260	1,290	3,000
16.....	1,410	3,060	3,540	2,610	5,910	12,100	10,900	9,900	14,200	3,830	1,860	2,900
17.....	1,630	2,610	3,450	2,470	5,700	11,700	9,680	10,100	13,000	3,180	1,740	2,900
18.....	1,240	2,610	2,470	3,290	5,700	10,900	8,800	10,600	11,600	2,960	1,740	1,600
19.....	1,870	3,210	6,460	3,290	5,300	10,700	8,360	9,460	10,600	3,180	1,800	1,700
20.....	1,810	2,680	5,300	2,900	4,800	9,740	8,800	9,240	10,600	3,030	1,670	3,000
21.....	1,750	2,200	4,060	2,680	5,200	10,200	9,020	9,240	10,600	3,030	1,180	3,300
22.....	1,940	2,230	4,060	2,610	5,000	9,980	9,980	8,800	10,100	3,100	840	3,100
23.....	1,940	2,260	5,910	2,610	4,900	8,780	11,300	11,300	9,900	2,800	1,740	2,800
24.....	1,580	3,060	4,300	2,830	5,200	8,320	12,100	12,300	9,680	2,240	2,120	2,400
25.....	1,240	2,330	3,370	3,210	5,200	7,880	11,800	13,000	9,460	1,980	2,590	1,400
26.....	1,810	2,330	4,150	3,790	5,200	7,880	10,600	13,000	9,020	2,590	2,520	1,800
27.....	1,870	2,610	4,520	5,100	4,420	9,500	11,100	13,300	9,240	2,590	2,240	3,400
28.....	1,940	4,710	4,620	4,620	5,200	13,400	13,500	14,700	8,800	2,310	1,260	3,300
29.....	1,940	9,500	4,150	4,150	-----	12,600	13,700	16,500	8,140	2,180	993	3,000
30.....	2,000	7,880	4,620	3,620	-----	11,400	11,600	17,300	7,480	2,120	1,740	3,000
31.....	1,630	-----	3,970	3,700	-----	11,200	-----	15,200	-----	1,800	2,310	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,540	1,220	1,780	109,000
November.....	9,500	984	2,930	174,000
December.....	6,460	1,870	3,950	243,000
January.....	10,200	2,470	4,000	246,000
February.....	5,910	3,540	4,710	262,000
March.....	13,400	6,780	9,910	609,000
April.....	14,700	8,360	11,100	660,000
May.....	17,300	8,800	10,900	670,000
June.....	17,600	7,480	12,400	738,000
July.....	7,260	1,800	4,140	255,000
August.....	2,590	840	1,830	113,000
September.....	3,400	858	2,340	139,000
The year.....	17,600	840	5,830	4,220,000

SPRAGUE RIVER NEAR CHILOQUIN, OREG.

LOCATION.—Water stage recorder in NE¼ sec. 35, T. 34 S., R. 7 E., 1¼ miles east of Chiloquin and 4 miles by river above Modoc Point Canal intake.

DRAINAGE AREA.—1,580 square miles.

RECORDS AVAILABLE.—August 1931 to September 1933. Comparable records except for extremely low stages at station at McCready ranch, 12 miles upstream, July 1920 to September 1931.

DISCHARGE.—Maximum during year, 1,040 second-feet Apr. 9 (gage height, 2.99 feet); minimum, 113 second-feet Aug. 24 (gage height, 1.29 feet).

1920-33: Maximum, 3,920 second-feet Mar. 29, 1928; minimum, about 50 second-feet May 26, 27, 1928. Average, 12 years (1921-33), 404 second-feet. Maximum known, 4,490 second-feet at Chiloquin, Apr. 27, 1917.

REMARKS.—Records good except those estimated because of ice Dec. 10 to Jan. 22, Jan. 24 to Feb. 22, which are fair. Diversions for irrigation above station; regulation by pending at irrigation dams.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	210	227			223	532	544	593	227	188	151
2	161	214	223			231	562	580	736	227	184	158
3	188	210	223			239	574	638	775	235	184	173
4	203	210	223			244	645	678	814	306	184	177
5	118	218	218			248	762	697	938	301	184	167
6	134	270	261			248	872	658	970	278	188	164
7	120	256	345			244	970	550	905	274	195	161
8	115	227	218			252	1,000	586	905	265	192	161
9	120	231	170			265	1,040	580	872	223	185	184
10	148	227				261	970	556	840	231	195	203
11	412	223		236	223	270	723	526	827	227	177	184
12	218	214				316	580	532	788	278	170	173
13	192	154				367	508	544	749	252	184	170
14	192	173				454	490	532	730	231	195	164
15	192	210				478	490	496	704	218	192	164
16	195	218				460	801	454	658	223	192	164
17	195	218				472	626	418	556	244	206	170
18	195	214				490	593	378	538	235	203	173
19	199	235				508	600	400	526	214	195	170
20	195	278		207		520	600	436	508	199	188	170
21	199	244				532	600	508	496	192	184	173
22	203	223				538	586	538	460	184	151	173
23	214	184		* 244	235	538	606	520	412	188	115	173
24	206	199			223	538	593	496	367	188	115	170
25	203	214			218	532	544	436	330	188	118	173
26	206	218			218	502	508	460	320	188	123	206
27	203	218		232	218	448	502	454	301	184	131	206
28	210	218			218	430	520	472	261	184	137	192
29	223	223				424	538	580	239	184	137	177
30	218	227				460	538	723	231	180	137	177
31	210					496		788		180	139	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	412	115	192	11,800
November	278	154	219	13,000
December	345		215	13,200
January			235	14,400
February			223	12,400
March	538	223	394	24,200
April	1,040	490	649	38,600
May	788	378	541	33,300
June	970	231	612	36,400
July	306	180	223	13,700
August	206	115	170	10,500
September	206	161	174	10,400
The year	1,040	115	320	232,000

* Discharge measurement.

WOOD RIVER AT FORT KLAMATH, OREG.

LOCATION.—Staff gage in sec. 22, T. 33 S., R. 7½ E., at highway bridge a quarter of a mile east of Fort Klamath. Zero of gage is 4,166.65 feet above mean sea level by 1929 general adjustment.

RECORDS AVAILABLE.—August 1911 to September 1933 (incomplete).

DISCHARGE.—Maximum during year, 362 second-feet Apr. 6 (gage height, 2.38 feet); minimum, 125 second-feet Aug. 17 (gage height, 0.94 foot).

1911-33: Maximum (estimated), 600 second-feet Nov. 23-25, 1921 (gage height, 4.0 feet); minimum, 84 second-feet in July, August, September 1931. Average, 15 years (1913-16, 1918-19, 1922-33), 221 second-feet.

REMARKS.—Records good. Considerable diversion for irrigation above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	154	176	199	176	169	162	231	199	139	247	129	169
2.....	162	184	184	169	169	169	247	192	154	247	128	169
3.....	162	192	184	169	169	162	279	184	162	215	129	169
4.....	162	199	184	162	169	154	279	192	162	215	135	162
5.....	162	192	184	162	162	162	311	192	169	215	139	169
6.....	162	199	176	169	162	169	362	176	162	207	139	176
7.....	162	192	184	169	169	162	279	176	162	207	139	192
8.....	162	192	169	176	162	169	231	176	176	215	139	192
9.....	162	184	154	176	169	184	231	176	263	215	146	192
10.....	162	192	154	176	162	184	231	176	263	215	139	192
11.....	162	184	154	176	162	199	247	176	263	215	154	192
12.....	162	184	154	169	162	192	263	169	263	231	162	192
13.....	169	184	154	169	162	184	295	176	263	207	162	199
14.....	169	184	154	176	162	176	247	176	263	199	131	199
15.....	169	192	154	176	169	184	215	176	279	176	128	199
16.....	169	215	162	176	162	176	199	184	263	176	126	199
17.....	176	207	169	169	169	176	199	184	263	184	125	199
18.....	176	199	169	169	169	176	193	184	247	184	126	207
19.....	176	192	169	169	162	176	184	176	231	176	139	207
20.....	176	184	162	169	169	176	192	176	247	176	139	207
21.....	176	184	169	169	162	176	199	176	247	162	139	199
22.....	184	176	169	169	162	184	199	176	231	162	139	207
23.....	176	184	169	169	162	184	199	184	215	162	139	215
24.....	176	176	169	176	162	176	199	176	199	154	139	215
25.....	176	184	169	169	162	176	199	184	207	146	146	215
26.....	184	192	169	169	169	176	199	176	207	146	146	215
27.....	176	207	184	169	162	184	192	169	247	136	146	215
28.....	176	207	184	176	169	184	199	184	270	135	146	215
29.....	176	199	184	169	-----	184	207	162	263	133	154	215
30.....	176	192	184	169	-----	199	199	139	255	131	154	215
31.....	176	-----	184	169	-----	215	-----	146	-----	126	162	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	184	154	170	10,500
November.....	215	176	191	11,400
December.....	199	154	171	10,500
January.....	176	162	171	10,500
February.....	169	162	165	9,160
March.....	215	154	178	10,900
April.....	362	184	230	13,700
May.....	199	139	177	10,900
June.....	279	139	225	13,400
July.....	247	126	184	11,300
August.....	162	125	141	8,670
September.....	215	162	197	11,700
The year.....	362	125	183	133,000

FOURMILE LAKE RESERVOIR NEAR ODESSA, OREG.

LOCATION.—Staff gage in NW¼ sec. 9, T. 36 S., R. 5 E., at dam at outlet of Four-mile Lake, 15 miles northwest of Odessa. Gage readings are elevations above mean sea level, irrigation company datum.

RECORDS AVAILABLE.—June 1923 to September 1930, June 1932 to September 1933.

EXTREMES.—Maximum contents during year, 15,170 acre-feet July 10 (elevation, 6,002.0 feet); minimum recorded contents, 5,196 acre-feet Oct. 10 (gage height, 5,989.0 feet).

1923-30, 1932-33: Maximum contents, that of July 10, 1933; no storage at times.

REMARKS.—Records fair. Water turned out of reservoir is diverted 300 feet below dam into Cascade Canal, which conveys it over divide into drainage basin of Fish Lake in Rogue River Basin. Records furnished by State engineer.

Monthly stage and contents, 1932-33

Date	Elevation in feet	Contents in acre- feet	Change in contents during month in acre-feet	Date	Elevation in feet	Contents in acre- feet	Change in contents during month in acre-feet
Sept. 30.....	-----	* 5, 241	-----	May 31.....	-----	* 11, 340	+2, 192
Oct. 31.....	-----	* 5, 504	+263	June 30.....	-----	* 15, 090	+3, 750
Nov. 30.....	-----	* 6, 281	+777	July 31.....	5, 990. 1	12, 530	-2, 560
Dec. 31.....	-----	* 7, 021	+740	Aug. 31.....	-----	* 9, 680	-2, 850
Jan. 31.....	-----	* 7, 694	+673	Sept. 30.....	-----	* 9, 550	-130
Feb. 28.....	-----	* 7, 936	+242				
Mar. 31.....	-----	* 8, 349	+413	The year.....	-----	-----	+4, 309
Apr. 30.....	-----	* 9, 148	+799				

* Interpolated between gage readings.

CASCADE CANAL NEAR FISH LAKE, OREG.

LOCATION.—Water-stage recorder in SE¼ sec. 30, T. 36 S., R. 5 E., at divide between Rogue River and Klamath River Basins, 3 miles above Fish Lake.

RECORDS AVAILABLE.—Irrigation seasons June 1924 to September 1933.

DISCHARGE.—Maximum during year, 35 second-feet Aug. 19 (gage height, 1.59 feet); no flow at times.

1924-33: Maximum, 42 second-feet Aug. 6, 7, 9, 10, 1924 (gage height, 1.72 feet).

REMARKS.—Records poor. This canal diverts water from Fourmile Creek in Klamath River Basin and discharges into Fish Lake in Rogue River Basin. Gaging station is 10 miles below point of diversion. About 1½ miles above Fish Lake is a lava bed into which the entire flow sinks, reappearing in springs at head of Fish Lake. Records furnished by State engineer.

Discharge, in second-feet, 1932-33

Day	June	July	Aug.	Day	June	July	Aug.	Day	June	July	Aug.
1.....	0		26	11.....	0		32	21.....	0	19	0
2.....	0		26	12.....	0		33	22.....	0	19	0
3.....	0		27	13.....	0	6	34	23.....	0	21	0
4.....	0		30	14.....	0		33	24.....	0	21	0
5.....	0		30	15.....	0	8	32	25.....	0	22	0
6.....	0		31	16.....	0	10	32	26.....	0	22	0
7.....	0		31	17.....	0	13	32	27.....		23	0
8.....	0		31	18.....	0	14	34	28.....	2	23	0
9.....	0		31	19.....	0	16	24	29.....		24	0
10.....	0	4	32	20.....	0	17	0	30.....		24	0
								31.....		25	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June.....		0	0.3	18
July.....	25		12.1	744
August.....	34	0	18.7	1,150
The period.....	34	0	2.6	1,910

NOTE.—Probably some flow in canal during April and May from melting snow; otherwise no flow during months omitted. Water released into canal from Fourmile Lake Reservoir June 27 to Aug. 19.

"A" CANAL AT KLAMATH FALLS, OREG.

LOCATION.—Water-stage recorder in NE¼ sec. 30, T. 38 S., R. 9 E., 300 feet below head gates of canal and 1 mile northwest of Klamath Falls.

RECORDS AVAILABLE.—1911-33.

DISCHARGE.—Maximum during year, 967 second-feet June 19 (gage height, 9.93 feet); no flow Oct. 1 to Apr. 12.

1911-33: Maximum, 986 second-feet May 14, 1931; maximum stage, 10.72 feet June 27, 1925. Average, 23 years (1910-33), 149 second-feet.

REMARKS.—Records good. "A" Canal diverts water from Upper Klamath Lake in NE¼ sec. 30, T. 38 S., R. 9 E., for irrigating lands east of Klamath River on both sides of Lost River. Most of return waters reach Lost River. Records furnished by United States Bureau of Reclamation.

Discharge, in second-feet, 1932-33

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1.....	0	226	710	611	835	462	16.....	203	260	890	771	696	397
2.....	0	231	750	561	810	444	17.....	158	300	902	779	720	406
3.....	0	228	794	525	752	430	18.....	108	293	909	816	718	381
4.....	0	228	768	475	672	404	19.....	108	235	940	830	634	357
5.....	0	170	726	529	638	384	20.....	155	214	947	832	586	357
6.....	0	153	729	651	611	360	21.....	203	197	948	832	565	334
7.....	0	162	733	724	613	360	22.....	204	199	920	835	585	296
8.....	0	158	717	735	652	360	23.....	204	202	882	846	588	256
9.....	0	162	722	704	696	359	24.....	203	250	838	838	582	227
10.....	0	167	716	705	698	359	25.....	206	304	807	840	592	204
11.....	0	157	696	666	668	406	26.....	205	335	771	865	572	201
12.....	0	156	711	656	655	416	27.....	202	330	755	890	593	199
13.....	54	204	778	672	658	424	28.....	201	364	711	877	616	199
14.....	141	208	853	712	670	416	29.....	203	457	680	858	610	199
15.....	196	228	878	750	672	399	30.....	200	599	659	822	581	132
							31.....		693		805	520	
Month						Maximum	Minimum	Mean	Run-off in acre-feet				
April.....						206	0	105	6,250				
May.....						693	153	260	16,000				
June.....						948	659	795	47,300				
July.....						890	475	742	45,600				
August.....						835	520	647	39,800				
September.....						462	132	388	20,100				
The year.....						948	0	242	175,000				

NOTE.—No flow during months omitted.

KENO CANAL AT KLAMATH FALLS, OREG.

LOCATION.—Staff gage in SW $\frac{1}{4}$ sec. 32 (revised), T. 38 S., R. 9 E., 200 feet above penstock to west-side plant of The California Oregon Power Co. and a quarter of a mile above Link River bridge at Klamath Falls.

RECORDS AVAILABLE.—October 1923 to September 1933.

DISCHARGE.—Maximum mean daily during year, 268 second-feet Sept. 8, 14, 30; no flow at times.

1923-33: Maximum mean daily, 281 second-feet June 30, 1927.

REMARKS.—Records good. Discharge determined from record of electrical output of power plant 200 feet below gage. Canal diverts water from Upper Klamath Lake at Link River storage dam in SE $\frac{1}{4}$ (revised) sec. 30. Water used for developing power and returned to Link River in SW $\frac{1}{4}$ sec. 32. Flow controlled by gates at head of canal. Gage-height and electrical records furnished by The California Oregon Power Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	120	233	" 3	243	243	" 3		240			262
2	241	179	231	" 3	243	245	" 3		240			262
3	240	0	235	127	244	243	55	" 3	95			265
4	241	0	234	254	243	243	164					261
5	241	0	234	250	243	244	235					261
6	237	0	234	252	243	112	236	140				267
7	237	0	237	121	239	" 3	236	243				267
8	233	0	241		237	103	235	244				268
9	231	0	239		234	250	233	244	" 3			267
10	231	0	243		236	244	230	240				267
11	92	0	245		243	243	231	241		" 3		267
12	0	0	244		245	245	234	247				264
13	0	0	239		244	245	234	243				265
14	0	0	240		244	247	145	244				268
15	0	0	241		244	245		241				261
16		0	243		243	244	" 3	239	146	" 3		262
17		112	244		243	243		237	209			260
18		231	243	" 3	243	243		235				260
19	" 3	230	166		243	244		240				264
20		233	72		244	243	0	208				262
21		233	178		244	243	0	248				261
22		233	244		244	243	0	245			159	267
23	65	230	91		243	243	0	248		" 3	265	264
24	65	231	0		245	243		244			267	265
25	65	227	144		243	106		243			265	264
26		234	134		244		" 3	245			157	265
27		226			243			244			267	265
28	" 3	229	" 3		245	" 3		244			265	265
29		225						244			265	265
30		235		74				244			262	268
31				241				244			264	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	243	0	87.1	5,360
November	235	0	114	6,780
December	245	3	172	10,600
January	254	3	44.9	2,760
February	245	234	243	13,500
March	250	3	176	10,800
April	236	0	83.7	4,980
May	248	3	200	12,300
June	240	3	33.5	1,990
July			3.0	184
August	267	3	80.6	4,960
September	268	260	264	15,700
The year	268	0	124	89,900

" Estimated.

LOST RIVER DIVERSION CANAL NEAR OLENE, OREG.

LOCATION.—Water-stage recorder in SW $\frac{1}{4}$ sec. 30, T. 39 S., R. 10 E., $1\frac{1}{4}$ miles below intake of canal at Lost River Dam and 5 miles southwest of Olene. Station was moved downstream about 1 mile in 1931.

RECORDS AVAILABLE.—May 1912 to September 1933.

DISCHARGE.—Maximum mean daily during year, 193 second-feet Mar. 26; no flow at times.

1912-33: Maximum, 1,050 second-feet Mar. 22, 1932.

REMARKS.—Records fair. Discharge estimated from daily gate openings and head at intake. Canal diverts water from Lost River in SW $\frac{1}{4}$ sec. 29, T. 39 S., R. 10 E., and discharges into Klamath River to assist in reclamation of bed of Tule Lake. At times direction of flow is reversed and water diverted from Klamath River into Lost River. (See p. 349.) Records furnished by United States Bureau of Reclamation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Sept.
1.....	97	93	89	89	90	92	82	0
2.....	98	92	90	89	89	98	0	0
3.....	98	91	88	89	88	122	0	0
4.....	100	89	87	89	88	123	0	10
5.....	102	89	87	89	88	123	0	15
6.....	102	89	87	90	87	177	0	15
7.....	105	90	92	89	87	192	0	15
8.....	100	90	82	87	87	188	0	15
9.....	97	96	83	84	88	162	0	25
10.....	97	97	76	83	86	157	0	28
11.....	96	97	77	83	83	156	0	28
12.....	93	97	78	84	88	154	0	28
13.....	93	93	79	86	85	149	0	32
14.....	98	98	77	85	96	149	0	50
15.....	100	94	83	88	92	156	0	62
16.....	98	93	76	85	84	154	0	58
17.....	97	93	75	85	83	157	0	59
18.....	93	92	75	83	87	160	0	63
19.....	92	91	76	83	90	160	0	66
20.....	89	90	85	83	94	160	0	66
21.....	90	90	85	86	96	162	0	80
22.....	90	89	82	88	93	165	0	85
23.....	91	89	86	86	92	169	0	91
24.....	92	87	86	86	93	169	0	92
25.....	97	86	86	86	93	169	0	108
26.....	97	86	85	90	88	193	0	120
27.....	97	86	85	88	92	191	0	115
28.....	97	86	98	86	92	187	0	112
29.....	97	81	44	89	-----	177	0	108
30.....	97	90	108	90	-----	167	0	105
31.....	97	-----	93	85	-----	167	-----	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
October.....	105		89		96.4		5,930	
November.....	98		81		90.8		5,400	
December.....	108		44		83.2		5,120	
January.....	90		83		86.5		5,320	
February.....	96		83		89.2		4,950	
March.....	193		92		158		9,720	
April.....	82		0		2.7		161	
September.....	120		0		55.0		3,270	
The year.....	193		0		55.1		39,900	

NOTE.—No flow during months omitted.

DIVERSION FROM KLAMATH RIVER TO LOST RIVER NEAR OLENE, OREG.

LOCATION.—Staff gages and orifice at diversion from Klamath River $3\frac{1}{2}$ miles south of Klamath Falls; water-stage recorder near wasteway in SW $\frac{1}{4}$ sec. 30, T. 39 S., R. 10 E., 5 miles southwest of Olene, Oreg. (description revised).
 RECORDS AVAILABLE.—April 1931, when diversion began, to September 1933.

DISCHARGE.—Maximum mean daily during year, 564 second-feet Apr. 13; no flow at times.

1931-33: Maximum mean daily, that of Apr. 13, 1933.

REMARKS.—Records fair. Discharge determined from gate openings and gage readings at intake from Klamath River. This canal was built to divert water from Lost River to Klamath River to assist in reclamation of the bed of Tule Lake. (See p. 348.) Beginning in April 1931 water was diverted from Klamath River and released into drain which empties into Lost River, from which it was rediverted for irrigation of lands near Tule Lake. Records furnished by Bureau of Reclamation.

Discharge, in second-feet, 1932-33

Day	Apr.	May	June	July	Aug.	Day	Apr.	May	June	July	Aug.
1.....	0	108	0	152	190	16.....	352	0	440	52	48
2.....	0	155	18	111	168	17.....	315	0	510	52	19
3.....	0	174	124	111	115	18.....	128	0	478	51	0
4.....	0	173	234	111	0	19.....	17	0	447	51	0
5.....	78	174	278	111	0	20.....	21	0	447	107	0
6.....	173	171	310	130	0	21.....	24	0	436	148	0
7.....	359	171	368	154	0	22.....	0	0	356	177	0
8.....	369	105	464	154	0	23.....	0	0	385	250	0
9.....	369	52	465	154	31	24.....	0	0	339	264	0
10.....	479	53	298	154	52	25.....	0	0	320	279	0
11.....	554	43	133	154	52	26.....	57	0	318	254	0
12.....	554	0	237	134	51	27.....	55	0	284	238	0
13.....	564	0	276	68	50	28.....	72	0	269	237	0
14.....	560	0	351	52	49	29.....	106	0	232	237	0
15.....	494	0	405	52	48	30.....	110	0	199	238	0
						31.....		0		213	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April.....	564	40	194	11,500
May.....	174	0	44.5	2,740
June.....	510	0	314	18,800
July.....	279	51	150	9,220
August.....	190	0	28.2	1,730
The year.....	564	0	60.6	43,900

NOTE.—No flow during months omitted.

FALL CREEK AT COPCO, CALIF.

LOCATION.—Staff gage in NE¼ sec. 36, T. 48 N., R. 5 W., at railway crossing 500 feet above mouth and 1 mile south of Fall Creek power plant and Copco post office.

RECORDS AVAILABLE.—July 1928 to September 1933.

DISCHARGE.—Maximum recorded during year, 89 second-feet Mar. 12 (gage height, 1.32 feet); minimum, 28 second-feet Aug. 27, Sept. 3, 6-10, 12, 17, 28, 30 (gage height, 0.40 foot).

1928-33: Maximum, 105 second-feet Dec. 27, 1928; minimum, 27 second-feet Aug. 10, 1930.

REMARKS.—Records fair. No diversions or regulation. Gage-height record furnished by The California Oregon Power Co.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				31		38	38	35	32	31	32	30
2		35		34		42	38	35	32	31	32	29
3						45	39	35	32	31	32	28
4	30		32		31	37	39	36	32	31	31	29
5						38	39	36	33	31	31	29
6	32					39	39	36	32	30	31	28
7		33				41	38	35	33	31	32	28
8				32	31	39	39	35	33	33	32	28
9					31	41	37	35	33	33	31	28
10					31	40	37	35	33	33	31	28
11			32		31	45	37	35	33	32	31	29
12					31	89	37	35	33	31	31	28
13		33			31	59	36	35	33	31	31	30
14	33				34	44	36	34	33	30	30	29
15				32	37	45	37	35	33	30	30	29
16					36	44	34	34	32	31	30	29
17					34	45	37	35	33	31	30	28
18	31				32	44	36	35	31	31	29	29
19					31	44	36	35	33	31	29	29
20		34	33	30	31	44	34	35	32	31	29	30
21				31	31	42	34	35	32	31	29	30
22				31	31	39	34	35	32	31	29	30
23				31	31	43	34	34	31	31	29	30
24					32	40	34	34	31	31	29	30
25			32		31	39	34	35	33	31	29	30
26	32				33	39	34	34	32	30	29	30
27		35			33	39	34	34	32	31	28	29
28					33	42	34	34	33	31	29	28
29				31		39	34	34	33	30	29	29
30	32					39	34	31	32	31	29	28
31						38		32		31	29	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			31.7	1,950
November			34.0	2,020
December			32.2	1,980
January			31.4	1,980
February			31.9	1,770
March	89	37	43.3	2,060
April	39	34	36.1	2,150
May	36	31	34.6	2,130
June	33	31	32.4	1,990
July	33	30	31.1	1,910
August	32	29	30.1	1,850
September	30	28	29.0	1,730
The year	89	28	33.2	24,000

NOTE.—Monthly mean discharge is mean of days for which records are published.

HYATT PRAIRIE RESERVOIR NEAR ASHLAND, OREG.

LOCATION.—Staff gage in SW $\frac{1}{4}$ sec. 16, T. 39 S., R. 3 E., at dam of Talent Irrigation District 3 miles north of Ashland-Klamath Falls highway and 20 miles east of Ashland. Gage readings are elevation above mean sea level, irrigation district datum.

RECORDS AVAILABLE.—December 1922 to September 1933.

EXTREMES.—Maximum contents during year, 12,000 acre-feet June 14 (elevation, 5,011.0 feet); minimum (estimated), 4,500 acre-feet Sept. 30.

1922-33: Maximum contents, 15,920 acre-feet May 15, 16, 1928 (elevation, 5,015.70 feet); no storage at times.

REMARKS.—Records furnished by State engineer.

Monthly stage and contents, 1932-33

Date	Elevation in feet	Contents in acre- feet	Change in contents during month in acre-feet	Date	Elevation in feet	Contents in acre- feet	Change in contents during month in acre-feet
Sept. 30.....	-----	" 4, 570	-----	June 30.....	-----	" 11, 650	+860
Jan. 31.....	-----	" 5, 295	+725	July 31.....	5, 007. 6	9, 513	-2, 137
Feb. 28.....	-----	" 5, 530	+235	Aug. 31.....	-----	" 5, 704	-3, 809
Mar. 31.....	5, 002. 0	5, 850	+320	Sept. 30.....	-----	" 4, 500	-1, 204
Apr. 30.....	-----	" 8, 027	+2, 177				
May 31.....	-----	" 10, 790	+2, 763	The year.....	-----	-----	-70

" Interpolated between gage readings.

KEENE CREEK CANAL NEAR ASHLAND, OREG.

LOCATION.—Water-stage recorder and staff gage in NW¼ sec. 29, T. 39 S., R. 3 E., 400 feet above short tunnel through Cascade Divide, 2 miles north of Ashland-Klamath Falls highway, and 16 miles southeast of Ashland.

RECORDS AVAILABLE.—June 1923 to September 1933.

DISCHARGE.—Maximum during year, about 75 second-feet in later part of August; no flow at times.

1923-33: Maximum, 78 second-feet Aug. 18, 1928.

REMARKS.—Records poor. Canal diverts from Keene Creek in SE¼ sec. 20, T. 39 S., R. 3 E., water released from Hyatt Prairie Reservoir into head of Emigrant Creek for irrigation of lands near Talent. Possibly some flow in canal October to May from run-off from basin above canal and below Hyatt Prairie Reservoir, from which stored water was released Oct. 5-16, June 14 to Sept. 17. Records furnished by State engineer.

Discharge, in second-feet, 1932-33

Day	Oct.	June	July	Aug.	Sept.
1.....	0	0	10	44	61
2.....	0	0	10	45	61
3.....	0	0	10	44	62
4.....	0	0	11	45	62
5.....		0	11	45	62
6.....		0	12	45	62
7.....		0	14	46	
8.....		0	16	46	
9.....		0	17	46	
10.....		0	17	48	
11.....	• 14	0	17	52	
12.....		0	17	52	• 26
13.....		0	21	53	
14.....		3	34	53	
15.....		• 12	37		
16.....		18	38		
17.....	0	19	38		
18.....	0	19	38		3
19.....	0	20	38		
20.....	0	21	38		
21.....	0	21	38		
22.....	0	22	38	• 70	
23.....	0		38		• 2
24.....	0		39		
25.....	0		39		
26.....	0	• 24	40		
27.....	0		41		
28.....	0		41		
29.....	0		42		1
30.....	0	11	43		• 1
31.....	0		44		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		0	5.4	332
June.....		0	11.1	660
July.....	44	10	28.6	1,760
August.....		44	59.8	3,680
September.....	62		22.7	1,350
The year.....				7,780

• Estimated.

NOTE.—No flow during months omitted.

SHASTA RIVER NEAR MONTAGUE, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 33, T. 45 N., R. 6 W., at highway bridge 1¼ miles southwest of Montague. Little Shasta River enters 1 mile above station. Altitude, about 2,300 feet.

DRAINAGE AREA.—667 square miles.

RECORDS AVAILABLE.—August 1911 to September 1913; September 1916 to November 1933 (discontinued).

DISCHARGE.—Maximum during period October 1932 to November 1933, 208 second-feet Mar. 29 (gage height, 3.56 feet); minimum, 10 second-feet July 30.

1911-33: Maximum, 5,700 second-feet Feb. 11, 1925 (gage height, 14.9 feet); minimum, 1.0 second-foot July 11, 1925. Average, 15 years (1912-13, 1917-21, 1923-33), 145 second-feet.

REMARKS.—Records good. Discharge estimated Oct. 21, 28-29, Nov. 2-5, 7-12, 15-19, 26. Storage and irrigation diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1.....	105	125	145	142	150	140	147	45	23	27	16	18	145	137
2.....	107	125	140	150	147	145	145	54	31	28	14	20	145	132
3.....	107	126	135	150	142	145	135	79	41	22	12	27	137	128
4.....	107	127	135	142	137	142	120	114	46	19	14	25	135	128
5.....	111	128	132	140	140	140	114	116	46	16	13	20	135	128
6.....	114	128	132	137	140	140	120	118	43	14	13	24	132	128
7.....	116	128	132	135	140	140	109	118	43	16	14	32	130	128
8.....	120	127	130	135	137	140	85	109	45	20	14	35	123	128
9.....	120	127	128	135	137	140	70	120	52	30	14	37	116	128
10.....	120	126	125	135	132	142	58	125	58	19	15	33	107	128
11.....	123	126	125	132	135	135	58	116	58	17	14	25	103	128
12.....	123	125	125	130	140	165	58	107	57	16	16	25	103	128
13.....	123	125	125	130	142	171	52	81	48	31	17	24	107	125
14.....	118	125	125	130	140	168	38	62	34	22	18	22	109	125
15.....	111	125	125	130	142	152	27	58	31	14	16	27	109	125
16.....	114	125	125	130	142	145	19	54	25	11	16	23	111	125
17.....	118	125	103	128	137	142	24	46	22	14	14	25	111	125
18.....	118	125	111	125	140	147	46	50	20	24	16	27	105	125
19.....	120	125	150	128	140	142	48	50	27	18	21	26	109	128
20.....	123	125	150	128	140	145	37	41	21	12	12	58	109	128
21.....	124	123	77	130	140	142	24	37	17	14	13	123	111	128
22.....	125	123	118	130	137	137	17	33	16	16	17	137	114	130
23.....	123	125	135	130	135	135	14	27	14	16	17	140	114	130
24.....	123	125	135	130	132	132	17	27	14	17	14	147	109	130
25.....	123	125	132	125	135	130	29	28	14	17	18	147	103	130
26.....	123	125	135	180	135	128	48	21	17	15	17	150	107	-----
27.....	123	125	142	145	135	128	56	22	26	17	19	145	109	-----
28.....	124	132	142	147	140	150	46	25	22	17	20	145	111	-----
29.....	124	137	142	150	-----	193	39	32	22	16	20	137	114	-----
30.....	125	142	142	152	-----	160	41	28	24	12	16	140	125	-----
31.....	125	-----	142	155	-----	150	-----	21	-----	14	17	-----	147	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1932-33				
October.....	125	105	119	7,320
November.....	142	123	127	7,560
December.....	150	77	130	7,990
January.....	155	125	136	8,360
February.....	150	132	139	7,720
March.....	193	128	146	8,980
April.....	147	14	61.4	3,650
May.....	125	21	63.4	3,900
June.....	58	14	31.9	1,900
July.....	31	11	18.1	1,110
August.....	21	12	15.7	965
September.....	150	18	65.5	3,900
The year.....	193	11	87.4	63,400
1933				
October.....	147	103	118	7,260
November 1-25.....	137	125	128	6,350

SALMON RIVER AT SOMES BAR, CALIF.

LOCATION.—Water-stage recorder in NW¼ sec. 2, T. 11 N., R. 6 E., 1½ miles above mouth and half a mile east of Somes Bar post office. Altitude, about 500 feet.

DRAINAGE AREA.—737 square miles.

RECORDS AVAILABLE.—September 1911 to September 1915, October 1927 to September 1933.

DISCHARGE.—Maximum during year, 7,750 second-feet June 10 (gage height, 7.90 feet); minimum, 100 second-feet Oct. 5.

1927-33: Maximum, 21,200 second-feet Mar. 26, 1928 (gage height, 13.0 feet); minimum, 70 second-feet Aug. 25 and Sept. 4-5, 1931.

REMARKS.—Records good except those for Dec. 10-17, which were estimated on account of ice. No large diversions above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	104	139	798	542	666	2,060	2,350	3,050	5,020	2,040	462	218
2.....	104	248	610	1,160	650	2,270	2,850	2,610	4,430	2,040	462	209
3.....	104	265	550	1,840	650	3,350	3,990	2,330	3,990	1,990	434	204
4.....	104	221	512	1,160	642	2,420	4,430	2,520	3,770	1,900	420	199
5.....	104	377	468	900	674	1,900	3,770	2,400	4,100	1,870	406	199
6.....	131	771	418	789	744	1,790	3,660	2,160	4,320	1,860	393	223
7.....	126	618	384	708	771	2,040	3,450	2,220	4,540	1,780	374	223
8.....	126	377	364	658	753	2,130	2,950	2,230	4,660	1,640	355	214
9.....	118	377	295	626	726	2,090	2,500	2,130	6,380	1,500	348	204
10.....	118	370	210	610	674	2,140	2,160	2,020	7,000	1,310	336	199
11.....	118	301	185	572	674	2,090	1,990	2,000	6,250	1,210	324	190
12.....	114	260	185	550	690	3,350	2,040	2,060	6,620	1,170	312	185
13.....	114	238	185	542	690	3,250	2,090	2,200	6,250	1,110	300	186
14.....	156	226	210	558	666	2,690	2,520	2,520	6,120	1,070	288	180
15.....	152	226	240	565	699	2,330	3,250	2,560	5,750	1,020	277	180
16.....	170	338	295	550	1,020	2,770	3,070	2,710	4,900	960	271	180
17.....	165	404	325	505	1,050	2,810	2,610	2,710	3,990	871	266	180
18.....	156	338	313	520	1,000	2,480	2,230	2,500	3,560	808	260	190
19.....	147	295	1,220	512	910	2,250	2,000	2,290	3,350	773	260	199
20.....	143	265	940	460	861	2,380	2,000	2,270	3,250	730	255	209
21.....	139	254	626	498	861	2,400	2,200	2,360	3,350	689	250	255
22.....	185	238	528	460	870	2,160	2,710	2,440	3,130	657	239	233
23.....	200	226	930	468	950	1,950	3,350	3,170	2,990	633	233	218
24.....	175	216	708	512	970	1,740	3,770	3,660	2,910	610	228	239
25.....	160	210	610	528	950	1,660	3,660	4,320	2,870	580	223	266
26.....	152	200	580	535	950	1,510	2,970	4,430	2,850	558	218	266
27.....	147	210	650	870	960	1,810	3,350	4,540	2,950	528	218	244
28.....	147	907	690	753	1,240	2,810	4,430	5,260	2,650	506	218	228
29.....	143	1,280	626	690	-----	2,560	4,660	6,380	2,330	483	218	218
30.....	139	1,340	580	634	-----	2,290	3,450	6,500	2,130	469	223	209
31.....	139	-----	565	642	-----	2,270	-----	5,750	-----	462	223	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	200	104	139	8,550
November.....	1,340	139	391	23,300
December.....	1,220	185	510	31,400
January.....	1,840	460	672	41,300
February.....	1,240	642	820	45,500
March.....	3,350	1,510	2,310	142,000
April.....	4,660	1,990	3,020	180,000
May.....	6,500	2,000	3,110	191,000
June.....	7,000	2,130	4,210	251,000
July.....	2,040	462	1,090	67,000
August.....	462	218	300	18,400
September.....	266	180	212	12,600
The year.....	7,000	104	1,400	1,010,000

TRINITY RIVER AT LEWISTON, CALIF.

LOCATION.—Water-stage recorder in NE¼ sec. 19, T. 33 N., R. 8 W., at highway bridge at Lewiston. Zero of gage is 1,794.72 feet above mean sea level.

DRAINAGE AREA.—724 square miles.

RECORDS AVAILABLE.—August 1911 to September 1933.

DISCHARGE.—Maximum during year, 8,600 second-feet Mar. 28 (gage height, 9.44 feet); minimum, 68 second-feet Oct. 1.

1911-33: Maximum, about 31,900 second-feet Nov. 30, 1926 (gage height 18.3 feet); minimum, 23 second-feet July 30, 1924. Average, 22 years (1911-33), 1,420 second-feet.

REMARKS.—Records good except those for Dec. 9, Mar. 30 to Apr. 2, June 24-30, which were estimated. Diversions for irrigation, power, and placer mining above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	71	103	712	240	250	742	2,600	3,340	5,300	1,160	218	112
2.....	71	109	505	237	247	1,200	3,000	2,740	4,400	1,120	214	109
3.....	73	116	426	314	243	1,980	4,120	2,290	3,600	1,080	211	107
4.....	74	118	382	299	247	1,250	4,690	2,130	3,340	1,030	208	105
5.....	74	125	338	292	257	976	3,990	2,240	3,470	960	200	105
6.....	76	130	314	281	281	960	3,730	2,030	3,860	925	191	105
7.....	87	163	281	278	299	1,160	3,470	2,080	4,120	869	186	107
8.....	96	160	267	274	303	1,350	2,980	1,930	4,120	834	177	109
9.....	98	144	229	274	299	1,470	2,400	1,780	3,990	766	160	112
10.....	98	147	191	274	288	1,460	2,030	1,630	4,260	684	163	107
11.....	98	144	155	271	299	1,730	1,880	1,630	4,400	645	158	107
12.....	98	137	152	257	299	4,260	2,030	1,680	4,400	618	158	107
13.....	98	134	169	254	292	2,980	2,180	1,780	4,540	585	152	100
14.....	98	132	172	271	285	2,080	2,620	2,130	4,400	555	147	96
15.....	92	127	186	278	285	1,780	3,470	2,260	4,260	520	142	94
16.....	92	130	191	274	322	4,270	3,470	2,510	3,600	500	137	94
17.....	92	137	208	257	338	3,220	2,680	2,460	2,980	465	132	98
18.....	96	147	206	247	338	2,240	2,130	2,180	2,560	431	150	98
19.....	98	142	243	264	334	1,980	1,880	1,930	2,290	408	142	100
20.....	100	132	260	247	334	2,080	1,930	1,880	2,130	386	137	101
21.....	100	127	254	250	354	2,240	2,180	2,030	2,080	359	132	107
22.....	98	125	240	250	382	1,880	2,800	2,130	2,030	330	125	123
23.....	94	125	254	250	404	1,630	3,470	2,130	1,830	318	116	123
24.....	100	123	247	257	413	1,390	4,120	2,510	1,750	299	112	116
25.....	101	127	227	254	413	1,310	4,260	3,470	1,700	281	109	127
26.....	101	125	224	271	436	1,260	3,220	4,120	1,750	278	107	147
27.....	103	127	230	267	500	3,560	3,470	4,260	1,800	264	105	150
28.....	103	913	240	274	535	6,840	4,840	4,840	1,650	250	103	144
29.....	103	1,830	240	288	-----	3,990	5,300	5,950	1,400	230	105	134
30.....	101	1,600	240	271	-----	2,900	3,370	6,300	1,250	224	105	123
31.....	101	-----	240	260	-----	2,800	-----	5,780	-----	218	114	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	103	71	93.1	5,720
November.....	1,830	103	263	15,600
December.....	712	152	265	16,300
January.....	314	237	267	16,400
February.....	535	243	331	18,400
March.....	6,840	742	2,220	136,000
April.....	5,300	1,880	3,160	188,000
May.....	6,300	1,630	2,780	171,000
June.....	5,300	1,250	3,110	185,000
July.....	1,160	218	567	34,900
August.....	218	103	149	9,160
September.....	150	94	112	6,660
The year.....	6,840	71	1,110	803,000

TRINITY RIVER NEAR BURNT RANCH, CALIF.

LOCATION.—Water-stage recorder in sec. 20, T. 5 N., R. 7 E., 2 miles above highway bridge at Cedar Flat and 7 miles above Burnt ranch. Altitude, about 950 feet.

DRAINAGE AREA.—1,400 square miles.

RECORDS AVAILABLE.—October 1931 to September 1933.

DISCHARGE.—Maximum during year, 13,200 second-feet Mar. 28 (gage height, 12.38 feet); minimum, 102 second-feet Oct. 1-2.

1931-33: Maximum, 16,800 second-feet Mar. 19, 1932 (gage height, 13.75 feet); minimum, 89 second-feet Oct. 5, 1931.

REMARKS.—Records excellent except those for Dec. 12-17, Sept. 1-30, which were estimated; affected by ice Dec. 12-17. Slight regulation and small diversions for mining and irrigation above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	104	156	1,490	552	610	1,880	4,520	4,670	7,040	1,880	395	160
2.....	104	179	980	570	601	2,760	4,970	4,380	5,950	1,880	398	160
3.....	106	193	780	950	596	4,670	6,900	3,590	5,130	1,840	388	155
4.....	106	187	680	890	601	3,590	7,430	3,350	4,670	1,800	380	155
5.....	105	208	610	780	655	2,650	6,860	3,470	4,670	1,700	373	150
6.....	115	225	556	705	730	2,430	6,120	3,350	5,130	1,700	356	150
7.....	132	339	508	608	805	2,700	5,780	3,230	5,450	1,620	352	155
8.....	131	291	460	680	805	3,110	4,970	3,110	5,450	1,530	313	160
9.....	135	282	425	655	805	3,230	4,100	3,050	5,290	1,450	297	160
10.....	142	285	352	655	730	3,350	3,970	3,870	5,610	1,250	279	155
11.....	140	260	254	632	780	3,230	3,230	2,760	5,950	1,180	270	150
12.....	139	252	200	606	780	6,070	3,350	2,820	5,950	1,140	262	150
13.....	137	234	200	588	755	6,480	3,470	2,990	6,120	1,110	252	145
14.....	137	220	220	606	730	4,820	3,840	3,350	5,950	1,080	244	140
15.....	137	216	250	632	730	3,970	4,820	3,590	5,950	1,040	234	140
16.....	138	220	325	632	860	6,470	4,970	3,710	5,130	980	225	140
17.....	139	244	350	588	1,010	6,850	4,380	3,840	4,240	920	218	145
18.....	140	244	356	565	1,040	4,970	3,590	3,590	3,590	832	210	145
19.....	144	244	524	565	980	4,100	3,110	3,230	3,350	805	206	145
20.....	147	232	556	560	980	4,100	3,050	2,990	3,050	755	225	145
21.....	147	222	556	547	1,010	4,380	3,230	3,110	2,990	705	208	150
22.....	149	216	516	538	1,110	3,840	3,840	3,230	2,990	655	204	170
23.....	153	212	610	534	1,180	3,350	4,670	3,470	2,760	610	191	170
24.....	152	208	588	556	1,220	2,930	5,610	3,710	2,650	588	184	160
25.....	155	200	524	552	1,180	2,650	5,950	4,670	2,540	556	176	170
26.....	156	200	492	574	1,180	2,540	4,970	5,610	2,600	520	171	190
27.....	156	212	512	655	1,290	3,200	4,670	5,780	2,650	496	166	200
28.....	156	660	556	632	1,410	10,900	6,120	6,300	2,540	468	165	180
29.....	155	1,820	556	655	-----	7,430	7,040	7,430	2,280	444	163	170
30.....	155	2,540	552	632	-----	5,450	5,610	8,430	2,690	417	163	160
31.....	156	-----	556	632	-----	4,670	-----	7,830	-----	410	163	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	156	104	138	8,480
November.....	2,540	156	373	22,200
December.....	1,490	200	519	31,900
January.....	950	534	632	38,900
February.....	1,410	596	900	50,000
March.....	10,900	1,880	4,280	263,000
April.....	7,430	3,050	4,800	286,000
May.....	8,430	2,760	4,110	253,000
June.....	7,040	2,030	4,320	257,000
July.....	1,880	410	1,040	64,000
August.....	398	163	252	15,500
September.....	200	140	158	9,400
The year.....	10,900	104	1,800	1,800,000

TRINITY RIVER NEAR HOOPA, CALIF.

LOCATION.—Water-stage recorder in SE¼ sec. 31, T. 8 N., R. 5 E., on Hoopa Indian Reservation, half a mile below mouth of Campbell Creek and 2 miles southeast of Hoopa.

DRAINAGE AREA.—2,820 square miles.

RECORDS AVAILABLE.—October 1931 to September 1933; also at Hoopa, October 1911 to January 1914 and November 1916 to August 1918.

DISCHARGE.—Maximum during year, 22,500 second-feet Mar. 28 (gage height, 14.58 feet); minimum, 199 second-feet Oct. 1.

1911-14, 1916-18, 1931-33: Maximum, 89,000 second-feet Dec. 31, 1913 (gage height, 28.1 feet at old Hoopa gage); minimum, 162 second-feet Oct. 4, 1931.

REMARKS.—Records excellent except those for Sept. 23-30, which were estimated. Small diversions for mining and irrigation above station.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	201	294	2,740	1,640	2,270	6,000	11,300	8,120	11,000	3,290	815	377
2.....	203	377	1,720	2,180	2,220	8,620	11,900	8,120	9,920	3,160	815	377
3.....	201	443	1,320	5,790	2,170	16,400	14,100	6,920	8,620	3,100	815	371
4.....	203	464	1,140	4,480	2,070	11,600	15,800	6,920	7,880	3,040	790	356
5.....	203	540	1,030	3,290	2,120	8,880	14,400	6,920	7,880	2,920	790	356
6.....	208	650	950	2,680	2,380	7,640	13,000	6,680	8,120	2,800	765	365
7.....	218	672	840	2,320	2,610	7,880	12,400	6,920	8,620	2,740	740	371
8.....	237	628	790	2,070	2,610	8,620	10,800	7,400	8,620	2,640	690	374
9.....	239	560	740	1,980	2,490	8,880	9,140	7,400	8,620	2,480	668	371
10.....	245	520	672	1,890	2,380	9,140	7,880	6,920	8,880	2,280	645	368
11.....	249	482	540	1,760	2,320	8,880	7,160	6,680	9,400	2,140	600	356
12.....	249	464	415	1,640	2,440	15,500	7,160	6,680	9,400	2,040	600	353
13.....	247	446	415	1,560	2,610	17,600	7,160	6,920	9,400	1,960	579	350
14.....	255	429	464	1,560	2,440	13,800	7,640	7,400	9,140	1,910	558	347
15.....	257	419	501	1,600	2,380	11,900	8,880	7,640	8,880	1,820	518	342
16.....	272	464	605	1,600	3,220	14,400	9,400	7,640	8,120	1,740	499	336
17.....	270	482	672	1,520	3,720	16,700	8,620	8,120	6,920	1,620	480	342
18.....	268	482	695	1,440	3,720	13,000	7,400	7,880	6,000	1,500	473	350
19.....	270	464	2,310	1,410	3,430	11,300	6,450	7,160	5,480	1,430	456	350
20.....	270	464	2,940	1,380	3,220	11,000	6,000	6,680	5,170	1,400	470	365
21.....	272	436	1,980	1,380	3,220	11,300	6,220	6,680	4,970	1,290	470	380
22.....	304	419	1,560	1,350	3,360	10,200	6,920	6,680	4,870	1,230	445	402
23.....	309	409	2,320	1,350	3,570	8,880	8,120	7,880	4,570	1,170	435	400
24.....	312	402	2,320	1,480	3,800	7,640	9,140	8,360	4,380	1,140	415	390
25.....	304	393	1,980	1,640	3,640	7,160	9,660	9,140	4,200	1,080	402	450
26.....	304	386	1,890	1,640	3,570	6,920	8,880	9,920	4,200	1,030	390	500
27.....	301	399	2,070	2,870	3,800	8,620	7,880	9,920	4,200	972	380	550
28.....	299	761	2,070	2,800	4,200	20,000	9,400	10,800	4,030	945	377	500
29.....	296	2,460	1,890	2,550	-----	16,700	11,000	12,200	3,800	890	374	450
30.....	291	3,870	1,720	2,320	-----	13,300	9,660	13,000	3,430	865	374	400
31.....	291	-----	1,680	2,220	-----	11,900	-----	12,200	-----	840	377	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	312	201	260	16,000
November.....	3,870	294	656	39,000
December.....	2,940	415	1,390	85,500
January.....	5,790	1,350	2,110	130,000
February.....	4,200	2,070	2,930	163,000
March.....	20,000	6,000	11,300	695,000
April.....	15,800	6,000	9,450	562,000
May.....	13,000	6,680	8,130	500,000
June.....	11,000	3,430	6,060	414,000
July.....	3,290	840	1,850	114,000
August.....	815	374	555	34,100
September.....	560	336	387	23,000
The year.....	20,000	201	3,830	2,780,000

SMITH RIVER BASIN

SMITH RIVER NEAR CRESCENT CITY, CALIF.

LOCATION.—Water-stage recorder in SW¼ sec. 10, T. 16 N., R. 1 E., half a mile below mouth of South Fork and 9 miles east of Crescent City.

DRAINAGE AREA.—613 square miles.

RECORDS AVAILABLE.—October 1931 to September 1933.

DISCHARGE.—Maximum during year, 51,500 second-feet Jan. 2 (gage height, 24.30 feet); minimum, 191 second-feet Oct. 5, 11-12.

1931-33: Maximum, 61,700 second-feet Mar. 18, 1932 (gage height, 26.45 feet); minimum, 168 second-feet Oct. 21, 1931.

REMARKS.—Records excellent. No diversions or regulation.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	194	264	7,800	5,600	7,800	10,900	7,600	3,980	4,170	1,510	582	358
2.....	194	1,050	4,900	28,400	5,830	14,200	7,220	5,030	3,660	1,510	582	349
3.....	194	1,390	3,640	23,300	4,730	15,200	7,600	4,880	3,310	1,440	565	343
4.....	194	982	2,900	11,600	4,450	9,200	7,040	8,600	3,200	1,370	565	346
5.....	192	4,690	2,480	8,000	4,730	6,860	5,830	7,400	3,200	1,340	548	364
6.....	192	12,200	2,120	6,680	4,880	6,000	5,340	6,860	3,200	1,310	530	462
7.....	196	4,030	1,840	5,500	4,310	6,340	4,730	10,900	3,090	1,280	512	415
8.....	194	2,250	1,680	4,590	3,910	5,660	4,040	17,300	4,220	1,250	512	373
9.....	194	2,080	1,530	4,040	3,420	5,340	3,540	11,600	14,700	1,160	495	358
10.....	192	1,640	1,390	3,660	3,090	5,830	3,200	8,200	9,840	1,100	478	349
11.....	192	1,300	1,270	3,310	4,170	6,070	2,980	7,040	6,680	1,040	478	340
12.....	192	1,100	1,180	2,980	6,680	13,000	2,930	6,510	5,660	1,020	462	337
13.....	198	1,000	1,150	2,780	6,510	10,300	2,980	6,000	4,880	970	452	334
14.....	572	1,080	1,080	2,680	5,030	7,800	3,200	5,660	4,450	948	440	334
15.....	622	1,650	1,050	2,680	13,500	7,040	3,540	5,180	3,910	902	427	349
16.....	581	5,040	1,080	2,440	17,300	12,600	3,200	4,730	3,420	880	424	343
17.....	459	3,200	1,150	2,260	9,400	10,700	2,780	7,400	2,980	855	421	340
18.....	336	2,200	1,320	2,440	7,040	8,200	2,480	8,200	2,680	815	412	391
19.....	282	1,680	15,500	2,480	5,660	7,040	2,300	6,680	2,480	775	409	394
20.....	257	1,390	9,280	2,300	5,030	6,340	2,260	6,000	2,340	755	406	391
21.....	245	1,210	6,220	2,390	5,340	5,830	2,340	5,180	2,840	735	397	548
22.....	611	1,030	5,240	2,480	5,030	4,880	2,580	6,490	2,210	715	388	462
23.....	870	982	14,000	2,580	5,500	4,170	2,980	16,700	2,120	695	385	459
24.....	512	892	9,280	3,420	5,030	3,780	2,930	12,100	2,040	675	379	478
25.....	381	825	11,100	3,660	4,450	4,040	2,880	9,200	2,040	675	373	512
26.....	330	780	13,600	6,920	4,450	4,170	2,480	7,600	1,920	655	370	495
27.....	304	818	11,800	19,800	4,450	14,800	2,580	6,340	1,880	635	376	485
28.....	285	6,370	8,570	9,000	7,760	19,900	3,200	6,000	1,760	618	379	430
29.....	299	19,100	6,380	7,800	-----	12,300	3,200	6,000	1,650	600	379	397
30.....	263	13,200	5,010	6,240	-----	10,300	2,580	5,500	1,580	600	379	376
31.....	257	-----	5,320	7,400	-----	9,840	-----	4,590	-----	582	370	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	870	192	321	19,700
November.....	19,100	264	3,180	189,000
December.....	15,500	1,050	5,190	319,000
January.....	28,400	2,260	6,440	396,000
February.....	17,300	3,090	6,050	336,000
March.....	19,900	3,780	8,670	533,000
April.....	7,600	2,260	3,750	223,000
May.....	17,300	3,980	7,550	464,000
June.....	14,700	1,580	3,720	221,000
July.....	1,510	582	948	58,300
August.....	582	370	448	27,500
September.....	548	334	397	23,600
The year.....	28,400	192	3,880	2,810,000

MISCELLANEOUS DISCHARGE MEASUREMENTS

Measurements of stream flow in the Pacific slope basins in California at points other than gaging stations for the year ending September 30, 1933, are listed in the following tables.

*Streams south of San Francisco Bay***Tia Juana River at highway bridge near Nestor, Calif.**

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>
Jan. 21.....	347	Jan. 31.....	374	Feb. 10.....	23	Feb. 26.....	3.
Jan. 24.....	236	Feb. 3.....	96	Feb. 14.....	21		
Jan. 27.....	63	Feb. 6.....	46	Feb. 21.....	6.6		

San Diego River below diverting dam near Lakeside, Calif.

Feb. 14, 57 second-feet

San Diego River at El Capitan dam site near Lakeside, Calif.

Dec. 18.....	9.4	Jan. 31.....	201	Mar. 4.....	26	May 3.....	63
Dec. 27.....	8.7	Feb. 3.....	115	Mar. 10.....	22	May 9.....	32
Jan. 17.....	147	Feb. 6.....	80	Mar. 18.....	26	May 18.....	31
Jan. 19.....	41	Feb. 10.....	67	Mar. 26.....	8.9	May 27.....	18
Jan. 21.....	101	Feb. 14.....	79	Apr. 5.....	3.9	June 2.....	11
Jan. 24.....	177	Feb. 21.....	35	Apr. 28.....	42		
Jan. 27.....	92	Feb. 26.....	32	May 1.....	134		

Boulder Creek at diverting dam near Lakeside, Calif.

[Tributary to San Diego River]

Nov. 15.....	6.7	Dec. 27.....	4.4	Feb. 14.....	14	June 2.....	7.8
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Cuyamaca Flume at diverting dam near Lakeside, Calif.

[Diverts from San Diego River]

Oct. 19.....	0.9	Dec. 27.....	8.4	June 2.....	7.0		
Nov. 15.....	6.7	Feb. 14.....	1.1				

Cuyamaca Flume at South Fork of San Diego River, near Alpine, Calif.

Nov. 15.....	6.5	Dec. 27.....	8.2				
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Cuyamaca Flume at Chocolate, near Lakeside, Calif.

Nov. 15, 6.6 second-feet

Dec. 27, 8.3 second-feet

Cuyamaca Flume at Los Coches, near Lakeside, Calif.

Nov. 15.....	6.2	Dec. 27.....	8.2	Feb. 14.....	3.7	June 2.....	7.5
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Cuyamaca Flume near Grossmont, Calif.

Nov. 15, 1.8 second-feet

Dec. 27, 7.4 second-feet

San Vicente Creek near Foster, Calif.

[Tributary to San Diego River]

Jan. 17.....	42	Jan. 27.....	14	Feb. 2.....	26	Feb. 10.....	8.3
Jan. 21.....	58	Jan. 31.....	56				

*Streams south of San Francisco Bay—Continued***San Dieguito River below Hodges Dam, near Del Mar, Calif.**

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>
Feb. 7.....	86	Feb. 22.....	37	Mar. 7.....	21		

Santa Ysabel Creek near Mesa Grande, Calif.

[Tributary to San Dieguito River]

Oct. 11.....	4.5	Jan. 22.....	32	Mar. 26.....	11	June 2.....	15
Nov. 5.....	1.6	Feb. 2.....	50	Apr. 16.....	7.8	June 14.....	7.9
Dec. 11.....	8.6	Feb. 10.....	26	Apr. 30.....	51	June 30.....	3.8
Dec. 18.....	7.4	Feb. 23.....	20	May 5.....	22	July 21.....	1.0
Jan. 19.....	20	Mar. 10.....	16	May 18.....	20		

San Luis Rey River at Sickler Mill, near Pala, Calif.

Apr. 19.....	12	June 16.....	7.0	Aug. 23.....	2.8	Sept. 20.....	3.7
Apr. 25.....	11	Aug. 2.....	3.3	Aug. 30.....	3.3	Sept. 26.....	3.2
May 12.....	24	Aug. 9.....	3.4	Sept. 6.....	3.8		
May 25.....	13	Aug. 16.....	2.9	Sept. 13.....	3.9		

San Luis Rey River above Pala Indian Reservation Canal, near Pala, Calif.

Oct. 4.....	3.7	May 25.....	8.6				
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Pala Indian Reservation Canal near Pala, Calif.

[Diverts from San Luis Rey River]

Mar. 23.....	5.3	May 25.....	6.7	Aug. 9.....	2.0	Sept. 6.....	2.3
Apr. 19.....	7.2	May 28.....	6.5	Aug. 16.....	1.6	Sept. 13.....	2.6
Apr. 25.....	7.1	June 16.....	5.7	Apr. 23.....	1.6	Sept. 20.....	2.8
May 12.....	5.0	Aug. 2.....	1.9	Apr. 30.....	1.6	Sept. 26.....	2.7

Cajon Creek at ranger station near Keenbrook, Calif.

[Tributary to Lytle Creek]

Mar. 15.....	8.0	May 23.....	2.2	Aug. 29.....	0.55		
Apr. 17.....	4.7	July 11.....	.49				

Cajon Cienega at San Andreas fault line, near Keenbrook, Calif.

[Tributary to Cajon Creek]

Mar. 15.....	0.55	May 23.....	0.60	Aug. 29.....	0.30		
Apr. 17.....	.70	July 11.....	.48				

Upper diversion from Haines Creek at upper sand box near Tujunga, Calif.

Jan. 5.....	0.04	Apr. 27.....	0.02	July 5.....	0.02	Aug. 30.....	0.01
Jan. 18.....	.06	May 19.....	.03	July 10.....	.01		
Mar. 23.....	.05	June 10.....	.02	Aug. 9.....	.01		
Apr. 10.....	.04	June 17.....	.02	Aug. 20.....	.002		

Lower diversions from Haines Creek at lower tunnel below gaging station near Tujunga, Calif.

Jan. 5.....	0.01	Apr. 27.....	0.12	July 5.....	0.08	Aug. 30.....	0.06
Jan. 18.....	.06	May 19.....	.11	July 10.....	.07		
Mar. 23.....	.15	June 10.....	.11	Aug. 9.....	.06		
Apr. 10.....	.13	June 17.....	.08	Aug. 20.....	.06		

*Streams south of San Francisco Bay—Continued***Piru Creek below Doheny diversion, near Piru, Calif.**

[Tributary to Santa Clara River]

Sept. 20, 0.75 second-foot

Piru Land & Water Co.'s diversion from Piru Creek near Piru, Calif.

Apr. 21, 2.8 second-feet

Doheny Diversion from Piru Creek near Piru, Calif.

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	Sec.-ft.		Sec.-ft.		Sec.-ft.		Sec.-ft.
Apr. 4.....	2.1	Apr. 21.....	2.2	Apr. 28.....	0.5	Sept. 20.....	2.0

Fillmore Land & Water Co.'s diversion from Sespe Creek near Sespe, Calif.

Nov. 9.....	7.9	Feb. 24.....	0	Apr. 28.....	11.6	July 10.....	6.5
Dec. 2.....	8.8	Mar. 17.....	7.6	May 9.....	11.6	Aug. 8.....	3.8
Dec. 16.....	3.4	Apr. 4.....	11.7	May 22.....	13.0	Aug. 23.....	2.9
Dec. 29.....	4.2	Apr. 11.....	13.0	June 14.....	11.0	Sept. 5.....	3.0
Jan. 26.....	* 1.5	Apr. 18.....	13.7	June 28.....	9.5	Sept. 20.....	3.2

* Estimated.

North Fork of Matilija Creek near Matilija, Calif.

[Tributary to Ventura River]

Nov. 2.....	0.9	Jan. 27.....	13	Mar. 28.....	3.5	June 14.....	1.2
Dec. 1.....	1.1	Feb. 3.....	12	Apr. 14.....	1.8	Aug. 8.....	.7
Jan. 17.....	7.0	Feb. 17.....	7.0	May 2.....	2.2		
Jan. 20.....	35	Mar. 14.....	3.6	May 22.....	1.7		

Coyote Creek near Ventura, Calif.

[Tributary to Ventura River]

Dec. 29.....	* 0.2	Jan. 27.....	14	Mar. 14.....	1.8	May 22.....	0.41
Jan. 17.....	16	Feb. 3.....	13	Mar. 28.....	1.4		
Jan. 21.....	12	Feb. 17.....	3.7	Apr. 18.....	.7		
Jan. 23.....	72	Feb. 28.....	3.2	May 2.....	.55		

* Estimated.

Santa Ynez River just above junction with North Fork, Calif.

Oct. 27.....	(^b)	Jan. 31.....	4.5	May 16.....	0.3	Aug. 17.....	0.2
Nov. 30.....	(^b)	Feb. 28.....	1.0	June 20.....	.3	Sept. 28.....	.1
Dec. 29.....	(^b)	Apr. 13.....	.3	July 20.....	.2		

^b Trace.**Santa Ynez River half a mile above junction with Mono Creek, Calif.**

Feb. 22.....	25	Mar. 22.....	7.8	Apr. 12.....	3.9	May 3.....	3.6
Mar. 2.....	17	Mar. 29.....	5.8	Apr. 19.....	4.4	May 10.....	2.4
Mar. 8.....	12	Apr. 5.....	4.0	Apr. 26.....	4.4	May 17.....	2.4

Santa Ynez River half a mile below junction with Mono Creek, Calif.

Oct. 5.....	0	Dec. 14.....	0	June 14.....	1.2	Aug. 15.....	0
Oct. 12.....	0	Dec. 21.....	0	June 21.....	.9	Aug. 22.....	0
Oct. 19.....	0	Dec. 28.....	0	June 28.....	.7	Aug. 29.....	0
Oct. 26.....	0	Jan. 4.....	0	July 5.....	.3	Sept. 6.....	0
Nov. 2.....	0	Jan. 11.....	0	July 10.....	.1	Sept. 12.....	0
Nov. 9.....	0	Jan. 18.....	1.1	July 19.....	.02	Sept. 19.....	0
Nov. 16.....	0	May 24.....	2.7	July 25.....	0	Sept. 26.....	0
Dec. 1.....	0	May 31.....	1.7	Aug. 1.....	0		
Dec. 7.....	0	June 1.....	6.8	Aug. 8.....	0		

*Streams south of San Francisco Bay—Continued***Santa Ynez River at Paradise Camp, Calif.**

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>
Nov. 9.....	(^b)	Apr. 19.....	1.0	June 28.....	0.2	Aug. 22.....	0
Nov. 16.....	(^b)	May 3.....	.9	July 5.....	.2	Aug. 29.....	0
Dec. 1.....	0.01	May 10.....	.6	July 12.....	.1	Sept. 1.....	0
Dec. 7.....	.05	May 17.....	.4	July 19.....	(^b)	Sept. 12.....	0
Dec. 14.....	.05	May 24.....	.3	July 25.....	(^b)	Sept. 19.....	0
Dec. 21.....	.07	May 31.....	.4	Aug. 1.....	0	Sept. 26.....	0
Dec. 28.....	.07	June 7.....	.4	Aug. 8.....	0		
Jan. 4.....	.01	June 21.....	.2	Aug. 15.....	0		

↳ Trace.

Santa Ynez River at Buellton, Calif.

Oct. 1.....	1.4	Dec. 31.....	6.6	Mar. 25.....	26	July 22.....	0.8
Oct. 10.....	1.2	Jan. 7.....	7.6	Apr. 8.....	20	July 29.....	.5
Oct. 15.....	1.4	Jan. 14.....	7.3	Apr. 15.....	12	Aug. 5.....	(^b)
Oct. 22.....	3.0	Jan. 20.....	744	Apr. 22.....	7.6	Aug. 12.....	0
Oct. 29.....	3.1	Jan. 24.....	375	May 6.....	6.1	Aug. 19.....	0
Nov. 5.....	3.2	Jan. 28.....	140	May 13.....	4.6	Aug. 26.....	0
Nov. 12.....	3.5	Feb. 4.....	136	May 20.....	3.9	Sept. 1.....	0
Nov. 19.....	3.5	Feb. 11.....	70	May 27.....	4.8	Sept. 11.....	0
Nov. 26.....	3.0	Do.....	52	June 3.....	4.5	Sept. 16.....	0
Dec. 3.....	3.5	Feb. 25.....	37	June 17.....	3.8	Sept. 23.....	0
Dec. 10.....	4.3	Mar. 4.....	39	June 30.....	3.2	Sept. 29.....	0
Dec. 17.....	4.9	Mar. 11.....	34	July 7.....	.9		
Dec. 24.....	6.0	Mar. 18.....	34	July 15.....	.6		

↳ Trace.

Santa Ynez River at Associated Oil Co.'s pipe line 5 miles below Buellton, Calif.

Oct. 7.....	0	Nov. 18.....	5.4	Jan. 6.....	9.9	May 5.....	6.4
Oct. 14.....	.3	Nov. 25.....	5.3	Jan. 13.....	11	May 12.....	5.3
Oct. 21.....	.4	Dec. 2.....	5.6	Apr. 7.....	21	May 19.....	3.0
Oct. 28.....	.5	Dec. 9.....	6.2	Apr. 14.....	18	May 26.....	2.9
Nov. 4.....	.6	Dec. 16.....	7.7	Apr. 21.....	13	June 2.....	2.7
Nov. 10.....	3.2	Dec. 30.....	9.6	Apr. 28.....	10	June 16.....	3.3

Santa Ynez River at A Street Bridge, Lompoc, Calif.

Nov. 4.....	0	Jan. 16.....	9.7	May 1.....	6.6	July 28.....	0
Nov. 10.....	0	Jan. 20.....	1,611	May 8.....	3.0	July 31.....	0
Nov. 14.....	0	Jan. 27.....	254	May 15.....	1.3	Aug. 4.....	0
Nov. 18.....	0	Feb. 2.....	385	May 22.....	.4	Aug. 7.....	0
Nov. 21.....	0	Feb. 6.....	237	May 26.....	0	Aug. 11.....	0
Nov. 25.....	0	Feb. 9.....	104	May 29.....	0	Aug. 14.....	0
Nov. 28.....	0	Feb. 13.....	98	June 5.....	0	Aug. 18.....	0
Dec. 2.....	0	Feb. 16.....	62	June 9.....	0	Aug. 21.....	0
Dec. 12.....	0	Feb. 20.....	59	June 12.....	0	Aug. 25.....	0
Dec. 16.....	0	Feb. 27.....	50	June 16.....	0	Aug. 28.....	0
Dec. 19.....	0	Mar. 6.....	42	June 19.....	0	Sept. 1.....	0
Dec. 23.....	0	Mar. 16.....	37	June 24.....	0	Sept. 5.....	0
Dec. 27.....	0	Mar. 20.....	33	June 30.....	0	Sept. 11.....	0
Dec. 30.....	0	Mar. 27.....	27	July 3.....	0	Sept. 16.....	0
Jan. 3.....	0	Apr. 3.....	25	July 10.....	0	Sept. 22.....	0
Jan. 6.....	2.6	Apr. 10.....	15	July 18.....	0	Sept. 27.....	0
Jan. 9.....	4.3	Apr. 17.....	8.5	July 21.....	0	Sept. 29.....	0
Jan. 13.....	4.7	Apr. 24.....	7.7	July 24.....	0		

*Streams south of San Francisco Bay—Continued***Santa Ynez River at H Street Bridge, Lompoc, Calif.**

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	Sec.-ft.		Sec.-ft.		Sec.-ft.		Sec.-ft.
Nov. 4.	0	Jan. 16.	7.5	Apr. 10.	14	July 24.	0
Nov. 10.	0	Jan. 21.	578	Apr. 17.	7.6	July 28.	0
Nov. 14.	0	Jan. 27.	291	Apr. 24.	7.2	July 31.	0
Nov. 18.	0	Feb. 2.	389	May 1.	4.9	Aug. 4.	0
Nov. 21.	0	Feb. 9.	112	May 8.	2.7	Aug. 7.	0
Nov. 25.	0	Feb. 13.	90	May 22.	1	Aug. 11.	0
Nov. 28.	0	Feb. 16.	68	May 26.	0	Aug. 14.	0
Dec. 2.	0	Feb. 20.	58	May 29.	0	Aug. 18.	0
Dec. 5.	0	Feb. 23.	54	June 5.	0	Aug. 21.	0
Dec. 12.	0	Feb. 27.	55	June 9.	0	Aug. 25.	0
Dec. 16.	0	Mar. 3.	49	June 12.	0	Aug. 28.	0
Dec. 19.	0	Mar. 6.	39	June 16.	0	Sept. 1.	0
Dec. 23.	0	Mar. 9.	40	June 19.	0	Sept. 5.	0
Dec. 27.	0	Mar. 13.	40	June 24.	0	Sept. 11.	0
Dec. 30.	0	Mar. 17.	40	June 30.	0	Sept. 16.	0
Jan. 3.	0	Mar. 20.	34	July 3.	0	Sept. 22.	0
Jan. 6.	0	Mar. 23.	35	July 10.	0	Sept. 27.	0
Jan. 9.	0	Mar. 31.	25	July 18.	0	Sept. 29.	0
Jan. 13.	0	Apr. 3.	22	July 21.	0		

Santa Ynez River at Pine Canyon Bridge, Calif.

Oct. 3.	0.5	Dec. 30.	0.4	Mar. 31.	27	June 26.	0.4
Oct. 7.	.3	Jan. 3.	.5	Apr. 3.	21	June 30.	.3
Oct. 10.	.3	Jan. 6.	.5	Apr. 7.	19	July 3.	.3
Oct. 14.	.3	Jan. 9.	.5	Apr. 10.	16	July 7.	.2
Oct. 17.	.3	Jan. 13.	.4	Apr. 14.	12	July 10.	.2
Oct. 21.	.3	Jan. 16.	1.5	Apr. 17.	13	July 14.	.2
Oct. 24.	.3	Jan. 20.	1,300	Apr. 21.	12	July 17.	.2
Oct. 28.	.3	Jan. 23.	181	Apr. 24.	9	July 21.	.2
Oct. 31.	.3	Jan. 27.	210	Apr. 28.	9	July 24.	.1
Nov. 4.	.3	Jan. 30.	496	May 1.	6	July 28.	.1
Nov. 7.	.3	Feb. 2.	272	May 5.	3.9	July 31.	.1
Nov. 10.	.3	Feb. 6.	149	May 8.	2.8	Aug. 4.	.1
Nov. 14.	.3	Feb. 9.	102	May 12.	1.8	Aug. 7.	.1
Nov. 18.	.3	Feb. 13.	80	May 15.	1.4	Aug. 11.	.1
Nov. 21.	.3	Feb. 16.	58	May 19.	.8	Aug. 14.	.1
Nov. 25.	.4	Feb. 20.	59	May 22.	.8	Aug. 19.	.1
Nov. 28.	.3	Feb. 23.	52	May 26.	.6	Aug. 21.	.1
Dec. 2.	.3	Feb. 27.	47	May 29.	.5	Aug. 26.	.1
Dec. 5.	.4	Mar. 3.	44	June 1.	.5	Sept. 1.	.1
Dec. 9.	.4	Mar. 6.	43	June 5.	1.3	Sept. 5.	.1
Dec. 12.	.5	Mar. 9.	42	June 9.	.8	Sept. 11.	.1
Dec. 16.	.4	Mar. 13.	39	June 12.	.5	Sept. 16.	.2
Dec. 19.	.4	Mar. 17.	41	June 16.	.5	Sept. 22.	.2
Dec. 23.	.9	Mar. 23.	31	June 19.	.3	Sept. 27.	.2
Dec. 27.	.5	Mar. 27.	30	June 23.	.3		

Santa Ynez River at Renwick Crossing, near Surf, Calif.

Oct. 3.	0.3	Dec. 9.	2.2	Mar. 3.	58	May 29.	0.9
Oct. 7.	.7	Dec. 12.	2.1	Mar. 6.	51	June 5.	1.5
Oct. 10.	.7	Dec. 16.	1.9	Mar. 9.	44	June 12.	1.1
Oct. 14.	.7	Dec. 19.	2.1	Mar. 13.	42	June 19.	.3
Oct. 17.	.8	Dec. 23.	3.2	Mar. 17.	45	June 26.	.2
Oct. 21.	.7	Dec. 27.	2.8	Mar. 20.	40	July 3.	.2
Oct. 24.	.9	Dec. 30.	2.7	Mar. 23.	36	July 10.	.4
Oct. 28.	1.0	Jan. 3.	2.6	Mar. 27.	34	July 17.	.4
Oct. 31.	.9	Jan. 6.	2.6	Mar. 31.	31	July 26.	.3
Nov. 4.	.9	Jan. 9.	2.5	Apr. 3.	26	Aug. 4.	.3
Nov. 7.	1.1	Jan. 13.	2.4	Apr. 7.	20	Aug. 11.	.2
Nov. 10.	.9	Jan. 16.	4.1	Apr. 10.	17	Aug. 18.	.3
Nov. 14.	1.3	Feb. 6.	122	Apr. 17.	12	Aug. 23.	.3
Nov. 18.	1.4	Feb. 9.	102	Apr. 21.	11	Sept. 1.	.3
Nov. 21.	1.4	Feb. 13.	90	Apr. 24.	11	Sept. 7.	.2
Nov. 25.	1.5	Feb. 16.	78	May 1.	8	Sept. 16.	.3
Nov. 28.	1.6	Feb. 20.	71	May 8.	5	Sept. 19.	.3
Dec. 2.	1.5	Feb. 23.	68	May 15.	4	Sept. 29.	.3
Dec. 5.	1.3	Feb. 27.	62	May 22.	3		

*Streams south of San Francisco Bay—Continued***Santa Ynez River at Southern Pacific Railroad bridge at Surf, Calif.**

Feb. 6, 296 second-feet

Alder Creek at junction with Santa Ynez River, Calif.

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>
Oct. 27.....	0	Feb. 28.....	10.0	June 20.....	0.6	Sept. 28.....	0.1
Nov. 30.....	0	Apr. 13.....	.7	July 20.....	.2		
Dec. 29.....	.1	May 16.....	.5	Aug. 17.....	.1		

North Fork of Santa Ynez River at junction with Santa Ynez River, Calif.

Oct. 27.....	(^b)	Jan. 31.....	1.3	May 16.....	0.2	Aug. 17.....	0
Nov. 30.....	0.2	Feb. 28.....	.8	June 20.....	.04	Sept. 28.....	0
Dec. 29.....	.1	Apr. 13.....	.4	July 20.....	.1		

^b Trace.**Mono Creek half a mile above junction with Santa Ynez River, Calif.**

Feb. 22.....	8.9	Mar. 22.....	5.5	Apr. 12.....	3.9	May 3.....	2.6
Mar. 2.....	6.1	Mar. 29.....	4.7	Apr. 19.....	4.1	May 10.....	1.9
Mar. 8.....	6.1	Apr. 5.....	5.4	Apr. 26.....	3.6	May 17.....	1.5

Camuesa Creek at junction with Santa Ynez River, Calif.

Oct. 12.....	0	Jan. 4.....	0	May 3.....	0.3	July 19.....	0.04
Oct. 19.....	0	Jan. 11.....	0	May 10.....	.2	July 25.....	.03
Oct. 26.....	0	Feb. 22.....	.5	May 17.....	.1	Aug. 1.....	.04
Nov. 2.....	0	Mar. 2.....	.3	May 24.....	.2	Aug. 8.....	.02
Nov. 9.....	0	Mar. 8.....	.2	May 31.....	.2	Aug. 15.....	(^b)
Nov. 16.....	0	Mar. 22.....	.3	June 7.....	.2	Aug. 22.....	0
Dec. 1.....	0	Mar. 29.....	.3	June 14.....	.1	Aug. 29.....	0
Dec. 7.....	0	Apr. 5.....	.3	June 21.....	.1	Sept. 6.....	0
Dec. 14.....	0	Apr. 12.....	.3	June 28.....	.1	Sept. 12.....	0
Dec. 21.....	0	Apr. 19.....	.3	July 5.....	.02	Sept. 19.....	0
Dec. 28.....	0	Apr. 26.....	.2	July 12.....	.01	Sept. 26.....	0

^b Trace.**Gidney Creek at junction with Santa Ynez River, Calif.**

Oct. 5.....	0	Jan. 4.....	0	May 3.....	0.1	Aug. 1.....	0
Oct. 12.....	0	Jan. 11.....	0	May 10.....	.1	Aug. 8.....	0
Oct. 19.....	0	Jan. 18.....	.3	May 17.....	.1	Aug. 15.....	0
Oct. 26.....	0	Feb. 22.....	.6	May 24.....	.1	Aug. 22.....	0
Nov. 2.....	0	Mar. 2.....	.6	May 31.....	.03	Aug. 29.....	0
Nov. 9.....	0	Mar. 8.....	.3	June 7.....	.1	Sept. 6.....	0
Nov. 16.....	0	Mar. 22.....	.3	June 14.....	.02	Sept. 12.....	0
Dec. 1.....	0	Mar. 29.....	.3	June 21.....	(^b)	Sept. 19.....	0
Dec. 7.....	0	Apr. 5.....	.2	June 28.....	0	Sept. 26.....	0
Dec. 14.....	0	Apr. 12.....	.2	July 5.....	0		
Dec. 21.....	0	Apr. 19.....	.2	July 12.....	0		
Dec. 28.....	0	Apr. 26.....	.2	July 25.....	0		

^b Trace.**Hot Spring Creek at junction with Santa Ynez River, Calif.**

Oct. 5.....	0.3	Jan. 4.....	0.5	Apr. 5.....	0.5	July 25.....	0.3
Oct. 12.....	.3	Jan. 11.....	.4	Apr. 19.....	.4	Aug. 1.....	.3
Oct. 19.....	.3	Jan. 19.....	.34	Apr. 26.....	.4	Aug. 8.....	.3
Oct. 26.....	.3	Jan. 23.....	.38	May 3.....	.4	Aug. 15.....	.3
Nov. 2.....	.3	Feb. 4.....	.8	May 10.....	.4	Aug. 22.....	.3
Nov. 9.....	.3	Feb. 11.....	.9	May 24.....	.4	Aug. 29.....	.3
Nov. 16.....	.3	Feb. 15.....	.7	May 31.....	.4	Sept. 6.....	.3
Nov. 26.....	.3	Feb. 24.....	.7	June 7.....	.5	Sept. 12.....	.3
Dec. 1.....	.4	Mar. 2.....	.6	June 21.....	.4	Sept. 19.....	.3
Dec. 7.....	.3	Mar. 8.....	.7	June 28.....	.3	Sept. 26.....	.3
Dec. 14.....	.6	Mar. 16.....	.6	July 5.....	.3		
Dec. 21.....	.5	Mar. 22.....	.5	July 12.....	.3		
Dec. 28.....	.4	Mar. 29.....	.5	July 19.....	.3		

*Streams south of San Francisco Bay—Continued***Santa Agueda Creek at junction with Santa Ynez River, near Santa Ynez, Calif.**

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>
Oct. 1.....	(^b)	Dec. 31.....	0	Apr. 1.....	0.1	July 15.....	0
Oct. 8.....	(^b)	Jan. 7.....	0	Apr. 8.....	.1	July 22.....	0
Oct. 15.....	(^b)	Jan. 14.....	0	Apr. 15.....	.1	July 29.....	0
Oct. 22.....	(^b)	Jan. 19.....	55	Apr. 20.....	.1	Aug. 5.....	0
Oct. 29.....	(^b)	Jan. 28.....	.7	Apr. 28.....	.1	Aug. 12.....	0
Nov. 5.....	(^b)	Feb. 4.....	.3	May 6.....	.1	Aug. 19.....	0
Nov. 12.....	0	Feb. 11.....	.3	May 13.....	.04	Aug. 26.....	0
Nov. 19.....	0	Feb. 17.....	.3	May 20.....	.03	Sept. 1.....	0
Nov. 26.....	0	Feb. 24.....	.2	May 27.....	(^b)	Sept. 16.....	0
Dec. 2.....	0	Mar. 1.....	.2	June 3.....	(^b)	Sept. 23.....	0
Dec. 10.....	0	Mar. 10.....	.1	June 10.....	(^b)	Sept. 29.....	0
Dec. 17.....	0	Mar. 15.....	.1	June 17.....	0		
Dec. 24.....	0	Mar. 29.....	.1	July 7.....	0		

* Trace.

Santa Cota Creek at junction with Santa Ynez River, near Santa Ynez, Calif.

Oct. 1.....	4.1	Dec. 31.....	7.0	Apr. 1.....	2.9	July 7.....	1.3
Oct. 8.....	4.6	Jan. 7.....	7.7	Apr. 8.....	3.4	July 15.....	1.7
Oct. 15.....	6.4	Jan. 14.....	5.8	Apr. 15.....	2.3	July 22.....	2.3
Oct. 22.....	6.0	Jan. 23.....	8.8	Apr. 22.....	1.2	July 29.....	2.7
Oct. 29.....	3.8	Jan. 28.....	6.7	Apr. 29.....	1.9	Aug. 5.....	.6
Nov. 5.....	5.8	Feb. 4.....	5.7	May 6.....	1.1	Aug. 9.....	.2
Nov. 12.....	8	Feb. 11.....	4.7	May 13.....	2.1	Aug. 12.....	1.0
Nov. 19.....	5.8	Feb. 18.....	4.4	May 20.....	1.4	Aug. 19.....	1.8
Nov. 26.....	6.7	Feb. 25.....	4.5	May 27.....	2.5	Aug. 26.....	.1
Dec. 3.....	6.8	Mar. 4.....	5.4	June 3.....	3.3	Sept. 1.....	1.2
Dec. 10.....	6.1	Mar. 11.....	4.5	June 10.....	4.0	Sept. 16.....	2.5
Dec. 17.....	6.1	Mar. 18.....	4.5	June 17.....	3.7	Sept. 23.....	2.2
Dec. 24.....	5.7	Mar. 25.....	4.0	June 30.....	1.4	Sept. 29.....	2.1

Alamo Pintado Creek 1.1 miles above junction with Santa Ynez River, near Solvang, Calif.

Oct. 1.....	0.2	Dec. 31.....	0.2	Apr. 1.....	0.3	July 15.....	0.2
Oct. 8.....	.2	Jan. 7.....	.2	Apr. 8.....	.3	July 22.....	.2
Oct. 15.....	.2	Jan. 14.....	.2	Apr. 15.....	.3	July 29.....	.2
Oct. 22.....	.2	Jan. 19.....	124	Apr. 22.....	.3	Aug. 5.....	.2
Oct. 29.....	.2	Jan. 28.....	.3	Apr. 29.....	.2	Aug. 12.....	.2
Nov. 5.....	.2	Feb. 4.....	.3	May 6.....	.2	Aug. 19.....	.2
Nov. 12.....	.2	Feb. 11.....	.2	May 13.....	.2	Aug. 26.....	.2
Nov. 19.....	.2	Feb. 18.....	.3	May 20.....	.2	Sept. 1.....	.2
Nov. 26.....	.2	Feb. 25.....	.3	May 27.....	.2	Sept. 16.....	.3
Dec. 3.....	.2	Mar. 3.....	.3	June 3.....	.2	Sept. 23.....	.3
Dec. 10.....	.2	Mar. 11.....	.3	June 10.....	.2	Sept. 29.....	.3
Dec. 17.....	.2	Mar. 18.....	.3	June 17.....	.2		
Dec. 24.....	.2	Mar. 25.....	.3	June 30.....	.2		

Alisal Creek at junction with Santa Ynez River, near Solvang, Calif.

Oct. 1.....	0	Jan. 14.....	0	Apr. 8.....	0.1	Aug. 5.....	0
Oct. 29.....	0	Jan. 24.....	1.1	Apr. 15.....	.1	Aug. 12.....	0
Nov. 5.....	0	Feb. 4.....	1.5	Apr. 22.....	.1	Aug. 19.....	0
Nov. 12.....	0	Feb. 11.....	.7	Apr. 29.....	0	Aug. 26.....	0
Nov. 19.....	0	Feb. 18.....	.3	May 13.....	(^b)	Sept. 1.....	0
Nov. 26.....	0	Feb. 25.....	.3	May 20.....	(^b)	Sept. 11.....	0
Dec. 3.....	0	Mar. 4.....	.3	May 27.....	(^b)	Sept. 16.....	0
Dec. 17.....	0	Mar. 11.....	.2	June 3.....	0	Sept. 23.....	0
Dec. 24.....	0	Mar. 18.....	.3	June 17.....	0	Sept. 29.....	0
Dec. 31.....	0	Mar. 25.....	.2	July 7.....	0		
Jan. 7.....	0	Apr. 1.....	.1	July 22.....	0		

* Trace.

Streams south of San Francisco Bay—Continued

Nojoqui Creek 0.6 mile above junction with Santa Ynez River, near Buellton, Calif.

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	Sec.-ft.		Sec.-ft.		Sec.-ft.		Sec.-ft.
Oct. 1.....	0	Jan. 7.....	0	Mar. 25.....	0	July 7.....	0
Oct. 29.....	0	Jan. 14.....	0	Apr. 8.....	0	July 22.....	0
Nov. 5.....	0	Jan. 20.....	0	Apr. 15.....	0	Aug. 5.....	0
Nov. 14.....	0	Jan. 24.....	1.0	Apr. 22.....	0	Aug. 12.....	0
Nov. 19.....	0	Jan. 28.....	.5	Apr. 29.....	0	Aug. 19.....	0
Nov. 26.....	0	Feb. 4.....	.5	May 6.....	0	Aug. 26.....	0
Dec. 3.....	0	Feb. 11.....	.3	May 13.....	0	Sept. 1.....	0
Dec. 10.....	0	Feb. 18.....	.1	May 20.....	0	Sept. 11.....	0
Dec. 17.....	0	Mar. 4.....	0	May 27.....	0	Sept. 16.....	0
Dec. 24.....	0	Mar. 11.....	0	June 3.....	0	Sept. 23.....	0
Dec. 31.....	0	Mar. 18.....	0	June 17.....	0		

Santa Rosa Creek at junction with Santa Ynez River, Calif.

Oct. 3.....	0.3	Dec. 5.....	0.3	Feb. 27.....	0.3	May 8.....	0.2
Oct. 10.....	.2	Dec. 12.....	.3	Mar. 6.....	.4	May 12.....	.2
Oct. 17.....	.2	Dec. 19.....	.3	Mar. 13.....	.4	May 20.....	.2
Oct. 24.....	.2	Dec. 27.....	.3	Mar. 20.....	.2	May 29.....	.2
Oct. 31.....	.2	Jan. 3.....	.4	Mar. 27.....	.2	June 19.....	.2
Nov. 7.....	.2	Jan. 9.....	.4	Apr. 3.....	.2	June 27.....	.2
Nov. 14.....	.2	Jan. 23.....	.9	Apr. 10.....	.2	Aug. 9.....	.2
Nov. 21.....	.2	Feb. 9.....	.3	Apr. 24.....	.1	Sept. 27.....	.2
Nov. 28.....	.3	Feb. 20.....	.3	May 1.....	.1		

Salsipuedes Creek 0.9 mile above junction with Santa Ynez River, near Lompoc, Calif.

Oct. 7.....	0.5	Jan. 6.....	1.7	Apr. 7.....	1.8	July 7.....	0.3
Oct. 14.....	.5	Jan. 13.....	1.8	Apr. 14.....	1.5	July 14.....	.2
Oct. 21.....	.4	Jan. 19.....	57	Apr. 21.....	1.1	July 28.....	.1
Oct. 28.....	.4	Jan. 27.....	2.5	Apr. 28.....	1.5	Aug. 4.....	.1
Nov. 4.....	.5	Feb. 2.....	4.7	May 5.....	.9	Aug. 11.....	0.01
Nov. 10.....	.4	Feb. 9.....	2.9	May 12.....	.7	Aug. 18.....	0
Nov. 18.....	.6	Feb. 16.....	2.5	May 19.....	.6	Sept. 1.....	.2
Nov. 25.....	.6	Feb. 23.....	2.6	May 26.....	.5	Sept. 7.....	.2
Dec. 2.....	.6	Mar. 3.....	2.6	June 2.....	.7	Sept. 16.....	.2
Dec. 9.....	1.3	Mar. 9.....	1.7	June 9.....	.9	Sept. 22.....	.1
Dec. 16.....	1.8	Mar. 17.....	3.1	June 16.....	.4	Sept. 29.....	.2
Dec. 23.....	3.2	Mar. 23.....	2.2	June 24.....	.3		
Dec. 30.....	1.5	Mar. 31.....	1.9	June 30.....	.3		

Alamo Creek at junction with Cuyama River, near Santa Maria, Calif.

Aug. 8, 1.7 second-foot
 Sept. 6, 1.6 second-foot

Salinas River above mouth of Nacimiento River, near Bradley, Calif.

Dec. 23.....	1.5	Jan. 8.....	5.7	Jan. 24.....	728		
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Trout Creek at Pozo road crossing, 4 miles above mouth, near Santa Margarita, Calif.

[Tributary to Salinas River]

Dec. 22, 1.2 second-foot
 Jan. 7, 0.6 second-foot

*Flow originates in springs about 1½ miles above point of measurement.

Nacimiento River near Bradley, Calif.

[Tributary to Salinas River]

Dec. 23.....	2.0	Mar. 1.....	29.4	Apr. 5.....	33.2	May 15.....	15.3
Jan. 8.....	1.7	Mar. 10.....	21.8	Apr. 14.....	21.4	June 12.....	.6
Jan. 24.....	434	Mar. 13.....	25.1	Apr. 21.....	13.5	July 19.....	0
Feb. 9.....	82	Mar. 20.....	83	Apr. 28.....	11.1		
Feb. 24.....	37.2	Mar. 24.....	48.4	May 8.....	8.2		

Tulare Lake Basin

South Fork of Tulare River at former gaging station near Porterville, Calif.

[Tributary to Tulare Lake]

Oct. 4, 3.5 second-feet

San Joaquin River Basin

North Fork of Big Creek above Huntington Lake, Calif.

[Tributary to Big Creek, which is tributary to San Joaquin River]

Feb. 21, 2.1 second-feet

Mar. 31, 4.8 second-feet

Sand Creek above Huntington Lake, Calif.

[Tributary to Big Creek]

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
	Sec.-ft.		Sec.-ft.		Sec.-ft.		Sec.-ft.
Feb. 21.....	0.7	Mar. 31.....	2.3				

Pitman Creek at gaging station at Big Creek, Calif.

[Tributary to Big Creek]

Oct. 11.....	0.2	Feb. 15.....	0.9	May 12.....	1.8	Aug. 10.....	0.3
Dec. 17.....	.8	Mar. 10.....	1.5	June 23.....	.8	Sept. 13.....	.2
Jan. 12.....	.6	Apr. 5.....	2.8	July 14.....	.4		

Stevenson Creek at gaging station at Shaver, Calif.

[Tributary to San Joaquin River]

Oct. 4.....	0.2	Jan. 9.....	0.2	Apr. 4.....	0.9	July 11.....	0.4
Nov. 7.....	.2	Feb. 6.....	.2	May 4.....	.6	Aug. 1.....	.3
Dec. 8.....	.2	Mar. 6.....	.6	June 1.....	.3	Sept. 13.....	.04

Mokelumne River at Victor Bridge, near Victor, Calif.

[Tributary to San Joaquin River]

Mar. 9.....	618	Mar. 9.....	597	Mar. 10.....	610	Mar. 11.....	597
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Cherry Creek below diversion dam at Early intake, near Mather, Calif.

[Tributary to Tuolumne River]

June 19, 1,100 second-feet

June 26, 720 second-feet

Cherry Canal at Early intake, near Mather, Calif.

[Diverts from Cherry Creek]

Apr. 22, 181 second-feet

Sacramento River Basin

North Fork of Pit River at former gaging station near Alturas, Calif.

[Tributary to Pit River]

Oct. 18, 1.6 second-feet

Nov. 15, 3.3 second-feet

Ash Creek at former gaging station at Adin, Calif.

[Tributary to Pit River]

Oct. 19, 20 second-feet

Nov. 16, 24 second-feet

Sacramento River Basin—Continued

Mill Creek at former gaging station near Mineral, Calif.

[Tributary to Sacramento River]

Oct. 14, 26 second-feet

Deer Creek at former gaging station at Deer Creek Meadows, Calif.

[Tributary to Sacramento River]

Oct. 14, 22 second-feet

Grizzly Creek at gaging station near Storrie, Calif.

[Tributary to North Fork of Feather River]

Date	Dis-charge	Date	Dis-charge	Date	Dis-charge	Date	Dis-charge
Oct. 11.....	Sec.-ft. 0.3	Feb. 1.....	Sec.-ft. 1.0	Sept. 11.....	Sec.-ft. 0.4		Sec.-ft.

Middle Fork of Feather River at former gaging station near Nelson Point, Calif.

[Tributary to Feather River]

Oct. 7, 74 second-feet

Grizzly Creek at former gaging station near Portola, Calif.

[Tributary to Middle Fork of Feather River]

Oct. 6, 0.3 second-foot

American River at gaging station at Sacramento, Calif.

[Tributary to Sacramento River]

Oct. 7.....	231	May 5.....	3,630	June 19.....	3,560	Aug. 21.....	192
Oct. 20.....	405	May 18.....	4,860	July 19.....	608	Sept. 13.....	81
Nov. 3.....	543	June 7.....	10,300	Aug. 3.....	337		

Klamath River Basin

Bluff Creek half a mile above mouth, in sec. 30, T. 10 N., R. 5 E., Calif.

[Tributary to Klamath River]

July 25, 108 second-feet

Keywords: *workplace spirituality, organizational commitment, organizational trust, organizational identification, organizational citizenship behaviors*

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