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SURFACE WATER SUPPLY *of the* UNITED STATES

1929

PART XI PACIFIC SLOPE BASINS IN CALIFORNIA

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Prepared in cooperation with
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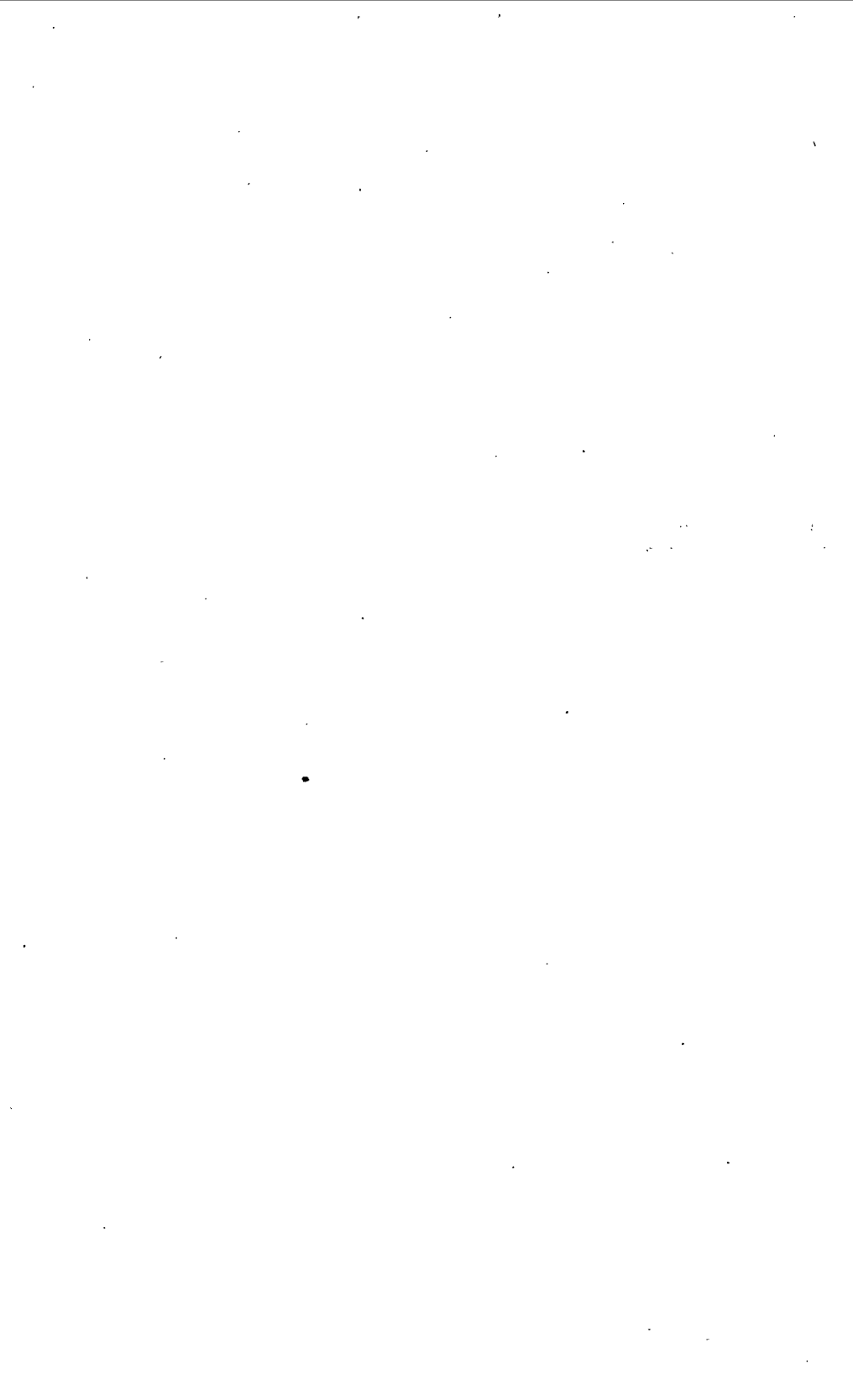
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SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN CALIFORNIA, 1929

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports representing results of measurements of flow made on streams in the United States during the year ending September 30, 1929.

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, 1895-1930

1895-----	\$12, 500. 00	1908-1910 -	\$100, 000. 00	1926-----	\$165, 000. 00
1896-----	24, 500. 00	1911-1917 -	150, 000. 00	1927-----	151, 000. 00
1897-1899 -	50, 000. 00	1918-----	175, 000. 00	1928-----	147, 000. 00
1900-----	70, 000. 00	1919-----	148, 244. 10	1929-----	270, 500. 00
1901-1902 -	100, 000. 00	1920-----	175, 000. 00	1930-----	275, 000. 00
1903-1906 -	200, 000. 00	1921-1923 -	180, 000. 00		
1907-----	150, 000. 00	1924-1925 -	170, 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 5,830 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1929, 2,240 gaging stations were being maintained by the Geological Survey and the cooperating organizations. 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-feet, 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, and acre-feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, run-off in inches, and acre-feet. They may be defined as follows:

“Second-feet” 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-feet 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 cover the year beginning October 1, 1928, and ending September 30, 1929. At the beginning of January in most parts of the United States much of the precipitation in the preceding three 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 precipitation within that year.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to

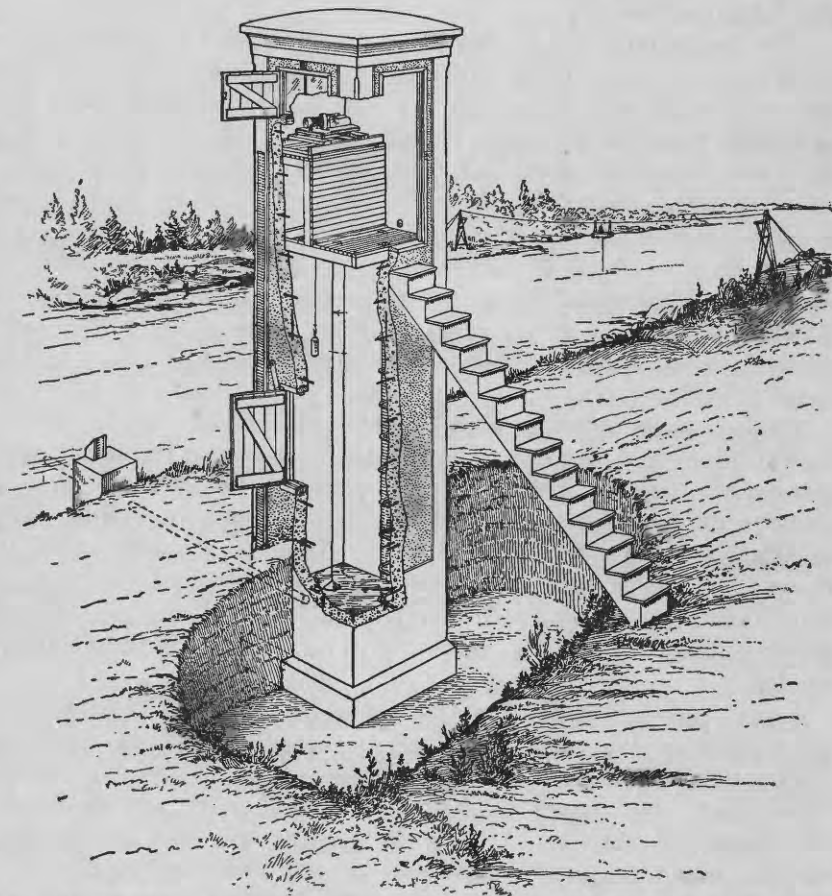


FIGURE 1.—Typical river measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car

supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct reading 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.

From the discharge measurements rating tables are prepared that give the discharge for any stage. The application of the daily gage height 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, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off.

The description of the station gives, in addition to statements regarding location and type of gage, information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded discharge, and the accuracy of the records. The maximum discharge given under "Extremes" does not represent the crest discharge unless a water-stage recorder was in operation or unless a nonrecording gage was read at the time of the crest.

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 non-recording 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 at regular intervals during 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 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 permanence 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 the records. "Excellent" indicates that records are

accurate within 5 per cent; "good," within 10 per cent; "fair," within 15 per cent; and "poor," 20 per cent 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 sections 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 I. North Atlantic slope basins (St. John River to York River).

II. South Atlantic slope and eastern Gulf of Mexico basins (James River to the Mississippi).

III. Ohio River Basin.

IV. St. Lawrence River Basin.

V. Hudson Bay and upper Mississippi River Basins.

VI. Missouri River Basin.

VII. Lower Mississippi River Basin.

VIII. Western Gulf of Mexico basins.

PART IX. Colorado River Basin.**X. The Great Basin.****XI. Pacific slope basins in California.****XII. 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, Me., Statehouse.

Boston, Mass., 2500 Customhouse.

Hartford, Conn., 60 Washington Street.

Albany, N. Y., 506 Broadway-Arcade Building.

Trenton, N. J., 710 Trenton Trust Building.

Charlottesville, Va., Brooks Museum, University of Virginia.

South Charleston, W. Va., Naval Ordnance Plant.

Asheville, N. C., 210 Post Office Building.

Columbia, S. C., 801 National Loan & Exchange Bank Building.

Ocala, Fla., Post Office Building.

Tuscaloosa, Ala., Post Office Building.

Chattanooga, Tenn., 630 Power Building.

Columbus, Ohio, Engineering Experiment Station, Ohio State University.

Indianapolis, Ind., 319 Federal Building.

Lansing, Mich., M9 State Office Building.

Chicago, Ill., 1503 Consumers Building.

Madison, Wis., 337N State Capitol.

St. Paul, Minn., 202 Old State Capitol.

Topeka, Kans., 23 Federal Building.

Rolla, Mo., Rolla Building, School of Mines and Metallurgy.

Fort Smith, Ark., Post Office Building.

Austin, Tex., State Capitol.

Tucson, Ariz., 210 Post Office Building.

Denver, Colo., 403 Post Office Building.

Salt Lake City, Utah, 313 Federal Building.

Idaho Falls, Idaho, 228 Federal Building.

Boise, Idaho, Federal Building.

Helena, Mont., 416 Power Block.

Tacoma, Wash., 406 Federal Building.

Portland, Oreg., 606 Post Office Building.

San Francisco, Calif., 303 Customhouse.

Los Angeles, Calif., 751 South Figueroa Street, room 510.

Honolulu, Hawaii, Territorial Office Building.

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

Stream-flow records have been obtained at about 5,830 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 and 1894.
16th A, pt. 2.....	Descriptive information only.....	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge (also 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 and 1896.
W 15.....	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas.....	1897.
W 16.....	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte, 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.
W 241 to 252.....	do.....	1907 and 1908
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 and 1920.
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.

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 1929. 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 III 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, 1899-1929

[For basins included see pp. 5 and 6]

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII-A	XII-B	XII-C
1899 *	35	36	36	36	36	36, 37	37	37	37, 38	38, 39	38, 39	38	38	38
1900 *	47, 48	48	48	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	65, 75	65, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	82	82	82	82	82	82	82	82	83	83	83	83	83
1903	97	97	97	97	97	97	97	97	97	98	98	98	98	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, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203	201, 202, 203
1907-8	281	281	281	281	281	281	281	281	281	281	281	281	281	281
1909	283	283	283	283	283	283	283	283	283	283	283	283	283	283
1910	281	281	281	281	281	281	281	281	281	281	281	281	281	281
1911	301	301	301	301	301	301	301	301	301	301	301	301	301	301
1912	321	321	321	321	321	321	321	321	321	321	321	321	321	321
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

* 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 IV.

† James River only.

‡ Gallatin River.

§ Green and Gunnison Rivers and Grand River above junction with Gunnison.

|| Mohave River only.

¶ Kings and Kern Rivers and South Pacific slope basins.

* Rating tables and Index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Tables of monthly discharge for 1900 in Twenty-second Annual Report, Part IV.

† Wisconsin and Sanuykill Rivers to James River.

‡ Seboto River.

! Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte.

‡ Tributaries of Mississippi from east.

§ Lake Ontario and tributaries to St. Lawrence River proper.

|| Hudson Bay only.

¶ New England rivers only.

* Susquehanna River to Delaware River, inclusive.

† Platte and Kansas Rivers.

‡ Great Basin in California except Truckee and Carson River Basins.

§ Below junction with Gila.

|| Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

Investigation of the water resources of California is being carried on by the United States Geological Survey in cooperation with the State in accordance with acts of the State legislature, approved March 16, 1903, March 20, 1905, March 11, 1907, and April 22, 1909, empowering the State authorities to enter into contracts with the Director of the United States Geological Survey for the purpose of making topographic maps, gaging streams, and surveying reservoir sites and canal sites for the conservation and utilization of the flood and storm waters of the State. The State funds for the work during the year 1929 were provided for in the State budget and the usual agreement was executed by B. B. Meek, director of public works, and Edward Hyatt, State engineer.

The entire expense of the stream-flow investigations in Tuolumne River Basin for the Hetch Hetchy project is paid by the city and county of San Francisco, through M. M. O'Shaughnessy, city engineer.

All stations in Los Angeles County are maintained in cooperation with the board of supervisors and the Department of Agriculture, represented by the Forest Service through F. E. Bonner and E. W. Kramer, district engineers, and the Weather Bureau through H. B. Hersey, meteorologist. The Forest Service pays the salary and expenses of one hydrographer detailed for field work. The Geological Survey supervises the work and compiles all stream-flow data for publication.

The stations in Santa Ana River Basin are maintained in cooperation with San Bernardino, Riverside, and Orange Counties through their boards of supervisors. Cooperation is also furnished by the Weather Bureau in maintaining precipitation stations.

Assistance in the maintenance of river-measurement stations was furnished by the Southern California Edison Co., San Joaquin Light & Power Corporation, Pacific Gas & Electric Co., Snow Mountain Water & Power Co., Merced Irrigation District, Yosemite Power Co., Southern Sierras Power Co., East Bay Municipal Utility District, and other permittees and licensees of the Federal Power Commission.

Many complete records of run-off, gage-height records, and discharge measurements are furnished by Federal bureaus, private companies, and individuals who are interested in the water resources of California. This cooperation is acknowledged and explained in the descriptions that precede the records.

The work in Oregon is carried on under a cooperative agreement with the State through Rhea Luper, State engineer. Financial cooperation was furnished by The California Oregon Power Co.

DIVISION OF WORK

The data for stations in California were collected and prepared for publication under the direction of H. D. McGlashan, district engineer, assisted by F. C. Ebert, William Kessler, R. C. Briggs, Charles Leidl, C. J. Emerson, Jesse Arnold, Jarrett Oliver, H. C. Troxell, A. C. Swanson, C. D. Bue, C. R. Reed, and H. J. Tompkins.

The data for stations in Oregon 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, H. M. Orem, and W. T. Miller, and by H. K. Smith and A. L. Crawford, hydrographers of the United States Bureau of Reclamation, except for stations in Goose Lake, Long Creek, Fourmile Lake, and Keene Creek basins, for which data, collected and computed by the State of Oregon under supervision of Rhea Luper, State engineer, were reviewed, checked, and prepared for publication by G. H. Canfield, district engineer, assisted by K. N. Phillips.

The records were reviewed and the manuscript assembled by Warren Withee.

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GAGING-STATION RECORDS

SAN DIEGO RIVER BASIN

SAN DIEGO RIVER NEAR SANTEE, CALIF.

LOCATION.—Water-stage recorder at head of Mission Gorge near Western boundary of El Cajon grant, 6 miles west of Santee, San Diego County.

DRAINAGE AREA.—375 square miles at old Mission Dam, $1\frac{1}{2}$ miles upstream. RECORDS AVAILABLE.—May, 1912, to September, 1929 (incomplete).

EXTREMES.—Maximum discharge during year, 440 second-feet April 5 (gage height, 1.90 feet); practically no flow October 1 to November 14 and May 15 to September 30.

1912-1929: Maximum discharge, 70,200 second-feet January 27, 1916 (gage height, 25.1 feet); stream practically dry for several months each year except for a small amount of ground water being forced to the surface.

REMARKS.—Records good except those for December 15-29 and January 15 to February 10, which were estimated. 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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1.....	0	0.2	0.2	0.2	0.2	0.2	0.2
2.....	0	0.2	.2	.3	.3	.2	.2
3.....	0	2.1	.2	.3	.3	.2	.2
4.....	0	.9	.2	.2	.3	.4	.2
5.....	0	.4	.2	.2	.3	153	.2
6.....	0	.4	.2	.3	.2	150	.1
7.....	0	.3	.2	.4	.2	110	.1
8.....	0	.2	.2	.4	.2	71	.1
9.....	0	.2	.2	.4	.2	54	.1
10.....	0	.2	.2	.4	1.8	61	.1
11.....	0	.9	.2	.9	.7	39	.1
12.....	0	.4	.2	.6	.9	19	.1
13.....	0	1.8	.2	.4	1.1	18	.1
14.....	0	1.8	.2	.4	.7	19	.1
15.....	.9	1.9	.2	.3	.4	20	0
16.....	.2	1.0	.3	.3	.3	12	0
17.....	.2	.7	.9	.3	.3	8.5	0
18.....	.1	.6	.4	.3	.4	7	0
19.....	.1	.4	.3	.3	.6	10	0
20.....	.1	.4	1.4	.2	.3	18	0
21.....	.2	.3	1.4	.2	.3	12	0
22.....	.2	.2	1.1	.2	.7	8.5	0
23.....	.2	.2	.4	.2	.7	5	0
24.....	.2	.2	.3	.2	.6	2.1	0
25.....	.2	.2	.3	.2	.4	1.1	0
26.....	.2	.2	.3	.2	.3	.7	0
27.....	.2	.2	.3	.2	.3	.7	0
28.....	.2	.2	.3	.2	.3	.4	0
29.....	.2	.2	.2		.3	.3	0
30.....	.2	.2	.2		.3	.3	0
31.....		.2	.2		.3		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	0.9	0	0.12	7.1
December.....	2.1	.2	.56	34.4
January.....	1.4	.2	.36	22.1
February.....	.9	.2	.31	17.2
March.....	1.8	.2	.46	28.3
April.....	153	.2	26.7	1,590
May.....	.2	0	.06	3.7
The year.....	153	0	2.35	1,700

NOTE.—No flow during months for which no discharge is given.

SAN DIEGUITO RIVER BASIN

SAN DIEGUITO RIVER AT LAKE HODGES, CALIF.

LOCATION.—In NW. $\frac{1}{4}$ sec. 18, T. 13 S., R. 2 W., at Lake Hodges Dam, $5\frac{1}{2}$ miles southwest of Escondido.

DRAINAGE AREA.—299 square miles.

RECORDS AVAILABLE.—January, 1916, to September, 1929.

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. The following table, furnished by city of San Diego, gives monthly storage in reservoir and other data from which inflow was computed.

Inflow of San Dieguito River to Lake Hodges, Calif., 1928-29

	Storage (acre-feet)		Decrease during month (acre-feet)			Inflow (acre-feet)
	End of month	Increase or decrease	Draft	Net evapo- ration*	Leakage	
September.....	29,756					
October.....	28,608	-1,148	718	-357	3	0
November.....	28,116	-492	306	-152	2	0
December.....	28,072	-44	206	-106	3	271
January.....	28,007	-65	284	-47	3	269
February.....	29,520	+1,513	279	-30	2	1,824
March.....	31,180	+1,660	458	-131	3	2,262
April.....	34,099	+2,919	422	-187	3	3,531
May.....	32,792	-1,307	821	-723	2	239
June.....	31,052	-1,740	877	-809	3	0
July.....	29,318	-1,734	903	-930	3	102
August.....	27,651	-1,667	904	-771	2	10
September.....	26,256	-1,395	872	-519	3	0
The year.....						8,498

* Net evaporation equals gross evaporation minus rainfall.

NOTE.—Inflow equals increase or decrease in storage plus draft, net evaporation, and leakage.

SAN LUIS REY RIVER BASIN

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

LOCATION.—In NW. $\frac{1}{4}$ 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, 1929

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. The following table gives the inflow of San Luis Rey River to Lake Henshaw as computed from storage data on the lake. Complete record except inflow furnished by San Diego Water Co.

Inflow of San Luis Rey River to Lake Henshaw, near Mesa Grande, Calif., 1928-29

	Storage (acre-feet)		Decrease during month (acre-feet)		Inflow (acre-feet ^b)
	End of month	Increase or decrease	Draft	Net evaporation ^a	
September.....	72,669				
October.....	70,496	-2,173	1,132	+1,150.5	109.5
November.....	70,255	-241	0	+295.2	54.2
December.....	70,684	+429	691	-319.4	800.6
January.....	71,441	+757	790	-137.1	1,409.9
February.....	73,716	+2,275	164	-655.0	1,784.0
March.....	76,264	+2,548	511	-733.0	2,326.0
April.....	78,409	+2,145	1,023	+132.0	3,300.0
May.....	76,265	-2,144	1,394	+1,652.8	902.8
June.....	72,477	-3,788	2,304	+1,699.6	215.6
July.....	67,165	-5,312	3,438	+1,988.4	114.4
August.....	64,960	-2,185	992	+1,856.0	663.0
September.....	63,970	-1,010	9	+1,553.5	552.5
The year.....		-8,699	12,448	+8,483.5	12,232.5

^a Net evaporation equals gross evaporation minus rainfall.^b Inflow computed by engineers of U. S. Geol. Survey. These figures do not agree with inflow as computed by the San Diego County Water Co., as their computations are corrected for conserved evaporation in accordance with a provision in the contract with the Escondido Mutual Water Co.

NOTE.—Inflow equals increase or decrease in storage plus draft and net evaporation.

SANTA MARGARITA RIVER BASIN

TEMECULA CREEK AT NIGGER CANYON, NEAR TEMECULA, CALIF.

LOCATION.—Water-stage recorder on the Pauba land grant, at upper end of Nigger Canyon, 10 miles east of Temecula, Riverside County. Arroyo Seco enters on left above gage.

RECORDS AVAILABLE.—January, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, determined by slope-area method about 450 second-feet August 14 (gage height, 11.90 feet); minimum, 1.1 second-foot August 13.

1923-1929: Maximum discharge, 17,100 second-feet February 16, 1927 (gage height, 19.5 feet); minimum, 0.8 second-foot September 30, 1924.

REMARKS.—Records good. Discharge estimated February 7, May 28, and August 24. No diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	2.2	2.2	2.2	3.4	8.5	7	9.5	4.8	2.9	2.5	1.9	6.5
2.	2.4	2.1	2.8	3.8	25	7.5	8	5.5	2.8	2.4	2.0	6.5
3.	2.4	2.3	4.2	3.6	14	7.5	7.5	5.5	2.7	2.3	2.1	6.5
4.	2.4	2.3	3.1	3.6	14	7.5	123	6	2.8	2.3	2.7	6
5.	2.1	2.2	2.7	3.8	17	7.5	82	5.5	2.9	2.8	3.1	4.5
6.	1.9	2.2	2.6	4.1	21	7	64	6	2.9	2.2	1.6	4.1
7.	1.8	2.3	2.4	4.4	28	7	45	5.5	2.9	2.1	1.6	3.6
8.	1.7	2.3	2.5	4.4	17	7	29	5	2.9	2.1	1.4	3.2
9.	1.7	2.3	2.5	4.4	13	7	21	5	2.9	2.0	1.4	2.7
10.	1.7	2.2	2.8	4.1	14	48	17	4.8	3.0	2.1	1.8	2.5
11.	2.7	2.2	3.2	3.8	14	23	15	4.6	3.0	2.1	1.2	2.4
12.	4.9	2.4	2.8	3.8	11	17	12	4.0	2.9	2.0	1.2	2.4
13.	3.1	2.9	11	4.1	11	25	19	3.7	2.9	2.1	1.8	2.4
14.	2.9	2.8	8.5	4.1	9	24	17	3.7	2.9	2.0	21	2.4
15.	2.8	2.7	5	4.6	8.5	21	15	3.6	2.9	2.0	5.5	2.4
16.	2.4	2.4	4.7	9.5	7.5	18	12	3.7	3.0	2.0	5	2.8
17.	2.1	2.3	4.4	8	6.5	16	12	3.8	3.0	2.0	4.9	2.4
18.	2.0	2.2	4.1	6	11	14	10	3.6	2.8	1.9	4.6	4.8
19.	2.0	2.1	4.1	6.5	13	12	10	3.6	2.6	1.9	4.4	3.2
20.	2.1	1.9	4.1	14	12	11	9.5	3.7	2.5	1.9	4.1	3.0
21.	2.1	2.1	4.1	11	12	11	9.5	3.6	2.3	1.9	3.8	3.1
22.	2.1	2.4	3.8	7	11	12	9	3.4	2.3	1.9	3.9	3.2
23.	2.2	2.4	4.1	7.5	10	22	9	3.3	2.1	1.8	5	3.8
24.	2.2	2.5	3.8	6.5	9	23	9	3.1	2.0	1.8	2.0	3.2
25.	2.1	2.6	3.6	5.5	8.5	17	8.5	3.1	2.0	1.8	2.2	3.4
26.	2.2	2.5	3.4	5.5	7.5	14	8	3.1	2.1	1.9	2.2	3.2
27.	2.3	2.6	3.8	6	7	12	7	3.1	2.3	2.0	2.2	3.1
28.	2.3	2.6	3.6	5.5	7.5	11	7	3.1	2.4	2.0	2.4	2.9
29.	2.4	2.5	3.6	5.5	-----	10	6.5	3.1	2.5	2.0	2.2	2.7
30.	2.4	2.6	3.6	6	-----	11	6	3.1	2.5	2.0	2.2	2.5
31.	2.3	-----	3.6	6	-----	10	-----	3.1	-----	2.0	28	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	4.9					1.7			2.32		143	
November	2.9					1.9			2.37		141	
December	11					2.4			3.01		240	
January	14					3.4			5.68		249	
February	28					6.5			12.4		689	
March	43					7			14.2		873	
April	123					6			20.6		1,230	
May	6					3.1			4.09		251	
June	3.0					2.0			2.66		158	
July	2.5					1.8			2.04		125	
August	28					1.2			4.14		255	
September	6.5					2.3			3.40		202	
The year	123					1.2			6.43		4,660	

TEMECULA CREEK AT RAILROAD CANYON, NEAR TEMECULA, CALIF.

LOCATION.—Water-stage recorder on the Temecula land grant, at upper end of Temecula or Railroad Canyon, 1½ miles south of Temecula, Riverside County. Murrieta Creek enters on right above station.

RECORDS AVAILABLE.—January, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, determined by slope-area method, about 158 second-feet August 15 (gage height, 1.65 feet); minimum, 0.9 second-foot August 9, 10, and 14.

1923-1929: Maximum discharge, about 27,600 second-feet February 16, 1927 (gage height, 15.00 feet); minimum, 0.4 second-foot July 16, 1925.

REMARKS.—Records fair. Pumping diversions regulate flow to a considerable extent during irrigation season.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*4.1	9.5	10	9.5	17	8	7	3.7	3.6	1.4	1.6	12
2	*4.0	9.5	11	10	16	8	7	4.8	5	1.8	1.2	3.2
3	*4.0	9.5	21	10	13	10	6.5	4.8	*4.6	2.0	1.2	2.0
4	*4.0	9.5	14	*10	13	8.5	13	5	*4.3	1.5	1.6	3.4
5	*4.0	8.5	12	*10	13	7.5	17	5	4.0	1.9	1.6	2.4
6	*3.9	8.5	11	*10	16	7.5	13	4.0	2.5	1.8	1.3	2.3
7	*3.8	8.5	10	*10	16	8	11	3.2	2.2	1.5	*1.2	2.1
8	3.6	9	10	*9.5	12	8	11	*3.4	2.6	1.3	*1.0	1.8
9	3.6	9	10	*9.5	11	10	9.5	*3.6	3.2	1.4	*.9	1.6
10	3.6	9	10	9.5	11	18	8.5	*3.7	*3.0	1.6	*.9	2.8
11	5	9	12	9.5	12	13	8.5	*3.8	*4.0	2.4	1.0	3.7
12	8	9	10	9.5	12	11	8.5	*3.9	5	2.1	1.0	2.2
13	8.5	12	17	9.5	12	12	8	4.0	5	2.0	1.2	2.2
14	8	12	12	10	12	11	8	4.4	5	1.4	.9	2.0
15	7.5	12	11	10	12	11	7.5	3.6	5	1.4	*2.0	1.4
16	7.5	10	10	18	12	10	7	3.1	5	1.3	*5	1.2
17	8	10	10	13	12	10	6.5	2.4	4.3	1.0	*1.3	1.9
18	8	9	10	11	14	10	5.5	3.6	2.5	1.2	*1.3	4.8
19	8	8.5	10	18	10	11	5	2.8	2.0	1.2	*1.2	4.4
20	8	7.5	10	24	12	10	4.6	2.8	2.0	1.4	*1.2	3.2
21	8	8	10	17	12	10	3.8	2.6	2.8	1.4	1.4	*3.0
22	8.5	8.5	10	14	12	12	3.7	2.8	1.8	1.2	1.2	*2.5
23	8.5	8.5	10	13	12	11	4.3	2.6	1.7	1.0	1.5	*1.8
24	8	8.5	10	12	11	10	4.3	2.8	1.9	1.2	1.3	*1.4
25	9.5	9.5	10	12	11	10	4.2	3.4	2.3	1.5	1.4	1.8
26	9.5	10	11	12	10	9.5	4.2	3.2	1.6	1.5	1.2	3.4
27	9	10	11	12	10	9.5	4.0	3.4	1.7	1.2	1.3	4.2
28	9	10	10	11	9.5	9.5	4.0	4.2	1.7	1.3	1.4	4.0
29	9	10	10	11	-----	8.5	5.0	4.2	1.8	1.6	1.2	4.3
30	9.5	10	10	11	-----	7.5	*4.5	3.8	1.4	2.6	1.0	4.3
31	9.5	-----	10	11	-----	7.5	-----	3.7	-----	1.9	.9	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October	9.5		3.6		6.87		422					
November	12		7.5		9.42		561					
December	21		10		11.1		682					
January	24		9.5		11.8		726					
February	17		9.5		12.3		683					
March	18		7.5		9.92		610					
April	17		3.7		7.15		425					
May	5		2.4		3.62		223					
June	5		1.4		3.12		186					
July	2.6		1.0		1.55		95.3					
August	20		.9		2.21		136					
September	12		1.2		3.03		180					
The year	24		.9		6.81		4,930					

* Estimated.

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.

RECORDS AVAILABLE.—November, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, determined by slope-area method, about 105 second-feet September 1 (gage height, 4.39 feet); minimum, 0.1 second-foot July 22-26, August 4, 5, and 8-14.

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

REMARKS.—Records fair. Considerable diversions from streams in Temecula Valley and pumping above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	8	9.5	9.5	15	8	7	3.9	2.1	0.6	0.3	15
2	3.3	7.5	11	9.5	20	7	6.5	3.5	2.5	.5	.2	13
3	3.5	8	26	9.5	14	9	6.5	3.7	3.3	.5	2	5.5
4	3.5	8	17	10	14	9.5	14	3.9	3.1	.7	.1	3.1
5	3.5	8	13	12	14	6.5	25	3.9	3.1	.6	.1	3.7
6	3.5	6.5	12	12	17	6.5	17	3.7	2.0	.7	.2	2.3
7	3.5	6	9.5	12	19	7	13	3.6	1.7	.7	.2	2.0
8	3.5	6.5	8	9.5	16	7	12	3.5	1.6	.7	.1	1.3
9	2.3	7	7.5	8	13	10	9.5	3.4	1.7	.8	.1	1.4
10	2.5	7	9	11	12	23	8.5	3.4	1.6	.5	.1	1.2
11	2.7	7.5	14	11	11	17	8	3.2	2.0	.5	.1	1.5
12	6.5	7.5	11	11	11	14	7	3.0	3.1	.5	.1	2.0
13	8.5	8	20	11	11	14	8	3.0	3.3	.5	.1	2.9
14	8	9	17	11	11	12	9	3.1	3.3	.4	.1	3.3
15	7	15	14	12	12	12	9.5	3.1	3.5	.4	15	2.9
16	7	10	12	18	12	12	9	2.5	3.9	.3	9	1.7
17	7.5	10	12	18	12	12	5.5	2.5	3.9	.3	2.1	2.0
18	7	10	11	13	15	12	5.5	2.5	2.9	.2	.7	5
19	7	10	11	19	16	11	6.5	2.3	2.0	.2	.4	4.2
20	6.5	9	10	27	12	10	5.5	2.1	1.3	.2	.3	3.5
21	6.5	8	10	22	10	9.5	6.5	2.1	1.3	.2	.4	2.1
22	7	8	9.5	17	9.5	13	5.5	2.0	1.6	.1	.3	2.0
23	7	9.5	9.5	15	9.5	14	4.8	1.8	.4	.1	.3	2.0
24	7.5	10	9.5	14	9	14	3.9	1.8	.3	.1	.3	1.7
25	8	9.5	9	14	8	10	3.9	1.8	.5	.1	.2	1.4
26	10	9.5	9	14	9.5	10	3.9	1.8	1.1	.1	.2	1.6
27	9.5	9	9	13	10	10	3.9	1.8	.5	.2	.2	2.3
28	9	9	9	13	10	10	3.9	2.1	1.4	.2	.2	2.7
29	8	9	9	13	10	10	3.9	2.3	1.1	.2	.2	2.7
30	8	8	9	12	12	8	5.5	2.5	1.6	.2	.2	2.9
31	8	8	9	12	12	8	5.5	2.5	1.6	.2	.2	2.9

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	10	2.3	6.07	373
November	15	6	8.60	512
December	26	7.5	11.5	707
January	27	8	13.3	818
February	20	8	12.6	700
March	23	6.5	10.8	684
April	25	3.9	7.94	472
May	3.9	1.8	2.77	170
June	3.9	.3	2.06	123
July	2.1	.1	.43	26.4
August	15	.1	1.04	64
September	15	1.2	3.30	196
The year	27	.1	6.67	4,830

SURFACE WATER SUPPLY, 1929, PART XI

SANTA MARGARITA RIVER AT YSIDORA, CALIF.

LOCATION.—On Santa Margarita y Las Flores land grant at Ysidora, San Diego County, 3 miles above mouth.

RECORDS AVAILABLE.—February, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, not determined.

1923-1929: Maximum discharge, about 33,600 second-feet February 16, 1927 (gage height, 18.0 feet); no flow part of each year.

ACCURACY.—Water-stage recorder destroyed during flood of February 16, 1927. Monthly run-off estimated and furnished by F. E. Green. Considerable water diverted above station for irrigation by the Pauba and Santa Margarita ranches.

Monthly run-off, in acre-feet, 1927-28

Month	Run-off	Month	Run-off
October.....	0.6	March.....	319
November.....	1.6	April.....	187
December.....	65	May.....	67
January.....	91	June.....	2.7
February.....	623	The year.....	1,360

NOTE.—No flow during July, August, and September.

SAN JUAN CREEK BASIN

SAN JUAN CREEK AT SAN JUAN CAPISTRANO, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 12, T. 8 S., R. 8 N., 300 feet upstream from State highway bridge and half a mile south of San Juan Capistrano.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 4.0 second-feet March 10 (gage height, 0.82 foot); stream dry for several months.

REMARKS.—Records fair. Discharge estimated April 14–29. Irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928–29

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1-----	0	2.7	1.4	0.2	16-----	0	1.2	1.0	0.1
2-----	0	2.7	.7	.2	17-----	0	1.2	.7	.1
3-----	0	2.2	.7	.2	18-----	0	1.8	.6	.1
4-----	0	2.4	.8	.8	19-----	0	1.6	.4	.1
5-----	0	2.2	1.2	1.4	20-----	0	1.6	.4	.1
6-----	0	2.4	1.4	1.2	21-----	0	1.4	.4	.1
7-----	0	2.4	1.6	.7	22-----	0	1.2	.5	.1
8-----	0	2.4	1.8	.3	23-----	0	.8	.4	.1
9-----	0	2.0	2.2	.2	24-----	0	.7	.4	.1
10-----	0	2.0	3.1	.1	25-----	0	1.2	.4	.1
11-----	0	2.2	2.4	.1	26-----	0	1.2	.3	.1
12-----	0	2.2	2.2	.1	27-----	0	1.4	.3	.1
13-----	0	2.2	2.2	.1	28-----	0	1.6	.3	.1
14-----	0	1.8	2.0	.1	29-----	0		.3	.1
15-----	0	1.6	1.6	.1	30-----	1.8		.3	0
					31-----	2.0		.3	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January-----	2.0	0	0.12	7.5
February-----	2.7	.7	1.80	100
March-----	3.1	.3	1.04	64
April-----	1.4	0	.24	14.3
The year-----	3.1	0	.26	186

NOTE.—No flow Oct. 1 to Jan. 29 and Apr. 30 to Sept. 30.

SANTA ANA RIVER BASIN

SANTA ANA RIVER NEAR MENTONE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 4, T. 1 S., R. 2 W., near mouth of canyon, one-fourth mile above Southern California Edison Co.'s Mentone power plant and $3\frac{1}{2}$ miles northeast of Mentone.

DRAINAGE AREA.—189 square miles.

RECORDS AVAILABLE.—July, 1896, to September, 1929.

EXTREMES.—Maximum discharge during year, 520 second-feet April 4 (gage height, 2.89 feet); minimum, 0.4 second-foot August 5.

1896-1929: Maximum discharge, 29,100 second-feet January 27, 1916; minimum, 0.1 second-foot October 12, 1919.

REMARKS.—Records good except those for estimated periods, which are fair. Diversions and regulation above station. The sum of the discharge in the river, the Mentone power plant's tailrace, and the Greenspot pipe line is given in the table of combined discharge (p. 21).

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	* 1.0	1.1	1.3	* 1.5	3.3	1.6	1.5	7.5	2.0	1.5	1.7	1.5
2.....	* 1.0	1.1	1.3	* 1.5	76	1.5	1.5	7.5	1.9	1.5	1.7	* 1.8
3.....	* 1.0	1.2	3.0	* 1.5	22	1.4	1.5	7.5	1.8	1.5	1.6	1.6
4.....	1.0	1.2	3.4	* 1.5	8.5	1.3	97	4.9	1.9	1.5	1.4	1.6
5.....	1.0	1.1	1.4	1.4	2.3	1.2	194	3.9	2.0	1.6	.8	1.6
6.....	1.0	1.0	1.6	1.4	5.5	1.2	114	2.7	1.8	1.6	2.2	1.6
7.....	1.0	1.1	1.6	1.5	9.5	1.3	97	2.6	1.8	1.6	2.1	1.6
8.....	1.0	1.1	1.6	1.5	1.3	1.3	44	2.8	1.8	1.6	2.0	1.4
9.....	1.0	1.1	1.5	1.4	* 1.3	1.3	24	2.6	1.8	1.6	2.0	1.2
10.....	1.0	1.1	2.3	1.5	* 1.3	62	22	2.6	1.7	1.6	2.0	1.2
11.....	1.1	1.1	18	1.5	* 1.3	50	19	2.5	1.6	1.6	1.9	1.2
12.....	1.2	1.2	5.5	1.6	* 1.2	29	16	2.5	1.5	1.6	1.8	1.2
13.....	1.2	1.4	* 35	1.5	* 1.2	17	15	2.2	1.5	1.6	1.8	1.2
14.....	1.1	1.7	* 6.5	1.4	* 1.2	16	15	2.2	1.4	1.6	1.7	1.1
15.....	1.0	2.0	* 6.5	1.5	* 1.2	14	13	2.1	1.5	1.6	1.6	1.1
16.....	1.0	1.8	* 6	* 1.5	* 1.2	12	12	2.2	1.5	1.7	1.5	1.0
17.....	1.0	1.6	* 6	* 1.5	* 1.2	40	12	2.1	1.5	1.8	1.5	1.5
18.....	1.0	1.6	6	* 1.5	* 5	30	12	2.0	1.4	1.8	1.4	7
19.....	1.0	1.6	6	* 1.5	2.1	8.5	13	2.0	1.4	1.8	1.4	5.5
20.....	1.0	1.5	5.5	26	2.0	7	10	2.0	1.4	1.8	1.2	4.3
21.....	1.0	1.5	4.5	26	1.9	2.3	9.5	2.0	1.4	1.7	1.3	3.2
22.....	1.0	1.5	3.1	23	1.8	2.7	9	2.0	1.4	1.7	1.3	2.6
23.....	1.0	1.5	1.8	16	1.8	2.7	8.5	1.9	1.5	1.7	1.3	* 2.0
24.....	1.0	1.5	* 1.8	1.2	1.7	2.6	8	1.7	1.5	1.8	1.3	* 1.7
25.....	1.0	1.5	* 1.8	.9	1.5	2.6	7.5	1.6	1.4	1.8	1.3	* 1.5
26.....	1.0	1.4	* 1.7	.9	1.5	2.5	8	1.8	1.5	2.0	1.3	* 1.3
27.....	1.0	1.4	* 1.7	.9	1.5	2.2	9	1.7	1.5	2.0	1.3	* 1.2
28.....	1.1	1.4	* 1.7	1.0	1.6	2.0	9.5	1.7	1.5	2.0	1.3	* 1.2
29.....	1.1	1.4	* 1.6	1.9	-----	1.9	9	1.8	1.5	2.0	1.2	* 1.1
30.....	1.1	1.4	* 1.6	1.8	-----	1.9	8.5	2.0	1.5	1.9	1.1	* 1.0
31.....	1.1	-----	* 1.6	1.8	-----	1.7	-----	2.0	-----	1.8	-----	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October.....	1.2		1.0		1.03		63.3					
November.....	2.0		1.0		1.37		81.5					
December.....	35		1.3		4.61		283					
January.....	26		.9		4.18		257					
February.....	76		1.2		5.78		321					
March.....	62		1.2		10.4		640					
April.....	194		1.5		27.3		1,620					
May.....	7.5		1.6		2.79		170					
June.....	2.0		1.4		1.60		95.2					
July.....	2.0		1.5		1.71		105					
August.....	2.2		.8		1.52		93.5					
September.....	7		1.0		1.90		113					
The year.....	194		.8		5.32		3,840					

* Estimated.

Daily and monthly discharge, in second-feet, of Santa Ana River and Canals
near Mentone, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	35	29	22	27	31	42	48	41	44	41	48
2	55	35	31	22	* 168	28	42	48	43	44	49	46
3	49	31	27	24	* 82	31	42	48	44	46	49	44
4	49	31	42	24	* 53	27	* 164	49	42	46	48	46
5	51	29	27	22	45	31	* 280	46	40	46	44	44
6	47	33	30	22	50	31	* 190	47	40	46	47	44
7	47	31	26	22	38	31	* 168	46	44	47	47	44
8	53	31	26	25	42	33	105	38	42	48	47	43
9	53	33	26	23	36	36	81	40	42	49	47	43
10	53	32	26	21	35	* 150	77	43	40	47	44	41
11	55	32	44	23	35	* 116	69	40	42	47	44	41
12	53	34	32	23	33	* 84	68	40	40	47	44	41
13	47	38	69	22	33	73	63	39	40	47	44	41
14	47	32	30	20	33	66	61	38	39	47	44	41
15	43	33	30	24	31	57	59	38	40	47	48	41
16	39	25	30	26	29	51	56	38	40	49	44	40
17	40	25	30	22	31	53	58	39	44	45	46	34
18	37	24	28	22	35	52	56	39	41	45	45	46
19	39	23	28	* 38	37	48	61	38	41	45	45	42
20	37	16	26	* 39	32	44	54	38	40	45	48	42
21	43	22	28	* 33	34	45	53	41	42	45	46	42
22	44	24	24	* 28	34	46	53	41	44	45	46	40
23	44	24	24	* 26	32	46	51	39	44	45	46	39
24	46	24	26	* 25	32	44	48	38	44	43	46	39
25	46	26	26	24	30	44	48	38	44	45	46	36
26	43	26	26	27	30	44	48	38	42	46	45	31
27	43	25	26	27	26	43	49	36	42	46	45	35
28	43	26	26	25	32	41	48	36	46	46	46	35
29	41	26	24	26	-----	41	48	34	46	46	45	35
30	44	26	24	26	-----	43	48	36	44	43	45	39
31	43	-----	24	28	-----	45	-----	32	-----	43	43	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	55	37	46.1	2,830
November	38	16	28.4	1,690
December	69	24	29.5	1,810
January	39	21	25.2	1,550
February	168	26	41.3	2,290
March	150	27	50.2	3,090
April	280	42	76.4	4,550
May	49	32	40.3	2,450
June	46	39	42.1	2,500
July	49	43	45.8	2,820
August	49	43	45.6	2,800
September	48	31	40.8	2,430
The year	280	16	42.6	30,800

* Estimated.

SANTA ANA RIVER NEAR SAN BERNARDINO, CALIF.

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

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 555 second-feet April 4 (gage height, 3.61 feet); stream dry for most of the year.

REMARKS.—Records good. Numerous water companies divert water from main river and tributaries above station. Flow partly regulated by storage at Bear Valley Reservoir on Bear Creek.

Daily and monthly discharge, in second-feet, 1928-29

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.				
1-----	0	0	0	11-----	0	.1	0	21-----	.0.1	0	0				
2-----	1.8	0	0	12-----	0	0	0	22-----	0	0	0				
3-----	.1.0	0	0	13-----	0	0	0	23-----	0	0	0				
4-----	.7	0	104	14-----	0	0	0	24-----	0	0	0				
5-----	.5	0	87	15-----	0	0	0	25-----	0	0	0				
6-----	.2	0	0	16-----	0	0	0	26-----	0	0	0				
7-----	.1	0	0	17-----	0	0	0	27-----	0	0	0				
8-----	0	0	0	18-----	.5	0	0	28-----	0	0	0				
9-----	0	0	0	19-----	.2	0	0	29-----		0	0				
10-----	0	25	0	20-----	.1	0	0	30-----		0	0				
								31-----		0	0				
Month				Maximum				Minimum				Mean		Run-off in acre-feet	
February-----				1.8				0				0.19		10.6	
March-----				25				0				.84		51.6	
April-----				104				0				6.35		378	
The year-----				104				0				.61		440	

* Estimated.

NOTE.—No flow during months for which no discharge is given.

SANTA ANA RIVER BASIN

23

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

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

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—Maximum discharge during period, 659 second-feet April 5 (gage height, 2.07 feet); minimum, 30 second-feet August 16.

REMARKS.—Records good. Numerous diversions. Regulation at Bear Valley Reservoir.

Daily and monthly discharge, in second-feet, 1929

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		91	56	53	48	47	40	34	34
2		107	63	59	71	47	40	33	34
3		94	65	56	51	43	39	34	36
4		101	63	78	51	43	40	34	37
5		88	61	319	52	43	41	32	37
6		86	63	131	44	46	40	33	37
7		86	61	101	47	47	38	33	37
8	74	68	57	91	43	44	39	33	36
9	68	63	56	88	44	44	37	32	38
10	63	63	72	74	41	44	38	32	37
11	63	57	88	61	41	42	40	34	36
12	72	57	63	54	40	42	41	34	36
13	74	63	78	51	40	43	38	34	36
14	72	59	83	56	41	42	40	32	36
15	70	59	94	57	41	43	39	32	35
16	78	59	94	53	40	43	41	30	35
17	68	61	86	56	42	43	39	32	35
18	59	70	86	57	43	41	39	32	39
19	61	76	81	53	43	40	39	34	37
20	70	63	78	63	46	39	38	32	39
21	80	63	68	57	44	38	38	33	40
22	91	70	63	59	46	37	37	33	37
23	81	65	70	64	43	36	36	34	38
24	76	63	59	58	47	35	36	34	40
25	65	65	58	50	50	36	35	34	40
26	74	63	54	51	48	48	36	34	40
27	81	57	54	56	44	41	37	32	40
28	74	59	61	51	44	41	37	33	38
29	72		56	52	45	42	38	33	38
30	74		55	55	44	41	36	34	37
31	83		50		44		34	34	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 8-31	91	59	72.7	3,460
February	107	37	70.6	3,920
March	94	50	67.5	4,150
April	319	50	72.3	4,310
May	71	40	45.5	2,800
June	48	35	42.0	2,500
July	41	34	38.3	2,360
August	34	30	33.0	2,000
September	40	34	37.1	2,210
The period				27,800

* Estimated.

25585-31-3

SURFACE WATER SUPPLY, 1929, PART XI

SANTA ANA RIVER NEAR PRADO, CALIF.

LOCATION.—Water-stage recorder 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, 1929.

EXTREMES.—Maximum discharge during year, 1,000 second-feet April 5 (gage height, 3.92 feet); minimum, 25 second-feet August 18.

1919-1929: Maximum discharge, about 18,000 second-feet February 16, 1927 (gage height, 11.5 feet); minimum that of August 18, 1929.

REMARKS.—Records good. Diversions and regulation above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	53	88	86	140	174	140	111	101	71	60	36	38
2.....	52	78	91	140	205	140	106	96	75	52	38	40
3.....	57	81	139	143	202	130	106	133	73	52	37	40
4.....	53	83	162	146	195	130	177	103	66	53	38	41
5.....	55	83	129	143	186	133	394	93	66	53	36	41
6.....	61	81	115	143	186	121	264	91	71	50	29	48
7.....	61	88	115	133	189	116	186	96	71	50	29	52
8.....	61	86	126	133	180	116	167	98	67	52	31	53
9.....	68	86	132	136	161	116	164	89	60	53	29	50
10.....	68	87	135	127	155	205	158	87	64	54	28	52
11.....	78	78	142	124	161	226	146	84	67	53	33	47
12.....	101	83	129	124	161	177	130	77	62	60	34	46
13.....	104	96	186	124	162	167	130	69	62	56	34	42
14.....	94	118	180	127	149	158	127	71	64	50	29	41
15.....	86	136	155	124	143	164	127	75	66	44	28	46
16.....	81	107	152	155	146	167	121	77	66	44	31	41
17.....	76	94	152	198	161	161	127	80	66	40	29	40
18.....	74	91	146	170	158	152	124	73	60	38	28	56
19.....	70	91	152	180	195	152	119	73	66	37	34	66
20.....	72	86	158	242	164	149	114	80	60	38	34	66
21.....	72	88	161	248	155	143	136	80	62	40	31	66
22.....	72	88	161	214	152	140	136	75	50	40	31	67
23.....	74	88	158	198	149	140	118	73	48	36	29	66
24.....	74	91	164	174	155	146	114	77	52	36	32	64
25.....	78	96	167	161	143	146	119	84	52	40	31	67
26.....	81	94	170	152	140	143	114	84	53	42	32	66
27.....	83	94	164	168	136	130	121	80	71	42	31	71
28.....	86	91	149	162	143	119	111	80	64	44	28	66
29.....	88	86	143	149	-----	121	111	80	60	46	29	67
30.....	94	83	149	149	-----	111	116	84	60	42	29	62
31.....	94	-----	143	152	-----	106	-----	84	-----	41	32	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	104	52	74.9	4,610
November.....	126	78	89.8	5,340
December.....	186	86	145	8,920
January.....	248	124	157	9,680
February.....	205	136	164	9,110
March.....	226	108	144	8,850
April.....	394	106	143	8,510
May.....	133	69	84.7	5,210
June.....	75	50	63.2	3,760
July.....	60	36	46.4	2,850
August.....	38	28	31.6	1,940
September.....	71	38	53.6	3,190
The year.....	394	28	99.4	71,900

LOWER SANTA ANA RIVER

For comparative purposes discharge measurements were made on the same day during the irrigating season at different points in lower Santa Ana River drainage basin. Measurements were also made at some of these points during the irrigating seasons, 1916 to 1928.

Results of the measurements for the 1929 season are given in the following table:

Discharge measurements, in second-feet, of lower Santa Ana River, 1928-29

Date	Union Pacific Railroad bridge near Arlington (Riverside Narrows gaging station)		Hamner Avenue Bridge near Corona		Auburndale Bridge near Corona		Atchison, Topeka & Santa Fe Railway bridge near Prado		Riverside-Orange County line (Prado gaging station)	
	Time	Dis-charge	Time	Dis-charge	Time	Dis-charge	Time	Dis-charge	Time	Dis-charge
Oct. 5	10.40 a. m.	35	11.25 a. m.	42	-----	-----	12.40 p. m.	62	1.10 p. m.	56
May 27	8.45 a. m.	45	10.45 a. m.	55	11.30 a. m.	60	1.20 p. m.	85	1.50 p. m.	78
June 3	9.00 a. m.	44	10.00 a. m.	47	10.50 a. m.	58	11.45 a. m.	76	12.20 p. m.	76
10	7.20 a. m.	45	8.30 a. m.	50	9.05 a. m.	56	9.45 a. m.	76	10.25 a. m.	68
17	6.45 a. m.	41	8.10 a. m.	42	8.50 a. m.	55	9.30 a. m.	77	10.00 a. m.	70
24	5.55 a. m.	36	7.00 a. m.	36	7.25 a. m.	45	8.20 a. m.	62	8.55 a. m.	53
July 1	6.20 a. m.	41	7.20 a. m.	40	7.55 a. m.	49	8.55 a. m.	58	9.15 a. m.	62
8	6.00 a. m.	40	7.20 a. m.	35	7.50 a. m.	47	8.45 a. m.	60	9.15 a. m.	52
15	6.15 a. m.	38	7.20 a. m.	31	7.50 a. m.	36	8.30 a. m.	55	9.00 a. m.	45
22	7.00 a. m.	38	8.00 a. m.	26	8.35 a. m.	32	9.15 a. m.	46	9.45 a. m.	41
29	6.45 a. m.	39	8.00 a. m.	38	8.30 a. m.	33	9.25 a. m.	47	9.55 a. m.	47
Aug. 5	6.40 a. m.	33	7.45 a. m.	28	8.25 a. m.	29	9.20 a. m.	47	9.55 a. m.	37
14	9.55 a. m.	32	11.00 a. m.	23	-----	-----	12.15 p. m.	33	12.50 p. m.	29
21	6.55 a. m.	34	7.50 a. m.	24	-----	-----	8.40 a. m.	36	9.15 a. m.	31
28	8.50 a. m.	34	9.50 a. m.	23	-----	-----	10.40 a. m.	36	11.15 a. m.	29
Sept. 2	6.25 a. m.	36	7.30 a. m.	25	7.55 a. m.	30	8.50 a. m.	48	9.20 a. m.	41
11	7.05 a. m.	37	8.05 a. m.	31	8.35 a. m.	30	9.25 a. m.	51	10.00 a. m.	48
20	7.10 a. m.	39	8.15 a. m.	41	8.50 a. m.	54	9.30 a. m.	73	10.00 a. m.	65
28	6.55 a. m.	40	8.00 a. m.	44	8.30 a. m.	51	9.10 a. m.	70	9.45 a. m.	56

SANTA ANA RIVER AT SANTA ANA, CALIF.

LOCATION.—Water-stage recorder at Fifth Street Bridge, Santa Ana, Orange County, 2 miles below junction with Santiago Creek and 10 miles above mouth.

RECORDS AVAILABLE.—January, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 23 second-feet January 4 (gage height, 1.56 feet); stream dry for several months.

1923-1929: Maximum discharge, about 25,000 second-feet February 16, 1927 (gage height, 8.2 feet); stream dry for several months each year.

REMARKS.—Records fair. Considerable diversion for irrigation above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Apr.	Day	Oct.	Nov.	Dec.	Jan.	Apr.
1	0	0	*3.0	0	0	16	0	0	*8	*0.5	0
2	0	0	*3.0	0	0	17	0	0	*5	*.4	0
3	0	0	*5	1.2	0	18	0	0	0	*.2	0
4	0	0	*10	8.5	0	19	0	0	0	*.2	0
5	0	0	0	14	0	20	0	0	0	*.1	0
6	0	0	0	6	*8	21	0	0	0	0	0
7	0	0	0	5.5	0	22	0	0	0	0	0
8	0	0	0	1.1	0	23	0	0	0	0	0
9	0	0	0	.7	0	24	0	0	0	0	0
10	0	0	*10	1.6	0	25	0	0	0	0	0
11	0	0	*10	.7	0	26	0	0	0	0	0
12	0	0	*12	1.1	0	27	0	0	0	0	0
13	0	0	*12	.5	0	28	*1.0	0	0	0	0
14	0	0	*12	.4	0	29	*.5	0	0	0	0
15	0	0	*10	.5	0	30	0	*3.0	0	0	0
						31	0		0	0	
Month					Maximum	Minimum	Mean	Run-off in acre-feet			
October					1.0	0	0.05	3.1			
November					3.0	0	.10	6.0			
December					12	0	3.23	199			
January					14	0	1.39	85.5			
April					8	0	.27	16.1			
The year					14	0	.43	310			

* Estimated.

NOTE.—No flow during months for which no discharge is given.

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

LOCATION.—In SW. $\frac{1}{4}$ 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, 1929.

EXTREMES.—1896-1929: Maximum mean daily canal discharge, 97 second-feet March 16, 1905; no flow during short periods nearly every year.

REMARKS.—The intake of this canal is at Southern California Edison Co.'s power plant No. 2, $2\frac{3}{4}$ 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. Sum of records of discharge of canal and pipe line in the following tables gives total flow of canal above forebay. Record furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, of Southern California Edison Co.'s canal near Mentone, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	47	30	24	21	24	30	41	35	37	41	35	41
2-----	47	30	26	21	80	26	41	35	39	41	43	39
3-----	41	26	21	22	45	30	35	35	39	41	43	37
4-----	41	26	39	22	35	26	52	39	37	41	43	39
5-----	43	24	26	21	43	30	61	37	35	41	39	37
6-----	39	28	28	21	45	30	56	39	35	41	39	37
7-----	39	26	24	21	28	30	56	39	39	41	39	37
8-----	45	26	24	19.2	41	32	56	32	37	41	39	37
9-----	45	28	24	17.5	35	35	52	34	37	41	39	37
10-----	45	28	24	15.5	34	80	50	37	35	41	39	35
11-----	47	28	26	17.5	34	61	45	35	37	41	39	35
12-----	45	30	26	17.5	32	52	47	35	35	41	39	35
13-----	39	34	34	19.2	32	56	43	34	35	41	35	35
14-----	39	28	24	17.5	32	50	41	34	35	41	35	35
15-----	35	30	24	22	30	43	41	34	35	41	39	35
16-----	34	22	24	24	28	39	39	34	35	43	35	34
17-----	35	22	24	21	30	13	41	35	39	39	37	28
18-----	32	21	22	21	30	22	39	35	37	39	37	34
19-----	34	19.2	22	21	35	39	43	34	37	39	37	32
20-----	32	12	21	5	30	37	39	34	37	39	41	34
21-----	34	19.2	24	0	32	43	39	37	39	39	39	34
22-----	35	22	21	0	32	43	39	37	41	39	39	32
23-----	35	22	22	4.5	30	43	37	35	41	39	39	32
24-----	37	22	24	21	30	41	35	34	41	37	39	32
25-----	37	24	24	28	28	41	35	34	41	39	39	32
26-----	34	22	24	26	28	41	35	34	39	39	39	28
27-----	34	19.2	24	26	24	41	35	32	39	39	39	28
28-----	34	21	24	24	30	39	34	32	43	39	39	28
29-----	32	21	22	24	-----	39	34	30	43	39	39	28
30-----	35	21	22	24	-----	41	34	32	41	41	39	32
31-----	34	-----	22	26	-----	43	-----	28	-----	37	37	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	47	32	38.2	2,350
November-----	34	12	24.4	1,450
December-----	39	21	24.5	1,510
January-----	26	0	18.9	1,160
February-----	80	24	34.2	1,900
March-----	80	13	39.2	2,410
April-----	61	34	42.5	2,530
May-----	39	28	34.5	2,120
June-----	43	35	38.0	2,260
July-----	43	37	40.0	2,460
August-----	43	35	38.7	2,380
September-----	41	28	34.0	2,020
The year-----	80	0	33.9	24,600

Daily and monthly discharge, in second-feet, of Greenspot pipe line near Mentone, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Apr.	May	June	July	Aug.	Sept.
1.....	7	4	4	0	0	5	2	2	4	5
2.....	7	4	4	0	0	5	2	2	4	5
3.....	7	4	2.8	0	5	5	3	3.5	4	5
4.....	7	4	0	0	5	5	3	3.5	4	5
5.....	7	4	0	0	5	5	3	3.5	4	5
6.....	7	4	0	0	5	5	3	3.5	6	5
7.....	7	4	0	0	5	4	3	4	6	5
8.....	7	4	0	4	5	3	3	5.2	6	5
9.....	7	4	0	4	5	3	3	6	6	5
10.....	7	3	0	4	5	3	3	4.5	3.5	5
11.....	7	3	0	4	5	3	3	4.5	3.5	5
12.....	7	3	0	4	5	3	3	4.5	3.5	5
13.....	7	3	0	1.2	5	3	3	4.5	7	5
14.....	7	2.1	0	1.2	5	2	3	4.5	7	5
15.....	7	1	0	0	5	2	3	4.5	7	5
16.....	4	1	0	0	5	2	3	4.5	7	5
17.....	4	1	0	0	5	2	3	4.5	7	5
18.....	4	1.5	0	0	5	2	3	4.5	7	5
19.....	4	2	0	0	5	2	3	4.5	7	5
20.....	4	2	0	0	5	2	2	4.5	6	5
21.....	8	1.5	0	0	5	2	2	4.5	6	5
22.....	8	1	0	0	5	2	2	4.5	6	5
23.....	8	1	0	0	5	2	2	4.5	6	5
24.....	8	1	0	0	5	2	2	4.5	6	5
25.....	8	1	0	0	5	2	2	4.5	6	2
26.....	8	2.6	0	0	5	2	2	4.5	5	2
27.....	8	4	0	0	5	2	2	4.5	5	6
28.....	8	4	0	0	5	2	2	4.5	5	6
29.....	8	4	0	0	5	2	2	4.5	5	6
30.....	8	4	0	0	5	2	2	0	5	6
31.....	8	-----	0	0	-----	2	-----	4	5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	8	4	6.87	422
November.....	4	1	2.76	164
December.....	4	0	.35	21.5
January.....	4	0	.72	44.3
April.....	5	0	4.67	278
May.....	5	2	2.84	175
June.....	3	2	2.57	153
July.....	6	0	4.10	252
August.....	7	3.5	5.47	336
September.....	6	2	4.93	293
The year.....	8	0	2.96	2,140

NOTE.—No flow during months for which no discharge is given.

MILL CREEK NEAR CRAFTONVILLE, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 13, T. 1 S., R. 2 W., at mouth of canyon, below bridge on Redlands-Bear Valley highway, and $\frac{5}{4}$ miles northeast of Craftonville.

RECORDS AVAILABLE.—January, 1919, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 34 second-feet April 5; stream dry for several months.

1919-1929: Maximum discharge, about 4,500 second-feet February 16, 1927 (gage height, 5.5 feet); all water diverted into Mill Creek power canal No. 1 at times.

REMARKS.—Records fair. 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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Aug.	Sept.
1.....	0	0.1	3.9	*0.1	0	0.1	0	*7.5
2.....	0	.1	6.5	*.1	0	.1	0	*6
3.....	2.1	.1	.5	*.1	0	.1	0	*.1
4.....	2.6	.2	.3	*.1	*20	.1	0	0
5.....	.3	.2	.3	*.1	*34	.1	*2.0	0
6.....	0	.2	.4	0	20	.1	*1.0	0
7.....	0	.2	.4	0	15	0	*.5	0
8.....	0	.2	.3	0	*9.5	.3	*.2	0
9.....	0	.2	.3	0	*5.5	0	0	0
10.....	.4	.2	.2	20	.8	0	0	0
11.....	8.5	.2	.2	4.0	.2	0	0	0
12.....	5.5	.2	.2	0	.3	0	0	0
13.....	*12	.2	.1	1.3	1.4	0	0	0
14.....	*5	.2	.3	0	6.5	0	*8	0
15.....	.4	.3	1.4	0	1.1	0	*1.0	0
16.....	.3	0	.1	0	.3	0	*.5	0
17.....	.3	0	.1	0	.2	0	*.2	*8
18.....	.3	0	.1	0	*.1	0	*.1	*17
19.....	.2	0	.1	3.8	*.1	0	0	*2.0
20.....	.2	0	.1	2.6	*.1	0	0	*1.0
21.....	.2	0	0	2.4	*.1	0	0	*.5
22.....	.2	0	0	1.7	*.1	0	*2.0	*.3
23.....	.3	0	0	2.1	*.1	0	*.5	*.2
24.....	.3	0	0	2.1	*.1	0	*.3	*.1
25.....	.3	0	.1	2.4	*.1	0	*.2	*.1
26.....	.2	0	*.1	2.8	*.1	0	*.1	0
27.....	.1	0	*.1	*1.0	*.1	0	0	0
28.....	.1	.1	*.1	0	*.1	0	*3.0	0
29.....	.2	.1	-----	0	*.1	0	*2.0	0
30.....	.1	.1	-----	0	.1	0	1.5	0
31.....	.1	.1	-----	0	-----	0	*11	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	12	0	1.30	79.9
January.....	3	0	.10	6.1
February.....	6.5	0	.58	32.2
March.....	20	0	1.51	92.8
April.....	34	0	3.87	230
May.....	3	0	.03	1.8
August.....	11	0	1.10	67.6
September.....	17	0	1.43	85.1
The year.....	34	0	.32	596

* Estimated.

NOTE.—No flow during months for which no discharge is given.

*Daily and monthly discharge, of Mill Creek and canals near Craftonville, Calif.,
in second-feet, 1928-29*

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	9.8	11	11.7	12.3	20	15.2	21	27	28	12.8	14.6	19.9
2.....	10.2	11.1	11.8	12.3	33	15.7	19.3	28	28	13.3	14.1	18.7
3.....	10.6	11.1	16.8	12.1	19.8	14.8	21	29	27	13.5	13.7	17.6
4.....	10.4	11.1	16.9	12	18.4	15.3	47	30	27	18.5	14	16
5.....	10.4	10.9	12.8	12	17.1	15.4	60	32	27	18.7	16.3	16.4
6.....	10.1	10.9	11.5	12.2	18.3	15.9	41	31	28	18.4	14.2	17.1
7.....	9.8	10.9	11	12.4	16.6	16.3	35	32	28	18.8	13.2	16.8
8.....	9.8	11.2	11	12.2	15.7	16.5	32	31	27	18.4	12.6	16.4
9.....	9.7	11.1	11.4	11.8	15.6	17	30	29	26	18.4	11.6	15.9
10.....	9.8	11.1	11.5	11.7	15.1	40	26	32	27	18.3	10.1	15.7
11.....	10.8	11.1	23	11.9	13.9	27	26	32	25	17.9	13.1	15.8
12.....	11.8	11	18.5	12.3	14.4	21	27	31	25	17.6	13.9	15.8
13.....	11.5	12.4	27	13.2	13.2	21	26	31	25	17.3	13.1	15.6
14.....	11.4	12.5	19.4	15	15	20	28	30	24	17.4	19.9	15.2
15.....	11.4	12.4	13.7	16.1	15.3	21	25	31	24	17.1	22	15.3
16.....	11.4	12.4	12.6	15	14	19.8	27	32	24	16.5	21	14.7
17.....	11.1	12.4	12.6	12.7	14.1	19.1	28	33	23	16.5	21	16.7
18.....	10.6	12	12.8	12.3	15.9	20	29	32	24	17	19.7	32
19.....	10.7	12.6	12.7	14.9	14.9	24	29	32	23	16.3	19.5	13.4
20.....	10.3	11.8	12.4	17.4	14.8	22	29	32	24	16.3	18.5	12.7
21.....	10.6	12	12.3	14.8	14.9	22	29	31	23	15.4	17.6	14.2
22.....	10.5	12.5	12.1	14.8	14.8	22	29	29	23	15	19.7	14.9
23.....	10.5	12.5	12.1	14	15.1	25	29	30	24	15.2	21	14.2
24.....	10.4	12	12.3	13.6	15.2	23	29	28	23	14.6	19	14.1
25.....	10.4	12	13.7	14.3	14.7	22	27	28	22	14.2	18.2	13.3
26.....	10.4	11.9	12.7	13.7	14.5	21	26	29	22	15	17.4	14.6
27.....	10.9	12.4	12.3	12.2	14.5	20	27	29	22	15.2	19	16
28.....	10.6	12.4	12.3	12.6	15.1	19.9	28	28	22	14.8	21	13.8
29.....	10.4	12	13.6	12.7	-----	18.8	28	28	19.8	14.8	19	14
30.....	10.7	11.8	11.6	12.6	-----	21	28	28	21	14.8	18.7	13.6
31.....	10.8	-----	11.5	12.1	-----	21	-----	28	-----	14.5	22	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October.....	11.8		9.7		10.6		652					
November.....	12.6		10.9		11.8		762					
December.....	27		11		13.8		848					
January.....	17.4		11.7		13.2		812					
February.....	33		13.2		16.2		990					
March.....	40		14.8		20.4		1,250					
April.....	60		19.3		29.5		1,760					
May.....	33		27		30.1		1,850					
June.....	28		19.8		24.5		1,460					
July.....	19.8		14.2		16.8		1,090					
August.....	22		10.1		17.1		1,050					
September.....	32		12.7		16.0		952					
The year.....	60		9.7		18.3		13,360					

MILL CREEK POWER CANAL NO. 3 AT INTAKE, NEAR FOREST HOME, CALIF.

LOCATION.—Water-stage recorder above weir in SE. $\frac{1}{4}$ sec. 12, T. 1 S., R. 1 W., at sand box 200 feet below diversion dam on Mill Creek, half a mile west of Forest Home.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 25 second-feet or more April 18 to May 31; minimum, 6.4 second-feet October 1-9.

REMARKS.—Records fair. Discharge estimated October 1, January 19-27, January 29 to February 5, March 10, and April 4. Discharge ascertained only for days when discharge of creek is less than 25 second-feet and entire flow is diverted; discharge greater than this amount April 18 to May 31.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.
1.....	6.4	7.5	7.5	8.3	9.0	9.5	15.5	20	14.7	10.3	12.3
2.....	6.4	7.5	7.5	8.3	9.1	9.5	15.5	20	14.7	10.7	12.3
3.....	6.4	7.5	9.9	8.3	9.1	9.5	15.5	20	14.7	10.7	12.3
4.....	6.4	7.5	7.9	8.7	9.1	9.9	22	20	14.3	11.9	11.9
5.....	6.4	7.5	7.5	8.7	9.1	9.9	18.0	21	13.9	11.1	11.9
6.....	6.4	7.5	7.5	8.7	9.1	9.9	17.5	20	12.7	10.7	11.9
7.....	6.4	7.5	7.5	8.7	9.1	9.9	17.1	20	13.1	10.3	11.9
8.....	6.4	7.5	7.5	8.7	9.5	9.5	17.1	20	12.7	10.3	11.9
9.....	6.4	7.5	7.5	8.7	9.5	9.9	17.1	20	12.7	9.9	11.5
10.....	6.7	7.5	7.5	8.7	9.9	22	17.1	19.5	12.3	9.9	11.5
11.....	6.7	7.5	8.3	8.7	9.9	15.9	18.0	19.0	12.3	9.9	11.5
12.....	6.7	7.9	7.9	8.7	9.9	13.9	18.5	18.5	12.3	9.5	11.1
13.....	6.7	9.1	7.5	8.7	9.9	12.7	18.5	18.5	12.3	9.5	11.1
14.....	6.7	9.1	7.9	8.7	9.9	12.7	18.5	18.5	12.3	6.7	11.1
15.....	6.7	9.5	7.9	8.3	9.5	12.3	19.0	18.0	11.9	15.5	11.1
16.....	6.7	9.5	7.9	8.3	9.5	11.9	19.0	18.5	11.5	15.9	10.7
17.....	6.7	9.5	7.9	8.3	9.5	12.3	19.0	18.0	11.5	15.1	11.9
18.....	6.7	9.5	7.9	8.3	9.5	12.7	-----	17.1	11.1	15.1	7.5
19.....	6.7	9.1	7.9	8.3	9.5	12.7	-----	16.7	10.7	14.7	9.5
20.....	6.7	8.7	7.9	8.4	9.5	12.7	-----	16.3	10.7	14.3	9.9
21.....	6.7	8.7	7.9	8.4	9.5	12.7	-----	16.3	10.7	13.5	9.9
22.....	6.7	8.3	7.9	8.5	9.5	14.7	-----	16.3	10.7	13.5	10.3
23.....	6.7	7.9	7.9	8.6	9.5	14.7	-----	16.3	10.7	14.3	10.3
24.....	6.7	7.5	7.9	8.7	9.5	13.9	-----	16.3	10.3	13.9	9.9
25.....	6.7	7.5	7.9	8.7	9.1	13.5	-----	15.9	10.3	13.5	10.3
26.....	6.7	7.5	7.9	8.8	8.7	13.5	-----	15.5	10.7	13.1	10.3
27.....	6.7	7.5	8.3	8.9	9.5	13.5	-----	15.5	10.3	14.3	9.5
28.....	6.7	7.5	8.3	9.0	9.5	13.9	-----	15.1	10.3	14.3	9.5
29.....	6.7	7.5	8.3	9.0	-----	14.7	-----	14.7	10.3	13.5	9.5
30.....	7.1	7.5	8.3	9.0	-----	15.9	-----	15.1	10.3	12.7	9.1
31.....	7.1	-----	8.3	9.0	-----	15.5	-----	-----	10.3	6.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7.1	6.4	6.64	408
November.....	9.5	7.5	8.06	480
December.....	9.9	7.5	7.93	488
January.....	9	8.3	8.62	530
February.....	9.9	8.7	9.42	623
March.....	22	9.5	12.8	787
April 1-17.....	22	15.5	17.8	601
June.....	21	14.7	17.9	1,070
July.....	14.7	10.3	11.8	796
August.....	15.9	6.7	12.1	744
September.....	12.3	7.5	10.8	643

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

LOCATION.—In NE. $\frac{1}{4}$ 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, 1929.

EXTREMES.—1919-1929: Maximum mean daily discharge, 36 second-feet November 19, 1923, and June 7, 1924; no flow May 27, 1923.

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. The headworks of canal No. 3 are in sec. 13, T. 1 S., R. 1 W., 3 miles above intake for canal No. 2. The canals serve power plants Nos. 2 and 3, which discharge into a common tailrace. Records furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	10.8	11.5	11.0	13.8	12.6	20	24	26	18.6	13.7	12.0
2	10.0	10.9	11.6	11.0	20	13.1	18	25	26	17.4	13.2	11.8
3	10.4	10.9	14.5	10.8	14.4	12.2	20	26	25	17.6	12.9	16.0
4	10.2	10.9	14.1	10.6	14.7	10.3	26	27	25	17.7	13.6	15.0
5	10.2	10.7	12.0	10.8	14.0	8.8	26	27	25	17.9	13.8	15.4
6	9.9	10.7	11.2	11.0	14.6	9.4	21	28	26	17.6	12.4	15.9
7	9.6	10.7	10.8	11.2	13.1	9.8	19.8	28	26	17.9	11.9	15.9
8	9.6	11.0	10.9	10.8	12.8	10.0	19.8	28	25	17.6	11.7	15.5
9	9.5	10.9	11.2	10.6	13.0	10.0	19.9	28	24	17.6	11.0	15.3
10	9.6	10.9	10.8	10.5	12.6	16.6	19.4	30	25	17.6	9.6	15.1
11	10.6	10.9	13.6	10.7	11.4	20	19.8	31	23	17.3	12.4	15.2
12	11.6	10.8	12.4	11.1	11.6	18.0	21	30	23	17.0	13.4	15.4
13	11.3	12.1	14.2	12.0	10.0	17.0	23	29	23	18.7	12.5	15.0
14	11.2	12.3	13.0	13.8	12.2	17.2	21	27	22	16.7	11.0	14.7
15	11.2	12.2	12.4	15.2	11.8	17.4	21	28	22	16.4	19.6	14.7
16	11.2	12.2	11.4	14.2	11.6	17.2	22	29	22	15.8	19.8	14.2
17	10.9	12.2	11.4	12.1	11.4	16.6	24	30	21	15.7	19.4	8.2
18	10.4	11.8	11.7	11.7	11.8	17.9	26	30	22	15.8	18.6	13.2
19	10.5	12.4	11.7	13.5	12.0	19.6	26	30	21	15.5	18.7	11.0
20	10.1	11.6	11.3	15.2	12.2	19.0	25	30	22	15.5	17.6	9.6
21	10.4	11.8	11.2	13.0	12.4	18.6	25	29	22	14.6	16.8	12.9
22	10.3	12.3	11.0	13.1	12.3	19.2	25	27	22	14.2	17.2	14.0
23	10.3	12.3	10.8	12.5	12.6	22	26	28	23	14.4	19.9	13.4
24	10.2	11.8	11.0	12.2	12.7	19.6	26	26	22	14.0	17.8	13.4
25	10.2	11.8	12.4	12.9	12.1	18.2	25	26	21	13.4	17.0	12.6
26	10.2	11.7	11.5	12.4	9.4	17.5	24	27	21	14.0	16.6	14.0
27	10.7	12.2	11.2	10.9	8.2	17.8	24	27	21	14.4	18.4	15.4
28	10.4	12.2	11.2	11.2	8.8	18.9	25	26	20	14.0	18.1	13.2
29	10.2	11.8	9.3	11.3	-----	17.8	25	26	18.4	13.8	16.6	13.4
30	10.5	11.6	7.5	11.3	-----	19.6	25	26	19.5	13.9	16.8	13.1
31	10.6	-----	9.2	10.8	-----	20	-----	26	-----	13.6	10.0	10.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	11.6	9.5	10.4	640
November.....	12.4	10.7	11.5	684
December.....	14.5	7.5	11.5	707
January.....	15.2	10.5	11.9	732
February.....	20	8.2	12.4	689
March.....	22	8.8	16.2	906
April.....	26	18.0	22.9	1,300
May.....	31	24	27.7	1,700
June.....	26	18.4	22.8	1,360
July.....	18.6	13.4	15.9	978
August.....	19.9	9.6	15.2	935
September.....	16.6	8.2	13.8	821
The year.....	31	7.5	16.0	11,600

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

LOCATION.—Water-stage recorder just above weir in NE. $\frac{1}{4}$ sec. 13, T. 1 S., R. 2 W., one-fourth mile below intake on Mill Creek, on Redlands-Bear Valley highway, 5 miles northeast of Craftonville.

RECORDS AVAILABLE.—January, 1919, to September, 1929.

REMARKS.—Records good except those for estimated periods, which are fair. This canal diverts from Mill Creek in NE. $\frac{1}{4}$ 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 the water is distributed for irrigation. Water-stage recorder operated by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.2	0.2	0.2	1.2	2.5	*2.5	1.2	2.5	2.1	1.2	0.9	0.4
2	*.2	.2	.2	1.2	6.4	*2.5	1.3	2.5	1.8	.9	.9	.9
3	*.2	.2	.2	1.2	4.9	*2.5	1.4	2.5	1.9	.9	.8	.9
4	*.2	.2	.2	1.2	3.4	*5.0	.9	3.0	2.1	.8	.4	1.0
5	*.2	.2	.5	1.0	2.8	*6.5	0	4.7	2.1	.8	.5	1.0
6	.2	.2	.3	1.0	3.3	*6.5	0	3.3	*2.1	.8	.8	1.2
7	*.2	.2	.2	1.0	3.1	*6.5	0	4.0	2.1	.9	.8	.9
8	*.2	.2	.1	1.2	2.6	*6.5	2.2	2.5	1.9	.8	.7	.9
9	*.2	.2	.2	1.0	2.3	*7.0	4.1	1.2	1.8	.8	.6	.6
10	*.2	.2	.3	1.0	2.3	*3.0	6.2	2.3	1.9	.7	.5	.6
11	*.2	.2	.6	1.0	2.3	*3.0	6.4	1.4	1.9	.6	.7	.6
12	*.2	.2	.6	1.0	2.6	*3.0	6	1.2	1.8	.6	.5	.4
13	.2	.3	1.2	1.0	3.1	3.0	2.1	1.7	1.8	.6	.6	.6
14	.2	.2	1.4	1.0	2.5	3.3	.9	2.9	1.9	.7	.9	.5
15	.2	.2	.9	.6	2.1	3.4	2.8	2.8	1.8	.7	1.7	.6
16	.2	.2	.9	.8	2.3	2.6	4.3	3.0	1.9	.7	1.0	.5
17	.2	.2	.9	.6	2.6	2.5	3.6	3.0	1.9	.8	1.3	.5
18	.2	.2	.8	.6	4.0	2.1	2.6	2.5	1.9	1.2	1.0	1.9
19	.2	.2	.8	1.4	2.8	.9	3.0	2.3	1.8	.8	.8	.4
20	.2	.2	.9	2.2	2.5	.7	4.0	2.3	1.8	.8	.9	2.1
21	.2	.2	.9	1.8	2.5	.8	4.0	2.1	1.3	.8	.8	.8
22	.2	.2	.9	1.7	*2.5	.7	3.8	2.1	.9	.8	.5	.6
23	.2	.2	1.0	1.5	*2.5	.7	3.3	2.1	1.3	.8	.7	.6
24	.2	.2	1.0	1.4	2.5	.9	2.8	2.2	1.2	.6	.9	.6
25	.2	.2	1.0	1.4	2.5	1.3	2.2	2.3	1.2	.8	1.0	.6
26	.2	.2	1.0	1.3	*5.0	.7	1.9	2.3	1.4	1.0	.7	.6
27	.2	.2	1.0	1.3	*6.2	1.0	2.6	2.1	1.2	.8	.6	.6
28	.2	.2	1.0	1.3	*6.2	1.0	2.6	2.3	1.8	.8	.2	.6
29	.2	.2	4.1	1.3	-----	1.0	2.8	2.2	1.4	1.0	.4	.6
30	.2	.2	4.0	1.2	-----	1.0	2.6	2.1	1.2	.9	.4	.5
31	.2	-----	2.2	1.2	-----	.9	-----	2.2	-----	.9	.5	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October	0.2		0.2		0.20		12.3					
November	.3		.2		.20		11.9					
December	4.1		.1		.95		58.4					
January	2.2		.6		1.18		72.6					
February	6.4		2.1		3.22		179					
March	7		.7		2.68		165					
April	6.4		0		2.72		162					
May	4.7		1.2		2.44		150					
June	2.1		.9		1.71		102					
July	1.2		.6		.82		50.4					
August	1.7		.2		.74		45.5					
September	2.1		.4		.75		44.6					
The year	6.4		0		1.45		1,050					

* Estimated.

PLUNGE CREEK NEAR EAST HIGHLANDS, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ 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.

RECORDS AVAILABLE.—January, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 176 second-feet April 5 (gage height, 2.32 feet); no flow for several months during year.

1919-1929: Maximum discharge, 1,420 second-feet February 16, 1927 (gage height, 3.80 feet); no flow for several months during each year.

REMARKS.—Records good. Discharge estimated January 26-28, January 30 to February 1, April 15-27, and April 29 to May 9. Irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1.....	0	0	3.0	0.4	0.4	2.5	16.....	1.9	1.5	3.9	5.5	2.0	0
2.....	0	0	30	.3	.6	2.5	17.....	.6	.7	2.5	3.2	2.0	0
3.....	0	0	20	.6	.6	2.3	18.....	.4	0	9.5	2.0	2.5	0
4.....	0	0	15	.5	.60	2.3	19.....	.4	.7	7.5	2.3	3.5	0
5.....	0	0	12	.4	109	2.1	20.....	.3	11	7	.4	3.0	0
6.....	0	0	18	.4	52	2.1	21.....	.3	6	7	.2	3.0	0
7.....	0	0	18	.2	37	1.8	22.....	.2	4.0	5.5	.4	3.0	0
8.....	0	0	12	.1	30	1.5	23.....	.1	2.5	4.6	1.2	3.0	0
9.....	0	0	9.5	.1	22	1.0	24.....	.1	1.9	4.6	.6	3.0	0
10.....	.9	0	8	45	16	0	25.....	0	1.4	2.1	1.1	3.0	0
11.....	4.5	0	7.5	36	13	0	26.....	0	1.4	2.0	.8	2.9	0
12.....	1.9	0	7	21	8	0	27.....	0	1.2	1.6	.1	2.9	0
13.....	8	0	6	12	3.9	0	28.....	0	1.2	.4	0	2.9	0
14.....	5.5	0	5.5	9.5	2.3	0	29.....	0	1.0	-----	.1	2.7	0
15.....	3.5	0	4.6	8	2.0	0	30.....	0	1.0	-----	.2	2.7	0
							31.....	0	.9	-----	.1	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	8	0	0.92	56.6
January.....	11	0	1.17	71.9
February.....	60	.4	9.44	524
March.....	45	0	4.93	303
April.....	109	.4	13.3	791
May.....	2.5	0	.58	35.7
The year.....	109	0	2.46	1,780

NOTE.—No flow during months for which no discharge is given.

SAN TIMOTEO CREEK NEAR REDLANDS, CALIF.

LOCATION.—Water-stage recorder in NE. ¼ sec. 10, T. 2 S., R. 3 W., 2½ miles south of Redlands.

RECORDS AVAILABLE.—October, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 24 second-feet December 3 (gage height, 1.68 feet); no flow for several months.

1926-1929: Maximum discharge (estimated), 3,000 second-feet February 16, 1927; no flow for several months each year.

REMARKS.—Records fair. Discharge largely estimated on basis of discharge measurements. Entire flow is diverted above station except during high water. Water-stage recorder operated, and discharge measurements furnished by city of Redlands.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	0	0.1	0.1	0.1	0.1	0.1	16	0.1	0.1	2.3	0.1	0.1	0
2	0	.1	.1	.1	.1	.1	17	.1	.1	.9	.1	.1	0
3	0	3.8	.1	.1	.1	.1	18	.1	.1	.2	3.9	.1	0
4	0	.9	.1	.1	.1	16	19	.1	.1	.5	4.4	.1	0
5	0	.7	.1	.1	.1	4.0	20	.1	.1	6.5	.8	.1	0
6	0	.7	0	.1	.2	.5	21	.1	.1	3.5	.5	.1	0
7	0	.7	0	.1	.2	.1	22	.1	.1	1.6	.3	.1	0
8	0	.7	0	.1	.2	.1	23	.1	.1	.8	.2	.1	0
9	0	.7	0	.1	.2	.1	24	.1	.1	.5	.1	.1	0
10	0	.6	0	.1	9	.1	25	.1	.1	.4	.1	.1	0
11	0	.6	0	.1	5	.1	26	.1	.1	.3	.1	.1	0
12	0	.6	0	.1	1.0	.1	27	.1	.1	.2	.1	.1	0
13	0	5.5	0	.1	.5	.1	28	.1	.1	.1	.1	.1	0
14	.2	.9	0	.1	.1	.1	29	.1	.1	.1	.1	.1	0
15	.1	.5	0	.1	.1	0	30	.1	.1	.1	.1	.1	0
							31		.1	.1		.1	
Month							Maximum	Minimum	Mean	Run-off in acre-feet			
November							0.3	0	0.06	3.6			
December							5.5	.1	.60	26.9			
January							6.5	0	.59	26.3			
February							4.4	.1	.44	24.4			
March							9	.1	.60	26.9			
April							16	0	.72	42.8			
The year							16	0	.25	181			

NOTE.—No flow during months for which no discharge is given.

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, 1929.

EXTREMES.—Maximum discharge during year, 294 second-feet April 4 (gage height, 3.45 feet); minimum, 18 second-feet August 30 and 31.

1920-1929: Maximum discharge, 2,780 second-feet December 21, 1922; minimum, that of August 30 and 31, 1929.

REMARKS.—Records good. Discharge estimated October 1-3 and April 16-27. Meeks & Daley Canal diverts half a mile above station. City of San Bernardino sewage disposal plant discharged about 2,330 acre-feet into Warm Creek above station from March to September.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	26	37	56	66	59	57	45	32	26	25	19
2	29	27	37	56	89	57	55	44	32	25	25	19
3	31	31	56	56	64	56	56	45	32	25	24	20
4	33	32	53	48	67	56	124	44	32	24	24	20
5	31	35	52	40	61	57	96	42	33	25	25	21
6	28	35	52	41	68	57	66	44	33	25	24	22
7	27	38	51	41	63	60	63	42	33	25	24	22
8	27	37	49	40	59	57	60	41	33	25	23	22
9	26	37	47	41	56	58	64	40	32	25	23	22
10	27	37	49	42	55	108	67	40	31	24	23	22
11	31	35	44	41	53	68	69	39	31	25	23	22
12	44	35	38	40	54	64	71	38	30	25	22	22
13	45	40	72	38	57	62	72	38	29	24	21	22
14	41	54	56	38	59	60	74	39	28	24	21	22
15	35	36	51	40	60	58	75	38	28	24	20	22
16	31	35	52	56	63	56	67	39	28	25	20	22
17	28	39	52	51	61	57	64	39	29	25	20	22
18	28	42	54	48	75	57	58	37	29	25	20	30
19	28	44	54	64	61	58	58	37	28	25	20	23
20	27	40	56	86	59	58	56	38	28	24	19	23
21	27	37	56	72	60	58	54	38	28	24	19	24
22	29	34	56	61	61	64	52	39	28	23	19	25
23	31	32	56	59	63	64	49	38	28	24	19	25
24	32	31	56	57	63	62	49	38	28	23	19	25
25	35	31	55	60	62	61	48	39	28	23	19	25
26	34	33	54	61	62	60	46	38	27	24	19	25
27	32	40	55	61	60	61	42	37	28	24	19	25
28	32	42	56	61	59	61	42	36	28	24	19	25
29	33	43	56	61	-----	59	44	34	27	23	19	25
30	31	41	56	60	-----	59	45	33	27	23	18	26
31	27	-----	56	60	-----	58	-----	33	-----	25	18	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	45	26	31.2	1,920
November	54	26	36.6	2,180
December	72	37	52.4	3,220
January	86	38	52.8	3,250
February	89	53	62.2	3,450
March	108	56	61.0	3,750
April	124	42	61.5	3,660
May	45	33	39.1	2,400
June	33	27	29.6	1,760
July	26	23	24.5	1,510
August	25	18	21.1	1,300
September	30	19	23.0	1,370
The year	124	18	41.1	29,800

Daily and monthly discharge, in second-feet, of Warm Creek and Meeks & Daley Canal near Colton, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	47	42	47	57	66	60	70	62	49	44	43	36
2.....	47	44	48	56	89	58	69	60	49	43	42	36
3.....	49	49	60	57	64	57	68	61	49	43	42	37
4.....	51	49	53	54	67	57	128	59	49	42	42	37
5.....	48	52	52	55	61	59	96	60	49	43	42	38
6.....	45	52	52	53	68	60	66	61	50	42	41	39
7.....	45	53	52	54	63	69	65	59	50	42	41	40
8.....	44	53	51	53	59	72	64	57	51	41	40	40
9.....	43	53	51	54	56	73	67	56	50	42	39	39
10.....	44	53	54	54	55	114	70	56	49	40	40	38
11.....	49	51	53	53	53	69	73	56	49	41	40	38
12.....	57	52	47	54	54	64	74	55	48	41	39	39
13.....	51	59	76	52	57	62	76	55	46	40	39	39
14.....	48	64	56	53	59	60	77	55	45	40	38	39
15.....	42	41	51	54	60	58	84	55	45	41	36	39
16.....	38	41	52	66	63	56	83	54	45	41	36	39
17.....	37	43	52	56	61	57	80	54	46	42	36	39
18.....	36	44	54	52	76	57	76	54	46	43	37	47
19.....	38	45	54	67	61	58	74	53	46	43	37	40
20.....	43	43	56	87	59	58	72	52	45	42	36	41
21.....	44	40	56	72	60	59	70	54	44	42	37	41
22.....	47	40	56	61	61	64	68	55	44	41	37	42
23.....	49	42	56	59	63	64	66	54	45	41	37	42
24.....	51	43	57	57	63	62	65	54	45	40	38	42
25.....	53	42	56	60	62	61	64	55	44	41	37	42
26.....	58	45	55	61	62	60	62	54	44	43	37	42
27.....	51	52	56	61	60	64	60	53	44	43	36	41
28.....	50	54	57	61	59	64	59	51	44	43	36	42
29.....	51	56	57	61	-----	62	61	51	44	44	36	42
30.....	47	53	57	60	-----	63	62	50	43	44	35	43
31.....	42	-----	57	60	-----	67	-----	50	-----	44	35	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	57	36	46.5	2,360
November.....	64	40	48.4	2,880
December.....	76	47	54.5	3,350
January.....	87	52	58.5	3,609
February.....	89	53	62.2	3,450
March.....	114	56	63.5	3,900
April.....	128	59	72.3	4,300
May.....	62	50	55.3	3,400
June.....	51	43	46.6	2,770
July.....	44	40	42.0	2,580
August.....	43	35	38.3	2,360
September.....	47	36	40.0	2,380
The year.....	128	35	52.3	37,800

STRAWBERRY CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 11, T. 1 N., R. 4 W., at the Del Rosa Water Co.'s diversion dam, half a mile south of Arrowhead Springs.

RECORDS AVAILABLE.—December, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 202 second-feet April 4 (gage-height, 2.80 feet); stream practically dry at times during August and September.

1919-1929: Maximum discharge, 408 second-feet January 2, 1922; maximum gage height, 4.35 feet February 16, 1927; stream practically dry at times during August and September, 1929.

REMARKS.—Records good. Discharge estimated May 8. Small diversion above station for domestic use.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.4	1.1	1.7	5	3.1	3.4	2.5	1.8	0.9	0.6	0.3
2	.3	.4	1.2	1.7	20	2.9	3.2	2.3	1.7	.7	.6	.3
3	.3	.4	2.5	1.7	10	2.9	3.1	2.2	1.5	.7	.5	.3
4	.4	.4	2.4	1.7	8.5	2.8	18	2.3	1.5	.7	.6	.4
5	.3	.5	1.7	1.7	6.5	2.6	27	2.7	1.7	.7	.6	.7
6	.3	.4	1.4	1.8	7.5	2.6	15	2.6	1.8	.7	.6	.7
7	.3	.4	1.4	1.8	7	2.8	11	2.5	1.8	.7	.5	.8
8	.3	.4	1.4	1.7	6	3.0	9	2.5	2.0	.7	.5	.8
9	.3	.4	1.3	1.7	5.5	2.9	7	2.4	1.8	.7	.6	.6
10	.3	.4	2.1	1.6	4.9	17	6	2.4	1.7	.8	.6	.5
11	.5	.4	4.1	1.6	4.7	11	8	2.2	1.6	.7	.6	.5
12	.9	.5	2.7	1.5	4.1	8.5	7	2.2	1.7	.7	.6	.4
13	.8	.9	7.5	1.5	3.6	7	6.5	2.1	1.3	.8	.6	.4
14	.8	1.5	3.9	1.5	3.3	6	5.5	2.0	1.3	.7	.6	.4
15	.8	1.0	3.3	1.4	3.0	5.5	4.9	2.1	1.4	.7	.6	.3
16	.6	1.2	2.9	3.0	2.8	5	4.6	2.0	2.2	.6	.5	.3
17	.4	1.0	2.6	2.2	3.0	4.9	4.4	2.1	1.8	.5	.4	.3
18	.5	.9	2.2	2.2	4.4	4.4	4.2	2.0	1.4	.6	.4	.7
19	.5	1.0	2.2	5	3.9	4.2	5.5	2.1	1.2	.6	.3	.8
20	.5	.9	2.2	9	3.5	3.8	4.3	2.1	1.0	.6	.2	.7
21	.5	1.1	1.9	6	3.1	3.5	4.1	2.2	.9	.7	.2	.8
22	.5	1.0	1.8	4.8	2.9	4.4	4.0	2.0	.9	.6	.3	.8
23	.5	.9	1.8	4.4	2.9	5.5	3.8	2.1	1.0	.6	.1	.8
24	.4	.9	1.9	3.8	2.8	6	3.5	2.0	1.1	.6	.3	.8
25	.4	1.0	1.9	3.4	2.8	5	3.4	2.0	.9	.6	.5	.8
26	.5	1.0	1.9	3.1	2.8	4.6	3.5	2.3	.8	.6	.3	.8
27	.5	1.0	1.9	2.7	3.0	3.9	3.4	2.2	.9	.7	.3	.8
28	.5	1.1	1.9	2.7	3.1	3.5	3.1	1.9	1.0	.7	.3	.8
29	.5	1.1	1.8	2.6	-----	3.5	2.9	1.8	.8	.8	.2	.8
30	.6	1.1	1.7	2.5	-----	3.9	3.0	1.7	.8	.7	.2	.8
31	.6	-----	1.7	2.5	-----	3.6	-----	1.8	-----	.7	.3	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October	0.9		0.3		0.48		29.5					
November	1.6		.4		.81		48.2					
December	7.5		1.1		2.27		140					
January	9		1.4		2.73		168					
February	20		2.8		5.02		279					
March	17		2.6		4.85		298					
April	27		2.9		6.41		381					
May	2.7		1.7		2.17		133					
June	2.2		.8		1.37		81.5					
July	.9		.5		.68		41.8					
August	.6		.1		.43		26.4					
September	.8		.3		.61		36.3					
The year	27		.1		2.80		1,660					

WATERMAN CANYON CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 2, T. 1 N., R. 4 W., 600 feet above old toll house and 1 mile northwest of Arrowhead Springs.

DRAINAGE AREA.—4.55 square miles.

RECORDS AVAILABLE.—November, 1911, to October, 1914; December, 1919, to September, 1929.

EXTREMES.—Maximum mean daily discharge, 20 second-feet February 2 and April 4; no flow October 1-13.

1920-1929: Maximum discharge, 164 second-feet January 2, 1922; no flow at times during summer in 1924, 1925, 1926, 1928, and 1929.

REMARKS.—Records good except those for estimated periods, which are fair. Small diversion above station for domestic use. Slight regulation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.2	0.8	0.8	4.3	1.8	1.7	2.4	0.8	0.4	0.2	0.1
2	0	.2	1.0	.8	20	1.8	1.5	2.2	.6	.4	.2	.1
3	0	.3	2.7	.8	12	1.8	1.5	2.2	.5	.3	.2	.1
4	0	.3	1.2	.8	13	1.8	2.0	2.2	.7	.3	.3	.1
5	0	.3	.9	.8	7.5	1.5	17	2.2	.8	.3	.2	.1
6	0	.3	.7	.8	4.9	1.5	.9	2.2	.8	.3	.2	.1
7	0	.3	.6	.8	4.8	1.5	.7	2.1	.9	.3	.2	.1
8	0	.3	.5	.8	4.1	1.5	5.5	2.0	.9	.3	.2	.1
9	0	.3	.4	.6	3.9	1.8	4.3	1.8	.8	.3	.2	.1
10	0	.3	1.8	.6	3.3	13	3.8	1.8	.8	.3	.2	.1
11	0	.3	3.3	.6	3.1	9.5	.5	1.6	.8	.3	.2	.1
12	0	.3	2.0	.5	3.3	6.5	.5	1.4	.8	.3	.2	.1
13	0	1.1	6	.5	3.1	6	4.0	1.3	.8	.2	.2	.1
14	.1	1.3	3.0	.4	2.6	5.5	3.5	1.4	.8	.2	.1	.1
15	.1	.8	2.2	.5	2.6	.5	3.4	1.3	.8	.2	.1	.1
16	.1	.5	1.8	1.8	2.6	4.9	3.4	1.4	.8	.2	.1	.1
17	.1	.5	1.5	.9	2.6	4.6	3.3	1.4	.8	.2	.1	.2
18	.1	.5	1.3	.9	3.7	4.1	3.2	1.1	.7	.2	.1	.5
19	.1	.5	1.2	3.8	2.9	4.4	3.1	1.0	.7	.2	.1	.4
20	.1	.5	1.2	4.7	2.4	3.5	3.1	1.1	.6	.2	.1	.8
21	.1	.5	1.2	2.7	2.2	3.7	3.0	1.2	.5	.2	.1	.2
22	.1	.5	1.2	1.8	2.0	4.4	3.0	1.1	.5	.2	.1	.2
23	.1	.4	1.1	1.4	2.0	3.9	3.0	1.0	.5	.2	.1	.2
24	.1	.5	1.1	1.4	1.8	3.5	3.0	.9	.5	.2	.1	.2
25	.1	.5	1.1	1.4	1.7	3.2	3.0	1.0	.5	.2	.1	.2
26	.1	.6	1.1	1.4	1.7	2.9	3.0	1.0	.5	.3	.1	.2
27	.2	.7	1.1	1.5	1.8	2.6	3.0	.9	.5	.3	.1	.2
28	.2	.8	1.1	1.5	1.8	2.4	2.8	.9	.5	.3	.1	.1
29	.2	.8	1.0	1.5	---	2.3	2.6	.9	.5	.3	.1	.1
30	.3	.8	1.0	1.5	---	2.1	2.4	.9	.4	.3	.1	.1
31	.3	---	.9	1.5	---	2.0	---	.8	---	.3	.1	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.3	0	0.08	4.9
November	1.3	.2	.51	30.3
December	6	.4	1.48	91.0
January	4.7	.4	1.28	73.7
February	20	1.7	4.34	241
March	13	1.5	3.71	228
April	20	1.5	4.57	272
May	2.4	.8	1.44	88.5
June	.9	.4	.67	38.9
July	.4	.2	.26	16.0
August	.3	.1	.15	9.2
September	.5	.1	.16	9.5
The year	20	0	1.53	1,110

* Estimated.

CITY CREEK NEAR HIGHLAND, CALIF.

LOCATION.—Water-stage recorder in SW. ¼ sec. 27, T. 1 N., R. 3 W., 1¼ miles northeast of Highland.

RECORDS AVAILABLE.—October, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 196 second-feet April 4 (gage height, 6.42 feet); no flow for several months.

1919-1929: Maximum discharge, 2,360 second-feet April 5, 1926; maximum gage height, 9.8 feet February 16, 1927; no flow for several months during each year except 1923.

REMARKS.—Records good except those for estimated periods, which are fair. City Creek Water Co.'s canal diverts water three-fourths mile above gage. Combined discharge is the sum of flow in creek and canal.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1	0	0	0.1	0.4	11	2.0	* 0.1	1.6
2	0	0	.1	.3	39	.6	*.1	1.2
3	0	0	1.6	.3	19	*.1	*.1	1.1
4	0	0	1.7	.3	12	*.1	.98	1.1
5	0	0	.3	.3	11	*.1	104	1.6
6	0	0	.2	.1	13	*.1	50	2.2
7	0	0	.1	.1	16	*.1	31	2.5
8	0	0	.1	.1	11	*.1	21	1.5
9	0	0	.1	.1	9	*.1	17	0
10	0	0	.2	.1	7.5	42	13	0
11	0	0	10	.1	6.5	27	12	0
12	* 1.7	0	1.5	.1	6.5	12	11	0
13	* 2.1	.2	16	.1	6.5	7.5	10	0
14	0	1.5	10	.1	7	6.5	9.5	0
15	0	3.3	7	.1	6.5	5.5	9	0
16	0	1.7	6	1.7	6.5	5	* 9	0
17	0	1.2	3.5	2.9	6.5	5	8.5	0
18	0	1.1	4.4	1.3	8	4.8	8.5	0
19	0	.6	4.6	4.4	7.5	5.5	10	0
20	0	.3	4.2	30	6	4.4	8	.2
21	0	.2	3.8	17	5	3.9	7	0
22	0	0	3.5	8	5	5	6.5	0
23	0	0	3.5	8	4.6	7	6.5	0
24	0	0	3.5	7.5	5	6.5	6	0
25	0	0	3.5	5.5	4.8	6	6	0
26	0	0	3.8	5.5	5	6.5	6	0
27	0	0	3.8	5	7	3.2	6	0
28	0	0	2.1	5	5.5	.6	5.5	0
29	0	0	.6	7	-----	.4	5.5	0
30	0	0	.5	7.5	-----	.2	3.9	0
31	0	-----	.4	8	-----	*.1	-----	0

Month	Maximum	Minimum	an	Run-off in acre-feet
October	2.1	0	0.12	7.4
November	3.3	0	.34	20.2
December	16	.1	3.25	200
January	30	.1	4.09	251
February	39	4.6	9.18	510
March	42	.1	5.42	333
April	104	.1	16.3	970
May	2.5	0	.42	25.8
The year	104	0	3.20	2,320

* Estimated.

NOTE.—No flow during months for which no discharge is given.

Daily and monthly discharge, in second-feet, of City Creek and City Creek Water Co.'s canal near Highland, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.6	1.5	2.7	3.7	11	5.5	5.5	6.5	4.1	1.2	0.5	0.2
2.....	.6	1.0	2.6	3.6	39	4.6	5.5	6	3.7	1.0	.4	.2
3.....	.8	1.0	2.5	3.6	19	5	5	6	3.4	1.0	.3	.3
4.....	1.0	1.1	3.2	3.5	12	4.8	99	6	3.4	.8	.4	.5
5.....	.8	1.0	3.7	3.5	11	4.3	104	6	3.6	.9	.6	.8
6.....	.7	1.0	3.5	3.3	13	3.9	50	6	3.8	.9	.5	1.0
7.....	.7	1.0	3.1	3.3	15	3.5	31	6	3.9	1.0	.4	1.2
8.....	.6	1.2	3.1	3.6	11	3.3	22	6	3.9	1.0	.3	1.1
9.....	.6	1.3	3.1	3.9	9	2.7	19	6	3.7	1.1	.3	.7
10.....	.6	1.4	3.0	3.8	7.5	44	15	7	3.5	1.1	.3	.6
11.....	.6	1.5	10	3.8	6.5	29	14	7	3.2	1.0	.3	.4
12.....	3.0	1.5	2.9	3.8	6.5	16	13	6.5	3.0	.9	.4	.4
13.....	4.6	1.7	17	4.0	6.5	11	12	6.5	2.7	.9	.4	.3
14.....	3.2	1.9	10	3.9	7	9.5	11	6	2.6	.8	.4	.2
15.....	2.5	3.3	7	3.9	6.5	8	11	6	2.9	.7	.3	.2
16.....	1.2	2.5	6	4.2	6.5	7	11	6	4.0	.6	.3	.2
17.....	1.1	1.8	3.5	5	6.5	7	10	6	4.4	.6	.3	.1
18.....	1.1	1.6	4.4	4.1	8	7	10	5.5	3.2	.6	.3	1.1
19.....	1.1	1.5	4.6	6.5	7.5	8	12	5	2.5	.6	.3	1.0
20.....	1.1	1.7	4.2	30	6	6.5	10	5.5	2.3	.6	.3	.9
21.....	1.2	1.9	3.8	18	5	6.5	9	5.5	2.0	.6	.2	1.0
22.....	1.2	1.8	3.5	9	5	6.5	9	5.5	1.9	.6	.2	1.1
23.....	1.3	1.7	3.5	9	4.6	7	9	5	1.8	.5	.2	1.0
24.....	1.4	1.6	3.5	8	5	6.5	8.5	4.9	1.7	.5	.2	.8
25.....	1.4	1.6	3.5	6	4.8	6	8.5	4.9	1.5	.5	.2	.8
26.....	1.4	1.9	3.8	6	5	6.5	8.5	5	1.4	.5	.2	.7
27.....	1.4	2.4	3.8	5.5	7	6.5	8.5	5	1.5	.6	.2	.7
28.....	1.4	2.5	3.8	5.5	6.5	6	8.5	4.7	1.5	.8	.2	.7
29.....	1.4	2.5	3.6	7.5	-----	6	8	4.4	1.4	.8	.3	.6
30.....	1.5	2.5	3.7	8	-----	5.5	7	4.2	1.3	.8	.2	.5
31.....	1.6	-----	3.7	8.5	-----	5.5	-----	4.1	-----	.7	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4.6	0.6	1.35	83.0
November.....	3.3	1.0	1.70	101
December.....	17	2.5	4.53	279
January.....	30	3.3	6.32	389
February.....	39	4.6	9.21	512
March.....	44	2.7	8.36	514
April.....	104	5	18.5	1,100
May.....	7	4.1	5.64	347
June.....	4.4	1.3	2.79	166
July.....	1.2	.5	.78	48.0
August.....	.6	.2	.31	19.1
September.....	1.2	.1	.64	38.1
The year.....	104	.1	4.97	3,600

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

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 27, T. 1 N., R. 3 W., 1 mile northeast of Highland. Prior to March 7, 1929, gage was at division box a quarter of a mile below.

RECORDS AVAILABLE.—May, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 7.6 second-feet May 10 (gage height, 8.48 feet); canal dry for several periods during year.

1924-1929: Maximum discharge, 10 second-feet May 30, 1927; canal dry at times.

REMARKS.—Records good. This canal diverts from City Creek a quarter of a mile above gage. At times water is pumped from canal above gage.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.5	2.6	*3.3	0.3	3.4	5.3	4.9	4.1	1.2	0.5	0.2
2	.6	1.0	2.5	*3.3	0	4.0	5.2	5.0	3.7	1.0	.4	.2
3	.8	1.0	1.0	*3.3	0	4.9	5.1	5.0	3.4	1.0	.3	.3
4	1.0	1.1	1.5	*3.2	0	4.7	.6	4.9	3.4	.8	.4	.5
5	.8	1.0	3.4	*3.2	0	*4.2	0	4.6	3.6	*.9	.6	.8
6	.7	*1.0	3.3	3.2	0	*3.8	0	3.9	3.8	*.9	.5	1.0
7	.7	1.0	3.0	3.2	0	*3.4	0	3.4	3.9	*1.0	.4	1.2
8	.6	1.2	3.0	3.5	0	3.2	.9	4.3	3.9	*1.0	.3	1.1
9	.6	1.3	3.0	3.8	0	2.6	1.9	5.8	3.7	1.1	.3	.7
10	.6	1.4	2.8	3.7	0	2.1	1.7	7.3	3.5	1.1	.3	.6
11	.6	1.5	0	3.7	0	1.7	1.7	6.9	3.2	1.0	.3	.4
12	1.3	*1.5	1.4	3.7	0	3.7	*1.7	6.7	3.0	.9	.4	.4
13	2.5	*1.5	.8	*3.9	0	3.4	*1.7	6.3	2.7	.9	.4	.3
14	3.2	.4	0	*3.8	0	2.8	*1.8	6.2	2.6	.8	.4	.2
15	2.5	0	0	*3.8	0	2.4	*1.8	6.1	2.9	.7	.3	.2
16	*1.2	.8	0	2.5	0	2.0	*1.8	6.0	4.0	.6	.3	.2
17	1.1	.6	0	2.2	0	1.8	*1.9	5.9	4.4	.6	.3	.1
18	*1.1	.5	0	2.8	0	2.1	*1.9	5.5	3.2	.6	.3	1.1
19	1.1	.9	0	2.2	0	2.6	*2.0	5.2	2.5	.6	.3	1.0
20	1.1	1.4	0	0	0	2.3	*2.1	5.5	2.3	.6	.3	.9
21	1.2	1.7	0	1.2	0	2.4	*2.2	5.5	2.0	.6	.2	1.0
22	1.2	1.8	0	*1.0	0	1.4	*2.3	5.3	1.9	.6	.2	1.1
23	1.3	1.7	0	*.8	0	.2	*2.4	5.0	1.8	.5	.2	1.0
24	1.4	1.6	0	*.6	0	*.1	*2.5	4.9	1.7	.5	.2	.8
25	1.4	1.6	0	*.5	0	*.1	2.6	4.9	1.5	.5	.2	.8
26	*1.4	1.9	0	*.4	0	0	2.6	5.1	1.4	.5	.2	.7
27	1.4	2.4	0	*.4	0	3.2	2.6	5.1	1.5	.6	.2	.7
28	1.4	2.5	*1.7	.4	1.1	5.0	2.8	4.7	1.5	.8	.3	.7
29	1.4	2.5	*3.0	.4		5.9	2.6	4.4	1.4	.8	.3	.6
30	1.5	2.5	*3.2	.4		5.8	3.3	4.2	1.3	.8	.2	.5
31	1.6		*3.3	.4		5.3		4.1		.7	.2	
Month	Maximum		Minimum		Mean		Run-off in		acre-feet			
October	3.2	0.6	1.22	75.0								
November	2.5	0	1.36	80.9								
December	3.4	0	1.27	78.1								
January	3.9	0	2.22	136								
February	1.1	0	.05	2.8								
March	5.6	0	2.92	180								
April	5.3	0	2.17	129								
May	7.2	3.4	5.25	323								
June	4.4	1.3	2.79	166								
July	1.2	.5	.78	48.0								
August	.6	.2	.31	19.1								
September	1.2	.1	.64	38.1								
The year	7.2	0	1.76	1,280								

* Estimated

DEVIL CANYON CREEK NEAR SAN BERNARDINO, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 6., T. 1 N., R. 4 W., 7.3 miles northwest of San Bernardino.

DRAINAGE AREA.—6.16 square miles.

RECORDS AVAILABLE.—November, 1911, to October, 1914; December, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 34 second-feet April 4 (gage height, 2.59 feet); stream practically dry for several months.

1919-1929: Maximum discharge, 220 second-feet April 7, 1926 (gage height, 3.75 feet); stream practically dry September 27 and 28, 1921, and several months during summers of 1924, 1925, 1926, 1928, and 1929.

REMARKS.—Records good. Water diverted above gage by city of San Bernardino and spread over canyon floor to increase absorption.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.	0	0	0.4	0.5	0.5	0.4	6.2	0.1
2.	0	0	11	.5	.4	.4	.2	.1
3.	0	0	9.5	.5	.4	.4	.2	.1
4.	.1	0	6	.4	8	.5	.2	.1
5.	0	0	3.0	.4	18	.5	.2	.1
6.	0	0	3.3	.4	7	.5	.2	.1
7.	0	0	6	.4	4.4	.5	.2	.1
8.	0	0	4.2	.4	3.9	.4	.2	.1
9.	0	0	3.0	.4	3.3	.4	.2	.1
10.	0	0	2.2	11	2.8	.4	.2	.1
11.	.1	0	1.9	6	2.5	.4	.2	.1
12.	0	0	1.7	3.6	2.2	.4	.2	.1
13.	0	0	1.7	2.2	2.0	.4	.2	.1
14.	.1	0	1.5	2.0	1.9	.4	.2	.1
15.	.1	.1	1.2	1.9	1.0	.4	.2	0
16.	0	.1	1.4	1.5	.1	.4	.2	0
17.	0	.1	1.2	1.5	.1	.4	.2	0
18.	0	.1	1.2	1.2	.1	.3	.1	0
19.	0	.1	1.4	1.2	1.9	.2	.1	0
20.	0	.1	1.2	.8	1.9	.2	.1	0
21.	0	.1	1.0	.7	1.5	.2	.1	0
22.	0	.1	.8	1.4	1.2	.2	.1	0
23.	0	.1	.7	1.7	1.2	.2	.1	0
24.	0	.1	.5	1.4	1.2	.2	.1	0
25.	0	.1	.5	1.2	.7	.2	.1	0
26.	0	.1	.7	1.2	.4	.2	.1	0
27.	0	.1	.8	1.0	.3	.2	.1	0
28.	0	.1	.8	.8	.3	.2	.1	0
29.	0	.1	-----	.8	.3	.2	.1	0
30.	0	.1	-----	.8	.3	.2	.1	0
31.	0	.1	-----	.8	-----	.2	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December	0.1	0	0.01	0.6
January	.1	0	.06	3.7
February	11	.4	2.46	137
March	11	.4	1.37	96.5
April	18	.1	2.32	138
May	.5	.2	.33	20.3
June	.2	.1	.16	9.5
July	.1	0	.05	3.0
The year	18	0	.56	409

• Estimated.

NOTE.—No flow during months for which no discharge is given.

LYTLE CREEK AND FONTANA PIPE LINE NEAR FONTANA, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 6, T. 1 N., R. 5 W., unsurveyed, one-fourth mile below Lytle Creek power plant of Southern California Edison Co. and $7\frac{1}{2}$ miles north of Fontana.

RECORDS AVAILABLE.—October, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year not determined; no flow in creek except on March 10.

1918-1929: Maximum discharge, about 5,300 second-feet February 16, 1927 (gage height, 5.40 feet); no flow in creek during most of each year.

REMARKS.—Water is diverted 3 miles above gage for Lytle Creek power plant. This water is then carried across creek to headworks of Fontana pipe line, which serves Fontana power plant $4\frac{1}{2}$ miles downstream. Records of daily discharge of Fontana pipe line, determined from kilowatt output of power plant, furnished by Southern California Edison Co.

Daily discharge of Lytle Creek near Fontana, Calif., for the year ending September 30, 1929, was as follows: March 10, 55 second-feet; no flow during rest of year.

Daily and monthly discharge, in second-feet, of Fontana pipe line near Fontana, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15.9	16.2	16.7	13.2	17.4	17.3	18.4	25	22	17.0	13.4	11.6
2	16.3	16.0	16.6	12.6	25	17.8	18.3	26	21	16.5	12.9	11.6
3	15.7	16.7	18.2	12.9	21	17.8	18.6	26	19.2	14.8	12.3	11.6
4	16.3	16.2	13.4	13.2	20	17.2	39	26	20	15.7	12.6	12.0
5	15.0	16.0	11.1	12.6	23	17.5	36	26	20	14.8	12.1	12.4
6	15.7	16.2	10.9	13.2	22	16.9	31	27	24	15.1	12.6	12.1
7	15.3	17.5	11.8	12.6	25	16.4	29	27	23	15.7	13.2	12.1
8	15.3	16.2	10.9	15.6	23	17.2	29	26	23	14.6	12.3	11.8
9	15.3	15.9	11.2	18.0	23	16.5	30	26	23	14.8	12.6	11.8
10	14.8	16.6	11.5	17.8	22	53	30	27	22	14.8	12.8	11.8
11	17.3	17.2	12.9	17.5	21	36	28	26	21	13.8	12.6	10.2
12	20	17.0	13.6	17.4	20	25	28	25	21	15.3	12.6	12.4
13	18.2	19.0	21	17.2	20	25	27	26	20	13.6	12.6	12.1
14	16.9	19.5	17.2	17.0	19.5	24	26	26	20	14.8	13.2	12.4
15	16.6	13.2	15.0	16.7	18.8	26	26	25	20	14.4	12.9	10.9
16	17.8	15.9	15.3	17.7	18.8	26	25	25	21	13.8	12.3	10.0
17	17.3	15.3	15.8	12.9	17.3	26	25	25	19.7	14.4	12.9	10.0
18	17.0	12.9	15.2	12.8	17.8	25	25	25	19.0	12.8	12.0	8.6
19	16.5	12.6	15.0	13.4	18.8	24	26	25	19.3	13.2	11.5	11.2
20	16.0	12.4	14.6	17.2	18.8	23	24	25	17.7	13.6	10.3	11.8
21	16.8	12.0	14.4	15.5	18.3	22	23	25	18.1	12.8	10.6	11.5
22	15.7	14.5	13.9	16.0	18.1	23	24	24	17.9	14.2	11.8	11.2
23	15.5	16.7	14.0	15.8	18.1	23	23	25	17.3	12.8	10.9	12.1
24	15.7	17.2	13.4	15.8	18.1	22	23	23	16.8	13.4	11.4	11.6
25	15.7	16.4	13.4	15.0	17.8	21	22	23	17.5	12.3	12.6	11.6
26	17.0	16.2	13.2	15.2	17.8	21	23	22	17.0	13.4	11.8	11.5
27	16.5	16.0	13.6	15.1	16.2	19.9	22	24	17.5	12.4	11.8	11.5
28	16.8	16.7	13.2	14.2	15.7	19.5	22	23	16.5	12.6	11.8	12.4
29	17.2	16.0	13.9	12.1	-----	19.0	19.9	22	16.8	13.2	10.9	11.2
30	17.0	15.8	13.4	12.6	-----	19.5	23	22	17.3	13.2	11.5	11.8
31	16.2	-----	13.2	14.6	-----	18.8	-----	21	-----	13.4	11.5	-----
Month					Maximum		Minimum		Mean		Run-off in acre-feet	
October					20		14.8		16.4		1,010	
November					19.5		12.0		15.9		946	
December					21		10.9		14.1		867	
January					18.0		12.1		14.9		916	
February					25		15.7		19.7		1,090	
March					53		16.4		22.5		1,380	
April					39		18.3		25.5		1,520	
May					27		21		24.8		1,520	
June					24		16.5		19.6		1,170	
July					17.0		12.3		14.1		867	
August					13.4		10.3		12.1		744	
September					12.4		8.6		11.5		684	
The year					63		8.6		17.6		12,700	

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

LOCATION.—Water-stage recorder in the San Bernardino grant, near the Atchison, Topeka & Santa Fe Railway bridge, one-quarter of a mile upstream from Mount Vernon Street Bridge, at San Bernardino, San Bernardino County.

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—Stream dry during period of record.

REMARKS.—No flow during period of record. Water diverted above station by Fontana pipe line (see p. 44) and for spreading on gravel cone.

LITTLE CREEK (WEST CHANNEL) AT COLTON, CALIF.

LOCATION.—Water-stage recorder in San Bernardino grant, on F Street near Colton Avenue, at Colton, San Bernardino County.

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—Stream dry during period of record.

REMARKS.—No flow during period of record. Water diverted by Fontana pipe line (see p. 44) and for spreading on gravel cone.

CAJON CREEK NEAR KEENBROOK, CALIF.

LOCATION.—Water-stage recorder in SE. ¼ sec. 12, T. 2 N., R. 6 W., 300 feet above mouth of Lone Pine Creek and 1 mile north of Keenbrook.

RECORDS AVAILABLE.—December, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 106 second-feet March 10 (gage height, 4.98 feet); minimum, 1.1 second-feet October 4-9.

1919-1929: Maximum discharge, about 5,000 second-feet December 20, 1921 (gage height, 9.0 feet); minimum, 0.05 second-feet June 25, 1920.

REMARKS.—Records fair. No diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.3	1.6	2.5	2.2	4.0	4.4	3.5	2.8	*2.2	1.6	1.3	1.4
2.....	1.3	1.4	2.9	2.2	9	4.2	3.4	2.6	*2.1	1.6	1.3	1.4
3.....	1.3	1.4	12	2.3	7	4.0	3.4	2.8	*2.1	1.6	1.3	1.4
4.....	1.1	1.4	3.8	2.3	7	3.8	6.5	2.9	*2.1	1.6	1.3	1.4
5.....	1.1	1.4	2.9	2.3	7	3.8	4.0	2.9	*2.1	1.6	1.3	1.6
6.....	1.1	1.4	2.9	2.3	7	3.8	3.9	2.9	2.1	1.6	1.3	1.6
7.....	1.1	1.4	3.2	2.2	7	3.6	3.9	2.9	2.2	1.6	1.3	1.6
8.....	1.1	1.4	3.6	2.2	6	3.6	4.0	2.9	2.2	1.4	1.3	1.6
9.....	1.1	1.4	3.6	2.2	6	3.9	3.8	2.9	2.0	1.4	1.3	1.6
10.....	1.3	1.4	3.9	2.2	5.5	25	3.7	2.9	2.0	1.4	1.3	1.6
11.....	1.6	1.8	3.8	2.2	5.5	12	3.6	2.6	2.0	1.4	1.3	1.6
12.....	2.4	2.5	6	*2.2	5	8.5	3.4	2.4	2.0	1.4	1.4	1.6
13.....	2.0	5	17	*2.2	5.5	8	3.2	2.4	1.8	1.3	1.4	1.6
14.....	1.9	10	4.8	*2.2	5.5	7.5	3.2	2.4	1.8	1.3	1.4	1.6
15.....	1.8	2.9	5.0	*2.2	5.5	7	3.2	2.4	1.7	1.3	1.4	1.6
16.....	1.8	2.4	3.9	3.6	5.5	7	3.2	2.4	1.7	1.2	1.4	1.6
17.....	1.9	2.0	3.0	3.4	5.5	7	3.2	2.4	1.7	1.3	1.4	1.6
18.....	1.8	2.0	2.7	4.7	7	6.5	3.2	2.3	1.7	1.3	1.4	1.7
19.....	1.6	2.0	3.0	4.0	6	6.5	3.2	2.2	1.6	1.2	1.4	1.7
20.....	1.4	2.0	2.9	10	6	6.5	3.4	2.3	1.6	1.2	1.4	1.6
21.....	1.6	2.0	2.7	11	5.5	6.5	3.5	2.3	1.6	1.3	1.4	1.6
22.....	1.4	2.0	2.5	10	5.5	*6	3.4	2.4	1.6	1.3	1.4	1.6
23.....	1.4	2.0	2.5	10	4.8	*5.5	3.1	*2.4	1.6	1.3	1.3	1.6
24.....	1.4	2.0	2.4	8	4.7	*5	3.1	*2.3	1.7	1.3	1.3	1.6
25.....	1.4	2.0	2.5	7	4.7	4.7	2.9	*2.3	1.7	1.4	1.3	1.4
26.....	1.3	2.2	2.4	6	4.7	4.3	2.9	*2.3	1.6	1.4	1.3	1.4
27.....	1.3	2.4	2.4	5.5	4.8	4.3	2.9	*2.3	1.6	1.4	1.3	1.4
28.....	1.3	2.4	2.4	4.5	4.8	4.0	2.9	*2.3	1.6	1.4	1.4	1.4
29.....	1.4	2.5	2.4	4.0	-----	3.9	2.9	*2.3	1.6	1.4	1.4	1.4
30.....	1.4	2.5	2.3	3.0	-----	3.9	2.8	*2.2	1.6	1.4	1.4	1.4
31.....	1.4	-----	2.3	2.8	-----	3.7	-----	*2.2	-----	1.4	-----	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October.....	2.4		1.1		1.46		89.8					
November.....	10		1.4		2.29		136					
December.....	17		2.3		3.88		239					
January.....	11		2.2		4.22		269					
February.....	9		4.0		5.79		322					
March.....	25		3.6		6.08		374					
April.....	6.5		2.8		3.44		205					
May.....	2.9		2.2		2.50		154					
June.....	2.2		1.6		1.83		109					
July.....	1.6		1.2		1.40		86.1					
August.....	1.4		1.3		1.35		83.0					
September.....	1.7		1.4		1.54		91.6					
The year.....	25		1.1		2.97		2,150					

* Estimated.

LONE PINE CREEK NEAR KEENBROOK, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 12, T. 2 N., R. 6 W., 50 feet above Atchison, Topeka & Santa Fe Railway bridge and 1 mile north of Keenbrook.

RECORDS AVAILABLE.—December, 1919, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 7 second-feet March 10; minimum, 0.1 second-foot most of the year.

1919-1929: Maximum discharge, about 810 second-feet December 19, 1922 (gage height, 4.1 feet); minimum, 0.1 second-foot at times during 1926, 1927, 1928, and 1929.

REMARKS.—Records good. Discharge estimated on basis of discharge measurements November 14 to June 18 and August 18 to September 4. No diversions or regulation above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
2.	.2	.2	.1	.2	.2	.2	.2	.1	.1	.1	.1	.1
3.	.2	.2	1.5	.2	.2	.2	.2	.1	.1	.1	.1	.1
4.	.2	.2	.2	.2	.2	.2	.5	.1	.1	.1	.1	.1
5.	.2	.2	.2	.2	.2	.2	.3	.1	.1	.1	.1	.1
6.	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1
7.	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1
8.	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1
9.	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1
10.	.2	.2	.2	.2	.2	7	.1	.1	.1	.1	.1	.1
11.	.2	.2	.2	.2	.2	.5	.1	.1	.1	.1	.1	.1
12.	.2	.2	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
13.	.2	.4	3.0	.2	.2	.3	.1	.1	.1	.1	.1	.1
14.	.2	.8	.3	.2	.2	.3	.1	.1	.1	.1	.1	.1
15.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
16.	.2	.1	.2	1.5	.2	.3	.1	.1	.1	.1	.1	.1
17.	.1	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
18.	.1	.1	.2	.2	.3	.3	.1	.1	.1	.1	.1	.1
19.	.1	.1	.2	.2	.3	.3	.1	.1	.1	.1	.1	.1
20.	.1	.1	.2	1.4	.3	.3	.1	.1	.1	.1	.1	.1
21.	.2	.1	.2	1.5	.2	.3	.1	.1	.1	.1	.1	.1
22.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
23.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
24.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
25.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
26.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.1	.1	.1
27.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.2	.1	.1
28.	.2	.1	.2	.2	.2	.3	.1	.1	.1	.2	.1	.1
29.	.2	.1	.2	.2	-----	.3	.1	.1	.1	.2	.1	.1
30.	.2	.1	.2	.2	-----	.2	.1	.1	.1	.2	.1	.1
31.	.2	-----	.2	.2	-----	.2	-----	.1	-----	.1	.1	-----
Month							Maximum	Minimum	Mean	Run-off in acre-feet		
October							0.2	0.1	0.19	11.7		
November							.8	.1	.17	10.1		
December							3	.1	.33	23.3		
January							1.5	.2	.32	13.7		
February							.3	.2	.21	11.7		
March							7	.2	.49	30.1		
April							.5	.1	.13	7.7		
May							.1	.1	.10	6.1		
June							.1	.1	.10	6.0		
July							.2	.1	.11	6.3		
August							.1	.1	.10	6.1		
September							.1	.1	.10	6.0		
The year							7	.1	.26	142		

MEEKS & DALEY CANAL NEAR COLTON, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ 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, 1929.

EXTREMES.—Maximum mean daily discharge during year, 19.2 second-feet July 27; minimum, 0.1 second-foot December 15–21.

1920–1929: Maximum mean daily discharge, 21 second-feet June 16, 1926; no flow at times.

REMARKS.—Records good except those for estimated periods, which are fair. This canal diverts from right bank of Warm Creek $1\frac{1}{2}$ miles northeast of Colton. Water is used for irrigation near Colton.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	18.9	15.5	10.1	0.6	0.2	1.0	12.6	16.7	16.8	17.6	18.0	17.1
2.....	18.0	17.4	10.6	.5	0.2	1.4	12.7	16.2	17.2	18.4	17.5	17.0
3.....	18.0	17.6	3.8	1.4	0.2	1.4	12.0	15.7	17.2	18.4	17.6	16.8
4.....	18.4	16.6	.2	6.3	0.2	1.4	4.4	15.2	16.8	18.3	17.5	17.4
5.....	16.6	17.4	.2	14.8	0.2	1.7	.3	18.0	15.7	18.3	17.1	17.5
6.....	17.2	16.6	0.2	12.4	0.3	3.2	.2	17.2	16.8	16.8	16.8	17.4
7.....	17.6	15.2	0.1	12.7	0.3	8.6	0.2	16.7	17.1	17.0	17.1	18.3
8.....	17.1	16.2	0.2	12.7	0.3	15.0	3.7	16.3	17.9	15.8	17.4	17.8
9.....	17.0	16.4	4.0	12.8	.4	14.8	3.4	16.4	18.0	16.6	16.4	16.8
10.....	17.1	16.2	5.0	11.6	.4	6.2	3.4	16.4	18.1	16.3	17.0	16.2
11.....	17.8	16.3	0.0	11.6	.4	.9	4.2	17.0	18.4	16.1	16.8	15.7
12.....	12.6	17.0	9.3	14.0	.4	.4	3.3	0.2	18.0	16.3	17.4	16.7
13.....	6.2	18.7	4.4	14.4	.4	.3	3.5	0.2	17.2	16.2	17.6	17.0
14.....	7.1	10.1	.2	14.6	.4	.3	3.8	0.2	16.8	16.3	16.7	17.0
15.....	6.5	4.6	0.1	14.0	.4	0.2	8.8	0.2	17.2	16.6	16.4	17.6
16.....	7.4	6.3	0.1	10.0	.4	0.2	15.9	0.2	17.1	16.3	16.4	17.1
17.....	8.8	4.2	0.1	4.7	.4	0.2	16.3	0.2	17.4	17.5	15.8	16.7
18.....	8.5	1.6	0.1	4.1	.5	0.2	17.5	16.7	17.4	17.6	16.8	16.7
19.....	10.0	1.0	0.1	2.7	.4	0.2	16.3	16.2	17.6	17.8	17.2	16.8
20.....	16.3	2.6	.1	.9	.3	0.2	16.2	14.2	17.0	17.8	17.2	17.6
21.....	17.2	3.4	.1	.3	.3	0.2	15.9	15.9	15.8	18.0	18.0	17.2
22.....	18.0	0.0	.2	.2	.3	0.2	16.2	16.3	16.1	18.0	18.3	16.7
23.....	18.0	0.0	.5	.2	.3	0.2	16.6	15.7	17.1	17.4	17.8	16.6
24.....	19.0	12.0	.6	.2	.3	0.2	16.4	15.9	16.7	16.6	18.5	16.7
25.....	18.3	11.5	.6	.2	.3	0.2	15.9	16.3	16.4	17.6	18.3	16.7
26.....	18.7	11.8	.6	.2	.3	0.2	16.2	16.3	16.6	18.7	18.0	16.8
27.....	18.7	11.6	.8	.2	.4	2.7	17.6	15.9	16.1	19.2	17.5	16.4
28.....	17.5	11.8	.9	0.2	.4	3.4	17.1	14.9	16.1	18.7	17.4	16.6
29.....	17.9	12.6	0.1	0.2	-----	3.4	16.8	16.7	16.7	18.8	17.5	17.0
30.....	16.1	11.8	0.1	0.2	-----	3.8	16.7	16.7	16.3	18.5	17.4	16.7
31.....	14.8	-----	0.1	0.2	-----	9.0	-----	16.7	-----	18.8	17.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	19.0	6.2	15.2	935
November.....	18.7	1.0	11.7	696
December.....	10.8	.1	2.19	135
January.....	14.8	.2	5.78	355
February.....	.5	.2	.33	18.3
March.....	15.0	.2	2.62	161
April.....	17.6	.2	10.8	643
May.....	18.0	14.2	16.2	996
June.....	18.4	15.7	17.0	1,010
July.....	19.2	15.8	17.5	1,080
August.....	18.5	15.8	17.3	1,060
September.....	18.3	15.7	16.9	1,010
The year.....	19.2	.1	11.2	8,100

• Estimated.

DAY CREEK NEAR ETIWANDA, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 8, T. 1 N., R. 6 W., one-fourth mile below junction of two main forks and 6 miles north of Etiwanda.

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—Maximum discharge during period, 60 second-feet March 10 (gage height, 1.46 feet); minimum, 0.6 second-foot August 30.

REMARKS.—Records good. The Etiwanda Water Co. diverted the following amount for spreading above station: January, 21 acre-feet; February, 79 acre-feet; March, 79 acre-feet; April, 106 acre-feet; May, 4 acre-feet.

Daily and monthly discharge, in second-feet, 1929

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		3.7	0.9	1.0	1.2	2.2	1.2	0.9	0.8
2.....		11	.9	1.0	1.0	2.2	1.1	.9	.8
3.....		4.8	.9	1.1	1.4	2.0	1.1	.9	1.0
4.....		3.0	.9	5	2.0	2.2	1.2	.9	1.2
5.....		2.5	.9	9.5	2.7	2.2	1.2	1.0	1.3
6.....		2.5	.9	4.4	2.7	2.2	1.2	1.0	1.5
7.....	2.0	2.3	1.0	3.3	2.9	2.4	1.1	1.0	1.6
8.....	1.8	2.0	1.0	2.9	2.9	2.6	1.1	1.1	1.5
9.....	1.8	1.8	1.0	2.9	2.9	2.8	1.1	1.0	1.4
10.....	2.0	1.5	23	2.6	2.7	2.8	1.0	.9	1.3
11.....	2.0	1.2	13	2.4	2.6	2.4	1.0	.9	1.1
12.....	2.0	1.2	8.5	2.0	2.4	2.2	1.0	.8	1.0
13.....	2.0	1.1	5	1.6	2.2	1.8	1.0	.8	.8
14.....	2.0	1.1	3.3	1.6	2.2	1.8	.9	.8	.8
15.....	2.0	1.1	2.2	1.6	2.2	2.0	1.0	.8	.8
16.....	2.3	1.0	1.3	1.6	2.4	2.9	1.0	.8	.9
17.....	2.2	1.0	1.2	1.6	2.4	2.4	1.1	.8	1.2
18.....	2.2	1.3	1.1	1.6	2.4	1.8	1.2	.8	1.6
19.....	2.7	1.3	1.1	1.6	2.4	1.5	1.2	.8	1.4
20.....	2.7	1.2	1.1	1.6	2.4	1.5	1.2	.8	1.2
21.....	2.0	1.2	1.1	1.6	2.4	1.4	1.1	.8	1.4
22.....	1.5	1.1	1.1	1.8	2.2	1.3	1.1	.7	1.4
23.....	1.4	1.1	1.0	1.6	2.2	1.3	1.0	.7	1.5
24.....	1.1	1.0	.8	1.5	2.0	1.2	1.0	.7	1.3
25.....	1.2	1.0	.8	1.5	2.2	1.2	1.2	.7	1.2
26.....	1.0	1.0	.8	1.5	2.6	1.2	1.2	.7	1.0
27.....	1.0	1.0	.8	1.5	2.6	1.2	1.2	.7	1.2
28.....	1.0	1.0	.8	1.2	2.4	1.2	1.2	.7	1.2
29.....	1.0		.8	1.2	2.4	1.2	1.2	.7	1.1
30.....	1.2		.8	1.4	2.0	1.2	1.2	.6	1.0
31.....	1.3		.9		2.2		1.0	.7	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 7-31.....	2.7	1.0	1.74	86.1
February.....	11	1.0	1.96	109
March.....	23	.8	2.55	157
April.....	9.5	1.0	2.19	180
May.....	2.9	1.0	2.30	141
June.....	2.9	1.2	1.88	112
July.....	1.2	.9	1.11	68.2
August.....	1.1	.6	.82	50.4
September.....	1.6	.8	1.18	70.2
The period.....				924

CUCAMONGA CREEK NEAR UPLAND, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 17, T. 1 N., R. 7 W., 6 miles north of Upland.

RECORDS AVAILABLE.—December, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 118 second-feet March 10 (gage height, 1.88 feet); minimum, 1.0 second-foot July 22-27.

REMARKS.—Records good. Discharge estimated February 19, 21, 22, March 20, 21, and April 8-12. From June 9 to September 30 entire flow was diverted around gage; daily discharge interpolated between measurements made in flume.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		1.8	8	2.6	4.2	4.5	2.6	1.6	1.2	1.1
2.....		1.7	18	2.3	4.2	4.5	2.6	1.6	1.2	1.2
3.....		1.7	12	2.3	4.5	4.5	2.6	1.5	1.2	1.2
4.....		1.7	9	2.3	17	4.5	2.6	1.5	1.2	1.2
5.....		1.7	7.5	2.3	21	4.5	2.9	1.5	1.1	1.2
6.....		1.7	8	2.3	14	4.5	3.2	1.5	1.1	1.2
7.....		1.7	7.5	2.3	12	4.5	3.7	1.5	1.1	1.2
8.....		1.7	6.5	2.3	11	4.2	3.4	1.5	1.1	1.1
9.....		1.8	5	2.6	10	4.2	3.2	1.5	1.1	1.1
10.....		1.8	5	4.6	9.5	3.7	3.2	1.5	1.1	1.1
11.....		1.8	4.9	25	9	3.7	2.9	1.5	1.1	1.1
12.....		1.8	4.5	17	8.5	3.7	2.7	1.4	1.1	1.1
13.....		1.8	4.2	12	8	3.7	2.5	1.4	1.1	1.1
14.....		1.8	4.2	11	8	4.0	2.5	1.3	1.1	1.1
15.....		1.7	3.7	8.5	8	4.0	2.3	1.2	1.1	1.1
16.....		4.0	3.4	8	7.5	4.0	2.3	1.2	1.1	1.1
17.....		2.9	3.2	7.5	7	4.0	2.2	1.2	1.1	1.1
18.....		2.6	4.9	7.5	6.5	3.7	2.1	1.1	1.1	1.6
19.....		3.4	4.0	7	6.5	3.7	2.0	1.1	1.1	1.4
20.....		5.5	3.4	7	7	4.2	1.9	1.1	1.1	1.4
21.....		5	3.2	6.5	7	4.5	1.9	1.1	1.1	1.4
22.....		4.5	3.0	6.5	6.5	4.2	1.8	1.0	1.1	1.4
23.....		4.0	2.9	6	6.5	4.2	1.8	1.0	1.1	1.3
24.....	2.1	3.2	2.3	5.5	6.5	4.2	1.8	1.0	1.1	1.3
25.....	2.1	3.2	2.3	5	5.5	4.2	1.7	1.0	1.1	1.3
26.....	2.1	3.2	2.6	4.5	5.5	4.5	1.7	1.0	1.1	1.3
27.....	2.3	3.2	2.9	4.2	6	4.2	1.7	1.0	1.1	1.3
28.....	2.3	3.2	2.9	4.2	6	3.7	1.7	1.1	1.1	1.3
29.....	2.1	3.4	-----	4.2	5	3.2	1.7	1.1	1.1	1.3
30.....	2.1	3.4	-----	4.2	4.5	2.6	1.6	1.1	1.1	1.3
31.....	1.8	3.4	-----	4.2	-----	2.6	-----	1.1	1.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December 24-31.....	2.3	1.8	2.11	38.5
January.....	5.5	1.7	2.72	167
February.....	18	2.3	5.32	295
March.....	46	2.3	7.51	462
April.....	21	4.2	8.08	481
May.....	4.5	2.6	4.01	247
June.....	3.7	1.6	2.36	140
July.....	1.6	1.0	1.26	77.5
August.....	1.2	1.1	1.11	68.2
September.....	1.6	1.1	1.23	73.2
The period.....	-----	-----	-----	2,040

SAN JACINTO RIVER NEAR SAN JACINTO, CALIF.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 13, T. 5 S., R. 1 E., at highway bridge $\frac{3}{4}$ miles southeast of San Jacinto.

RECORDS AVAILABLE.—October, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year not determined; stream practically dry during parts of October, July, and August.

1920-1929: Maximum discharge, about 45,000 second-feet February 16, 1927; stream usually dry several months each year.

REMARKS.—Records fair. Several diversions above gage and storage at Lake Hemet. Gage-height record furnished by Lake Hemet Water Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
1.	0	0.1	0.1	0.5	0.9	4.8	22	2.8	0.3	0.1	0	*6
2.	0	.1	.1	.5	.67	4.8	22	2.1	.3	.1	0	*1.0
3.	0	.1	.2	.5	.33	4.0	17	1.0	.2	.1	0	*.5
4.	0	.1	3.2	.5	20	4.0	17	.9	.2	.1	0	*.3
5.	0	.1	.9	.5	19	4.0	54	.9	.2	.1	0	*.2
6.	0	.1	.5	.5	14	4.0	56	.9	.2	.1	0	*.2
7.	0	.1	.5	.5	19	4.0	47	.9	.2	.1	0	*.2
8.	0	.1	.5	.5	12	4.0	41	.9	.2	0	0	*.2
9.	0	.1	.4	.5	9.5	4.0	35	.7	.2	0	.0	*.1
10.	0	.1	.4	.5	8.5	54	33	.7	.2	0	0	*.1
11.	0	.1	.4	.5	7	84	31	.7	.2	0	0	*.1
12.	.1	.1	.5	.5	7	39	31	.7	.2	0	0	*.1
13.	.1	.1	1.3	.5	7	29	29	.6	.2	0	0	*.1
14.	.1	.1	3.2	.5	7	20	27	.6	.2	0	*8	*.1
15.	.1	.1	.9	.5	7	16	25	.6	.2	0	.2	*.1
16.	.1	.1	.7	.5	6.5	14	22	.6	.2	0	.2	*.1
17.	.1	.1	.7	.7	6.5	14	22	.5	1.0	0	.2	*.1
18.	.1	.1	.6	.6	4.8	14	22	.5	.2	0	*.2	*40
19.	.1	.1	.6	.6	6.5	14	24	.5	.2	0	.1	*4.0
20.	.1	.1	.6	17	5.5	13	24	.5	.1	0	.1	*.5
21.	.1	.1	.6	8.5	5.5	12	20	.5	.1	0	.1	*.2
22.	.1	.1	.6	4.0	5.5	13	17	.5	.1	0	.1	.1
23.	.1	.1	.6	2.4	6.5	29	16	.5	.1	0	*.1	.1
24.	.1	.1	.6	1.7	6.5	20	14	.3	.1	0	*.1	.1
25.	.1	.1	.5	1.3	5.5	20	13	.3	.1	0	0	.1
26.	.1	.1	.5	1.3	4.0	17	9.5	.3	.1	0	0	.1
27.	.1	.1	.5	1.2	4.8	24	8.5	.3	.1	0	0	.1
28.	.1	.1	.5	1.0	4.8	24	7	.8	.1	0	0	.1
29.	.1	.1	.5	1.0	-----	25	6.5	.3	.1	0	0	.1
30.	.1	.1	.5	.9	-----	27	2.8	.2	.1	0	0	.1
31.	.1	-----	.5	.9	-----	25	-----	.3	-----	0	*50	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.1	0	0.06	3.7
November	.1	.1	.10	6.0
December	3.2	.1	.72	44.3
January	17	.5	1.65	101
February	67	.9	11.1	616
March	84	4.0	18.8	1,160
April	56	2.8	23.8	1,420
May	2.8	.3	.69	42.4
June	1.0	.1	.20	11.9
July	.1	0	.02	1.2
August	50	0	1.92	118
September	40	.1	1.84	109
The year	84	0	5.02	3,630

* Estimated.

SAN JACINTO RIVER NEAR ELSINORE, CALIF.

LOCATION.—Water-stage recorder near east line sec. 9, T. 6 S., R. 4 W., 2 miles southeast of Elsinore and $2\frac{1}{4}$ miles above junction with Elsinore Lake (low-water stage).

DRAINAGE AREA.—717 square miles.

RECORDS AVAILABLE.—January, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 0.4 second-foot April 4 (gage height, 2.44 feet); stream dry most of the year.

1916-1929: Maximum discharge, about 16,000 second-feet February 17, 1927 (gage height, 11.8 feet); stream dry for several months each year.

REMARKS.—Daily discharge estimated. Storage and diversions for irrigation above station.

Daily discharge, in second-feet, 1928-29

Date	Discharge	Date	Discharge	Date	Discharge
Apr. 4.....	0.1	Apr. 7.....	0.1	Apr. 10.....	0.1
Apr. 5.....	.2	Apr. 8.....	.1	Apr. 11.....	.1
Apr. 6.....	.1	Apr. 9.....	.1		

NOTE.—No flow except on Apr. 4-11. Total run-off for the year, 1.8 acre-feet.

ELSINORE LAKE AT ELSINORE, CALIF.

LOCATION.—Staff gage on northeast shore near outlet at Elsinore, Riverside County.

RECORDS AVAILABLE.—December, 1915, to September, 1929.

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. The surface of the lake has been below the outlet since the later date. A history of the lake is published in United States Geological Survey Water-Supply Papers, 426, 429, and 441.

Daily elevation, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....			51.2	51.2					50.1			
2.....	51.8				51.2	51.1	51.0			49.5		
3.....		51.4										48.3
4.....			51.3					50.7	50.0			
5.....				51.2	51.2	51.1						
6.....	51.7	51.4					50.9			49.4		
7.....								50.7			48.9	48.2
8.....			51.3	51.2					49.9			
9.....	51.7				51.2	51.0	50.9			49.3		
10.....		51.4									48.8	48.2
11.....			51.3				50.9	50.6	49.9			
12.....				51.1	51.2	51.1						
13.....	51.7	51.4					50.9			49.2	48.7	
14.....								50.5				48.1
15.....			51.3	51.1					49.8			
16.....	51.6				51.2	51.1	50.9					
17.....		51.4									48.7	48.0
18.....			51.3					50.4	49.8			
19.....				51.1	51.2	51.1						
20.....	51.6	51.3					50.9			49.1	48.6	
21.....								50.4				48.0
22.....									49.7			
23.....	51.6		51.2	51.2	51.2	51.0				49.0		
24.....		51.3					50.8				48.5	48.0
25.....			51.2					50.3	49.6			
26.....				51.2	51.1	51.0						
27.....	51.5	51.3					50.8				48.4	
28.....								50.2				47.9
29.....			51.2	51.2					49.5			
30.....	51.5					51.0	50.7					
31.....												

NOTE.—Add 1,200 feet to obtain elevation above sea level.

TEMESCAL CREEK NEAR CORONA, CALIF.

LOCATION.—Water-stage recorder in the 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 to September, 1929.

EXTREMES.—Maximum mean daily discharge during period, 1.2 second-feet April 4; no flow June 23 to September 30.

REMARKS.—Records good. Daily discharge interpolated between discharge measurements January 14 to March 29. Numerous diversions and three storage reservoirs above station.

Daily and monthly discharge, in second-feet, 1929

Day	Jan.	Feb.	Mar.	Apr.	May	June	Day	Jan.	Feb.	Mar.	Apr.	May	June
1.		0.7	0.6	0.7	0.7	0.4	16.	0.7	0.7	0.8	0.7	0.6	0.2
2.		.7	.6	.7	.7	.4	17.	.6	.7	.7	.7	.6	.2
3.		.7	.6	.7	.7	.4	18.	.6	.7	.7	.7	.6	.1
4.		.7	.6	*1.2	.7	.4	19.	.6	.7	.7	.7	.6	.1
5.		.7	.6	*.7	.7	.4	20.	.6	.7	.7	.7	.6	.1
6.		.7	.6	*.7	.7	.4	21.	.6	.7	.7	.7	.5	.1
7.		.7	.6	.7	.7	.4	22.	.6	.7	.7	.7	.5	.1
8.		.7	.6	.7	.7	.4	23.	.6	.7	.6	.7	.5	0
9.		.7	.6	.7	.7	.4	24.	.7	.7	.6	.7	.5	0
10.		.7	.7	.7	.6	.3	25.	.7	.7	.6	.7	.5	0
11.		.7	.7	.7	.6	.3	26.	.7	.7	.6	.7	.5	0
12.		.7	.7	.7	.6	.3	27.	.7	.7	.6	.7	.5	0
13.		.7	.8	.7	.6	.2	28.	.7	.6	.6	.7	.5	0
14.	0.7	.7	.8	.7	.7	.2	29.	.7	.7	.7	.7	.4	0
15.	.7	.7	.8	.7	.7	.2	30.	.7	.7	.7	.7	.4	0
							31.	.7	.7	.7	.7	.4	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January 14-31.	0.7	0.6	0.66	23.6
February.	.7	.6	.70	38.9
March.	.8	.6	.66	40.6
April.	1.2	.7	.72	42.8
May.	.7	.4	.59	36.3
June.	.4	0	.20	11.9
The period.				194

* Estimated.

NOTE.—No flow June 23 to Sept. 30.

CHINO CREEK NEAR PRADO, CALIF.

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

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—Maximum discharge during period, 85 second-feet April 5 (gage height, 3.50 feet); minimum, 1.0 second-foot June 28.

REMARKS.—Records good. Numerous irrigation diversions above station. Waste water from Durkee ditch discharged into Chino Creek above station.

Daily and monthly discharge, in second-feet, 1929

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		20	15	13	6.5	5	2.0	2.0	4.2
2.....		34	17	12	6.5	5.	1.7	3.2	3.0
3.....		23	12	12	* 6.5	4.2	2.0	4.1	3.7
4.....		24	13	27	* 6	4.9	2.0	4.6	4.0
5.....		23	16	58	* 6	4.5	2.0	3.4	6
6.....		24	12	28	6	3.3	3.1	3.6	6
7.....		23	12	18	4.6	3.4	3.2	3.7	7
8.....		19	12	18	4.3	3.2	5	3.3	7
9.....		19	13	19	4.5	* 3.2	3.4	3.7	5.5
10.....		16	45	16	* 4.0	3.2	2.8	4.4	5
11.....		19	39	15	* 3.5	* 3.1	3.4	3.7	5
12.....		18	24	15	* 3.0	* 3.0	3.8	2.2	5
13.....		17	21	16	* 2.8	* 3.0	3.6	2.8	4.4
14.....	13	19	18	15	3.1	2.9	4.4	3.8	4.4
15.....	15	14	16	16	3.3	2.9	3.2	3.7	4.2
16.....	17	15	17	14	3.8	3.1	3.1	3.4	3.7
17.....	20	19	15	12	5.5	* 2.5	3.1	3.7	3.6
18.....	18	21	17	15	6	* 2.5	3.8	5.5	5.5
19.....	20	26	17	15	5.5	* 2.4	3.5	4.7	4.3
20.....	36	19	21	* 12	4.5	* 2.4	4.9	2.5	4.4
21.....	35	21	16	* 11	5	* 2.4	5	2.5	4.3
22.....	27	18	13	* 10	6	* 2.3	4.0	2.9	4.2
23.....	21	18	18	* 9.5	7	* 2.3	4.0	2.9	3.6
24.....	19	18	20	9	5	* 2.2	4.0	3.6	3.8
25.....	19	14	16	9.5	4.9	3.2	4.9	4.3	3.8
26.....	17	16	14	9	6	3.2	3.5	3.1	3.3
27.....	18	14	12	8	6	2.4	4.2	2.7	3.2
28.....	18	13	14	8.5	5.5	1.2	4.6	2.3	3.0
29.....	17		16	8	5	1.6	2.7	2.3	2.9
30.....	16		12	7.5	6.5	3.7	2.9	3.6	2.8
31.....	18		12		5.5		2.7	3.2	
Month	Maximum		Minimum		Mean		Run-off in acre-feet		
January 14-31.....	36		13		20.2		722		
February.....	34		13		19.4		1,080		
March.....	45		12		17.3		1,080		
April.....	58		7.5		15.2		904		
May.....	6.5		2.8		5.07		312		
June.....	5		1.2		2.94		175		
July.....	5		1.7		3.41		210		
August.....	5.3		2.2		3.42		210		
September.....	7		2.8		4.32		267		
The period.....							4,930		

* Estimated.

SAN ANTONIO CREEK NEAR CLAREMONT, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ SE. $\frac{1}{4}$ 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.

DRAINAGE AREA.—16.9 square miles.

RECORDS AVAILABLE.—March, 1901, to September, 1929.

EXTREMES.—Maximum discharge during year, 7.5 second-feet March 10 (gage height, 3.76 feet); minimum, 0.2 second-foot numerous periods.

1917-1929: Maximum discharge, 1,020 second-feet December 19, 1921 (gage height, 8.20 feet); minimum (estimated), 0.1 second-foot in August and September, 1919, and September and October, 1925.

REMARKS.—Records good. Discharge estimated February 8-14. The Southern California Edison Co. diverts water for power development above station (see p. 57).

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.2	0.3	0.4	0.8	1.3	0.6	1.4	1.6	0.6	0.4	0.4	0.2
2.....	.2	.3	.5	.8	2.0	.6	1.4	1.6	.6	.4	.4	.2
3.....	.2	.3	.9	.8	2.2	.6	1.4	1.5	.6	.4	.4	.2
4.....	.3	.3	.7	.8	2.0	.7	3.1	1.6	.6	.4	.4	.2
5.....	.3	.3	.7	.8	1.7	.7	4.6	1.6	.6	.4	.4	.2
6.....	.3	.3	.7	.8	1.7	.7	4.2	1.4	.6	.4	.4	.3
7.....	.3	.3	.6	.8	1.6	.7	3.7	1.4	.6	.4	.4	.3
8.....	.3	.3	.5	.8	1.5	.7	3.1	1.2	.6	.4	.3	.3
9.....	.2	.3	.5	.8	1.2	.7	2.7	1.1	.7	.4	.3	.3
10.....	.2	.3	.6	.7	1.0	5.5	2.4	1.0	.6	.4	.3	.3
11.....	.3	.3	.6	.7	.9	5	2.2	.9	.7	.4	.3	.3
12.....	.6	.4	.7	.7	.9	3.8	2.0	.9	.6	.4	.3	.3
13.....	.5	.4	1.0	.7	.8	2.7	1.7	.9	.6	.4	.3	.3
14.....	.5	.5	.9	.7	.7	2.4	1.7	.9	.6	.3	.3	.3
15.....	.5	.5	.8	.8	.6	2.2	1.7	.9	.6	.3	.3	.3
16.....	.4	.5	.7	.9	.7	2.0	1.6	.9	.7	.3	.3	.3
17.....	.4	.5	.6	.8	.7	1.8	1.6	.9	.7	.3	.3	.3
18.....	.4	.5	.7	.8	.8	1.6	1.6	.9	.7	.3	.3	.3
19.....	.4	.4	.6	.8	.8	1.6	1.5	.8	.6	.3	.3	.3
20.....	.3	.4	.7	.9	.9	1.5	1.5	.8	.5	.3	.3	.3
21.....	.3	.4	.7	.9	.9	1.5	1.6	.8	.5	.3	.3	.4
22.....	.3	.4	.7	.8	.8	1.5	1.6	.7	.5	.3	.3	.3
23.....	.3	.4	.8	.7	.9	1.5	1.6	.7	.5	.3	.2	.3
24.....	.3	.4	.8	.6	.8	1.6	1.7	.6	.4	.3	.3	.3
25.....	.3	.4	.8	.6	.7	1.6	1.7	.6	.4	.3	.3	.3
26.....	.3	.4	.8	.6	.7	1.5	1.9	.6	.4	.3	.2	.3
27.....	.3	.4	.8	.6	.6	1.4	1.8	.9	.4	.3	.2	.3
28.....	.3	.4	.8	.6	.6	1.4	1.7	.7	.4	.3	.2	.3
29.....	.3	.4	.8	.6	-----	1.4	1.7	.6	.4	.3	.2	.3
30.....	.3	.4	.8	.6	-----	1.4	1.7	.6	.4	.3	.2	.3
31.....	.3	-----	.8	.6	-----	1.4	-----	.6	-----	.4	.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.6	0.2	0.33	20.3
November.....	.5	.3	.38	22.6
December.....	1.0	.4	.71	43.7
January.....	.9	.6	.74	45.5
February.....	2.2	.6	1.07	59.4
March.....	5.5	.6	1.69	104
April.....	4.6	1.4	2.07	123
May.....	1.6	.6	.97	59.6
June.....	.7	.4	.56	33.3
July.....	.4	.3	.34	20.9
August.....	.4	.2	.30	18.4
September.....	.4	.2	.29	17.3
The year.....	5.5	.2	.78	568

Daily and monthly discharge, in second-feet, of San Antonio Creek and Southern California Edison Co.'s canal near Claremont, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7	7.1	7.0	7.2	10.1	8.6	14.8	20	15.4	10.7	8.3	7.0
2	6.8	7.1	7.1	7.3	10.2	8.6	14.4	20	14.6	10.5	8.5	7.0
3	7.4	7.1	8.3	7.0	10.3	8.5	14.6	19.8	14.2	10.4	8.6	6.8
4	6.9	7.1	7.5	7.0	10.1	8.6	19.6	19.6	14.2	10.5	8.6	7.0
5	6.7	6.7	7.4	7.0	9.8	8.5	21	19.6	14.2	10.5	8.2	7.4
6	6.7	6.9	7.5	7.2	9.9	8.6	21	19.3	14.2	10.4	8.6	7.3
7	6.9	6.9	7.3	7.0	9.7	8.7	20	19.2	14.1	10.6	8.0	6.8
8	6.7	6.7	7.3	7.1	9.3	8.6	19.5	19.2	13.9	10.4	7.9	7.3
9	6.5	6.7	7.3	7.0	9.2	8.7	19.1	19	13.7	10.2	8.1	7.1
10	6.5	6.7	7.3	6.9	9.0	21	18.7	18.8	13.2	10.2	7.7	6.5
11	7.1	6.9	7.6	6.9	8.9	16.2	18.6	18.7	13.9	10.2	8.3	6.7
12	7.8	6.8	7.7	6.9	9.1	15.2	18.4	18.7	13.0	9.8	7.9	6.7
13	7.5	7.3	9.0	6.6	8.9	13.9	18.2	18.5	12.8	10.3	7.3	6.7
14	7.3	7.5	8.3	6.9	8.8	13.6	18.2	18.5	12.6	9.9	8.1	6.6
15	7.3	7.5	8.2	7.2	8.8	13.4	18.5	18.5	12.8	9.6	8.1	6.7
16	7.2	7.5	7.7	8.6	8.7	13.4	18.5	18.3	13.1	9.7	7.7	6.9
17	7.3	7.3	7.6	7.6	8.9	13.5	18.9	18.1	12.7	9.7	7.7	6.6
18	7.2	7.3	7.7	7.5	9.4	13.6	19.3	17.9	12.6	9.5	7.0	6.5
19	7.2	7.2	7.4	7.8	9.4	14.2	19.4	17.8	11.7	9.3	7.5	6.7
20	7.1	7.0	7.5	8.2	9.2	13.9	19.4	17.8	11.8	9.3	7.9	6.7
21	7.1	7.1	7.4	7.8	9.4	13.7	19.5	17.8	11.4	8.9	7.4	6.8
22	7.0	7.0	7.3	7.6	9.2	13.7	19.6	17.5	11.3	8.9	6.9	6.5
23	6.9	7.2	7.4	7.5	9.1	13.8	19.6	17.3	11.3	8.7	7.4	6.7
24	7.0	7.2	7.4	7.4	9.0	13.9	19.9	17.0	10.9	8.3	7.1	6.9
25	6.9	7.0	7.2	7.4	9.0	14.4	19.9	16.8	11.2	8.7	7.6	6.7
26	6.9	7.0	7.3	7.4	8.9	14.9	20	17.0	11.5	8.9	7.0	6.4
27	6.9	7.1	7.2	7.3	8.8	14.8	20	16.9	11.2	9.1	7.0	6.3
28	7.0	7.1	7.2	7.4	8.7	14.8	20	16.5	11.4	8.8	6.8	6.7
29	7.0	7.2	7.2	7.3	-----	14.8	20	16.2	11.4	8.9	7.0	6.7
30	7.1	7.2	7.4	7.3	-----	14.8	20	15.7	10.7	8.6	6.8	6.7
31	7.0	-----	7.4	7.4	-----	14.7	-----	15.7	-----	8.6	6.6	-----
Month	Maximum					Minimum		Mean		Run-off in acre-feet		
October	7.8					6.5		7.02		432		
November	7.5					6.7		7.08		421		
December	9.0					7.0		7.52		462		
January	8.6					6.6		7.31		449		
February	10.3					8.7		9.28		515		
March	21					8.5		12.8		787		
April	21					14.4		19.0		1,130		
May	20					15.7		18.1		1,110		
June	15.4					10.7		12.7		756		
July	10.7					8.3		9.62		592		
August	8.6					6.6		7.66		471		
September	7.4					6.3		6.78		403		
The year	21					6.3		10.4		7,536		

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

LOCATION.—Hook gage in NW. $\frac{1}{4}$ sec. 1, T. 1 N., R. 8 W., at weir in tailrace of Sierra power house on San Antonio Creek, $1\frac{1}{2}$ miles below intake and 8 miles northeast of Claremont.

RECORDS AVAILABLE.—January, 1917, to September, 1929.

REMARKS.—This canal diverts from San Antonio Creek in SE. $\frac{1}{4}$ sec. 25, T. 2 N., R. 8 W., 1 mile above gaging station on San Antonio Creek near Claremont. The water is used for power development at Sierra power house and then returned to creek. Discharge record furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	6.5	6.8	6.6	6.4	8.8	8.0	13.4	18.4	14.8	10.3	7.9	6.8
2.....	6.6	6.8	6.6	6.5	8.2	8.0	13.0	18.4	14.0	10.1	8.1	6.8
3.....	7.2	6.8	7.4	6.2	8.1	7.9	13.2	18.3	13.6	10.0	8.2	6.6
4.....	6.6	6.8	6.8	6.2	8.1	7.9	16.5	18.0	13.6	10.1	8.2	6.8
5.....	6.4	6.4	6.7	6.2	8.1	7.8	16.4	18.0	13.6	10.1	7.8	7.2
6.....	6.4	6.6	6.8	6.4	8.2	7.9	16.8	17.9	13.6	10.0	8.2	7.0
7.....	6.6	6.6	6.7	6.2	8.1	8.0	16.5	17.8	13.5	10.2	7.6	6.5
8.....	6.4	6.4	6.8	6.3	7.8	7.9	16.4	18.0	13.3	10.0	7.6	7.0
9.....	6.3	6.4	6.8	6.2	8.0	8.0	16.4	17.9	13.0	9.8	7.8	6.8
10.....	6.3	6.4	6.7	6.2	8.0	16.1	16.3	17.8	12.6	9.8	7.4	6.2
11.....	6.8	6.6	7.0	6.2	8.0	11.2	16.4	17.8	13.2	9.8	8.0	6.4
12.....	7.2	6.4	7.0	6.2	8.2	11.4	16.4	17.8	12.4	9.4	7.6	6.4
13.....	7.0	6.9	8.0	5.9	8.1	11.2	16.5	17.6	12.2	9.9	7.0	6.4
14.....	6.8	7.0	7.4	6.2	8.1	11.2	16.5	17.6	12.0	9.6	7.8	6.3
15.....	6.8	7.0	7.4	6.4	8.2	11.2	16.8	17.6	12.2	9.3	7.8	6.4
16.....	6.8	7.0	7.0	7.7	8.0	11.4	16.9	17.4	12.4	9.4	7.4	6.6
17.....	6.9	6.8	7.0	6.8	8.2	11.7	17.3	17.2	12.0	9.4	7.4	6.3
18.....	6.8	6.8	7.0	6.7	8.6	12.0	17.7	17.0	11.9	9.2	6.7	6.2
19.....	6.8	6.8	6.8	7.0	8.6	12.6	17.9	17.0	11.1	9.0	7.2	6.4
20.....	6.8	6.6	6.8	7.3	8.3	12.4	17.9	17.0	11.3	9.0	7.6	6.4
21.....	6.8	6.7	6.7	6.9	8.5	12.2	17.9	17.0	10.9	8.6	7.1	6.4
22.....	6.7	6.6	6.6	6.8	8.4	12.2	18.0	16.8	10.8	8.6	6.6	6.2
23.....	6.6	6.8	6.6	6.8	8.2	12.3	18.0	16.6	10.8	8.4	7.2	6.4
24.....	6.7	6.8	6.6	6.8	8.2	12.3	18.2	16.4	10.5	8.0	6.8	6.6
25.....	6.6	6.6	6.4	6.8	8.3	12.8	18.2	16.2	10.8	8.4	7.3	6.4
26.....	6.6	6.6	6.5	6.8	8.2	13.4	18.2	16.4	11.1	8.6	6.8	6.1
27.....	6.6	6.7	6.4	6.7	8.2	13.4	18.3	16.0	10.8	8.8	6.8	6.0
28.....	6.7	6.7	6.4	6.8	8.1	13.4	18.3	15.8	11.0	8.5	6.6	6.4
29.....	6.7	6.8	6.4	6.7	-----	13.4	18.3	15.6	11.0	8.6	6.8	6.4
30.....	6.8	6.8	6.6	6.7	-----	13.4	18.3	15.1	10.3	8.3	6.6	6.4
31.....	6.7	-----	6.6	6.8	-----	13.3	-----	15.1	-----	8.2	6.4	-----
Month	Maximum		Minimum		Mean		Run-off in		acre-feet			
October.....	7.2		6.3		6.69		411					
November.....	7.0		6.4		6.70		399					
December.....	8.0		6.4		6.81		419					
January.....	7.7		5.9		6.57		404					
February.....	8.8		7.8		8.21		466					
March.....	15.1		7.8		11.1		682					
April.....	18.3		13.0		16.9		1,010					
May.....	18.4		15.1		17.1		1,050					
June.....	14.8		10.3		12.1		720					
July.....	10.3		8.0		9.27		570					
August.....	8.2		6.4		7.36		453					
September.....	7.2		6.0		6.49		386					
The year.....	18.4		5.9		9.62		6,980					

SANTIAGO CREEK NEAR VILLA PARK, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 13, T. 4 S., R. 9 W., five-eighths mile below Serrano and Carpenter water companies' diversion dam and $1\frac{1}{4}$ miles northeast of Villa Park.

RECORDS AVAILABLE.—June, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 34 second-feet December 12 (gage height, 0.64 foot); no flow most of the year.

1920-1929: Maximum discharge, about 11,000 second-feet February 16, 1927 (gage height, 8.4 feet); no flow several months each year.

REMARKS.—Records good except those for estimated periods, which are fair. Serrano & Carpenter Canal diverts above gage. See canal record, page 60. The Irvine Co. also diverts above the gage at times.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1-----	0	0	0	1.7	0	0	16-----	* 1.0	0	0	0	0	0
2-----	0	0	0	4.7	0	0	17-----	0	0	0	0	0	0
3-----	0	* 4.0	0	4.1	0	0	18-----	0	0	0	* 1.0	0	0
4-----	0	3.2	0	2.0	0	6	19-----	0	0	0	* .9	0	0
5-----	0	1.3	0	0	0	2.0	20-----	0	0	5.5	0	0	0
6-----	0	0	0	0	0	* 1.0	21-----	0	0	* 2.5	0	0	0
7-----	0	0	0	0	0	0	22-----	0	0	* 1.8	0	0	0
8-----	0	0	0	0	0	0	23-----	0	0	* .5	0	0	0
9-----	0	0	0	0	0	0	24-----	0	0	0	0	0	0
10-----	0	* .8	0	0	10	0	25-----	0	0	0	0	0	0
11-----	0	2.9	0	0	3.5	0	26-----	0	0	0	0	0	0
12-----	* 1.6	3.8	0	0	* 1.8	0	27-----	0	0	0	0	0	0
13-----	* .7	7.	0	0	* .8	0	28-----	0	0	0	0	0	0
14-----	* 1.6	3.8	0	0	0	0	29-----	0	0	0	-----	0	0
15-----	* 2.8	2.6	0	0	0	0	30-----	0	0	0	-----	0	0
							31-----	-----	0	0	-----	0	-----
Month							Maximum	Minimum	Mean	Run-off in acre-feet			
November-----							2.8	0	0.26	15.5			
December-----							4.0	0	.95	58.4			
January-----							5.5	0	.53	20.5			
February-----							4.7	0	.51	23.3			
March-----							10	0	.52	32.0			
April-----							6	0	.30	17.9			
The year-----							10	0	.24	172			

* Estimated.

NOTE.—No flow during months for which no discharge is given.

Daily and monthly discharge, in second-feet, of Santiago Creek and Serrano & Carpenter Canal near Villa Park, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.6	2.6	2.3	2.1	2.7	1.8	1.8	7.1	6.1	7.9	6.1	3.1
2.....	2.6	2.6	2.4	2.1	4.7	1.8	1.8	8.6	6.1	7.6	5.8	3.2
3.....	2.5	2.5	4.2	2.1	4.1	1.8	1.8	9.1	6.1	7.6	5.8	3.8
4.....	2.4	2.5	4.0	2.1	3.0	1.8	6.4	9.3	6.1	7.9	5.6	3.6
5.....	2.3	2.4	3.7	2.1	1.9	1.8	2.0	9.3	6.1	7.9	5.6	3.9
6.....	2.4	2.4	2.2	2.1	2.0	1.8	1.8	9.3	6.1	7.6	5.4	4.0
7.....	2.5	2.4	2.2	2.1	2.0	1.8	1.8	9.3	6.1	7.6	5.4	3.9
8.....	2.6	2.4	2.2	2.0	1.9	1.8	1.8	9.3	6.1	7.9	5.2	3.8
9.....	2.8	2.4	2.2	1.9	1.9	1.9	1.8	9.3	5.6	7.6	5.2	3.9
10.....	2.8	2.4	2.4	1.9	1.9	10.6	1.8	9.3	5.4	7.6	5.2	3.9
11.....	2.9	2.4	2.9	1.9	1.9	3.5	1.8	9.3	5.4	7.1	5.2	3.8
12.....	2.9	2.8	3.8	1.9	1.9	1.8	1.8	8.8	5.0	7.1	5.2	3.6
13.....	2.9	1.9	7.0	2.0	1.9	1.8	1.8	9.1	4.8	6.9	5.0	3.2
14.....	2.9	2.7	3.8	2.0	1.9	1.8	1.9	8.8	4.8	6.7	4.8	3.2
15.....	2.9	2.8	4.1	2.0	1.9	1.8	1.9	8.6	4.8	6.7	4.6	3.1
16.....	2.9	2.8	2.5	2.1	1.9	1.8	1.9	8.6	5.0	6.7	4.5	3.0
17.....	2.9	2.6	2.5	2.0	2.0	1.8	2.0	8.3	4.8	6.7	4.4	2.8
18.....	2.9	2.3	2.5	1.9	2.0	1.8	2.0	8.1	4.8	6.7	4.4	3.3
19.....	2.9	2.2	2.3	2.0	2.0	1.8	2.1	7.9	4.6	6.7	4.4	3.1
20.....	2.9	2.2	2.3	6.4	1.9	1.8	2.1	8.1	5.2	6.5	4.2	3.1
21.....	2.9	2.2	2.8	2.5	1.9	1.8	2.1	7.9	7.6	6.3	3.9	3.1
22.....	2.8	2.4	2.3	1.8	1.9	1.8	2.1	7.4	7.6	6.3	3.9	3.2
23.....	2.5	2.5	2.3	1.5	1.9	1.9	2.1	7.1	7.6	6.3	3.9	3.2
24.....	2.5	2.5	2.2	1.6	1.9	1.8	2.2	6.9	7.9	6.3	3.8	3.1
25.....	2.5	2.5	2.2	1.7	1.9	1.8	2.3	7.1	7.9	6.1	3.8	3.1
26.....	2.6	2.5	2.2	1.7	1.9	1.8	2.3	7.1	7.6	6.1	3.8	3.1
27.....	2.8	2.4	2.1	1.8	1.9	1.8	2.4	6.9	7.9	6.1	3.6	3.0
28.....	2.8	2.4	2.1	1.8	1.8	1.8	2.4	6.9	8.1	6.1	3.4	2.9
29.....	2.6	2.3	2.1	1.9	-----	1.8	4.2	6.9	7.9	6.1	3.4	2.9
30.....	2.5	2.3	2.1	1.9	-----	1.8	6.5	6.9	7.9	6.1	3.3	2.6
31.....	2.6	-----	2.1	1.8	-----	1.8	-----	6.7	-----	6.1	3.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.9	2.3	2.70	166
November.....	2.8	1.9	2.44	145
December.....	7.0	2.1	2.76	170
January.....	6.4	1.5	2.09	129
February.....	4.7	1.8	2.16	120
March.....	10.6	1.8	2.15	132
April.....	6.5	1.8	2.36	140
May.....	9.3	6.7	8.17	502
June.....	8.1	4.6	6.23	371
July.....	7.9	6.1	6.87	422
August.....	6.1	3.2	4.58	282
September.....	4.0	2.6	3.30	186
The year.....	10.6	1.5	3.83	2 730

SANTIAGO CREEK AT SANTA ANA, CALIF.

LOCATION.—Water-stage recorder in the Santiago de Santa Ana grant at the end of Baker Street in Santa Ana, Orange County.

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—No flow during period of record.

REMARKS.—During most of the year the entire flow of creek is diverted above Villa Park. Waste water from Santa Ana Valley Irrigation District's canal enters above the station.

The only flow past the station during the year was a small amount of waste water from irrigation ditches. This occurred during three or four short periods.

SERRANO & CARPENTER CANAL NEAR VILLA PARK, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 13, T. 4 S., R. 9 W., at division box half a mile above mouth of Santiago Creek Canyon and $2\frac{1}{4}$ miles north-east of Villa Park.

RECORDS AVAILABLE.—August, 1920, to September, 1929.

EXTREMES.—1920-1929: Maximum mean daily discharge, 16.8 second-feet May 20, 1922; no water is diverted at times.

REMARKS.—Records good. This canal diverts from Santiago Creek at a submerged dam at Point of Rocks. At the division box the flow is divided between the John T. Carpenter and Serrano Water Companies and is carried through concrete pipe lines to orchard lands on the north and south sides of Santiago Creek. During periods of shortage both companies augment their supply by pumping.

Daily and monthly discharge, in second-feet, 1928-29.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.6	2.6	2.3	2.1	1.0	1.8	1.8	7.1	6.1	7.9	6.1	3.1
2.....	2.6	2.6	2.4	2.1	0	1.8	1.8	8.6	6.1	7.6	5.8	3.2
3.....	2.5	2.5	.2	2.1	0	1.8	1.8	9.1	6.1	7.6	5.8	3.3
4.....	2.4	2.5	.8	2.1	1.0	1.8	.4	9.3	6.1	7.9	5.6	3.6
5.....	2.3	2.4	2.4	2.1	1.9	1.8	0	9.3	6.1	7.9	5.6	3.9
6.....	2.4	2.4	2.2	2.1	2.0	1.8	.8	9.3	6.1	7.6	5.4	4.0
7.....	2.5	2.4	2.2	2.1	2.0	1.8	1.8	9.3	6.1	7.6	5.4	3.9
8.....	2.6	2.4	2.2	2.0	1.9	1.8	1.8	9.3	6.1	7.9	5.2	3.8
9.....	2.8	2.4	2.2	1.9	1.9	1.9	1.8	9.3	5.6	7.6	5.2	3.9
10.....	2.8	2.4	1.6	1.9	1.9	.6	1.8	9.3	5.4	7.6	5.2	3.9
11.....	2.9	2.4	0	1.9	1.9	0	1.8	9.3	5.4	7.1	5.2	3.8
12.....	2.9	1.2	0	1.9	1.9	0	1.8	8.8	5.0	7.1	5.2	3.6
13.....	2.9	1.2	0	2.0	1.9	1.0	1.8	9.1	4.8	6.9	5.0	3.2
14.....	2.9	1.1	0	2.0	1.9	1.8	1.9	8.8	4.8	6.7	4.8	3.2
15.....	2.9	0	1.5	2.0	1.9	1.8	1.9	8.6	4.8	6.7	4.6	3.1
16.....	2.9	1.8	2.5	2.1	1.9	1.8	1.9	8.6	5.0	6.7	4.5	3.0
17.....	2.9	2.6	2.5	2.0	2.0	1.8	2.0	8.3	4.8	6.7	4.4	2.8
18.....	2.9	2.3	2.5	1.9	1.0	1.8	2.0	8.1	4.8	6.7	4.4	3.3
19.....	2.9	2.2	2.3	2.0	1.1	1.8	2.1	7.9	4.6	6.7	4.4	3.1
20.....	2.9	2.2	2.3	.9	1.9	1.8	2.1	8.1	5.2	6.5	4.2	3.1
21.....	2.9	2.2	2.3	0	1.9	1.8	2.1	7.9	7.6	6.3	3.9	3.1
22.....	2.8	2.4	2.3	0	1.9	1.8	2.1	7.4	7.6	6.3	3.9	3.2
23.....	2.5	2.5	2.3	1.0	1.9	1.9	2.1	7.1	7.6	6.3	3.9	3.2
24.....	2.5	2.5	2.2	1.6	1.9	1.8	2.2	6.9	7.9	6.3	3.8	3.1
25.....	2.5	2.5	2.2	1.7	1.9	1.8	2.3	7.1	7.9	6.1	3.8	3.1
26.....	2.6	2.5	2.2	1.7	1.9	1.8	2.3	7.1	7.6	6.1	3.8	3.1
27.....	2.8	2.4	2.1	1.8	1.9	1.8	2.4	6.9	7.9	6.1	3.6	3.0
28.....	2.8	2.4	2.1	1.8	1.8	1.8	2.4	6.9	8.1	6.1	3.4	2.9
29.....	2.6	2.3	2.1	1.9	-----	1.8	4.2	6.9	7.9	6.1	3.4	2.9
30.....	2.5	2.3	2.1	1.9	-----	1.8	6.5	6.9	7.9	6.1	3.3	2.6
31.....	2.6	-----	2.1	1.8	-----	1.8	-----	6.7	-----	6.1	3.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.9	2.3	2.70	166
November.....	2.6	0	2.19	130
December.....	2.5	0	1.81	111
January.....	2.1	0	1.75	108
February.....	2.0	0	1.65	91.6
March.....	1.9	0	1.63	100
April.....	6.5	0	2.06	123
May.....	9.3	6.7	8.17	502
June.....	8.1	4.6	6.23	371
July.....	7.9	6.1	6.87	422
August.....	6.1	3.2	4.58	282
September.....	4.0	2.6	3.30	196
The year.....	9.3	0	3.59	2,600

* Estimated.

SAN GABRIEL RIVER BASIN

SAN GABRIEL RIVER NEAR AZUSA, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 23, T. 1 N., R. 10 W., half a 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, 1929.

EXTREMES.—Maximum discharge during year, 895 second-feet March 10 (gage height, 4.30 feet); no flow October 1 to February 1, March 3–8, and May 16 to September 30.

1894–1929: Maximum discharge, 40,000 second-feet January 18, 1916 (gage height, 12.0 feet); stream dry for several months each year.

REMARKS.—Records good. Power canal of Southern California Edison Co. diverts about 5 miles above station. For canal record see p. 63. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928–29

Day	Feb.	Mar.	Apr.	May	Day	Feb.	Mar.	Apr.	May
1.....	0	0.2	* 1.0	12	16.....	1.0	48	55	0
2.....	35	.3	* 1.0	9.5	17.....	.8	39	50	0
3.....	52	.2	* 1.0	9.5	18.....	33	31	50	0
4.....	24	0	157	9.5	19.....	15	27	52	0
5.....	13	0	411	7.5	20.....	2.8	19	48	0
6.....	6	0	220	7.5	21.....	1.2	12	42	0
7.....	6	0	159	6	22.....	.7	12	38	0
8.....	3.0	0	127	3.4	23.....	.6	13	32	0
9.....	2.1	.1	107	2.1	24.....	.6	11	29	0
10.....	* 1.5	302	92	1.5	25.....	.5	8	25	0
11.....	* 1.0	288	85	.8	26.....	.5	5.5	22	0
12.....	* 1.0	144	74	.6	27.....	.4	* 2.0	22	0
13.....	* 0.8	98	71	.4	28.....	.3	* 1.5	19	0
14.....	22	72	63	.3	29.....		* 1.0	15	0
15.....	3.4	58	60	.2	30.....		* 1.0	13	0
					31.....		* 1.0		0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February.....	52	0	8.15	453
March.....	302	0	38.5	2,370
April.....	411	1.0	71.4	4,250
May.....	12	0	2.28	140
The year.....	411	0	9.96	7,210

* Estimated.

NOTE.—No flow during months for which no discharge is given.

Daily and monthly discharge, in second-feet, of San Gabriel River and Southern California Edison Co.'s canal near Azusa, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.-----	10.3	15.0	21	30	73	58	78	93	49	23	14.2	9.1
2.-----	10.3	15.0	21	29	114	57	75	99	51	22	14.2	9.5
3.-----	10.3	15.5	47	29	132	54	75	99	46	23	13.4	10.4
4.-----	11.6	15.9	63	29	104	53	238	90	44	19.6	13.0	10.7
5.-----	11.8		42	29	92	58	492	88	46	20	12.8	11.0
6.-----	11.4	15.5	34	28	84	53	301	88	46	19.6	12.2	13.9
7.-----	11.0	16.1	31	28	85	53	240	87	48	20	12.4	14.2
8.-----	10.8	15.9	31	29	76	56	206	88	47	21	13.0	14.6
9.-----	10.6	15.4	28	28	71	54	186	81	45	17.4	12.0	13.4
10.-----	10.6	15.4	27	27	68	379	178	82	45	20	11.8	12.0
11.-----	11.2	15.6	41	28	63	369	166	79	42	21	11.6	12.2
12.-----	27	15.4	35	27	61	225	155	74	41	18.7	12.4	11.4
13.-----	20	22	70	27	58	179	152	71	38	18.4	11.6	11.6
14.-----	17.0	34	62	27	77	153	144	70	37	17.8	11.6	11.2
15.-----	16.2	32	53	27	58	139	141	70	36	17.1	11.0	10.4
16.-----	15.4	25	44	50	54	129	136	67	40	14.6	11.0	9.5
17.-----	14.6	23	40	39	54	120	131	66	42	16.6	11.2	9.5
18.-----	14.2	22	38	35	101	112	131	65	40	16.6	10.8	12.7
19.-----	13.9	21	36	38	91	108	133	63	34	15.9	11.0	14.2
20.-----	13.9	17.4	35	71	72	169	129	64	34	15.9	10.8	12.8
21.-----	14.6	18.5	34	75	69	93	123	62	31	15.4	10.6	12.0
22.-----	14.2	19.0	33	62	67	93	119	64	30	14.6	10.6	13.0
23.-----	14.6	19.4	32	54	66	94	113	61	29	14.6	10.6	13.7
24.-----	14.6	19.8	31	50	64	92	110	59	30	15.0	10.8	13.5
25.-----	14.6	19.8	31	45	62	89	106	58	28	15.2	10.8	12.8
26.-----	14.6	19.8	31	44	60	86	103	57	27	14.8	10.6	13.3
27.-----	13.2	19.8	31	43	53	83	103	60	27	15.9	10.4	13.3
28.-----	15.5	19.8	30	42	58	80	100	56	27	16.1	9.9	13.0
29.-----	15.5	20	30	41	-----	79	96	53	24	15.9	10.1	12.0
30.-----	15.0	21	30	42	-----	79	94	51	25	16.6	9.2	12.0
31.-----	15.0	-----	30	42	-----	78	-----	52	-----	15.6	9.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	27	10.3	14.0	861
November.....	34	15.0	19.3	1,150
December.....	70	21	35.8	2,260
January.....	75	27	38.5	2,370
February.....	132	54	74.7	4,159
March.....	379	53	111	6,820
April.....	492	75	152	9,040
May.....	93	51	70.8	4,380
June.....	51	24	37.6	2,240
July.....	23	14.6	17.7	1,090
August.....	14.2	9.2	11.4	701
September.....	14.6	9.1	12.1	720
The year.....	492	9.1	49.4	35,800

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REMARKS.—This canal diverts from San Gabriel River in SE. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 31, T. 2 N., R. 9 W., 5 miles above gaging station on San Gabriel River. The 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. Record furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10.3	15.0	21	30	73	58	77	81	49	23	14.2	9.1
2	10.3	15.0	21	29	79	57	74	81	51	22	14.2	9.5
3	10.3	15.5	47	29	80	54	74	81	46	23	13.4	10.0
4	11.6	15.9	63	29	80	53	81	81	44	19.6	13.0	11.0
5	11.8	15.2	42	29	79	53	81	81	46	20	12.8	10.7
6	11.4	15.5	34	28	78	53	81	81	46	19.6	12.2	13.9
7	11.0	16.1	31	28	79	53	81	81	48	20	12.4	14.2
8	10.8	15.9	31	29	73	56	81	80	47	21	12.0	14.6
9	10.6	15.4	28	28	69	54	81	79	45	17.4	12.0	13.4
10	10.6	15.4	27	27	66	77	81	80	45	20	11.8	12.0
11	11.2	15.6	41	28	62	81	81	78	42	21	11.6	12.2
12	27	15.4	35	27	60	81	81	73	41	18.7	12.4	11.4
13	20	22	79	27	57	81	81	71	38	19.4	11.6	11.6
14	17.0	34	62	27	55	81	81	70	37	17.8	11.6	11.2
15	16.2	32	53	27	55	81	81	70	36	17.1	11.0	10.4
16	15.4	25	44	50	53	81	81	67	40	14.6	11.0	9.5
17	14.6	23	40	89	53	81	81	66	42	16.6	11.2	9.5
18	14.2	22	38	35	68	81	81	65	40	16.6	10.8	12.7
19	13.9	21	36	38	76	81	81	63	34	15.9	11.0	14.2
20	13.9	17.4	35	71	69	81	81	64	34	15.9	10.8	12.8
21	14.6	13.5	34	75	68	81	81	62	31	15.4	10.6	12.0
22	14.2	18.0	33	62	66	81	81	64	30	14.6	10.6	13.0
23	14.6	19.4	42	54	65	81	81	61	29	14.6	10.6	12.7
24	14.6	19.8	31	50	64	81	81	59	30	15.0	10.8	13.5
25	14.6	19.8	31	45	61	81	81	58	28	15.2	10.8	12.8
26	14.6	19.8	31	44	59	81	81	57	27	14.8	10.6	13.3
27	15.2	19.8	31	43	58	81	81	60	27	15.9	10.4	13.8
28	15.5	19.8	30	42	58	79	81	56	27	16.1	9.9	13.0
29	15.5	20	30	41	-----	78	81	53	24	15.9	10.1	12.0
30	15.0	21	30	42	-----	73	81	51	25	16.6	9.2	12.0
31	15.0	-----	30	42	-----	77	-----	52	-----	15.6	9.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	27	10.3	14.0	861
November.....	34	15.0	19.3	1,180
December.....	70	21	36.8	2,200
January.....	75	27	38.5	2,370
February.....	80	53	66.5	3,600
March.....	81	53	72.8	4,480
April.....	81	74	80.4	4,780
May.....	81	51	68.6	4,220
June.....	51	24	37.6	2,240
July.....	23	14.6	17.7	1,090
August.....	14.2	9.2	11.4	701
September.....	14.6	9.1	12.1	720
The year.....	81	9.1	39.5	28,600

ROGERS CREEK NEAR AZUSA, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 23, T. 1 N., R. 10 W., half a mile above mouth of creek and $2\frac{1}{2}$ miles north of Azusa.

DRAINAGE AREA.—6.4 square miles.

RECORDS AVAILABLE.—October, 1917, to September, 1929. (Discharge measurements only, May, 1916, to June, 1917.)

EXTREMES.—Maximum discharge during year, 62 second-feet March 10 (gage height, 4.30 feet); no flow for most of year.

1917-1929: Maximum discharge, about 2,600 second-feet April 7, 1926; stream dry several months each year.

REMARKS.—Records good except those for estimated periods, which are fair. Two small diversions above station diverted all the water at times. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
1.....	0	0	*0.1	0.9	0.5	*0.1	0.8
2.....	0	0	*.1	6.5	.2	*.1	.7
3.....	0	3.9	*.1	3.1	*.1	*.1	.6
4.....	0	1.4	*.1	3.1	*.1	11	.3
5.....	0	.7	*.1	2.0	*.1	13	.3
6.....	0	*.5	*.1	1.8	*.1	6.5	.3
7.....	0	*.4	*.1	1.7	*.1	4.7	.3
8.....	0	*.3	*.1	1.3	*.1	3.9	.2
9.....	0	*.2	*.1	1.0	*.1	3.5	.2
10.....	0	.7	*.1	1.0	31	2.7	.3
11.....	0	1.6	*.1	*.8	9	2.3	.2
12.....	0	.7	*.1	*.7	5.5	2.1	.1
13.....	0	4.9	0	*.6	3.9	2.0	.1
14.....	2.0	.8	0	*.6	3.1	1.7	.1
15.....	.4	.4	0	*.5	2.3	1.4	0
16.....	*.1	.3	1.7	.4	2.1	1.6	0
17.....	*.1	.2	.7	.3	2.0	1.6	0
18.....	0	.2	.5	2.3	1.7	1.3	0
19.....	0	.2	.5	2.1	1.4	1.6	0
20.....	0	.2	3.5	1.3	1.2	1.4	0
21.....	0	*.2	3.9	.9	1.2	1.3	0
22.....	0	*.2	2.9	.8	1.2	1.1	0
23.....	0	*.2	1.7	.7	1.1	1.0	0
24.....	0	*.2	1.1	.6	1.1	1.0	0
25.....	0	*.2	.8	.6	.9	1.0	0
26.....	0	*.2	.6	.6	.8	.9	0
27.....	.1	*.2	.5	.6	.7	.9	0
28.....	.1	*.2	.4	.5	.6	.9	0
29.....	.1	*.2	.4	-----	.6	.9	0
30.....	0	*.2	.3	-----	.5	.8	0
31.....	-----	*.2	.3	-----	.2	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	2.0	0	0.1	6.0
December.....	4.9	0	.64	39.4
January.....	3.9	0	.68	41.8
February.....	6.5	.3	1.33	73.0
March.....	31	.1	2.37	146
April.....	13	.1	2.41	143
May.....	.8	0	.15	9.2
The year.....	13	0	.63	459

* Estimated.

NOTE.—No flow during months for which no discharge is given.

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-fourths of a mile above mouth of canyon and 4 miles northeast of Duarte.

DRAINAGE AREA.—6.5 square miles.

RECORDS AVAILABLE.—July to September, 1916; July, 1917, to September, 1929.

EXTREMES.—Maximum discharge during year, 71 second-feet March 10 (gage height, 3.72 feet); stream practically dry during periods in July, August, and September.

1916-1929: Maximum discharge, about 2,180 second-feet April 4, 1925 (gage height, 8.0 feet); no flow during periods in 1919, 1920, 1921, 1924, and 1929.

REMARKS.—Records good. No diversions or regulation above station. Los Angeles County Flood Control District furnished results of some discharge measurements.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.1	0.3	0.4	0.8	3.3	1.3	1.4	1.6	0.6	0.2	0.1	0
2.....	.1	.3	.5	.8	15	1.3	1.3	1.4	.6	.2	.1	0
3.....	.1	.3	.7	.8	8	1.3	2.0	1.3	.6	.1	.1	0
4.....	.1	.3	2.4	.8	5.5	1.2	25	1.3	.6	.1	0	0
5.....	.2	.3	1.4	.8	4.3	1.2	16	1.3	.6	.1	0	0
6.....	.2	.3	1.1	.7	3.7	1.2	9.5	1.3	.6	.1	0	.1
7.....	.2	.3	.9	.7	3.4	1.2	7.5	1.3	.6	.1	0	.1
8.....	.2	.3	.9	.7	2.9	1.2	6.5	1.3	.6	.1	0	.1
9.....	.2	.3	.8	.7	2.5	1.9	5.5	1.2	.6	.1	0	.1
10.....	.2	.3	1.5	.7	2.3	41	5.0	1.1	.6	.2	0	.1
11.....	.2	.3	3.0	.7	2.0	13	3.8	1.1	.5	.2	0	.1
12.....	.7	.3	2.2	.8	2.0	8	3.5	1.0	.5	.1	0	0
13.....	.5	.7	11	.8	1.8	6.5	3.1	1.0	.5	.1	0	0
14.....	.5	1.6	3.6	.8	1.7	4.8	2.7	1.0	.5	.1	0	0
15.....	.4	.8	2.4	.8	1.6	4.2	2.4	1.0	.5	1	0	0
16.....	.3	.5	1.6	3.1	1.6	3.8	2.5	1.0	.8	.1	0	0
17.....	.3	.5	1.3	1.5	1.6	3.3	2.6	1.0	.7	.1	0	0
18.....	.3	.5	1.2	1.1	4.3	3.2	2.7	1.0	.6	0	0	.1
19.....	.3	.5	1.1	2.2	4.1	3.0	3.1	1.0	.4	0	0	.1
20.....	.3	.4	1.0	4.3	3.0	2.7	2.8	.9	.3	0	0	.1
21.....	.3	.4	1.0	7	2.5	2.6	2.7	.8	.3	0	0	.1
22.....	.3	.4	1.0	4.5	2.3	2.6	2.6	.8	.3	0	0	.1
23.....	.2	.4	.9	3.4	2.0	2.5	2.4	.8	.3	0	0	.1
24.....	.2	.4	.9	2.6	1.8	2.3	2.2	.8	.3	0	0	.2
25.....	.2	.4	.9	2.2	1.6	2.1	2.0	.7	.3	0	0	.2
26.....	.2	.5	.9	1.8	1.5	1.8	2.0	.8	.3	0	0	.2
27.....	.2	.5	.9	1.7	1.5	1.6	2.0	.7	.3	0	0	.2
28.....	.2	.5	.9	1.6	1.4	1.6	1.8	.7	.2	0	0	.2
29.....	.2	.4	.9	1.6	-----	1.5	1.6	.6	.2	0	0	.2
30.....	.3	.4	.9	1.5	-----	1.4	1.6	.6	.2	.1	0	.1
31.....	.3	-----	.9	1.3	-----	1.4	-----	.6	-----	.1	0	-----
Month												
	Maximum			Minimum			Mean			Run-off in acre-feet		
October.....	0.7			0.1			0.26			16.0		
November.....	1.6			.3			.45			26.8		
December.....	11			.4			1.79			110		
January.....	7			.7			1.70			105		
February.....	15			1.4			3.19			177		
March.....	41			1.2			4.09			251		
April.....	25			1.3			4.33			258		
May.....	1.6			.6			1.00			61.5		
June.....	.6			.2			.47			28.0		
July.....	.2			0			.07			4.3		
August.....	.1			0			.01			.6		
September.....	.2			0			.08			4.8		
The year.....	41			0			1.44			1,040		

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 mile below junction of two main branches and 2 miles north of Monrovia.

DRAINAGE AREA.—5.3 square miles at old location three-eighths mile upstream.

RECORDS AVAILABLE.—November, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 8 second-feet March 10 (gage height, 1.27 feet); stream dry at gage for several months.

1916-1929: Maximum discharge, about 2,000 second-feet April 7, 1926, estimated from flow of Rogers Creek; stream dry several months each year.

REMARKS.—Records good. Regulation at flood control dam above gage and diversions by city of Monrovia. See record for Monrovia pipe line (p. 68). Los Angeles County Flood Control District furnished results of some discharge measurements.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.
1	* 0.6	0	0	0.1	0.1	0.1	0	0	0	0.3	0
2	* 0.6	0	0	.1	.1	.1	0	0	0	.3	0
3	* .4	0	.2	.1	.1	.1	0	0	0	.3	0
4	* .4	0	0	.1	.2	.1	.5	0	0	.3	0
5	* .3	0	0	.1	.3	.1	.6	0	0	.3	0
6	* .1	0	0	.1	.2	.1	.5	0	0	.3	0
7	0	0	0	.1	.2	.1	.3	0	0	.3	0
8	0	0	0	.1	.2	.1	.2	0	0	.2	0
9	0	0	0	.1	.1	.1	.2	0	0	.2	0
10	0	0	.1	.1	.1	2.6	.1	0	0	* .2	0
11	0	0	.3	.1	.1	1.0	.1	0	0	* .1	0
12	0	0	.2	.1	.1	.6	.1	0	.1	* .1	0
13	0	0	.4	.1	.1	.2	.1	0	.2	* .1	0
14	0	* .2	.4	.1	.1	* .2	.1	0	.2	* .1	0
15	0	0	.4	.1	.1	* .1	.1	0	.2	* .1	0
16	0	0	.3	.1	.1	.1	.1	0	.3	0	0
17	0	* .1	.2	.1	.1	.1	.1	0	.3	0	0
18	0	0	.2	.1	.1	.1	.1	0	.3	0	* .4
19	0	0	.1	.1	.1	.1	.1	0	.3	0	* .4
20	0	0	.1	.1	.1	.1	.1	0	.3	0	* .4
21	0	0	.1	.3	.1	.1	.1	.3	.3	0	* .4
22	0	0	.1	.4	.1	.1	.1	.2	.3	0	* .5
23	0	0	.1	.1	.1	0	0	.3	.3	0	* .5
24	0	0	.1	.1	.1	0	0	.3	.3	0	* .5
25	0	0	.1	.1	.1	0	0	.3	.3	0	* .5
26	0	0	.1	.1	.1	0	0	.3	.2	0	* .4
27	0	0	.1	.1	.1	0	0	.1	.2	0	* .4
28	0	0	.1	.1	.1	0	0	0	.2	0	* .3
29	0	0	.1	.1	.1	0	0	0	.2	0	* .3
30	0	0	.1	.1	.1	0	0	0	.2	0	* .3
31	0	0	.1	.1	.1	0	0	0	.3	0	
Month	Maximum					Minimum		Mean		Run-off in acre-feet	
October	0.6					0		0.08		4.9	
November	.2					0		.01		.6	
December	.4					0		.13		8.0	
January	.4					.1		.12		7.4	
February	.3					.1		.12		6.7	
March	2.6					0		.20		12.3	
April	.6					0		.12		7.1	
June	.3					0		.06		3.6	
July	.3					0		.16		9.8	
August	.3					0		.10		6.1	
September	.5					0		.18		10.7	
The year	2.6					0		.11		77.2	

* Estimated.

NOTE.—No flow during May.

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Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	.8	.8	1.0	1.2	1.2	1.2	1.3	1.1	.8	.7	.6
2	1.4	.8	.8	1.0	1.2	1.2	1.3	1.3	1.1	.8	.7	.6
3	1.2	.8	1.4	1.0	1.3	1.2	1.7	1.3	1.0	.8	.7	.6
4	1.2	.8	1.1	1.0	1.9	1.2	2.2	1.2	.9	.8	.7	.6
5	1.1	.8	.9	1.0	1.8	1.2	3.0	1.1	.9	.8	.7	.6
6	.9	.8	.9	1.0	1.6	1.2	2.9	1.3	.9	.8	.7	.6
7	.8	.8	.9	1.0	1.5	1.2	2.4	1.3	.9	.8	.7	.6
8	.8	.8	.9	1.0	1.5	1.2	2.1	1.3	.9	.6	.6	.6
9	.8	.8	.8	1.0	1.4	1.2	2.1	1.3	.9	.6	.6	.6
10	.8	.8	1.3	1.0	1.2	3.0	1.8	1.1	.9	.6	.6	.6
11	.8	.8	1.6	1.0	1.2	3.1	1.8	1.1	.9	.6	.5	.6
12	.8	.8	1.5	1.0	1.2	2.6	1.8	1.1	.9	.7	.5	.6
13	.9	.9	1.7	1.0	1.2	2.1	1.8	1.1	.9	.8	.5	.6
14	.9	1.0	1.7	1.0	1.2	1.9	1.8	1.1	.9	.8	.5	.6
15	.9	.9	1.7	1.0	1.2	1.8	1.8	1.1	.9	.8	.5	.6
16	.8	.8	1.6	1.3	1.2	1.6	1.8	1.1	1.1	.8	.4	.6
17	.8	.9	1.3	1.2	1.2	1.6	1.8	1.1	1.1	.8	.4	.6
18	.8	.8	1.3	1.2	1.4	1.6	1.8	1.1	.8	.8	.6	1.0
19	.8	.8	1.2	1.3	1.5	1.6	1.8	1.1	.8	.8	.6	1.0
20	.8	.8	1.2	1.4	1.2	1.6	1.8	1.1	.8	.8	.6	1.0
21	.8	.8	1.2	2.0	1.2	1.5	1.8	1.1	1.1	.8	.6	1.0
22	.8	.8	1.2	1.9	1.2	1.4	1.7	1.1	1.0	.8	.6	1.1
23	.8	.8	1.2	1.5	1.3	1.5	1.5	1.1	1.1	.8	.6	1.1
24	.8	.8	1.2	1.4	1.3	1.5	1.5	1.1	1.1	.8	.6	1.1
25	.8	.8	1.2	1.3	1.2	1.5	1.5	1.1	1.1	.8	.6	1.1
26	.8	.8	1.2	1.2	1.2	1.2	1.5	.9	1.1	.7	.6	1.0
27	.8	.8	1.2	1.3	1.2	1.2	1.5	1.1	.9	.7	.6	1.0
28	.8	.8	1.2	1.2	1.2	1.2	1.5	1.1	.8	.6	.6	.9
29	.8	.8	1.0	1.2	1.2	1.2	1.5	1.1	.8	.6	.6	.9
30	.8	.8	1.0	1.2	1.2	1.2	1.5	1.1	.8	.6	.6	.9
31	.8		1.0	1.2		1.2		1.1		.7	.6	.9

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1.4	0.8	0.89	54.7
November.....	1.0	.8	.82	48.8
December.....	1.7	.8	1.20	73.8
January.....	2.0	1.0	1.18	73.6
February.....	1.9	1.2	1.33	73.9
March.....	3.9	1.2	1.55	95.3
April.....	3.0	1.2	1.80	107
May.....	1.3	.9	1.14	70.1
June.....	1.1	.8	.95	56.5
July.....	.8	.6	.74	45.5
August.....	.7	.4	.59	36.3
September.....	1.1	.6	.78	46.4
The year.....	3.9	.4	1.08	781

SURFACE WATER SUPPLY, 1929, PART XI

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 $1\frac{1}{2}$ miles north of Monrovia.

RECORDS AVAILABLE.—May, 1916, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 2.4 second-feet April 5 and 6; minimum, 0.4 second-foot July 28 to August 17.

1916-1929: Maximum mean daily discharge, 6.1 second-feet May 9, 1922; no flow November 11, 1924, April 8 and 16, 1926, and February 16, 1927.

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

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.8	0.8	0.9	1.1	1.1	1.2	1.3	1.1	0.8	0.4	0.6
2	.8	.8	.8	.9	1.1	1.1	1.3	1.3	1.1	.8	.4	.6
3	.8	.8	1.2	.9	1.7	1.1	1.7	1.3	1.0	.8	.4	.6
4	.8	.8	1.1	.9	1.7	1.1	1.7	1.2	.9	.8	.4	.6
5	.8	.8	.9	.9	1.5	1.1	2.4	1.1	.9	.8	.4	.6
6	.8	.8	.9	.9	1.4	1.1	2.4	1.3	.9	.8	.4	.6
7	.8	.8	.9	.9	1.3	1.1	2.1	1.3	.9	.8	.4	.6
8	.8	.8	.9	.9	1.3	1.1	1.9	1.3	.9	.6	.4	.6
9	.8	.8	.8	.9	1.3	1.1	1.9	1.3	.9	.6	.4	.6
10	.8	.8	1.2	.9	1.1	1.3	1.7	1.1	.9	.6	.4	.6
11	.8	.8	1.3	.9	1.1	2.1	1.7	1.1	.9	.6	.4	.6
12	.8	.8	1.3	.9	1.1	2.0	1.7	1.1	.9	.6	.4	.6
13	.9	.9	1.3	.9	1.1	1.9	1.7	1.1	.9	.6	.4	.6
14	.9	.8	1.3	.9	1.1	1.7	1.7	1.1	.9	.6	.4	.6
15	.9	.9	1.3	.9	1.1	1.7	1.7	1.1	.9	.6	.4	.6
16	.8	.8	1.3	1.2	1.1	1.5	1.7	1.1	1.1	.5	.4	.6
17	.8	.8	1.1	1.1	1.1	1.5	1.7	1.1	1.1	.5	.4	.6
18	.8	.8	1.1	1.1	1.3	1.5	1.7	1.1	.8	.5	.6	.6
19	.8	.8	1.1	1.2	1.4	1.5	1.7	1.1	.8	.5	.6	.6
0	.8	.8	1.1	1.3	1.1	1.5	1.7	1.1	.8	.5	.6	.6
21	.8	.8	1.1	1.7	1.1	1.4	1.7	1.1	.8	.5	.6	.6
22	.8	.8	1.1	1.5	1.1	1.3	1.6	1.1	.8	.5	.6	.6
23	.8	.8	1.1	1.4	1.1	1.3	1.5	1.1	.8	.5	.6	.6
24	.8	.8	1.1	1.3	1.1	1.2	1.5	1.1	.8	.5	.6	.6
25	.8	.8	1.1	1.2	1.1	1.2	1.5	1.1	.8	.5	.6	.6
26	.8	.8	1.1	1.1	1.1	1.2	1.5	.9	.8	.5	.6	.6
27	.8	.8	1.1	1.1	1.1	1.2	1.5	1.1	.8	.5	.6	.6
28	.8	.8	1.1	1.1	1.1	1.2	1.5	1.1	.8	.4	.6	.6
29	.8	.8	.9	1.1	-----	1.2	1.5	1.1	.8	.4	.6	.6
30	.8	.8	.9	1.1	-----	1.2	1.5	1.1	.8	.4	.6	.6
31	.8	-----	.9	1.1	-----	1.2	-----	1.1	-----	.4	.6	-----
Month	Maximum		Minimum		Mean		Run-off in		acre-feet			
October	0.9	0.8	0.81	49.8								
November	.9	.8	.81	48.2								
December	1.3	.8	1.07	65.8								
January	1.7	.9	1.07	65.8								
February	1.7	1.1	1.21	67.2								
March	2.1	1.1	1.35	83.0								
April	2.4	1.2	1.69	101								
May	1.3	.9	1.14	70.1								
June	1.1	.8	.89	53.0								
July	.8	.4	.58	35.7								
August	.6	.4	.49	30.1								
September	.6	.6	.60	35.7								
The year	2.4	.4	.97	705								

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.

RECORDS AVAILABLE.—December, 1916, to September, 1929. (Discharge measurements only, April to September, 1916.)

REMARKS.—Records good. Flood-control dam regulates flow above gage. San Dimas Water Co. diverts just below gage for irrigation. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.1	0.7	2.4	0.3	0.5	0.6	3.0	2.4	2.3	0.1
2	.1	.1	.1	.7	5.5	.3	.5	.6	3.0	2.4	2.2	.1
3	.1	.2	.4	.8	2.4	.3	.6	.6	3.0	2.4	2.2	.1
4	.1	.1	.8	.8	.7	.3	1.3	.6	3.2	2.4	2.6	.1
5	.1	.1	.6	.7	.6	.3	1.2	.6	3.4	2.4	2.7	.1
6	.1	.1	.6	.7	.6	.3	1.0	.8	3.3	2.4	2.8	.1
7	.1	.1	.6	.8	.6	.3	.9	1.0	3.3	2.4	3.5	.1
8	.1	.1	.6	.8	.8	.3	.7	1.0	3.3	2.3	1.3	.1
9	.1	.1	.6	.9	1.4	.4	.7	1.4	3.3	2.9	.3	.1
10	.1	.1	.8	.8	1.5	2.1	.7	2.0	3.2	3.0	.2	.1
11	.2	.1	2.2	.8	1.5	1.2	.7	2.2	3.0	2.5	.2	.1
12	.8	.1	1.3	.9	1.5	.9	.7	2.1	2.6	2.3	.2	.1
13	.2	.2	3.8	.9	1.5	.8	.7	2.1	2.6	2.2	.2	0
14	.2	.3	2.1	.9	1.6	.7	.6	2.2	2.5	2.2	.2	0
15	.1	.2	1.5	.9	1.2	.5	.6	2.1	2.6	2.0	.1	0
16	.1	.2	1.2	2.3	.5	.6	.6	2.1	2.7	2.0	.1	0
17	.1	.2	1.0	1.6	.5	.5	.6	2.2	2.6	2.0	.1	0
18	.1	.2	1.0	1.4	.6	.5	.6	2.9	2.4	2.4	.1	.1
19	.1	.2	1.0	2.0	.5	.5	.6	3.4	2.4	3.2	.1	.1
20	.2	.2	.9	4.2	.4	.5	.6	3.0	2.4	2.8	.1	.1
21	.2	.2	.9	4.0	.4	.4	.6	2.4	2.4	2.0	.1	.1
22	.2	.2	.9	3.0	.4	.5	.6	2.4	2.5	2.0	.1	.1
23	.2	.2	.8	2.5	.4	.5	.6	2.4	2.5	2.3	.1	.1
24	.2	.2	.8	2.1	.4	.5	.6	2.7	2.7	2.4	.1	.1
25	.2	.1	.8	2.0	.4	.5	.6	3.1	2.7	2.4	0	.1
26	.2	.1	.8	1.8	.4	.5	.6	2.9	2.7	2.4	0	.1
27	.2	.1	.8	1.6	.4	.4	.6	2.3	2.5	2.4	0	.1
28	.2	.1	.8	1.6	.4	.4	.6	2.4	2.4	2.4	0	.1
29	.1	.1	.8	1.6	---	.5	.6	3.0	2.4	2.4	0	.1
30	.1	.1	.8	1.4	---	.6	.6	3.0	2.4	2.3	0	.1
31	.2	---	.7	1.4	---	.5	---	3.0	---	2.3	0	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.3	0.1	0.15	9.2
November.....	.3	.1	.15	8.9
December.....	3.8	.1	.97	59.6
January.....	4.2	.7	1.50	92.2
February.....	5.5	.4	1.05	58.3
March.....	2.1	.3	.55	33.8
April.....	1.3	.5	.68	40.5
May.....	3.4	.6	2.04	125
June.....	3.4	2.4	2.77	165
July.....	3.0	2.0	2.38	146
August.....	3.5	0	.71	43.7
September.....	.1	0	.08	4.8
The year.....	5.5	0	1.09	787

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 one-fourth mile above mouth and 2½ miles north-east of Glendora.

DRAINAGE AREA.—7.5 square miles.

RECORDS AVAILABLE.—December, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 6.5 second-feet April 5 (gage height, 1.07 feet); no flow for several months.

1919-1929: Maximum discharge, 660 second-feet February 16, 1927 (gage height, 3.30 feet); no flow for several months during each year.

REMARKS.—Records good. The Glendora Irrigation Co. diverts water half a mile and 1½ 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 1 mile up stream. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Jan.	Feb.	Mar.	Apr.	Day	Jan.	Feb.	Mar.	Apr.
1.....	0	0	0.2	0.1	16.....	0	0	0.7	0.3
2.....	0	0	.1	0	17.....	0	0	.7	.1
3.....	0	0	.1	0	18.....	0	.1	.7	0
4.....	0	0	.1	.9	19.....	0	.4	.7	.2
5.....	0	0	.1	4.8	20.....	0	.2	.6	.9
6.....	0	0	.1	3.3	21.....	.1	.2	.6	.8
7.....	0	0	.1	2.4	22.....	.3	.2	.7	.4
8.....	0	0	0	1.7	23.....	.2	.2	.7	.1
9.....	0	0	0	1.5	24.....	.1	.2	.7	0
10.....	0	0	2.6	1.3	25.....	.2	.2	.6	0
11.....	0	0	2.6	1.2	26.....	.1	.2	.5	0
12.....	0	0	1.5	1.1	27.....	0	.2	.2	0
13.....	0	0	1.2	.7	28.....	0	.2	.2	0
14.....	0	0	1.0	1.1	29.....	0		.2	0
15.....	0	0	.8	.7	30.....	0		.1	0
					31.....	0		.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January.....	0.3	0	0.03	1.8
February.....	.4	0	.08	4.4
March.....	2.6	0	.60	36.9
April.....	4.8	0	.79	47.0
The year.....	4.8	0	.12	90.1

NOTE.—No flow during months for which no discharge is given.

LOS ANGELES RIVER BASIN

PACOIMA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 24, T. 3 N., R. 15 W., 600 feet above mouth of canyon and 4 miles northeast of San Fernando.

DRAINAGE AREA.—27.9 square miles.

RECORDS AVAILABLE.—March, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year not determined; no flow during several periods.

1916-1929: Maximum discharge, about 1,860 second-feet February 16, 1927 (gage height, 15.4 feet); usually no flow for several months each year.

REMARKS.—Records fair. Flow regulated by flood-control dam above gage.

Daily discharge October 1 to March 24 and April 6 to September 30 furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.3	0	0	3.2	1.0	1.8	3.0	2.5	2.5
2	0	.3	0	0	2.4	1.0	1.8	3.0	2.5	2.5
3	0	.3	0	0	1.2	1.0	1.8	3.0	2.5	2.5
4	0	.3	0	0	3.0	1.0	1.8	2.5	2.5	2.5
5	0	.3	0	0	3.0	1.0	1.8	2.5	2.5	2.5
6	0	.2	0	0	2.0	1.0	1.8	2.5	2.5	2.5
7	0	.4	0	0	1.5	1.0	2.8	2.5	2.5	2.5
8	0	.4	0	0	1.2	1.0	3.0	2.5	2.5	2.5
9	0	0	0	0	1.2	1.0	3.0	2.5	2.5	2.5
10	0	0	0	0	1.2	1.0	3.0	2.5	2.5	2.5
11	0	0	0	0	1.2	1.0	3.0	2.5	2.5	2.8
12	0	0	0	0	1.2	1.0	3.0	2.5	2.5	3.0
13	0	.2	0	0	1.2	1.0	3.0	2.5	2.5	3.0
14	0	.2	0	0	1.0	1.0	3.0	2.5	2.5	3.0
15	0	.2	0	0	1.0	1.0	3.0	2.5	2.5	3.0
16	0	.2	.1	0	1.0	1.0	3.0	2.5	2.5	3.0
17	0	.2	0	0	1.0	1.0	3.0	2.5	2.5	2.8
18	0	.2	0	0	1.0	1.0	3.0	2.5	2.5	3.0
19	.1	.2	0	0	1.0	1.0	3.0	2.5	2.5	3.0
20	.2	.2	.1	0	1.0	1.0	3.0	2.5	2.5	3.0
21	.2	.2	.1	1.2	1.0	1.5	3.0	2.5	2.5	3.0
22	.2	.2	.1	1.2	1.0	2.0	3.0	2.5	2.5	3.0
23	.2	.2	0	1.5	1.0	2.0	3.0	2.5	2.5	3.0
24	.2	.2	0	1.5	.7	2.0	3.0	2.5	2.5	3.0
25	.2	.2	0	7	.7	2.0	3.0	2.5	2.5	3.0
26	.2	.2	0	2.7	.7	2.0	3.0	2.5	2.5	3.0
27	.1	0	0	2.0	.7	2.0	3.0	2.5	2.5	3.0
28	0	0	0	3.2	.7	2.0	3.0	2.5	2.5	3.0
29	0	0	0	3.2	1.0	2.0	3.0	2.5	2.5	3.0
30	0	0	0	3.2	.7	1.8	3.0	2.5	2.5	3.0
31	0	0	0	4.0	1.8	1.8		2.5	2.5	
Month	Maximum		Minimum		Mean		Run-off in acre-feet			
November	0.2	0	0.05	3.0						
December	.4	0	.17	10.4						
January	.1	0	.01	6						
March	7	0	.99	60.9						
April	3.2	.7	1.29	76.8						
May	2.0	1.0	1.33	31.8						
June	3.0	1.8	2.75	164						
July	3.0	2.5	2.55	157						
August	2.5	2.5	2.50	154						
September	3.0	2.5	2.82	168						
The year	7	0	1.21	876						

NOTE.—No flow during months for which no discharge is given.

SURFACE WATER SUPPLY, 1929, PART XI

TUJUNGA CREEK NEAR SUNLAND, CALIF.

LOCATION.—Water-stage recorder near center of sec. 32, T. 3 N., R. 13 W. (unsurveyed), at 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, 1929.

EXTREMES.—Maximum discharge during year, 216 second-feet April 4 (gauge height, 1.90 feet); minimum, 0.1 second-foot during numerous periods.

1916-1929: Maximum discharge, 8,600 second-feet December 19, 1921 (gauge height, 6.20 feet); minimum, 0.1 second-foot during summers of 1919, 1924, 1928, and 1929.

REMARKS.—Records good. Discharge interpolated between frequent measurements July 13 to September 30. There are two or three small irrigation diversions above gauge. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	1.5	3.6	8.5	7	13	7	2.2	0.4	0.2	0.2
2	.2	.1	1.8	3.4	16	6.5	13	6	1.7	.4	.2	.2
3	.2	.1	9.5	3.4	14	6.5	16	6	1.5	.4	.2	.2
4	.2	.1	7	3.2	12	6	95	6	1.5	.4	.2	.2
5	.2	.1	4.8	3.2	11	6	99	6	1.7	.4	.2	.2
6	.2	.1	3.9	3.2	11	6	55	6	2.1	.4	.2	.2
7	.2	.1	3.6	2.5	11	6	46	6	2.2	.4	.2	.2
8	.1	.1	3.4	2.5	9.5	6	38	6	2.2	.3	.2	.2
9	.1	.1	3.6	3.2	8.5	6	32	5.5	2.2	.3	.2	.2
10	.1	.1	4.6	3.0	8	90	27	5.5	2.1	.8	.2	.2
11	.1	.1	9.5	3.0	8	64	20	4.8	2.0	.3	.1	.2
12	.2	.1	7	3.0	8	32	20	4.1	1.7	.3	.1	.2
13	.2	.2	32	3.4	8	27	20	3.6	1.4	.2	.1	.2
14	.2	2.2	16	3.6	8	22	17	3.9	1.3	.2	.1	.2
15	.2	1.4	10	3.9	7.5	20	16	4.1	1.3	.2	.1	.2
16	.2	.4	9.5	8	7.5	17	15	3.9	2.0	.2	.1	.2
17	.1	.2	8	6	7.5	16	13	4.1	2.0	.2	.1	.2
18	.1	.2	7	5	16	15	13	3.9	1.5	.2	.1	.2
19	.1	.1	7	7	13	13	12	3.4	1.2	.2	.1	.2
20	.2	.1	5.5	21	10	12	12	3.6	.8	.2	.1	.2
21	.1	.1	5	19	10	11	12	3.6	.8	.2	.1	.2
22	.1	.1	4.8	13	9	12	12	3.6	.7	.2	.1	.1
23	.1	.1	4.6	11	9	12	12	3.4	.6	.2	.1	.1
24	.1	.2	4.1	9.5	9	12	12	3.2	.6	.2	.2	.1
25	.1	.4	4.1	11	8	11	11	3.4	.6	.2	.2	.1
26	.1	.5	4.1	11	7.5	10	11	3.2	.6	.2	.2	.1
27	.1	.8	4.1	9.5	7.5	10	10	3.2	.5	.2	.2	.1
28	.1	1.0	3.9	8.5	7	9.5	9.5	3.0	.5	.2	.2	.1
29	.1	1.2	3.6	7.5	7	9	9	2.5	.4	.2	.2	.1
30	.1	1.3	3.9	7	7	10	7.5	2.3	.4	.2	.2	.1
31	.1		3.9	7		13		2.3		.2	.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.14	8.6
November	2.2	.1	.39	23.2
December	32	1.5	6.46	397
January	21	3	6.75	415
February	16	7	9.64	535
March	90	6	16.2	996
April	99	7.5	23.2	1,380
May	7	2.3	4.29	264
June	2.2	.4	1.34	79.7
July	.4	.2	.26	16.0
August	.2	.1	.16	9.8
September	.2	.1	.17	10.1
The year	99	.1	5.72	4,130

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 $1\frac{1}{2}$ miles northeast of Tujunga.

DRAINAGE AREA.—1.2 square miles.

RECORDS AVAILABLE.—February, 1917, to September, 1929.

EXTREMES.—Maximum discharge during year, 0.11 second-foot April 4 (gage height, 0.43 foot); minimum discharge measured, 0.0009 second-foot October 11.

1917-1929: Maximum discharge, 15 second-feet January 2, 1922 (gage height, 1.74 feet); stream dry July 18 to August 1, 1921, August 29 to October 12, 1925, and December 19, 1925, to January 10, 1926.

REMARKS.—Records fair. Daily discharge not ascertained. Mean monthly discharge estimated from volumetric measurements. Diversions above and below station. There are several small check dams above station.

Monthly discharge 1928-29

Month	Mean *	Run-off in acre-feet	Month	Mean *	Run-off in acre-feet
October.....	0.001	0.06	May.....	0.005	0.31
November.....	.002	.12	June.....	.003	.18
December.....	.003	.18	July.....	.002	.12
January.....	.005	.31	August.....	.001	.06
February.....	.01	.56	September.....	.002	.12
March.....	.01	.61			
April.....	.01	.60	The year.....	.004	3.2

* Estimated.

ARROYO SECO NEAR PASADENA, CALIF.

LOCATION.—Water-stage recorder near south line of sec. 30, T. 2 N., R. 12 W. (unsurveyed), 1½ miles above mouth of Millard Canyon, and 5½ miles northwest of Pasadena.

DRAINAGE AREA.—16.4 square miles.

RECORDS AVAILABLE.—December, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 155 second-feet April 4 (gage height, 2.78 feet); stream practically dry July 24 to September 30.

1910-1929: Maximum discharge, about 5,630 second-feet February 20, 1914 (gage height, 12.5 feet); stream practically dry July 20 to September 30, 1925, August 12 to November 23, 1926, and July 24 to September 30, 1929.

REMARKS.—Records good. Daily discharge not ascertained for October. No diversions. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0.1	0.2	1.0	2.0	2.5	2.0	1.6	0.8	0.2
2.....	.1	.2	1.1	7.5	2.5	2.0	1.4	.8	.2
3.....	*.1	1.8	1.1	6.5	2.4	2.4	1.5	.8	.1
4.....	*.1	1.3	1.1	6.0	2.4	45	1.6	.8	.1
5.....	*.1	1.1	1.0	4.0	2.5	56	1.6	.8	.1
6.....	*.1	1.0	1.0	3.5	2.4	25	1.7	.8	.1
7.....	*.1	1.0	1.0	3.1	2.4	16	1.7	.8	.1
8.....	*.1	.9	1.0	2.7	2.3	12	1.6	.8	.1
9.....	*.1	.9	1.0	2.4	2.4	*9	1.6	.8	.1
10.....	*.1	1.2	1.0	2.2	52	*8	1.5	.8	.1
11.....	*.1	2.4	1.0	2.1	20	*7	1.4	.8	.1
12.....	*.1	1.9	1.0	2.0	11	*6	1.3	.8	.1
13.....	*.3	13	1.0	2.0	8	5.5	1.3	.7	.1
14.....	*1.0	4.9	1.1	2.0	6.5	5	1.3	.7	.1
15.....	*.5	2.9	1.1	2.0	5.5	4.5	1.3	.7	.1
16.....	.2	2.3	1.6	1.9	4.6	4.1	1.3	1.0	.1
17.....	.2	2.0	1.3	1.8	4.1	4.0	1.3	.8	.1
18.....	.2	1.8	1.3	4.8	4.1	4.1	1.3	.6	.1
19.....	.2	1.6	1.5	4.3	3.9	4.5	1.2	.5	.1
20.....	.2	1.6	4.6	3.0	3.4	4.0	1.2	.4	.1
21.....	.2	1.5	5.0	2.7	3.2	3.8	1.3	.4	.1
22.....	.2	1.4	3.2	2.7	3.2	3.6	1.3	.4	.1
23.....	.2	1.3	2.5	2.7	3.2	3.4	1.2	.4	.1
24.....	.2	1.3	2.1	2.7	3.0	3.2	1.1	.3	0
25.....	.2	1.3	2.0	2.6	2.9	3.0	1.1	.2	0
26.....	.2	1.2	2.0	2.4	2.7	2.9	1.1	.2	0
27.....	.2	1.2	2.0	2.6	2.5	2.8	1.0	.2	0
28.....	.2	1.3	2.0	2.5	*2.4	2.7	1.0	.2	0
29.....	.2	1.2	2.0	-----	2.2	2.4	.9	.2	0
30.....	.2	1.1	1.9	-----	2.2	2.1	.9	.2	0
31.....	-----	1.0	1.9	-----	2.1	-----	.9	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	-----	-----	*0.1	3.1
November.....	1.0	0.1	.20	11.9*
December.....	13	.2	1.86	114
January.....	5.0	1.0	1.69	104
February.....	7.5	1.8	3.10	172
March.....	52	2.1	5.63	346
April.....	56	2.0	8.53	508
May.....	1.7	.9	1.31	80.6
June.....	1.0	.2	.59	35.1
July.....	.2	0	.08	4.9*
The year.....	56	0	1.90	1,380

* Estimated.

NOTE.—No flow during August and September.

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.

DRAINAGE AREA.—10.5 square miles.

RECORDS AVAILABLE.—July, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 61 second-feet March 10 (gage height, 2.40 feet); stream practically dry August 18 to September 14.

1916-1929: Maximum discharge, about 1,400 second-feet April 7, 1926 (gage height, 10.7 feet); stream practically dry August 18 to September 14, 1929.

REMARKS.—Records good. No diversions. Results of some discharge measurements furnished by Los Angeles County Flood Control District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.2	0.5	0.9	2.6	1.8	2.5	2.5	1.1	0.4	0.1	0
2	.1	.2	.6	1.0	8	1.7	2.3	2.3	1.0	.4	.1	0
3	.1	.2	4.6	1.0	5.5	1.7	2.8	2.3	.9	.3	.1	0
4	.1	.2	4.4	1.0	4.9	1.4	30	2.3	1.0	.3	.1	0
5	.1	.2	1.7	1.0	4.0	1.2	28	2.3	1.0	.3	.1	0
6	.1	.2	1.2	1.0	3.7	1.2	16	2.3	1.1	.3	.1	0
7	.1	.3	1.1	1.0	3.5	1.2	12	2.3	1.1	.3	.1	0
8	.1	.2	1.0	1.0	3.1	1.2	13	2.3	1.1	.3	.1	0
9	.1	.3	.9	1.1	2.8	1.4	9	2.1	1.1	.2	.1	0
10	.1	.3	1.2	1.0	2.6	28	7.5	2.0	1.1	.2	.1	0
11	.1	.3	2.3	1.0	2.5	13	6.5	1.8	1.0	.2	.1	0
12	.1	.2	1.4	.8	2.2	7.5	6.5	1.6	1.0	.2	.1	0
13	.1	.2	.6	.7	2.1	6	6	1.4	.9	.2	.1	0
14	.2	2.2	2.8	.7	2.1	4.6	5.5	1.3	.8	.2	.1	0
15	.2	1.2	2.0	.7	2.0	4.0	5	1.2	.9	.1	.1	.1
16	.2	.8	1.6	2.2	2.0	3.7	4.9	1.2	1.2	.1	.1	.1
17	.2	.7	1.3	1.3	1.8	3.1	4.6	1.2	1.0	.1	.1	.1
18	.2	.6	1.3	1.1	4.4	3.0	4.6	1.2	.9	.1	0	.1
19	.2	.5	1.2	1.8	3.9	3.0	4.4	1.2	.7	.1	0	.1
20	.2	.4	1.0	3.5	3.1	3.0	4.2	1.3	.6	.1	0	.1
21	.2	.5	1.0	3.5	2.6	2.6	4.0	1.4	.5	.1	0	.1
22	.2	.5	1.0	2.6	2.5	2.8	3.9	1.4	.5	.1	0	.1
23	.2	.5	.9	2.3	2.3	2.8	3.7	1.4	.5	.1	0	.1
24	.2	.5	.9	2.1	2.2	2.8	3.5	1.4	.5	.1	0	.1
25	.2	.5	.8	2.0	2.1	2.8	3.3	1.4	.4	.1	0	.1
26	.2	.5	.9	1.8	2.0	2.8	3.3	1.4	.4	.1	0	.1
27	.2	.5	.9	2.0	1.8	2.6	3.1	1.4	.4	.1	0	.1
28	.2	.5	.9	1.8	1.8	2.5	3.0	1.2	.4	.1	0	.1
29	.2	.5	.9	1.7	---	2.5	2.8	1.1	.4	.1	0	.1
30	.2	.5	.9	1.7	---	2.5	2.8	1.1	.4	.1	0	.1
31	.2	---	.9	1.7	---	2.5	---	1.1	---	.1	0	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.1	0.16	9.8
November	2.2	.2	.49	29.2
December	6	.5	1.55	95.3
January	3.5	.7	1.52	93.5
February	8	1.8	3.00	167
March	28	1.2	3.90	240
April	30	2.3	6.96	414
May	2.5	1.1	1.63	100
June	1.2	.4	.80	47.6
July	.4	.1	.18	11.1
August	.1	0	.05	3.1
September	.1	0	.05	3.0
The year	30	0	1.68	1,210

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, 1929.

EXTREMES.—Maximum discharge during year, 14 second-feet April 4 (gage height, 1.42 feet); minimum, 0.01 second-foot numerous times during August and September.

1916-1929: Maximum gage height, 11.75 feet April 7, 1926 (discharge not determined); stream dry during periods in 1919, 1924, and 1925.

REMARKS.—Records good. Discharge estimated March 21-28 and May 12-14. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1			0.1	0.3	0.1	0.2	0.2	0.1
2			.1	.5	.1	.2	.2	.1
3		0.3	.1	.3	.1	.2	.2	.1
4		.1	.1	.3	.1	3.6	.2	.1
5		.1	.1	.3	.1	3.6	.2	.1
6		.1	.1	.3	.1	2.0	.2	.1
7		.1	.1	.3	.1	1.5	.2	.1
8			.1	.2	.1	1.2	.2	.1
9			.1	.2	.2	1.0	.2	.1
10		.2	.1	.2	2.2	.8	.2	.1
11		.2	.1	.2	1.2	.7	.2	.1
12		.2	.1	.2	.7	.6	.2	.1
13		.4	.1	.2	.6	.6	.2	.1
14	0.2	.2	.1	.2	.5	.5	.2	.1
15		.2	.1	.2	.4	.5	.2	
16		.1	.2	.2	.4	.4	.2	.1
17		.1	.1	.2	.3	.4	.2	.1
18		.1	.1	.3	.3	.4	.2	.1
19		.1	.2	.2	.3	.4	.2	.1
20		.1	.3	.2	.3	.4	.2	.1
21		.1	.2	.2	.2	.4	.2	.1
22		.1	.2	.2	.2	.3	.1	
23		.1	.2	.2	.2	.3	.1	
24		.1	.2	.2	.2	.3	.1	
25		.1	.2	.2	.2	.3	.1	
26		.1	.2	.2	.2	.3	.1	
27		.1	.2	.2	.2	.3	.2	
28		.1	.2	.2	.2	.3	.1	
29		.1	.2		.2	.2	.1	
30		.1	.2		.2	.2	.1	
31		.1	.2		.2		.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			0.03	1.8
November	0.2		.05	3.0
December	.3		.13	8.0
January	.3	0.1	.15	9.2
February	.5	.2	.24	13.3
March	2.2	.1	.34	20.9
April	3.6	.2	.74	44.0
May	.2	.1	.17	10.4
June	.1		.10	6.0
July			.04	2.5
August			.02	1.2
September			.02	1.2
The year	3.6		.17	122

NOTE.—Discharge below 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, 1929.

EXTREMES.—Maximum discharge during year, 235 second-feet April 4 (gage height, 2.90 feet); no flow for several months.

1918-1929: Maximum discharge, about 1,360 second-feet April 7, 1926 (gage height, 5.0 feet); no flow for periods each year.

REMARKS.—Records good. Discharge estimated January 20 and February 2. City of Pasadena diverts water above station; record of diversion furnished by city.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Dec.	Jan.	Feb.	Mar.	Apr.
1.....	0	0	0	0	0	16.....	0	0	0	0	0
2.....	0	0	0	0	0	17.....	0	0	0	0	0
3.....	0	0	0	0	0	18.....	0	0	0	0	0
4.....	0	0	0	0	18	19.....	0	0	0	0	0
5.....	0	0	0	0	24	20.....	0	.2	0	0	0
6.....	0	0	0	0	11	21.....	0	0	0	0	0
7.....	0	0	0	0	5	22.....	0	0	0	0	0
8.....	0	0	0	0	1.9	23.....	0	0	0	0	0
9.....	0	0	0	0	.3	24.....	0	0	0	0	0
10.....	0	0	0	19	0	25.....	0	0	0	0	0
11.....	0	0	0	6	0	26.....	0	0	0	0	0
12.....	0	0	0	.6	0	27.....	0	0	0	0	0
13.....	.9	0	0	0	0	28.....	0	0	0	0	0
14.....	0	0	0	0	0	29.....	0	0	0	0	0
15.....	0	0	0	0	0	30.....	0	0	0	0	0
						31.....	0	0	0	0	0
Month						Maximum	Minimum	Mean	Run-off in acre-feet		
December.....						0.9	0	0.03	1.8		
January.....						.2	0	.01	.6		
February.....						.2	0	.01	.6		
March.....						19	0	.83	51.0		
April.....						24	0	2.01	120		
The year.....						24	0	.24	174		

NOTE.—No flow during months for which no discharge is given.

Monthly diversion by city of Pasadena from Eaton Creek, 1923-29

Month	Acre-feet	Month	Acre-feet	Month	Acre-feet
October.....	7.3	March.....	118.4	August.....	3.8
November.....	13.3	April.....	134.4	September.....	3.6
December.....	55.4	May.....	55.5		
January.....	51.1	June.....	30.8	The year.....	577.0
February.....	93.4	July.....	10.5		

SANTA YNEZ RIVER BASIN

SANTA YNEZ RIVER NEAR LOMPOC, CALIF.

LOCATION.—Water-stage recorder near east boundary of La Misión Vieja la Purísima grant, at highway bridge $1\frac{1}{2}$ miles east of Lompoc, Santa Barbara County. Prior to December 14, 1928, staff gage at same location.

DRAINAGE AREA.—790 square miles.

RECORDS AVAILABLE.—November, 1906, to September, 1918; April, 1925, to September, 1929. (Discharge not computed for 1909.)

EXTREMES.—Maximum discharge during year, 1,520 second-feet February 3 (gage height, 5.15 feet); stream dry during August and September.

1906–1918, 1925–1929: Maximum discharge, 41,800 second-feet January 25, 1914 (gage height, 13.0 feet); stream dry during August and September, 1929.

REMARKS.—Records good. Water diverted by city of Santa Barbara at Gibraltar Dam, and some irrigation water is pumped from wells along banks of river.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	1.0	0.9	6.5	12	14	22	24	17	2.7	0.2
2	1.0	.9	7.5	12	15	22	22	17	3.0	.4
3	1.0	1.2	70	12	113	21	22	15	3.3	.3
4	.9	1.0	14	13	181	20	73	12	3.0	.2
5	1.0	1.0	11	13	124	20	42	12	3.2	.2
6	1.0	1.0	10	13	97	20	51	12	2.7	.2
7	1.0	1.1	10	11	73	20	68	11	1.8	.3
8	.9	1.2	10	11	55	20	59	9.5	1.3	.4
9	.9	1.1	11	10	49	22	48	8	1.8	.4
10	.9	1.1	12	11	46	75	42	7	2.3	.3
11	.7	1.1	15	12	42	73	36	6.5	2.3	.2
12	.8	1.2	16	11	37	121	35	6.5	2.0	.2
13	.8	1.2	45	11	37	102	33	7.5	1.7	.1
14	.6	37	24	10	36	77	33	6.5	1.6	.2
15	.6	9	20	10	34	64	31	6	1.6	.3
16	.6	5.5	17	13	32	53	30	5.5	1.8	.2
17	.8	5.5	17	14	32	50	25	6.5	1.4	.2
18	.8	5.5	15	12	32	48	26	6.5	1.2	.2
19	.8	5.5	15	14	31	48	25	5.5	1.1	.2
20	.8	5.5	14	20	27	42	23	6	.9	.1
21	.8	5.5	16	19	25	39	22	6	.7	.1
22	.8	5.5	16	19	24	39	22	6	.5	.1
23	.8	5.5	16	18	21	41	21	5.5	.4	.1
24	.8	6.5	14	18	20	41	20	4.9	.4	.2
25	.8	6.5	13	16	21	36	19	4.8	.4	.2
26	.8	7	13	15	24	35	19	4.6	.6	.2
27	.8	7	14	15	23	32	17	4.2	.3	.1
28	.8	7	12	15	20	29	17	3.9	.2	.1
29	.9	7	11	14	-----	26	17	3.8	.1	.1
30	.9	7	12	15	-----	25	16	3.3	.2	.1
31	.9	-----	12	15	-----	24	-----	3.0	-----	.1

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.0	0.6	0.84	51.6
November	37	.9	5.07	302
December	70	6.5	16.4	1,010
January	20	10	13.7	842
February	181	14	45.9	2,550
March	121	20	42.2	2,590
April	73	16	31.3	1,860
May	17	3	7.53	468
June	3.3	.1	1.5	89.3
July	.4	.1	.2	12.3
The year	181	0	13.5	9,770

NOTE.—No flow during months for which no discharge is given.

SALINAS RIVER BASIN

ARROYO SECO NEAR SOLEDAD, CALIF.

LOCATION.—Water-stage recorder in sec. 21, T. 19 S., R. 6 E., at Pettitt ranch, 15 miles south of Soledad. Prior to June 16, 1929, staff gage at same location.

DRAINAGE AREA.—215 square miles.

RECORDS AVAILABLE.—January, 1901, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,300 second-feet February 3 (gage height, 9.5 feet); minimum, 0.1 second-foot August 7 to September 30.

1901–1929: Maximum discharge, about 22,000 second-feet February 21, 1917, and November 27, 1926 (gage height, 16.5 feet); stream dry during periods in 1902, 1903, 1904, 1906, 1913, 1914, 1919, 1921, 1924, and 1926.

REMARKS.—Records good. No diversions.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0.4	7.5	25	35	72	51	62	48	20	3.9	0.5	0.1
2.....	.4	8.5	25	35	182	51	62	48	20	2.7	.4	.1
3.....	.4	10	665	35	3,850	48	62	46	20	2.7	.4	.1
4.....	.4	10	510	33	1,580	48	79	46	18	2.7	.4	.1
5.....	.4	10	88	39	585	46	156	43	18	2.7	.3	.1
6.....	.4	10	58	33	305	44	132	40	18	2.7	.2	.1
7.....	.4	10	46	33	240	42	132	38	20	3.1	.1	.1
8.....	.4	12	35	31	196	42	120	38	20	3.9	.1	.1
9.....	.4	12	35	31	182	39	120	36	37	4.7	.1	.1
10.....	.4	12	35	31	169	2,880	120	33	46	3.5	.1	.1
11.....	.5	12	240	29	156	780	108	31	28	3.5	.1	.1
12.....	.5	14	510	29	132	465	98	31	24	3.9	.1	.1
13.....	.5	156	322	29	120	442	88	31	22	3.9	.1	.1
14.....	.5	25	156	29	108	420	88	31	18	3.5	.1	.1
15.....	.5	25	127	27	108	210	79	29	17	2.7	.1	.1
16.....	.5	25	88	27	80	204	79	29	18	1.9	.1	.1
17.....	.5	25	85	33	80	182	79	29	21	1.5	.1	.1
18.....	.5	25	75	72	72	169	70	29	19	1.9	.1	.1
19.....	.5	21	69	88	72	156	70	29	18	1.9	.1	.1
20.....	.5	20	61	46	65	144	70	27	16	1.4	.1	.1
21.....	.7	18	58	46	65	132	70	27	14	1.2	.1	.1
22.....	.7	18	56	44	64	132	70	27	12	1.1	.1	.1
23.....	.8	16	46	44	58	120	64	27	11	.8	.1	.1
24.....	.9	16	44	42	58	108	62	25	9.5	.8	.1	.1
25.....	1.6	14	44	42	58	108	60	24	8	.7	.1	.1
26.....	1.8	14	42	42	56	98	60	22	7.5	.7	.1	.1
27.....	2.0	14	39	42	53	88	54	22	7	.7	.1	.1
28.....	4.0	14	39	42	51	88	54	20	6	.7	.1	.1
29.....	4.9	14	37	39	-----	88	51	20	5.5	.6	.1	.1
30.....	6	25	37	39	-----	79	51	20	4.7	.6	.1	.1
31.....	7.5	-----	35	39	-----	70	-----	20	-----	.5	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7.5	0.4	1.29	79.3
November.....	156	7.5	29.4	1,216
December.....	665	25	129	7,360
January.....	88	27	38.7	2,380
February.....	3,850	51	315	17,590
March.....	2,880	39	244	16,000
April.....	156	51	82.3	4,900
May.....	48	20	31.2	1,820
June.....	46	4.7	17.4	1,040
July.....	4.7	.5	2.16	135
August.....	.5	.1	.15	9.2
September.....	.1	.1	.10	6.0
The year.....	3,850	.1	71.3	51,600

COYOTE CREEK BASIN

COYOTE CREEK NEAR MADRONE, CALIF.

LOCATION.—Staff gage in northwest corner of San Jose grant, one-fourth mile below mouth of Las Animas Creek and 2¼ miles northeast of Madrone, Santa Clara County.

DRAINAGE AREA.—193 square miles.

RECORDS AVAILABLE.—October, 1902, to September, 1912; December, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 920 second-feet February 3 (gage height, 6.8 feet); practically no flow September 18-30.

1902-1912, 1917-1929: Maximum discharge, 25,000 second-feet, probably occurred March 7, 1911; no flow for several periods during 1902-1911, 1920, 1924, and 1929.

REMARKS.—Records good. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.3	0.9	6	12	8	14	9.5	3.9	1.1	0.6	0.1
2	.2	.4	1.1	6	15	8	13	9	3.9	1.1	.6	.1
3	.2	.5	3.3	6.5	343	7.5	13	9	3.6	.9	.6	.1
4	.2	.5	1.9	6.5	376	7.5	16	8.5	3.5	.9	.5	.1
5	.2	.4	1.5	6	160	7	14	8	3.5	1.2	.4	.1
6	.2	.4	1.1	6	103	7	13	8	3.6	1.2	.4	.1
7	.2	.4	1.2	6	62	7	13	7.5	3.5	1.2	.4	.2
8	.2	.4	1.1	6	38	7	14	7.5	3.6	1.3	.4	.2
9	.2	.3	1.2	6.5	30	8	15	7.5	5	1.3	.4	.1
10	.2	.4	1.8	6	26	114	17	7	4.0	1.3	.4	.1
11	.2	.4	1.9	6	22	226	19	6.5	3.8	1.4	.4	.1
12	.2	.6	2.5	5.5	19	98	18	6.5	3.2	1.3	.4	.1
13	.2	2.3	7	5.5	17	70	17	6	2.9	1.3	.4	.1
14	.2	6	8	5.5	16	54	15	6	2.8	1.1	.3	.1
15	.2	4.0	10	6	16	40	15	6	2.9	1.1	.3	.1
16	.2	1.7	9.5	9.5	17	33	14	5.5	4.0	1.1	.3	.1
17	.2	.9	9.5	7	16	29	14	5.5	3.5	1.1	.3	.1
18	.2	1.0	9.5	6.5	14	27	14	5	3.2	1.0	.3	0
19	.2	.9	9	8	13	24	15	5	2.7	1.0	.2	0
20	.2	.9	8.5	17	12	21	14	5	2.3	1.0	.2	0
21	.3	.9	8.5	28	11	19	14	5	2.1	.9	.1	0
22	.3	.9	8	24	11	18	13	4.9	2.0	.8	.2	0
23	.2	.9	7.5	19	10	18	12	4.7	1.9	.7	.1	0
24	.3	.9	7.5	16	10	19	12	4.5	1.7	.7	.2	0
25	.3	.9	8	15	9.5	18	12	4.4	1.6	.7	.2	0
26	.3	.8	7.5	14	9	18	12	4.4	1.6	.6	.2	0
27	.3	.8	7.5	13	9	17	11	4.2	1.8	.6	.2	0
28	.4	.9	7.5	12	8.5	16	11	4.0	1.9	.5	.2	0
29	.4	.9	7.5	12	-----	16	11	4.0	1.7	.6	.2	0
30	.4	.9	6.5	11	-----	15	10	4.0	1.5	.7	.1	0
31	.4	-----	6	11	-----	14	-----	3.9	-----	.7	.1	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.4	0.2	0.25	15.4
November	6	.3	1.05	32.5
December	10	.9	5.56	342
January	28	5.5	10.1	621
February	376	8.5	50.2	2,790
March	226	7	32.0	1,970
April	19	10	13.8	821
May	9.5	3.9	6.02	370
June	5	1.5	2.90	173
July	1.4	.5	.98	60.3
August	.6	.1	.31	19.1
September	.2	0	.06	3.6
The year	376	0	10.0	7,250

NOTE.—Discharge less than 0.05 second-foot Sept. 18-30.

COYOTE CREEK NEAR EDENVALE, CALIF.

LOCATION.—Staff gage at east boundary of Santa Teresa grant at "The Narrows," 1½ miles northeast of Edenvale, Santa Clara County, and 7 miles south of San Jose.

RECORDS AVAILABLE.—October, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 326 second-feet February 4 (gage height, 4.05 feet); no flow except February 4–6.

1916–1929: Maximum discharge, 10,000 second-feet February 10, 1922 (gage height, 12.8 feet); no flow during most of each year.

REMARKS.—Records good. Water is pumped from wells along the river above station for irrigation.

The daily discharge of Coyote Creek near Edenvale, Calif., for 1928–29, was as follows: February 4, 288 second-feet; February 5, 86 second-feet; February 6, 4.4 second-feet. Total run-off for year, 750 acre-feet.

ALAMEDA CREEK BASIN

ALAMEDA CREEK NEAR NILES, CALIF.

LOCATION.—Water-stage recorder in sec. 15, T. 4 S., R. 1 W., one-eighth mile above highway bridge and $1\frac{1}{4}$ miles northeast of Niles.

DRAINAGE AREA.—633 square miles.

RECORDS AVAILABLE.—October, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 288 second-feet February 4 (gage height, 4.02 feet); no flow during most of summer.

1916-1929: Maximum discharge, 13,900 second-feet February 10, 1922* (gage height, 12.44 feet); no flow during summer of 1918, possibly 1920, and 1924-1929.

REMARKS.—Records excellent. Discharge estimated April 2-6, 8, and June 27-29. Diversions above station and regulation at Calaveras Reservoir. Water released from Calaveras Reservoir May 1-21.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	1.1	3.2	2.4	1.0	1.0	3.0	0.6
2.....	0	1.3	2.6	6	.6	1.0	66	.6
3.....	0	2.8	7.5	43	.5	1.0	76	.6
4.....	0	1.7	10	224	.4	1.0	80	.6
5.....	0	1.1	7.5	130	.4	1.0	82	.6
6.....	0	1.0	5.5	50	.5	1.0	84	.6
7.....	0	.9	4.6	22	.5	1.1	60	.6
8.....	0	.9	3.4	10	.5	1.4	58	.6
9.....	0	1.1	2.8	7	.6	1.7	62	.6
10.....	0	1.7	2.2	6	30	1.5	65	.6
11.....	0	5	2.1	5	97	1.2	66	.6
12.....	0	6	1.7	4.4	28	1.2	71	.5
13.....	.3	28	1.5	3.9	5	1.4	71	.5
14.....	.7	20	1.3	3.2	3.0	1.1	73	.5
15.....	.2	11	1.7	2.8	2.5	1.0	80	.6
16.....	.1	6	3.2	2.4	2.1	1.0	70	.8
17.....	0	4.4	2.6	2.2	2.0	.9	78	.6
18.....	0	3.2	2.6	2.2	2.0	.9	84	.6
19.....	0	2.6	28	1.9	1.8	1.5	73	.5
20.....	0	1.7	86	1.7	1.8	1.4	71	.5
21.....	0	1.2	32	1.5	1.7	1.1	11	.4
22.....	0	1.1	9	1.3	1.7	1.0	2.8	.4
23.....	0	1.1	5.5	1.3	1.7	1.0	1.8	.3
24.....	0	1.9	3.9	1.2	1.7	.9	1.3	.2
25.....	0	48	3.4	1.1	1.5	.9	1.1	.2
26.....	0	30	3.0	1.1	1.4	.9	1.1	.2
27.....	.7	7	2.8	1.0	1.2	.9	1.0	.1
28.....	.9	7	1.9	1.0	1.1	.9	.9	.1
29.....	1.0	5	1.7	-----	1.0	.9	.8	0
30.....	1.1	4.6	1.7	-----	1.1	.6	.7	0
31.....	-----	4.4	1.7	-----	1.0	-----	.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	1.1	0	0.17	10.1
December.....	48	.9	6.86	422
January.....	86	1.3	7.95	489
February.....	224	1.0	19.5	1,070
March.....	97	.4	6.30	387
April.....	1.7	.6	1.08	64.3
May.....	84	.7	45.0	2,770
June.....	.8	0	.45	26.8
The year.....	224	0	7.24	5,240

NOTE.—No flow during months for which no discharge is given.

KERN RIVER BASIN

KERN RIVER NEAR KERNVILLE, CALIF.

LOCATION.—Water-stage recorder in SE. ¼ sec. 14, T. 23 S., R. 32 E., 3 miles above Salmon Creek and 15 miles north of Kernville.

RECORDS AVAILABLE.—January, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,240 second-feet May 25 (gage height, 7.37 feet); minimum, 1.4 second-feet August 25.

1912-1929: Maximum discharge, 9,690 second-feet January 17, 1916 (gage height, 8.8 feet, old datum); no flow at intervals July 31, 1924, to February 7, 1925.

REMARKS.—Records excellent. Kern River No. 3 Canal diverts 1 mile above station. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	6	5.5	4.4	6.5	5.5	4.7	4.4	170	400	331	6.5	4.7
2.....	5.5	5.5	4.7	6	4.1	4.9	4.2	284	312	260	6.5	4.7
3.....	5.5	5.5	4.9	6.5	5.5	4.9	4.4	400	355	201	6	4.7
4.....	5.5	5.5	4.2	6	5.5	4.7	5.5	530	415	167	6	7
5.....	5.5	5.5	4.7	6.5	5.5	4.7	4.1	570	373	132	5.5	5
6.....	5	5	5	6.5	5.5	4.4	4.9	492	312	111	5.5	4.9
7.....	5	4.9	4.9	6	5.5	4.2	4.4	492	279	88	5.5	5.5
8.....	5	4.9	5	6	5	4.2	4.7	550	251	58	5.5	5.5
9.....	5	5	5	6.5	5	4.4	4.2	630	313	16	5.5	5.5
10.....	5	5	5.5	6.5	5.5	5.5	4.2	692	111	6	5.5	5.5
11.....	5	4.9	5.5	6.5	5.5	3.6	4.2	610	68	5	4.9	5.5
12.....	5.5	5	6	6.5	5.5	5.5	4.1	630	82	5.5	5.5	5.5
13.....	5.5	5.5	6.5	6.5	5.5	5	4.1	738	225	6.5	5.5	6
14.....	5.5	6	5	6.5	5	4.4	4.1	785	411	7	5.5	5.5
15.....	5	5	6	6	5	4.7	4.9	760	492	6.5	5.5	5.5
16.....	5	5	6	6.5	5	4.7	5.5	650	785	6	5.5	6
17.....	4.9	5.5	6.5	6.5	4.9	4.4	87	760	670	6.5	5.5	6
18.....	4.9	5	6	6	4.9	4.7	128	992	445	7.5	5.5	6.5
19.....	4.9	4.7	6.5	6	4.9	4.7	101	1,110	370	5.5	5.5	7
20.....	4.9	4.7	6.5	6.5	4.9	4.2	52	785	400	5.5	5.5	6.5
21.....	4.9	4.7	6	5.5	4.9	4.4	159	610	510	4.9	5.5	6
22.....	4.9	4.9	6	6.5	4.7	31	18	550	610	4.4	5	6
23.....	5	4.7	6.5	6.5	4.9	4.7	9	738	610	5	5	5
24.....	5	4.7	5.5	11	4.7	3.9	9	910	530	6	4.7	4.4
25.....	5	4.4	5.5	5.5	4.9	4.7	8	1,080	492	4.7	3.4	5.5
26.....	4.9	4.4	5.5	4.9	4.7	4.7	8	910	460	5.5	4.7	5.5
27.....	4.9	4.4	5.5	4.9	4.7	4.7	8	630	460	5	6.5	5.5
28.....	5	4.4	6	4.7	4.7	4.7	10	460	445	4.9	4.7	5.5
29.....	4.9	4.9	6	4.7	4.9	4.9	26	430	415	5.5	4.7	5.5
30.....	5	4.7	6	5	5	4.2	80	475	367	6.5	4.7	5.5
31.....	5.5	6	6	5	5	3.9	-----	492	-----	4.2	4.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	6	4.9	5.13	315
November.....	6	4.4	4.99	297
December.....	6.5	4.2	5.59	344
January.....	11	4.7	6.15	378
February.....	5.5	4.1	5.07	282
March.....	31	3.6	5.43	334
April.....	189	4.1	26.7	1,590
May.....	1,110	170	642	39,500
June.....	785	68	399	23,700
July.....	331	4.2	48.0	2,950
August.....	6.5	3.4	5.35	329
September.....	7	4.4	5.58	332
The year.....	1,110	3.4	97.2	70,400

Daily and monthly discharge, in second-feet, of Kern River and Kern River No. 3 Canal near Kernville, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	138	155	178	198	209	434	766	977	917	262	189
2	122	138	156	177	208	217	434	890	889	846	244	170
3	122	148	185	178	210	229	454	1,010	982	787	230	164
4	126	172	180	173	268	251	486	1,140	992	753	226	162
5	126	164	176	178	226	277	484	1,180	950	718	222	156
6	125	168	164	178	214	302	425	1,100	899	697	218	152
7	125	176	168	177	198	302	424	1,100	856	674	210	148
8	125	164	164	173	168	302	445	1,160	789	635	202	148
9	122	148	168	174	168	338	424	1,230	733	588	188	144
10	122	148	168	174	190	340	414	1,290	717	544	194	142
11	122	148	186	174	202	320	434	1,210	674	505	185	142
12	134	148	173	174	190	312	464	1,230	688	468	182	138
13	142	172	194	174	186	294	457	1,330	843	432	176	134
14	148	186	168	174	189	284	457	1,380	1,020	396	172	134
15	148	172	157	173	189	285	505	1,360	1,100	368	226	126
16	152	168	161	182	189	285	562	1,250	1,390	349	244	126
17	152	186	166	174	189	302	673	1,360	1,280	340	230	126
18	148	185	165	165	193	321	714	1,580	1,050	360	230	126
19	144	185	170	186	189	321	687	1,700	976	340	214	150
20	144	176	182	190	185	329	623	1,370	1,010	330	206	178
21	141	176	177	182	189	429	576	1,200	1,120	312	202	182
22	141	181	177	182	197	569	601	1,140	1,220	293	193	169
23	137	176	174	182	201	439	547	1,320	1,220	277	185	160
24	133	168	182	166	197	393	547	1,500	1,140	278	185	155
25	133	167	190	164	197	375	546	1,670	1,100	268	174	152
26	133	163	198	172	197	366	536	1,500	1,070	260	168	148
27	133	167	194	176	197	385	565	1,220	1,070	260	162	144
28	137	163	194	176	201	430	587	1,050	1,040	260	160	142
29	133	152	190	176	201	467	622	1,020	1,010	260	168	142
30	133	148	182	181	201	438	676	1,060	963	286	193	142
31	138	177	185	185	201	444	676	1,070	963	267	209	142
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	152					122			134		8,240	
November	186					138			165		9,820	
December	198					155			176		10,800	
January	190					162			176		10,800	
February	268					168			197		10,900	
March	569					209			340		20,900	
April	714					414			527		31,400	
May	1,700					766			1,240		76,200	
June	1,390					674			990		53,900	
July	917					260			454		27,900	
August	262					160			202		12,400	
September	189					128			150		8,930	
The year	1,700					122			397		287,000	

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.

DRAINAGE AREA.—1,220 square miles.

RECORDS AVAILABLE.—October, 1910, to September, 1912 (fragmentary); October, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,360 second-feet May 19 (gage height, 9.45 feet); minimum, 1.0 second-foot August 20-23.

1925-1929: Maximum discharge, 4,500 second-feet November 27, 1926 (gage height, 12.73 feet); minimum, 0.9 second-foot August 14, 1926.

REMARKS.—Records good. Borel Canal diverts $3\frac{1}{2}$ miles above gage. Other irrigation and power diversions, and regulation above station. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	2.4	3.1	2.1	2.4	2.7	6.5	249	494	360	3.2	1.6
2	1.6	2.4	3.1	2.1	3.1	2.7	6.5	362	362	327	3.2	1.6
3	1.6	2.4	4.0	2.1	4.5	3.1	5.5	484	331	237	3.2	1.6
4	1.4	2.4	3.1	2.1	5.5	3.1	10	624	419	198	3.2	1.6
5	1.4	2.4	3.1	2.1	5.5	3.5	110	719	424	160	3.2	1.8
6	1.2	2.4	2.7	2.4	5	4.0	20	670	362	129	3.2	1.8
7	20	2.7	2.7	2.4	4.5	4.0	15	618	318	117	3.2	1.8
8	104	2.4	2.7	2.4	3.5	4.0	13	644	278	95	3.2	2.1
9	104	2.1	2.7	2.4	3.1	4.0	12	726	239	66	3.2	2.1
10	104	2.1	3.1	2.4	3.1	7	11	815	198	34	3.2	2.1
11	104	1.8	3.5	2.1	3.1	17	11	762	156	14	2.4	1.6
12	115	1.8	2.7	2.1	2.7	8	12	726	117	10	2.1	1.6
13	126	3.1	4.5	2.4	2.7	6.5	12	815	183	9	2.1	1.6
14	106	4.0	3.5	2.4	2.7	6.5	11	906	382	9	1.8	1.6
15	15	2.7	3.1	2.4	2.7	4.5	22	922	545	8.5	2.1	1.6
16	10	2.1	3.1	2.7	2.7	4.0	76	800	760	7.5	2.1	1.6
17	8	2.1	2.7	2.7	2.7	4.0	159	838	944	7.5	2.1	1.8
18	8	1.8	2.7	2.4	2.7	4.5	253	1,060	542	7	1.8	2.1
19	5	2.1	2.7	2.4	2.7	4.5	257	1,220	410	6	1.2	2.8
20	5	2.1	2.7	2.4	2.7	4.5	205	1,010	398	5	1.0	2.4
21	2.4	2.1	2.4	2.7	2.7	5	180	726	482	4.7	1.0	2.1
22	2.1	2.4	2.4	2.4	2.7	61	159	618	611	4.2	1.0	1.8
23	1.8	2.4	2.4	2.4	2.7	128	84	705	639	3.7	1.0	1.8
24	1.8	2.7	2.4	2.1	2.7	18	63	954	590	3.2	1.2	1.6
25	1.8	2.7	2.4	2.1	2.7	11	59	1,130	524	3.2	1.2	1.6
26	2.1	2.7	2.4	2.1	2.7	8	49	1,080	500	3.2	1.4	1.6
27	2.1	3.1	2.4	2.1	2.7	6.5	76	785	488	2.8	1.4	1.6
28	2.1	3.1	2.4	2.1	2.7	5.5	102	551	470	2.8	1.4	1.6
29	2.4	3.1	2.4	2.1	-----	7	134	462	448	2.8	1.6	1.6
30	2.7	3.1	2.4	2.1	-----	8	169	479	410	3.2	1.6	1.6
31	2.4	-----	2.4	2.1	-----	7	-----	518	-----	3.2	1.6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	126	1.2	28.0	1,729
November	40	1.8	2.49	148
December	4.5	2.4	2.84	175
January	2.7	2.1	2.28	140
February	5.5	2.4	3.19	177
March	128	2.7	11.8	726
April	257	5.5	76.8	4,570
May	1,220	249	741	45,600
June	944	117	434	25,800
July	360	2.8	59.5	3,660
August	3.2	1.0	2.10	129
September	2.8	1.6	1.80	107
The year	1,220	1.0	115	83,000

Daily and monthly discharge, in second-feet, of Kern River and Borel Canal at Isabella, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1.....	106	131	167	190	208	225	506	833	1,070	955	257	186
2.....	107	134	171	195	248	235	506	936	946	911	239	170
3.....	107	142	197	199	240	248	516	1,070	915	821	230	162
4.....	106	166	204	190	298	257	552	1,210	1,000	782	221	154
5.....	108	162	196	186	278	286	663	1,300	1,010	744	217	154
6.....	109	162	183	195	250	325	520	1,250	946	713	213	150
7.....	100	175	183	190	240	325	505	1,200	902	701	204	150
8.....	107	166	183	186	196	325	524	1,230	862	679	200	146
9.....	107	160	183	182	183	325	512	1,310	803	640	191	142
10.....	106	150	183	182	204	387	491	1,400	782	587	187	138
11.....	106	150	210	186	230	387	511	1,350	740	555	178	134
12.....	116	146	191	186	221	350	544	1,310	712	490	174	131
13.....	127	175	232	186	213	348	554	1,400	778	449	166	127
14.....	140	205	204	186	213	336	543	1,490	977	419	162	123
15.....	133	196	183	186	209	326	585	1,510	1,140	388	190	116
16.....	139	170	183	200	209	316	650	1,380	1,340	368	238	114
17.....	133	190	183	191	209	325	743	1,420	1,530	358	220	111
18.....	133	195	187	178	217	336	827	1,640	1,130	358	224	114
19.....	130	190	187	208	209	356	831	1,800	1,000	357	207	132
20.....	130	186	200	208	204	356	779	1,590	993	346	198	158
21.....	127	186	195	209	209	365	700	1,310	1,070	326	194	174
22.....	127	186	195	178	217	511	733	1,200	1,210	306	185	166
23.....	127	186	195	199	225	640	658	1,290	1,220	287	177	158
24.....	127	179	199	186	225	498	647	1,540	1,180	276	173	150
25.....	127	179	208	186	217	451	633	1,710	1,120	276	169	146
26.....	127	175	220	195	217	428	633	1,660	1,100	267	161	142
27.....	127	179	216	195	213	416	660	1,370	1,080	267	153	142
28.....	127	179	216	195	217	446	686	1,140	1,060	257	149	138
29.....	131	167	212	199	-----	497	718	1,050	1,040	257	158	134
30.....	132	163	199	195	-----	550	753	1,060	1,000	286	178	134
31.....	131	-----	195	199	-----	518	-----	1,100	-----	276	199	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	140	100	121	7,440
November.....	205	131	171	10,200
December.....	232	167	195	12,000
January.....	209	178	192	11,800
February.....	298	183	222	12,300
March.....	649	225	378	23,200
April.....	831	491	623	37,100
May.....	1,800	833	1,320	81,200
June.....	1,530	712	1,020	60,700
July.....	955	257	474	29,100
August.....	257	149	194	11,900
September.....	186	111	143	8,510
The year.....	1,800	100	422	305,000

KERN RIVER BASIN

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KERN RIVER NEAR BAKERSFIELD, CALIF.

LOCATION.—Water-stage recorder in sec. 2, T. 29 S., R. 28 E., at mouth of lower canyon, 5 miles northeast of Bakersfield.

DRAINAGE AREA.—2,345 square miles.

RECORDS AVAILABLE.—January, 1894, to September, 1929.

EXTREMES.—1896-1929: Maximum discharge, 18,287 second-feet January 26, 1914; minimum, 57 second-feet in November, 1924.

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., through A. K. Warren, engineer.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	122	160	198	226	243	243	544	789	1,117	965	271	199
2.	125	158	199	217	260	255	538	883	1,089	928	269	208
3.	124	167	205	211	296	260	541	1,001	944	870	247	197
4.	181	177	231	210	290	278	568	1,123	961	824	235	193
5.	128	193	223	215	368	282	628	1,241	1,029	789	230	181
6.	180	194	215	209	344	310	686	1,295	1,009	753	227	171
7.	182	189	206	221	323	333	620	1,236	975	724	224	167
8.	126	189	195	225	292	340	587	1,196	949	709	221	161
9.	117	185	201	217	243	339	593	1,215	902	705	221	180
10.	114	170	208	210	221	368	581	1,312	855	713	224	143
11.	116	170	226	206	235	406	550	1,410	805	623	222	137
12.	119	173	247	206	254	442	549	1,387	735	559	206	131
13.	181	190	248	208	254	418	585	1,454	694	527	194	129
14.	146	232	275	214	250	408	609	1,591	806	463	185	126
15.	149	269	241	219	267	397	691	1,712	1,010	444	177	129
16.	164	249	213	227	266	387	619	1,744	1,184	411	188	128
17.	160	226	209	237	252	375	671	1,644	1,492	380	247	126
18.	160	225	213	236	247	373	764	1,697	1,348	360	226	120
19.	161	224	213	227	244	383	847	1,864	1,151	336	238	119
20.	166	220	214	256	240	397	849	1,913	1,066	345	230	119
21.	163	217	227	268	231	401	793	1,627	1,107	333	207	147
22.	164	212	215	269	247	410	744	1,406	1,223	318	209	169
23.	164	207	209	233	253	531	773	1,376	1,340	313	196	171
24.	162	214	203	235	261	636	721	1,424	1,361	307	188	169
25.	164	207	220	228	271	682	703	1,601	1,298	294	178	167
26.	162	205	228	214	264	533	672	1,773	1,215	286	174	166
27.	163	204	248	213	257	505	666	1,668	1,159	278	171	160
28.	163	210	252	221	246	496	678	1,418	1,130	265	162	161
29.	163	206	249	231	—	493	704	1,229	1,073	254	162	143
30.	166	197	241	235	—	525	740	1,135	1,027	249	165	136
31.	168	—	241	237	—	566	—	1,118	—	268	175	—

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	167	111	142	8,730
November	276	147	201	12,090
December	280	187	223	13,700
January	285	204	226	13,900
February	375	215	264	14,700
March	731	239	409	25,100
April	883	532	657	39,100
May	2,002	768	1,399	86,000
June	1,672	680	1,067	63,500
July	1,002	246	504	31,000
August	273	150	208	12,800
September	209	119	164	9,160
The year	2,002	111	455	380,000

NOTE.—Maximum and minimum are absolute values determined from water-stage recorder graph. Run-off in acre-feet computed by U. S. Geol. Survey.

SURFACE WATER SUPPLY, 1929, PART XI

KERN RIVER NO. 3 CANAL NEAR KERNVILLE, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 25, T. 23 S., R. 32 E., 4 miles below intake and 12 miles north of Kernville.

RECORDS AVAILABLE.—March, 1921, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 615 second-feet June 13; no flow parts of April 21 and June 9.

1921-1929: Maximum mean daily discharge, 648 second-feet July 16, 1921; no flow at times.

REMARKS.—Records excellent except those for March 31 to April 12, which were estimated. This canal diverts from left bank of Kern River in sec. 12, T. 23 S., R. 32 E. The water is used for power and returned to the river 8 miles below. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	117	132	151	171	192	204	430	596	577	586	255	134
2.....	117	132	151	171	204	212	430	606	577	586	238	171
3.....	117	143	180	171	204	224	450	606	577	586	224	169
4.....	120	167	176	167	263	246	480	606	577	586	220	155
5.....	120	159	171	171	220	272	480	606	577	586	216	151
6.....	120	163	159	171	208	298	420	606	577	586	212	147
7.....	120	171	163	171	192	298	420	606	577	586	204	143
8.....	120	159	159	167	163	298	440	606	538	577	196	143
9.....	117	143	163	167	163	334	420	596	420	577	192	139
10.....	117	143	163	167	184	334	410	596	606	538	188	136
11.....	117	143	180	167	196	316	430	596	606	500	180	136
12.....	128	143	167	167	184	307	460	596	606	462	176	132
13.....	136	167	188	167	180	269	453	596	615	425	171	128
14.....	143	180	163	167	184	280	453	596	606	389	167	128
15.....	143	167	151	167	184	280	500	596	606	361	220	120
16.....	147	163	155	176	184	280	557	596	606	343	238	120
17.....	147	180	189	167	184	298	586	596	606	334	224	120
18.....	143	180	159	159	188	316	586	586	606	352	224	120
19.....	139	180	163	180	184	316	586	586	606	334	208	148
20.....	139	171	176	184	180	325	571	586	606	325	200	171
21.....	136	171	171	176	184	425	387	586	606	307	196	176
22.....	136	176	171	155	192	538	586	586	606	289	188	168
23.....	132	171	167	176	196	434	538	586	606	272	180	155
24.....	128	163	176	155	192	389	538	586	606	272	180	151
25.....	128	163	184	159	192	370	538	586	606	268	171	147
26.....	128	159	192	167	192	361	528	586	606	255	168	143
27.....	128	163	188	171	192	380	557	586	606	255	155	139
28.....	132	159	188	171	196	425	577	586	596	255	155	138
29.....	128	147	184	171	-----	462	596	586	596	255	163	136
30.....	128	143	176	176	-----	434	596	586	596	280	188	136
31.....	132	-----	171	180	-----	440	-----	577	-----	263	204	-----

Month	Maximum	Minimum	Mean	Run-off, in acre-feet
October.....	147	117	129	7,930
November.....	180	132	160	9,520
December.....	192	151	170	10,500
January.....	184	155	169	10,400
February.....	263	163	192	10,700
March.....	538	204	335	20,600
April.....	596	410	500	29,800
May.....	606	577	593	36,500
June.....	615	420	590	35,100
July.....	586	255	406	25,000
August.....	255	155	197	12,100
September.....	184	120	144	8,570
The year.....	615	117	299	217,000

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-fourths mile south of Kernville.

RECORDS AVAILABLE.—January, 1910, to September, 1914; October, 1925, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 595 second-feet many days in June and July 1; no flow except a little leakage past head gates October 8-13.

1925-1929: Maximum mean daily discharge, 605 second-feet June 3-5, 1927; no flow at times.

REMARKS.—Records excellent. This canal diverts from Kern River half a mile below Kernville. It supplies the Borel hydroelectric plant of the Southern California Edison Co., 10 miles below, and the water then returns to Kern River. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104	129	164	188	206	223	500	584	584	595	254	184
2	105	132	168	193	245	232	500	574	584	584	236	108
3	105	140	193	197	236	245	511	584	584	584	227	160
4	105	164	201	188	202	254	542	584	584	584	218	152
5	107	160	193	184	273	233	553	584	584	584	214	153
6	108	160	180	193	245	321	500	584	584	584	210	143
7	80	173	190	188	236	321	490	584	584	584	201	143
8	3	164	180	184	193	321	511	584	584	584	197	144
9	3	148	180	180	180	321	500	584	584	574	188	140
10	2	148	180	180	201	380	480	584	584	553	184	136
11	2	148	206	184	227	370	500	584	584	521	176	123
12	1	144	188	184	213	351	532	584	595	480	172	120
13	1	172	227	184	210	341	542	584	595	440	164	125
14	34	201	201	184	210	331	532	584	595	410	160	121
15	118	193	180	184	206	321	563	584	595	380	188	114
16	129	168	180	197	206	312	574	584	584	360	236	112
17	125	188	180	188	206	321	584	584	584	351	218	109
18	125	193	184	176	214	331	574	584	584	351	222	112
19	125	188	184	206	206	351	574	584	595	331	206	120
20	125	184	197	206	201	351	574	584	595	341	197	156
21	125	184	193	206	206	360	520	584	584	321	193	172
22	125	184	193	176	214	450	574	584	595	302	184	164
23	125	184	193	197	222	521	574	584	584	283	176	156
24	125	176	197	184	222	480	584	584	595	273	172	143
25	125	176	206	184	214	440	574	584	595	273	168	144
26	125	172	218	193	214	420	584	584	595	264	160	146
27	125	176	214	193	210	410	584	584	595	264	152	140
28	125	176	214	193	214	440	584	584	595	254	143	136
29	129	164	210	197	-----	490	584	584	595	254	156	132
30	129	160	197	193	-----	542	584	584	595	233	176	132
31	129	-----	193	197	-----	511	-----	584	-----	273	197	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	129					1			93.4		5,740	
November	201					120			168		10,000	
December	227					164			193		11,900	
January	206					176			190		11,700	
February	242					180			219		12,360	
March	242					222			366		22,580	
April	534					480			548		32,500	
May	584					574			584		35,608	
June	595					564			588		35,000	
July	595					254			414		25,500	
August	254					143			192		11,800	
September	184					109			141		8,390	
The year	595					1			308		223,000	

SURFACE WATER SUPPLY, 1929, PART XI

SOUTH FORK OF KERN RIVER NEAR ONYX, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 24, T. 25 S., R. 35 E., three-fourths mile north of Kernville-Walker Pass road and 5 miles northeast of Onyx.

RECORDS AVAILABLE.—September, 1911, to August, 1914; January, 1919, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 236 second-feet April 18; no flow several days in July and August.

1911-1914, 1919-1929: Maximum discharge, 2,360 second-feet January 25, 1914 (gage height, 7.1 feet); no flow several days in July and August, 1929.

REMARKS.—No record October 1 to December 31. Lowell and Thomas irrigation ditches head above station. Mean daily discharge record furnished by Empire Development Co. January 1 to March 11; by State of California, division of water resources, March 12 to September 30.

Daily and monthly discharge, in second-feet, 1929

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	17	24	29	85	120	34	5.5	0.2	0.3
2.....	17	29	30	96	120	34	3.7	.2	.6
3.....	16	27	31	127	118	30	8.0	.1	.6
4.....	17	30	28	160	118	31	2.9	.1	.6
5.....	20	23	29	185	117	34	2.7	0	.5
6.....	18	23	32	78	104	33	2.7	0	.5
7.....	14	22	36	60	97	31	2.6	0	.5
8.....	18	11	26	53	94	26	2.4	0	.5
9.....	21	17	38	85	92	30	2.2	0	.5
10.....	20	24	60	65	90	30	2.1	0	.5
11.....	21	29	50	80	84	30	.9	0	.5
12.....	21	29	40	97	80	26	.7	0	.5
13.....	20	27	43	120	86	28	.5	0	.5
14.....	20	29	42	122	78	22	.2	0	.5
15.....	21	28	42	160	78	18	.2	0	.5
16.....	20	26	42	176	70	20	0	0	.5
17.....	11	28	42	212	70	38	0	0	.3
18.....	10	26	42	266	68	36	0	.1	.4
19.....	21	22	42	232	66	30	0	.2	2.9
20.....	26	21	36	183	64	30	0	0	2.5
21.....	22	21	41	164	67	17	.1	0	4.5
22.....	19	22	70	165	64	15	.2	0	5
23.....	17	22	76	140	58	12	.4	0	6
24.....	19	22	49	132	58	11	.4	0	5.5
25.....	19	21	47	180	52	10	.4	0	5
26.....	21	22	50	126	49	10	.4	0	4.5
27.....	22	22	50	123	46	10	.4	0	4.6
28.....	22	27	55	121	44	9.5	.4	.3	4.5
29.....	22	64	117	42	42	8.5	.5	.3	4.5
30.....	25	76	112	40	40	7.5	.9	.3	4.5
31.....	24	83			36		.8	.3	
Month	Maximum			Minimum		Mean		Run-off in acre-feet	
January.....	26			10		19.5		1,200	
February.....	30			11		24.1		1,340	
March.....	83			28		46.2		2,840	
April.....	236			60		131		7,800	
May.....	120			36		76.1		4,680	
June.....	38			7.5		22.9		1,300	
July.....	5.5			0		1.21		74.4	
August.....	.3			0		.07		4.3	
September.....	9.5			.3		2.31		137	
The period.....								19,400	

KERN RIVER BASIN

91

SOUTH FORK OF KERN RIVER AT ISABELLA, CALIF.

LOCATION.—Water-stage recorder in NW. ¼ sec. 20, T. 26 S., R. 33 E., one-fourth mile above junction with Kern River, at Isabella.

DRAINAGE AREA.—985 square miles.

RECORDS AVAILABLE.—January to September, 1929.

EXTREMES.—Maximum mean daily discharge during period, 28 second-feet April 6; minimum, 3.9 second-feet July 23 and 31.

REMARKS.—Twenty-seven irrigation ditches divert from river above station; considerable return flow from many of them. Mean daily discharge record furnished by Empire Development Co. January 1 to April 16; by State of California, division of water resources, April 17 to September 30.

Daily and monthly discharge, in second-feet, 1929

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	24	24	23	18	6	6	8.5	4.3	8
2.	24	25	23	16	7	6.5	8	6.5	8
3.	24	24	23	15	6.5	7	8.5	6.5	8.5
4.	24	24	23	15	6.5	10	8.5	6.5	8.5
5.	24	24	23	24	7	10	8	7	8.5
6.	24	24	23	28	7	10	8	6.5	8.5
7.	23	24	23	22	6.5	10	8	8	8.5
8.	23	24	23	21	7	10	8.5	8.5	8.5
9.	23	24	24	17	7	11	8	8	8.5
10.	23	24	24	15	8.5	10	7.5	7	6.5
11.	23	24	24	15	7	10	7	7.5	4.9
12.	23	24	24	16	7	10	7.5	8	4.7
13.	23	23	24	16	7	10	7.5	8.5	4.9
14.	23	23	21	16	6.5	9.5	7.5	8.5	8.5
15.	23	23	13	17	6.5	9.5	7.5	9	8.5
16.	23	23	14	17	6.5	9.5	7	8.5	8
17.	23	22	20	6.5	7	8	7	8.5	8
18.	23	23	16	7	7	6.5	6.5	8.5	8
19.	23	22	16	12	9.5	6.5	7	8.5	8
20.	23	22	20	19	9.5	6	7	8	8
21.	23	22	20	13	8	5.5	7	7.5	8
22.	23	22	20	12	7.5	5.5	7	7.5	8
23.	24	23	20	11	6	5.5	7	8	8
24.	23	22	20	9	6	5.5	7	8	8
25.	23	23	20	6	6	5	7.5	8	8
26.	23	22	20	6	6.5	5	6	8	8
27.	24	22	20	6	6	7	4	8	8
28.	24	23	21	6	5.5	9	3.9	8	8.5
29.	24	21	21	6	6	8.5	4.3	8	8.5
30.	24	20	20	6	6	8.5	4.3	8	9
31.	24	21	21	6.5	6.5	6.5	3.9	8	467

Month	Maximum	Minimum	Mean	Run-off in acre-feet
January	24	23	23.4	1,440
February	25	22	23.1	1,280
March	24	13	20.9	1,290
April	28	6	13.8	821
May	9.5	5.5	6.85	421
June	11	5	8.02	477
July	8.5	3.9	6.93	426
August	9	4.3	7.72	475
September	9	4.7	7.85	467
The period				7,100

LOWELL DITCH NEAR ONYX, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 24, T. 25 S., R. 35 E., three-fourths mile below intake and 5 miles northeast of Onyx.

RECORDS AVAILABLE.—April to September, 1929.

EXTREMES.—Maximum mean daily discharge during period, 5 second-feet several days in April, May, and June; minimum, 0.4 second-foot June 12-14.

REMARKS.—This ditch diverts from South Fork of Kern River 1 mile above gaging station near Onyx, and the water is used for irrigation on the 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. Record of daily discharge furnished by State of California, division of water resources.

Daily and monthly discharge, in second-feet, 1929

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	-----	5	2.7	4.8	1.8	2.0	16	5	4.6	4.7	4.8	3.2	1.5
2	-----	4.7	1.6	4.8	2.4	1.9	17	5	4.6	4.8	4.8	3.5	1.5
3	-----	4.7	1.2	4.6	2.4	1.9	18	5	4.6	5	4.8	4.2	1.8
4	-----	4.7	.6	2.9	3.2	1.9	19	5	4.7	5	4.8	4.2	3.3
5	-----	4.8	.6	2.6	3.2	1.9	20	5	4.9	4.9	3.9	3.5	4.1
6	-----	4.8	.6	2.6	3.2	1.9	21	5	5	4.8	.5	2.5	4.0
7	-----	4.8	.6	2.6	3.1	1.8	22	5	5	4.8	.5	1.6	3.0
8	-----	4.8	.6	2.6	3.0	1.9	23	5	5	4.5	.5	1.6	1.7
9	-----	4.7	.5	2.4	2.8	1.8	24	5	5	4.2	.5	1.6	1.6
10	-----	4.6	.5	2.1	2.6	1.9	25	5	5	3.9	.5	1.6	1.4
11	-----	1.4	4.6	.5	3.5	2.5	26	5	4.8	3.6	.5	1.6	1.2
12	-----	1.5	4.7	.4	4.8	2.5	27	5	4.8	3.2	.7	1.6	1.1
13	-----	1.7	4.6	.4	4.9	2.6	28	5	4.8	2.8	.7	1.6	1.1
14	-----	1.8	4.6	.4	4.9	2.3	29	5	4.6	3.5	.8	1.7	1.0
15	-----	3.8	4.6	1.4	4.8	2.6	30	5	3.5	4.9	1.1	1.8	.8
							31	-----	3.2	-----	1.0	1.5	-----
Month							Maximum		Minimum		Mean		Run-off in acre-feet
April 11-30							5		1.4		4.26		169
May							5		3.2		4.67		287
June							5		.4		2.57		198
July							4.9		.5		2.72		167
August							4.2		1.5		2.50		184
September							4.1		.8		1.90		118
The period													1,040

KERN RIVER BASIN

93

THOMAS DITCH NEAR ONYX, CALIF.

LOCATION.—Water-stage recorder in SW. ¼ sec. 24, T. 25 S., R. 35 E., 200 feet below intake and 5 miles northeast of Onyx.

RECORDS AVAILABLE.—April to September, 1929.

EXTREMES.—Maximum mean daily discharge during period, 11 second-feet May 17; minimum, 1.8 second-feet June 5 and 6.

REMARKS.—This ditch diverts from South Fork of Kern River 1,000 feet above gaging station near Onyx, and the water is used for irrigation on the 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. Record of daily discharge furnished by State of California, division of water resources.

Daily and monthly discharge, in second-feet, 1929

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1		9	8	6	5	3.7	16	8.5	10	8.5	2.0	2.8	3.2
2		9	3.9	7	3.4	3.7	17	7.5	11	10	2.9	3.0	3.2
3		9	10	7	2.6	3.7	18	5.5	9.5	9.5	2.9	3.9	3.5
4		9	7	6.5	2.2	3.8	19	5	9.5	9	2.9	4.2	4.8
5		9	1.8	6.5	2.1	3.8	20	6	9.5	8	3.6	3.4	6.5
6		9	1.8	6	2	3.9	21	9	9.5	7.5	5.5	3.4	6
7		8.5	4.3	6	2.1	3.9	22	9.5	9	6.5	5.5	3.4	6
8		8	9	5.5	2.0	3.9	23	8	9	6	5.5	3.4	6
9		8	9.5	5.5	2.2	3.7	24	7	9	6	5.5	3.6	5.5
10		8	9.5	5.5	2.3	3.6	25	7.5	9	6	5.5	3.6	5.5
11	6	8	9	3.8	2.6	3.4	26	7.5	8.5	6	5.5	3.6	6
12	7	8	8.5	2.9	2.6	3.3	27	7	8.5	5.5	5	3.8	6
13	8	7.5	8.5	3.7	2.5	3.3	28	8	8.5	5.5	5	3.8	6
14	8.5	7.5	8.5	3.4	2.5	3.4	29	9	8.5	4.8	5.5	3.7	5.5
15	9	9	8	3.2	2.4	3.3	30	8.5	8.5	4.6	6.5	3.7	5.5
							31		8.5		6	3.7	

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April 11-30	9.5	5	7.60	361
May	11	7.5	8.79	540
June	10	1.8	7.02	418
July	7	2.9	4.99	307
August	5	2.0	3.08	189
September	6.5	3.2	4.45	265
The period				2,020

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.

RECORDS AVAILABLE.—October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 205 second-feet December 18 (gage height, 2.24 feet); minimum, 1.1 second-feet August 5 to September 5. 1910-1929: Maximum discharge, about 420 second-feet January 24, 1914 (gage height, 2.9 feet); minimum, 0.6 second-foot August 5-12, 1920.

REMARKS.—Records fair. Flow is regulated at times by filling and emptying swimming tank at Hot Springs. Gage-height record furnished by United States Forest Service.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	2.8	8.5	4.6	5	3.9	10	12	5	3.0	1.2	1.1
2	2.1	2.8	9.5	4.6	10	4.1	10	12	5	3.0	1.2	1.1
3	1.7	3.0	8.5	4.4	12	4.1	10	18	5	2.6	1.2	1.1
4	2.1	2.8	8.5	4.6	16	4.1	11	15	4.6	2.6	1.2	1.1
5	2.1	2.8	8.5	4.6	13	4.6	19	15	4.6	2.6	1.1	1.1
6	2.2	2.8	12	4.6	10	4.6	15	14	4.6	2.6	1.1	1.2
7	2.4	2.6	11	4.4	5	4.6	22	14	4.1	2.6	1.1	1.2
8	2.1	2.4	11	4.1	4.6	4.6	25	15	4.1	2.2	1.1	1.2
9	2.1	2.4	10	4.1	4.2	10	29	15	3.7	2.2	1.1	1.2
10	2.1	2.8	10	4.4	3.8	6.5	22	15	3.7	2.2	1.1	1.2
11	2.4	5.5	11	4.4	3.7	5	18	15	3.2	2.2	1.1	1.2
12	2.4	53	10	4.4	3.7	5	16	14	3.7	2.2	1.1	1.2
13	2.4	70	10	4.6	3.4	5	12	15	3.2	2.1	1.1	1.2
14	3.2	44	10	4.6	3.2	5.5	12	14	3.2	1.9	1.1	1.2
15	3.2	46	10	4.6	3.2	5.5	13	14	3.2	1.5	1.1	1.2
16	3.2	15	165	5.5	3.2	5.5	13	14	59	1.5	1.1	1.2
17	3.2	13	165	15	3.2	6	16	13	11	1.5	1.1	1.2
18	2.8	12	205	10	3.0	6	25	12	9.5	1.5	1.1	1.2
19	2.8	13	140	8	3.0	6	26	12	8	1.3	1.1	1.0
20	2.4	12	96	22	3.2	8	13	11	7.5	1.3	1.1	15
21	2.6	12	46	16	3.7	13	12	10	6.5	1.3	1.1	7
22	2.6	11	21	87	3.7	31	11	8.5	6.5	1.2	1.1	2.6
23	2.6	11	14	42	3.7	28	11	9.5	6	1.2	1.1	2.2
24	2.4	10	12	16	3.9	16	10	8.5	5.5	1.2	1.1	1.9
25	2.4	10	10	9.5	3.9	12	9.5	8	4.8	1.2	1.1	1.5
26	2.6	9.5	8	8	3.7	12	9.5	7.5	4.8	1.2	1.1	1.5
27	2.6	9.5	6	6	3.7	10	9.5	7.5	4.4	1.2	1.1	1.5
28	2.6	9.5	6	5.5	3.9	10	10	6.5	3.9	1.2	1.1	1.5
29	2.8	9.5	5	5.5	-----	10	11	6	3.4	1.2	1.1	1.5
30	2.8	9.5	4.6	5	-----	10	12	5.5	3.4	1.2	1.1	1.5
31	2.8	-----	4.6	5	-----	10	-----	5.5	-----	1.2	1.1	-----
Month												
	Maximum						Minimum		Mean		Run-off in acre-feet	
October	3.2						1.7		2.51		154	
November	70						2.4		13.7		815	
December	205						4.6		34.1		2,100	
January	87						4.1		10.7		668	
February	16						3.0		5.24		291	
March	31						3.9		8.73		537	
April	29						9.5		14.8		881	
May	18						5.5		11.7		719	
June	59						3.2		6.84		407	
July	3.0						1.2		1.80		111	
August	1.2						1.1		1.11		68.2	
September	15						1.1		2.02		120	
The year	205						1.1		9.47		6,800	

TULE RIVER NEAR PORTERVILLE, CALIF.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 25, T. 21 S., R. 23 E., below highway bridge 1 mile above mouth of South Fork and 6 miles east of Porterville.

DRAINAGE AREA.—266 square miles.

RECORDS AVAILABLE.—May, 1901, to September, 1929.

EXTREMES.—Maximum discharge during year, 468 second-feet March 22 (gage height, 3.8 feet); stream practically dry October 1-18.

1901-1929: Maximum discharge, about 6,780 second-feet January 17, 1916 (gage height, 11.0 feet); stream practically dry several days in September and October, 1926, and October 1-18, 1929.

REMARKS.—Records good. Discharge estimated August 25 to September 1. Several small diversions above station. Power is developed on Middle Fork and tributaries.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.6	19	33	89	89	146	202	72	16	0.5	0.2
2	0	.6	24	30	133	89	146	220	70	16	.5	.2
3	0	1.0	35	30	124	42	146	211	70	12	.5	.2
4	0	1.4	48	30	105	43	138	258	64	9.5	.4	.2
5	0	4.4	35	30	102	44	248	258	58	8	.4	.2
6	0	2.9	32	28	94	55	229	238	64	9	.4	.2
7	0	3.0	31	27	79	55	194	220	63	7	.4	.2
8	0	3.0	30	27	68	55	154	211	64	6	.4	.2
9	0	3.2	29	27	65	56	146	211	65	4.2	.4	.2
10	0	3.4	30	27	61	146	124	194	64	2.7	.3	.2
11	0	4.0	29	27	53	220	181	194	62	2.5	.3	.2
12	0	4.0	36	27	52	124	131	189	54	2.5	.3	.2
13	0	10	190	27	51	95	181	178	47	2.2	.3	.2
14	0	19	65	27	50	87	124	186	42	1.5	.3	.2
15	0	37	54	28	50	84	138	186	38	1.2	.3	.2
16	0	28	40	34	50	87	154	170	186	.8	.3	.2
17	0	25	35	34	50	88	220	178	178	.7	.3	.2
18	0	24	34	29	49	90	238	186	124	.6	.3	.1
19	.1	24	32	44	48	146	229	162	97	.7	.3	.1
20	.4	22	32	60	47	131	220	154	82	.7	.3	.2
21	.9	22	32	48	45	138	202	138	65	.6	.3	.1
22	1.0	22	31	44	45	300	186	131	54	.6	.3	.2
23	.9	22	29	39	46	300	162	138	50	.6	.3	.1
24	1.6	22	30	38	48	229	146	131	47	.6	.3	.1
25	1.6	22	29	36	47	178	131	131	42	.6	.3	.1
26	1.2	22	31	35	46	138	131	131	35	.5	.3	.1
27	.7	22	34	38	44	131	138	117	31	.5	.3	.2
28	.5	21	35	24	42	138	146	92	29	.5	.3	.2
29	.4	20	35	33	33	186	170	85	22	.5	.2	.3
30	.4	19	34	31	31	186	186	80	18	.5	.2	.3
31	.4	---	35	31	31	154	---	76	---	.5	.2	---
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October	1.6			0			0.33			20.3		
November	37			6			14.5			868		
December	190			19			39.2			2,410		
January	60			27			33.2			2,040		
February	138			39			62.1			3,438		
March	300			39			123			7,860		
April	248			124			166			9,380		
May	258			76			169			10,490		
June	186			18			66.2			3,890		
July	16			.5			3.54			218		
August	.5			.2			.33			20.3		
September	.3			.1			.18			10.7		
The year	300			0			56.3			40,800		

SOUTH FORK OF TULE RIVER NEAR PORTERVILLE, CALIF.

LOCATION.—Staff gage opposite Indian school in Tule Indian Reservation, 2 miles below mouth of Rocky Creek, 8 miles above junction with Tule River, and 14 miles southeast of Porterville, Tulare County.

RECORDS AVAILABLE.—October, 1910, to March, 1925; January, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 231 second-feet March 22 (gage height, 3.00 feet); no flow October 1-6.

1910-1925, 1927-1929: Maximum discharge, about 2,750 second-feet January 26, 1914 (gage height, 8.0 feet); no flow about June 27 to October 6, 1924, and October 1-6, 1928.

REMARKS.—Records good except those for estimated periods and for June 17 to September 30, which are fair. Diversions for irrigation above station. Gage-height record furnished by United States Indian Service.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	0	3.0	6	12	18	12	49	60	20	8.5	2.8	0.8
2.....	0	2.7	6	12	37	*13	44	63	20	*8	1.8	.8
3.....	0	2.7	18	12	29	15	44	61	20	*8	2.2	.8
4.....	0	4.0	18	13	81	16	55	65	19	*7	2.6	.7
5.....	0	3.8	10	12	36	18	104	63	18	*7	2.0	.7
6.....	0	*3.4	8.5	12	33	20	74	61	18	*6	1.4	1.2
7.....	.8	3.0	8	12	25	20	64	59	*13	6	1.3	1.0
8.....	.8	3.0	7.5	11	20	19	64	56	*19	6	1.6	1.4
9.....	.7	3.0	7.5	11	18	16	70	54	*30	6	1.2	1.4
10.....	.7	3.0	7.5	10	15	40	68	54	*34	5.5	1.4	1.3
11.....	.8	3.0	22	10	17	34	65	52	*20	4.5	2.1	.9
12.....	1.3	3.0	14	10	16	29	64	49	14	3.9	1.2	.8
13.....	2.1	14	50	10	15	27	*61	48	14	3.9	1.2	.6
14.....	2.4	16	18	11	15	27	58	47	13	3.9	1.3	.6
15.....	2.4	15	15	11	14	27	71	43	*13	3.7	2.0	.6
16.....	2.2	11	14	14	14	28	86	42	38	3.7	*1.8	.6
17.....	1.6	10	13	14	14	30	91	42	29	3.4	*1.7	.5
18.....	1.3	9	12	12	14	30	92	*40	20	3.4	*1.6	.6
19.....	1.2	7.5	12	23	13	42	96	38	16	3.4	*1.5	1.4
20.....	1.1	6.5	12	23	13	39	89	36	14	2.9	*1.4	2.7
21.....	*1.2	6.5	11	16	13	33	81	33	14	3.0	*1.3	1.8
22.....	1.2	7	11	15	14	220	67	30	*13	2.6	*1.2	1.8
23.....	1.2	6.5	11	14	13	128	61	30	*12	2.1	1.1	1.4
24.....	1.4	*6.5	11	13	13	82	56	29	*12	2.1	.7	1.4
25.....	1.5	*6.5	*12	13	13	58	49	28	*12	3.2	1.3	1.1
26.....	1.6	*6.5	*16	*14	13	50	50	26	*11	3.2	1.0	1.2
27.....	2.1	*6	*18	14	12	51	54	25	*10	3.9	.7	1.3
28.....	2.1	*6	16	13	12	56	59	24	10	3.4	.7	1.6
29.....	2.1	*6	14	12	-----	64	59	22	9.5	3.0	.7	1.6
30.....	2.2	6	13	13	-----	64	59	22	9	3.2	.8	1.5
31.....	2.7	-----	12	*14	-----	*56	-----	21	-----	3.4	.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.7	0	1.25	76.9
November.....	16	2.7	6.34	877
December.....	50	6	13.6	836
January.....	23	10	13.1	806
February.....	81	12	20.0	1,119
March.....	220	12	44.0	2,710
April.....	104	44	66.8	3,970
May.....	65	21	42.7	2,630
June.....	38	9	17.4	1,040
July.....	8.5	2.1	4.48	275
August.....	2.8	.7	1.43	87.9
September.....	2.7	.5	1.13	67.2
The year.....	220	0	19.3	14,000

* Estimated.

KAWeah RIVER NEAR THREE RIVERS, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 27, T. 17 S., R. 28 N., $1\frac{1}{4}$ miles southwest of Three Rivers. South Fork enters three-fourths mile and North Fork 3 miles above station. Previous to July 1, 1929, a staff gage at same location.

DRAINAGE AREA.—520 square miles.

RECORDS AVAILABLE.—April, 1903, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,780 second-feet June 16 (gage height, 9.45 feet); minimum, 14 second-feet October 1-11.

1903-1929: Maximum discharge, about 14,700 second-feet January 17, 1916 (gage height, 13.5 feet); minimum, 9.5 second-feet August 29 to September 1, 1924.

REMARKS.—Records good. Discharge estimated May 1-6. Irrigation diversions above station. Power is developed on Middle and East Forks.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	34	71	116	151	123	428	850	778	428	75	36
2	14	44	78	116	285	132	402	1,060	778	371	71	36
3	14	66	90	116	288	154	428	1,250	815	352	65	34
4	14	85	90	116	420	188	428	1,450	815	328	62	35
5	14	66	95	116	206	266	513	1,600	740	306	57	31
6	14	66	90	116	177	244	428	1,400	740	288	56	36
7	14	66	90	116	188	244	428	1,330	670	276	54	34
8	14	66	95	116	128	244	376	1,330	637	260	52	34
9	14	62	90	116	132	206	376	1,520	542	236	51	35
10	14	66	90	116	138	513	328	1,420	573	221	50	32
11	14	66	108	111	123	328	376	1,330	573	199	47	30
12	16	66	116	103	128	328	428	1,420	604	181	46	29
13	21	95	228	95	108	244	376	1,420	670	167	44	27
14	31	122	169	90	108	226	402	1,620	740	151	42	26
15	34	139	145	103	106	206	484	1,520	778	148	47	26
16	21	111	130	116	108	244	740	1,420	3,780	138	51	28
17	18	116	130	108	106	284	815	1,530	1,330	129	48	24
18	16	116	122	116	108	244	778	1,620	1,160	123	44	24
19	31	111	122	123	106	284	706	1,620	865	117	48	27
20	28	103	130	151	108	284	670	1,150	815	111	42	36
21	24	95	130	122	108	244	573	1,060	855	306	41	34
22	28	90	116	116	123	815	604	1,060	815	98	40	32
23	28	90	116	116	114	513	542	1,520	742	90	41	31
24	24	90	116	116	123	402	542	1,330	670	88	38	36
25	24	90	122	116	123	328	484	1,420	670	83	37	30
26	24	85	139	116	123	376	484	1,330	573	81	36	26
27	24	71	145	116	114	402	484	895	542	79	35	28
28	24	66	139	116	132	402	542	815	542	77	35	29
29	24	71	139	130	-----	484	637	895	513	77	34	28
30	4	66	116	130	-----	484	670	895	518	81	34	27
31	31	-----	116	130	-----	428	-----	815	-----	79	35	-----
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October	34			14			20.9			1,290		
November	139			34			81.7			4,660		
December	228			71			118			7,230		
January	151			90			116			7,130		
February	420			108			147			8,160		
March	815			123			316			10,400		
April	815			328			516			30,700		
May	1,620			815			1,290			70,800		
June	3,780			513			827			49,300		
July	428			77			176			10,800		
August	75			34			46.9			2,880		
September	36			24			30.4			1,310		
The year	3,780			14			308			223,000		

SURFACE WATER SUPPLY, 1929, PART XI

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, one-fourth mile above Manikin Creek and half a mile north of Kaweah.

RECORDS AVAILABLE.—October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 780 second-feet June 16 (gage height, 3.50 feet); minimum, 0.2 second-foot during October and September, 1910-1929: Maximum discharge, about 7,400 second-feet January 25, 1914 (gage height, 10.2 feet); no flow many days during July to October, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Several small irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1			6	15	28	25	108	177	55	24	5	0.4	
2			7	14	68	26	105	203	51	23	4.3	.4	
3			10	15	48	35	118	203	49	23	4.4	.4	
4			15	17	118	47	113	218	42	22	4.2	.4	
5			11	14	62	59	145	177	41	21	3.7	.4	
6		0.3	10	14	49	64	121	177	42	20	2.3	.4	
7			8.5	14	38	55	105	166	42	19	3.1	.4	
8			7.5	13	26	51	98	190	46	16	3.1	.5	
9			7.5	12	23	46	99	203	72	17	2.8	.5	
10			7.5	12	28	133	88	177	78	17	1.8	.5	
11				21	13	24	100	108	155	62	15	1.7	.5
12				15	13	22	92	115	155	47	16	1.7	.4
13			12	49	13	23	75	96	155	42	15	1.7	.5
14			15	25	13	23	69	87	155	38	13	1.2	.3
15			23	21	13	62	123	145	35	13	1.0	.3	
16		0.2											
17			10	18	14	23	62	155	135	250	12	1.8	.4
18			12	16	15	24	70	190	133	187	11	2.8	.4
19			9.5	15	13	25	79	177	130	114	11	2.8	.2
20			8	15	18	22	86	177	128	94	10	2.1	.2
21			7.5	14	25	23	84	155	121	78	9.5	2.0	.3
22													
23			7	14	21	21	100	145	110	66	9	2.0	.4
24			7.5	14	17	27	135	135	105	60	8.5	2.0	.4
25			7.5	15	18	29	155	123	99	49	8	2.0	.4
26			7	15	16	29	125	125	96	45	6.5	1.3	.4
27			6.5	16	15	28	94	115	93	40	6	1.3	.4
28													
29			6.5	25	15	26	93	112	87	38	6	1.5	.4
30			6.5	29	15	25	79	123	79	34	5	1.5	.4
31			6.5	25	15	25	113	112	72	32	5	.5	.4
1			6.5	23	15	25	135	145	67	29	4.8	.4	.4
2			6	20	16	25	135	155	61	26	5.5	.4	.6
3				16	17	108		55		6	.4		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			0.2	12.3
November	23		5.60	333
December	49	6	16.5	1,010
January	25	12	15.2	565
February	113	21	33.1	1,867
March	155	25	53.9	5,169
April	190	87	126	7,500
May	213	55	136	8,808
June	250	26	62.8	3,740
July	24	4.8	12.8	787
August	5	.4	2.20	185
September	.6	.2	.40	23.8
The year	250	.2	41.2	29,800

* Estimated.

TULARE LAKE BASIN

99

KINGS RIVER NEAR HUME, CALIF.

LOCATION.—Water-stage recorder near west line of sec. 35, T. 12 S., R. 28 E., 1½ miles below junction of South and Middle Forks of Kings River and 3¾ miles north of Hume.

RECORDS AVAILABLE.—August, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 7,020 second-feet June 16 (gauge height, 6.92 feet); minimum, 108 second-feet October 10.

1921-1929: Maximum discharge, 11,700 second-feet June 4, 1922 (gauge height, 8.67 feet); minimum, 63 second-feet September 29 to October 4, 1924.

REMARKS.—Records good. Gauge-height record and results of discharge measurements furnished by city of Los Angeles.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	122	124	144	192	192	212	684	1,840	2,000	1,940	559	297
2.....	122	124	144	190	226	220	708	2,280	1,780	1,780	490	370
3.....	120	148	182	192	226	238	750	2,440	2,100	1,720	440	370
4.....	122	162	176	186	282	271	774	3,240	2,220	1,620	480	343
5.....	122	164	168	192	236	321	732	3,100	1,940	1,620	480	317
6.....	120	162	160	185	244	361	678	2,880	1,890	1,480	366	285
7.....	118	170	162	185	226	306	678	2,880	1,780	1,890	343	205
8.....	114	158	160	182	190	248	678	3,020	1,670	1,800	325	185
9.....	110	146	168	180	190	361	630	3,400	1,480	1,180	313	178
10.....	110	144	168	182	208	537	624	3,820	1,620	1,100	297	170
11.....	112	140	175	180	220	420	672	2,950	1,480	1,040	285	166
12.....	124	138	175	178	212	430	720	3,240	1,620	940	271	140
13.....	130	168	206	175	210	426	702	3,400	2,110	840	260	154
14.....	132	192	178	173	210	392	690	3,650	2,000	774	254	150
15.....	134	176	162	173	202	415	842	3,480	2,540	720	274	144
16.....	136	185	164	172	208	420	1,000	3,400	5,310	672	293	140
17.....	132	198	178	168	206	470	1,800	3,910	3,020	654	338	128
18.....	130	188	182	166	206	470	1,840	4,560	2,540	648	343	124
19.....	126	186	186	180	198	475	1,220	4,860	2,540	624	317	132
20.....	126	178	198	178	198	480	1,070	3,240	2,540	676	297	200
21.....	126	180	185	160	198	510	1,040	2,740	2,740	532	282	210
22.....	126	175	186	160	206	908	1,000	2,880	2,880	495	268	240
23.....	124	168	186	180	206	708	940	3,400	2,810	470	257	188
24.....	122	164	186	164	208	618	940	3,740	2,670	455	247	128
25.....	122	160	226	172	202	570	934	4,190	2,600	445	235	170
26.....	120	158	235	166	202	542	908	3,240	2,540	435	220	166
27.....	120	156	218	170	200	564	979	2,280	2,400	430	212	160
28.....	122	150	228	172	206	654	1,070	1,940	2,340	415	215	156
29.....	120	138	216	170	-----	744	1,180	2,000	2,280	445	238	150
30.....	122	138	202	170	-----	774	1,390	2,840	2,060	435	289	148
31.....	122	-----	198	175	-----	708	-----	2,400	-----	624	297	-----
Month	Maximum						Minimum		Mean		Run-off in acre-feet	
October.....	136						110		123		7,560	
November.....	198						124		160		9,520	
December.....	235						144		183		11,200	
January.....	192						160		176		10,800	
February.....	282						190		211		11,700	
March.....	908						212		482		29,480	
April.....	1,390						624		896		68,880	
May.....	4,560						1,840		3,100		191,000	
June.....	5,310						1,480		2,330		139,000	
July.....	1,944						415		895		55,000	
August.....	559						212		316		12,480	
September.....	370						134		199		11,880	
The year.....	5,310						110		759		550,000	

KINGS RIVER AT PIEDRA, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 8, T. 13 S., R. 24 E., half a mile below highway bridge at Piedra and 12 miles northeast of Sanger.

DRAINAGE AREA.—1,700 square miles.

RECORDS AVAILABLE.—September, 1895, to September, 1929.

EXTREMES.—Maximum discharge during year, 14,700 second-feet June 16 (gage height, 12.94 feet); minimum (estimated), 118 second-feet October 1.

1895-1929: Maximum discharge, about 59,700 second-feet January 25, 1914 (gage height, 21.8 feet); minimum, 67 second-feet October 3, 1924.

REMARKS.—Records good; daily discharge estimated October 1 to November 3 on basis of weekly staff gage readings. One hydroelectric plant on North Fork of Kings River. No other diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	118	123	158	275	287	347	1,240	3,450	3,090	2,380	636	257
2	120	123	166	269	413	383	1,240	4,290	2,680	2,230	552	257
3	120	123	212	269	473	407	1,520	5,910	3,090	2,060	485	353
4	120	132	293	263	740	461	1,850	5,870	3,330	1,930	437	341
5	120	182	245	257	636	571	1,610	6,050	2,850	1,780	515	329
6	120	170	218	263	467	656	1,320	5,330	2,730	1,700	425	299
7	120	162	201	251	443	675	1,240	5,330	2,550	1,610	365	269
8	120	178	201	240	395	656	1,240	5,170	2,450	1,490	341	186
9	120	170	206	234	329	636	1,210	6,050	2,330	1,420	317	174
10	123	147	212	223	317	1,470	1,070	6,250	2,450	1,280	305	162
11	126	141	281	223	353	1,280	1,180	5,330	2,580	1,180	287	154
12	129	141	257	223	359	1,070	1,550	5,690	2,380	1,070	275	150
13	132	162	223	223	347	902	1,290	6,000	2,080	968	257	147
14	135	263	223	223	341	805	1,210	6,450	3,090	870	240	141
15	138	317	245	223	335	772	1,460	6,450	3,450	805	234	135
16	141	234	212	234	329	786	1,930	6,050	3,560	766	251	132
17	138	218	228	234	335	805	2,530	6,450	5,590	720	275	129
18	136	263	245	223	341	870	2,730	7,290	4,370	688	305	129
19	133	269	234	245	335	902	2,430	7,510	3,870	662	311	132
20	130	228	234	263	311	902	2,080	5,870	3,590	636	299	135
21	128	218	234	263	317	935	1,930	5,010	3,590	584	287	138
22	126	223	234	251	335	1,570	1,880	5,010	3,730	539	263	138
23	123	228	234	240	353	1,540	1,700	5,330	3,590	509	245	132
24	123	212	234	269	365	1,210	1,650	6,050	3,330	451	223	174
25	123	201	245	223	341	1,070	1,610	6,650	3,210	479	218	166
26	123	186	347	240	341	1,000	1,570	5,510	3,090	467	212	138
27	123	180	377	234	323	968	1,709	3,870	2,970	455	190	147
28	123	186	359	240	317	1,100	1,980	3,210	2,850	443	178	141
29	123	180	347	251	-----	1,350	2,230	3,090	2,680	437	174	132
30	123	174	317	251	-----	1,490	2,630	3,450	2,530	467	166	129
31	123	-----	281	257	-----	1,350	-----	3,590	-----	558	245	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	141	118	126	7,750
November	317	123	192	11,490
December	377	158	248	16,300
January	293	223	247	16,290
February	740	287	378	21,000
March	1,570	347	934	57,400
April	2,730	1,070	1,660	98,800
May	7,510	3,090	5,350	331,000
June	9,560	2,330	3,340	199,000
July	2,380	437	1,020	62,700
August	636	174	308	18,980
September	341	129	187	11,100
The year	9,560	118	1,170	849,000

NORTH FORK OF KINGS RIVER BELOW MEADOW BROOK, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ 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 square miles.

RECORDS AVAILABLE.—October, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 733 second-feet June 16 (gage height, 4.49 feet); minimum, 0.8 second-foot September 17.

1921-1929: Maximum discharge, 870 second-feet June 4, 1922 (gage height, 5.02 feet); minimum, 0.3 second-foot part of September 12-14, 1924.

REMARKS.—Records excellent except those for estimated periods, which are fair. Daily discharge not determined December 1 to March 26 because of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.3				20	168	138	70	31	1.6
2	1.0	1.4				20	206	160	65	21	1.5
3	1.0	1.6				20	252	192	56	16	1.4
4	1.1	3.0				20	303	*200	52	12	1.3
5	1.1	2.8				17	284	*170	44	10	1.2
6	1.1	3.8				14	273	*150	41	8.5	1.2
7	1.0	3.0				*15	260	*130	37	7.5	1.2
8	1.0	1.7				*14	289	*110	32	6.5	1.2
9	1.0	1.5				*13	328	*125	28	6	1.2
10	1.0	1.4	*3.6	*5.5		*13	298	*140	25	5	1.2
11	1.0	1.3				*17	274	*130	22	4.1	1.1
12	1.3	1.5				*30	310	*120	20	3.6	1.0
13	1.5	1.5				27	332	160	17	3.5	1.0
14	1.6	1.4				31	348	218	14	3.6	1.0
15	1.8	2.3				56	313	276	12	5	.9
16	1.7	3.1				76	334	482	11	5.5	.9
17	1.6	4.4				92	378	252	10	11	.8
18	1.4	3.6				71	432	226	10	8.5	1.0
19	1.3	3.3				55	372	208	9.5	8	1.7
20	1.2	3.0				48	290	198	8.5	7	2.1
21	1.2	3.1				46	278	201	8	6	1.9
22	1.2	3.5				41	318	198	7	5	1.6
23	1.2	3.1				41	350	182	6.5	4.1	1.5
24	1.2	2.8				42	392	159	6.5	3.6	1.3
25	1.2	2.4				39	358	142	6	3.1	1.2
26	1.2	2.4				39	247	129	5.5	2.8	1.2
27	1.2	2.3			17	57	174	114	5.5	2.3	1.2
28	1.2	1.8			17	70	145	107	6	2.3	1.2
29	1.2	1.6			18	84	164	98	22	2.1	1.2
30	1.2	1.6			20	127	192	80	37	2.0	1.2
31	1.3				20		173		48	1.7	
<hr/>											
Month	Maximum					Minimum		Mean		Run-off in acre-feet	
October	1.8					0.9		1.22		75.0	
November	4.4					1.3		2.38		142	
December								*3.5		215	
January								*4.0		246	
February								*6.0		333	
March								*15.0		922	
April						127		13		41.8	
May						432		145		285	
June						482		80		173	
July						70		5.5		28.9	
August						31		1.7		7.04	
September						2.1		.8		1.27	
The year						482		.8		47.3	
										34,200	

* Estimated.

* Result of discharge measurement.

NORTH FORK OF KINGS RIVER NEAR CLIFF CAMP, CALIF.

LOCATION.—Water-stage recorder in N. $\frac{1}{2}$ sec. 12, T. 11 S., R. 27 E., at Cliff Camp Bridge, 1 mile west of Cliff Camp. Altitude, about 6,150 feet.

DRAINAGE AREA.—174 square miles.

RECORDS AVAILABLE.—August, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,880 second-feet June 16 (gage height, 11.98 feet); minimum, 2.0 second-feet November 28.

1921-1929: Maximum discharge, 6,030 second-feet June 4, 1922 (gage height, 10.6 feet at previous gage); minimum, 1.3 second-feet September 9 and 10, 1924.

REMARKS.—Records excellent except those for December 13-20, January 20 to February 4, February 8 and 9, which were estimated because of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	4.3	6.5	8	23	30	55	221	1,030	540	170	52	6.5
2.....	4.3	7	9.5	23	34	64	235	1,240	540	162	38	6
3.....	4.4	13	12	23	45	77	247	1,800	660	138	26	5.5
4.....	4.5	14	16	23	40	101	221	1,640	620	123	25	5.5
5.....	4.8	13	16	24	33	120	174	1,900	505	112	22	6.5
6.....	4.7	18	16	23	33	130	157	1,480	470	96	19	5.5
7.....	4.5	18	15	22	26	126	163	1,380	455	94	18	6
8.....	4.4	13	16	20	24	109	156	1,510	425	86	16	6
9.....	4.3	10	16	20	24	114	142	1,780	540	78	15	6
10.....	4.2	9	15	21	30	157	149	1,679	700	71	14	5.5
11.....	4.5	8.5	17	22	29	106	200	1,520	560	65	13	6.5
12.....	6	9	17	22	29	98	235	1,660	470	59	12	5.5
13.....	7	16	17	22	29	92	212	1,740	505	52	11	5
14.....	8.5	18	16	23	32	89	252	1,850	580	46	10	4.7
15.....	9	17	16	24	33	90	396	1,780	757	42	16	4.5
16.....	10	24	16	24	36	100	540	1,730	2,880	37	14	4.3
17.....	9	25	17	21	38	114	660	1,820	1,120	34	17	4.0
18.....	8	21	17	22	34	116	580	1,960	915	33	20	4.0
19.....	7.5	18	17	22	33	119	477	1,760	780	31	17	5.5
20.....	7	17	18	22	33	131	381	1,400	660	28	16	12
21.....	7	18	21	21	38	174	381	1,350	580	26	14	11
22.....	6.5	20	22	20	42	305	354	1,440	522	24	12	9.5
23.....	6.5	16	22	20	46	177	305	1,600	470	22	12	8
24.....	6.5	13	22	21	42	133	341	1,600	396	20	11	7.5
25.....	6.5	12	33	22	40	117	354	1,500	354	19	10	6.5
26.....	6	12	36	22	37	110	341	1,060	312	18	9	6.5
27.....	6	12	31	22	37	139	440	740	276	18	8.5	6
28.....	6.5	9.5	31	23	43	217	505	680	252	18	7.5	6
29.....	6.5	8.5	30	24	-----	288	602	690	223	34	7.5	6
30.....	6.5	8	20	25	-----	263	800	780	192	49	7.5	6
31.....	6.5	-----	25	26	-----	223	-----	720	-----	75	7	-----
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October.....	10			4.2			6.21			382		
November.....	25			6.5			14.1			839		
December.....	36			8			19.6			1,219		
January.....	26			20			22.3			1,370		
February.....	46			24			34.6			1,620		
March.....	305			55			138			8,480		
April.....	800			142			340			20,200		
May.....	1,960			680			1,430			87,960		
June.....	2,880			192			609			36,200		
July.....	170			18			60.3			3,710		
August.....	52			7			16.1			990		
September.....	12			4.0			6.20			369		
The year.....	2,880			4.0			226			164,000		

NORTH FORK OF KINGS RIVER BELOW RANCHERIA CREEK, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ SE. $\frac{1}{4}$ 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, 1929.

EXTREMES.—Maximum discharge during year, 5,690 second-feet June 16 (gage height, 12.45 feet); minimum, 8 second-feet September 18.

1927-1929: Maximum discharge, 5,910 second-feet May 16, 1927 (gage height, 12.6 feet); minimum, 6.5 second-feet September 25, 1928.

REMARKS.—Records excellent except those for December 14-16, February 8 and 9, which were estimated because of ice. No diversions. Gage-height record and discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	14	20	39	49	70	290	1,140	634	206	65	13
2	10	15	21	38	54	78	304	1,340	602	185	51	12
3	10	22	35	39	68	91	330	1,560	748	170	44	12
4	10	31	33	36	75	120	314	1,720	727	153	39	12
5	10	26	32	39	54	153	250	1,650	587	137	35	12
6	10	29	31	37	53	166	222	1,540	552	125	32	12
7	10	33	30	36	49	161	224	1,460	516	113	30	12
8	10	28	30	35	45	138	213	1,380	496	105	28	12
9	10	22	29	35	45	142	186	1,800	615	93	26	12
10	10	20	31	36	47	299	196	1,700	783	84	26	12
11	10	19	31	35	48	155	260	1,560	648	78	24	11
12	12	19	33	37	49	136	312	1,690	536	72	23	11
13	14	30	33	38	47	124	282	1,750	558	68	21	10
14	17	40	32	38	49	120	302	1,870	618	62	20	10
15	19	35	32	38	47	126	470	1,800	754	58	21	9.5
16	20	39	32	39	51	136	636	1,770	3,180	53	27	9
17	20	45	34	35	54	160	778	1,860	1,230	50	26	8.5
18	18	39	33	36	52	166	718	1,990	1,000	48	28	8.5
19	16	37	34	38	48	160	604	1,780	870	47	29	10
20	15	35	35	39	49	182	477	1,450	720	43	26	15
21	15	37	35	37	54	223	468	1,400	638	41	24	20
22	15	37	35	39	91	429	458	1,480	590	39	22	17
23	15	33	35	38	66	272	392	1,620	519	37	20	15
24	14	31	35	38	58	192	416	1,610	454	35	19	14
25	14	29	47	37	56	162	438	1,560	405	33	18	13
26	14	28	56	37	53	152	419	1,180	371	32	17	12
27	14	27	50	37	53	180	529	877	327	31	16	12
28	14	26	49	36	58	275	615	784	296	31	15	12
29	14	22	49	39	-----	362	704	784	269	35	14	12
30	14	22	43	42	-----	368	927	885	238	56	14	12
31	14	-----	41	44	-----	296	-----	823	-----	71	14	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	20	10	13.5	839
November	45	14	29.0	1,730
December	56	20	35.4	2,180
January	44	35	37.6	2,310
February	91	45	54.4	3,020
March	429	70	187	11,500
April	927	189	425	23,300
May	1,990	784	1,480	91,000
June	3,180	238	683	40,600
July	206	31	77.1	4,740
August	65	14	26.2	1,610
September	20	8.5	12.1	720
The year	3,180	8.5	257	186,000

NORTH FORK OF KINGS RIVER ABOVE DINKEY CREEK, CALIF.

LOCATION.—Water-stage recorder in sec. 19, T. 12 S., R. 26 E., 200 feet above mouth of Dinkey Creek. Altitude, about 1,240 feet.

DRAINAGE AREA.—246 square miles.

RECORDS AVAILABLE.—December, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 5,740 second-feet June 16 (gage height, 11.90 feet); minimum, 8 second-feet October 1.

1919-1929: Maximum discharge, 6,080 second-feet June 4, 1922 (gage height, 12.18 feet); minimum, about 4 second-feet August 29 to September 1, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined March 1 to June 30. No diversions. Balch power house is 2 miles above station. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	July	Aug.	Sept.
1	8.5	12	23	38	52	214	76	9.5
2	9.5	13	20	39	63	205	51	10.
3	10	14	35	38	81	185	42	10.
4	11	28	34	37	116	175	32	10.
5	10.	28	32	37	61	152	27	9.5
6	11	19	29	38	57	148	30	11
7	11	26	22	39	55	122	25	10
8	11	27	23	42	52	108	20	11
9	11	16	27	34	46	111	18	13
10	11	16	38	25	52	95	18	* 12
11	10	15	36	29	51	78	19	* 12
12	11	13	41	34	49	79	19	* 11
13	11	32	40	38	52	71	20	11
14	11	52	33	36	47	66	17	10
15	12	38	25	33	51	68	14	10
16	15	21	30	32	53	51	17	9.5
17	17	24	38	41	56	48	17	8.5
18	18	61	37	39	55	46	16	8.5
19	17	36	35	40	51	43	20	9.5
20	15	31	33	37	49	42	24	14
21	12	34	29	42	56	40	21	14
22	12	23	38	36	62	36	18	14
23	12	39	34	41	67	34	14	14
24	12	20	29	39	65	30	14	14
25	14	23	35	32	62	26	14	14
26	14	20	62	37	58	26	14	11
27	13	26	71	34	46	28	14	10
28	12	18	60	38	60	27	15	10
29	12	17	38	38	-----	27	14	10
30	12	18	45	40	-----	53	12	11
31	12	-----	34	51	-----	67	11	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18	8.5	12.2	750
November	61	12	25.3	1,610
December	71	20	35.7	2,200
January	51	25	37.2	2,200
February	116	46	58.0	3,220
March	-----	-----	* 200	12,300
April	-----	-----	* 450	28,800
May	-----	-----	* 1,570	96,500
June	-----	-----	* 725	43,100
July	214	26	80.4	4,940
August	76	11	22.0	1,350
September	14	8.5	11.1	660
The year	-----	-----	270	190,000

* Estimated.

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 Deer Meadow-Long Meadow trail. Altitude, about 8,000 feet.

DRAINAGE AREA.—34 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,020 second-feet June 16 (gage height, 5.38 feet); minimum, 1.5 second-feet October 12.

1922-1929: Maximum discharge, 1,140 second-feet May 16, 1927 (gage height, 5.58 feet); minimum, 1.1 second-feet August 1 and 27, 1924.

REMARKS.—Records excellent except those for estimated periods, which are fair. Daily discharge not determined November 12 to April 19, because of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	2.4	2.8						224	88	18	5	2.6
2.	2.4	2.8						286	92	17	4.2	2.6
3.	2.6	3.8						345	89	15	4.0	2.6
4.	2.6	4.0						369	73	13	4.0	2.6
5.	2.6	4.2						348	64	13	3.8	2.6
6.	2.4	7						326	74	12	3.6	2.6
7.	2.4	4.2		4.0				292	69	11	3.4	2.6
8.	2.4	3.6		3.8	4.1			336	69	10	3.4	2.6
9.	2.4	3.2						382	99	8.5	3.4	2.8
10.	2.4	3.2					*35	360	114	9	3.4	2.8
11.	2.8	3.2						248	90	8	3.2	2.8
12.	2.8							363	81	7.5	3.0	2.8
13.	2.8							377	78	6.5	3.0	2.6
14.	3.8							407	75	6.5	6	2.6
15.	3.8							388	146	6	5.5	2.4
16.	3.4							387	516	5.5	4.0	2.4
17.	3.0							387	166	6	4.2	2.4
18.	3.0							370	120	5.5	4.2	2.4
19.	3.0		3.9					330	92	5	3.8	3.4
20.	3.0						64	278	77	5	3.4	4.4
21.	3.0	4.8					65	286	66	4.7	3.2	3.4
22.	3.0				5.5		56	285	68	4.7	3.2	3.0
23.	2.8						54	298	50	4.4	3.2	2.8
24.	2.8						66	260	44	4.2	3.2	2.8
25.	2.6					15	66	240	39	4.0	3.0	2.6
26.	2.6						64	170	35	4.0	3.0	2.6
27.	2.6						76	127	31	4.2	2.8	2.6
28.	2.6						98	124	27	10	2.8	2.6
29.	2.6						116	180	24	9.5	2.8	2.6
30.	2.8						167	125	21	8	2.8	2.6
31.	2.6							107		6	2.8	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.8	2.4	2.77	170
November			*4.0	238
December			*4.0	246
January			*4.0	246
February			*5.0	278
March			*20	1,230
April	167		51.7	3,080
May	407	107	293	18,000
June	516	21	88.8	5,280
July	18	4.0	8.09	497
August	6	2.8	3.59	221
September	4.4	2.4	2.74	163
The year	516	2.4	41.0	29,600

* Estimated.

† Result of discharge measurement.

RANCHERIA CREEK NEAR SMITH MEADOW, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 19, T. 11 S., R. 28 E., at trail crossing (Cliff Camp to Smith Meadow), half a mile below North Fork of Rancheria Creek and half a mile north of Smith Meadow. Altitude, about 6,400 feet.

DRAINAGE AREA.—22 square miles.

RECORDS AVAILABLE.—October, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year not determined, probably occurred on June 16; minimum, 2.3 second-feet October 14.

1924-1929: Maximum discharge, 426 second-feet May 16, 1927 (gage height, 5.45 feet); practically no flow part of November 25, 26, and 27, 1924.

REMARKS.—Records good except those for estimated periods, which are fair.

Daily discharge not determined November 15 to April 20 because of ice.

No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	4.4	4.7						72	58	21	7.5	4.6
2.	4.4	4.7						83	56	20	7.5	4.6
3.	4.4	7						97	60	19	7	4.6
4.	4.7	6.5						105	56	18	7	4.6
5.	4.7	6.5						102	54	18	7	4.8
6.	4.4	8						97	51	17	7	4.8
7.	4.4	6						98	51	16	6.5	4.8
8.	4.4	4.7	^b 8					105	49	16	6.5	4.8
9.	4.1	4.7						113	58	15	6.5	4.8
10.	4.1	4.7						112	67	14	6.5	4.8
11.	4.1	4.7					^a 25	112	51	14	6	4.6
12.	4.4	5						115	47	13	6	4.6
13.	4.4	5						125	46	12	6	4.6
14.	4.7	4.4						136	52	12	6	4.6
15.	5							139	67	11	6	4.6
16.	6							137	^a 130	10	6	4.4
17.	5.5			^b 7.5				145	^a 70	10	6	4.4
18.	4.7							144	^a 65	10	5.5	4.4
19.	4.4							125	^a 80	9.5	5.5	5
20.	4.7							112	^a 55	9	5.5	5.5
21.	4.7						27	112	^a 50	9	5	5
22.	4.7						26	115	^a 45	8.5	5	5
23.	4.7						25	123	^a 40	8.5	5	5
24.	4.7			^b 5		^b 21	23	128	^a 37	8.5	5	4.8
25.	4.4				^b 9.5		24	120	35	8	5	5
26.	4.4						26	96	31	8	5	4.8
27.	4.7						30	77	29	8	5	4.8
28.	4.7						35	70	25	8	5	4.6
29.	4.4						46	73	24	8.5	5	4.8
30.	4.4						60	72	23	9	5	4.8
31.	4.7							67		8	4.8	
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October	6		4.1		4.59		252					
November					^a 6.0		387					
December					^a 8.0		462					
January					^a 8.0		492					
February					^a 10.0		555					
March					^a 20.0		1,230					
April	60				27.4		1,630					
May	145		67		107		6,580					
June	130		23		51.4		3,060					
July	21		8		12.1		744					
August	7.5		4.8		5.88		362					
September	5.5		4.4		4.75		253					
The year	145				22.2		16,100					

^a Estimated.

^b Result of discharge measurement.

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.—51 square miles.

RECORDS AVAILABLE.—October, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,060 second-feet June 16 (gage height, 6.90 feet); minimum, 1.2 second-feet September 17 and 18.

1921-1929: Maximum discharge, 2,660 second-feet November 26, 1927 (gage height, 7.62 feet); minimum, 0.4 second-foot August 30, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined November 13 to February 28, because of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	1.8				37	126	344	110	36	5.5	1.7
2	1.3	1.8				44	134	382	108	32	4.7	1.7
3	1.4	4.6				53	132	428	113	30	4.4	1.7
4	1.4	4.6				70	124	424	111	28	4.2	1.7
5	1.4	2.9				82	101	404	103	26	3.9	1.7
6	1.4	4.6				82	95	378	96	24	3.6	1.7
7	1.4	3.8				71	87	346	95	22	3.5	1.8
8	1.4	2.7				60	77	372	96	20	3.4	1.8
9	1.3	2.3				74	72	392	138	18	3.1	1.7
10	1.3	2.2				200	72	372	138	17	3.1	1.6
11	1.4	2.1				110	93	355	109	16	2.9	1.5
12	1.8	2.1				85	100	356	98	15	2.8	1.4
13	2.3			10.0	16	70	82	375	96	14	2.6	1.4
14	2.1					60	104	382	96	13	2.6	1.4
15	2.1					60	169	382	236	12	2.5	1.3
16	2.1					60	238	398	859	11	2.7	1.3
17	2.2					75	269	396	238	10	2.7	1.2
18	2.1					80	230	377	166	10	2.6	1.2
19	2.0			7.5		70	188	342	133	9.5	2.4	9.5
20	1.9					85	160	390	113	8.5	2.4	7
21	1.8					110	156	314	192	8	2.3	3.2
22	1.8					195	150	310	91	7	2.2	2.4
23	1.8					120	134	304	81	7	2.1	2.2
24	1.8					90	140	300	71	6	2.0	2.0
25	1.7					75	140	264	64	6	2.0	1.9
26	1.7	4.6				70	142	199	58	6	2.0	1.8
27	1.7					90	175	152	53	5.5	1.9	1.8
28	1.8					132	194	140	48	5.5	1.8	1.8
29	1.8					162	227	144	44	5.5	1.8	1.8
30	1.8					148	200	144	39	8	1.7	1.7
31	1.8					120		134		6	1.7	
Month						Maximum	Minimum	Mean		Run-off in acre-feet		
October						2.3	1.3	1.71		105		
November								5.0		298		
December								8.0		492		
January								10.0		615		
February								20.0		1,110		
March						200	37	21.6		5,000		
April						230	72	147		8,760		
May						428	134	320		19,700		
June						559	39	130		7,740		
July						36	5.5	14.3		879		
August						5.5	1.7	2.81		173		
September						9.5	1.2	2.16		129		
The year						859	1.2	62.9		45,600		

^a Estimated.

^b Result of discharge measurement.

DINKEY CREEK AT MOUTH, CALIF.

LOCATION.—Water-stage recorder in sec. 3, T. 12 S., R. 26 E., half a mile above mouth. Altitude, about 1,310 feet.

DRAINAGE AREA.—136 square miles.

RECORDS AVAILABLE.—January, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,150 second-feet June 16 (gage height, 10.42 feet); minimum, 3.0 second-feet September 18.

1920-1929: Maximum discharge, 3,360 second-feet November 9, 1924 (gage height, 10.57 feet); minimum, 1.6 second-feet August 31, 1924.

REMARKS.—Records good. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3.6	6	11	22	28	63	215	570	215	71	15	4.6
2.....	3.8	6	26	24	50	75	223	630	203	85	13	4.4
3.....	4.0	6.5	20	25	58	86	245	710	207	60	12	4.4
4.....	4.2	15	20	22	95	112	236	730	205	57	12	4.4
5.....	4.4	11	18	25	56	141	203	690	198	52	12	4.4
6.....	4.4	9	17	22	50	154	183	650	183	49	11	4.6
7.....	4.4	11	17	20	39	135	163	590	176	47	10	4.5
8.....	4.2	* 10	16	26	35	107	157	630	179	45	8.5	5
9.....	4.0	* 8	21	20	33	110	141	670	251	42	9	5
10.....	3.8	7	22	20	35	378	138	630	263	38	9	5
11.....	3.6	7	22	21	37	191	163	610	223	37	9	4.6
12.....	4.4	6.5	28	22	35	150	197	610	185	35	8.5	4.4
13.....	6	15	21	24	36	123	161	630	170	32	8	4.0
14.....	7	32	20	24	38	106	159	650	164	31	7.5	3.8
15.....	7	20	19	24	35	105	273	650	172	29	7.5	3.6
16.....	7	18	20	25	40	102	375	670	1,500	28	7.5	3.4
17.....	7	22	21	20	44	126	450	670	482	26	7.5	3.2
18.....	6.5	20	22	23	42	140	450	650	348	24	7.5	3.0
19.....	6.5	15	34	26	36	117	348	590	271	22	7	3.4
20.....	6	18	37	29	36	146	292	518	227	22	6.5	12
21.....	6	13	42	24	42	187	287	518	197	20	6.5	12
22.....	5.5	13	40	25	52	335	267	518	176	19	6	8
23.....	5.5	12	35	27	59	209	245	500	155	18	6	0.5
24.....	5.5	11	28	22	49	152	249	482	138	18	6	6
25.....	5.5	* 11	26	26	45	130	251	450	124	17	5.5	6.5
26.....	5.5	* 11	* 30	24	42	124	245	375	115	16	5.5	5
27.....	5.5	* 11	* 28	25	40	150	300	300	105	15	5.5	5
28.....	5.5	* 12	* 26	24	50	219	335	273	94	15	5	5
29.....	5.5	12	* 25	26	-----	278	375	263	85	15	5	5
30.....	5.5	11	* 24	29	-----	278	482	263	77	17	4.8	5
31.....	5.5	-----	* 23	30	-----	207	-----	247	-----	17	4.8	-----
Month	Maximum	Minimum	Mean	Run-off in acre-feet								
October.....	7	3.6	5.25	323								
November.....	32	6	12.5	744								
December.....	42	11	24.5	1,510								
January.....	30	20	23.9	1,470								
February.....	95	33	44.6	2,480								
March.....	378	63	159	6,780								
April.....	482	138	261	15,000								
May.....	730	247	546	33,000								
June.....	1,500	77	296	14,000								
July.....	71	15	32.2	1,980								
August.....	15	4.8	8.05	495								
September.....	12	3.0	5.17	303								
The year.....	1,500	3.0	114	82,200								

* Estimated.

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 200 feet below mouth of East Fork. Altitude, about 6,700 feet.

DRAINAGE AREA.—21 square miles.

RECORDS AVAILABLE.—October, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 860 second-foot June 16 (gage height, 7.00 feet); minimum, 0.4 second-foot October 9 and 10.

1923-1929: Maximum discharge, that of June 16, 1929; minimum, 0.2 second-foot October 3, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined November 14 to March 24 because of ice. No diversions. Gage-height record and results of discharge measurements furnished by San Joaquin Light & Power Corporation.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.5	0.7					38	124	36	13	1.7	0.5
2.	.5	.7					43	143	37	12	1.7	.6
3.	.6	1.7					40	161	37	11	1.5	.6
4.	.6	1.5					31	161	34	10	1.5	.6
5.	.6	1.1					32	145	33	9.5	1.5	.7
6.	.6	1.3				* 23	41	136	31	9.5	1.3	.7
7.	.6	1.1					29	124	32	9	1.3	.7
8.	.5	1.1					22	140	34	8.5	1.3	.9
9.	.5	.7					25	145	54	8	1.3	.9
10.	.5	.6					23	136	56	7	1.3	.9
11.	.6	.6					24	136	40	7	1.1	.7
12.	.9	.6					26	136	32	6.5	1.1	.6
13.	1.1	1.3					20	143	29	6	1.1	.6
14.	1.1			* 5.3	* 3.5		28	143	28	6	1.1	.7
15.	1.1						49	140	50	4.5	1.3	.7
16.	1.1						77	152	325	4.0	1.3	.7
17.	.9						89	150	92	4.0	1.1	.6
18.	.9						73	138	60	3.5	.9	.6
19.	.9						53	120	46	3.5	.9	.9
20.	.9		* 2.8				46	110	38	3.0	.9	1.5
21.	.9						46	112	32	3.0	.7	1.3
22.	1.1						43	106	29	3.0	.7	1.1
23.	.9						39	104	25	3.0	.7	.9
24.	.9						38	100	22	3.0	.7	1.1
25.	.9					19	39	87	20	2.5	.7	.9
26.	.9					19	43	67	18	2.5	.6	.9
27.	.9					25	52	56	17	2.5	.6	1.1
28.	.9					40	61	52	16	2.5	.5	.9
29.	.9					52	78	49	15	3.0	.5	1.1
30.	.9					41	106	46	13	3.0	.5	.9
31.	.7					33		43		2.5	.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.1	0.5	0.80	49.2
November			* 2.0	119
December			* 3.0	184
January			* 4.0	246
February			* 4.0	222
March	52		* 25	1,540
April	106	20	45.1	2,680
May	161	43	116	7,130
June	825	13	44.4	2,640
July	13	2.5	5.68	849
August	1.7	.5	1.08	68.3
September	1.5	.5	.83	49.4
The year	325		21.1	15,300

* Result of discharge measurement.

* Estimated.

SAN JOAQUIN RIVER BASIN

SAN JOAQUIN RIVER AND TRIBUTARIES ABOVE FRESNO RIVER

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 and 6 miles above mouth of Bear Creek. Altitude, about 7,200 feet.

RECORDS AVAILABLE.—December, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 13 second-feet May 27 (gage height, 8.26 feet); minimum, 0.1 second-foot several days in April and May.

1921-1929: Maximum discharge, 3,460 second-feet June 4, 1922 (gage height, 13.75 feet); stream practically dry August 30 and September 2-7, 1924, December 16 and 17, 1925.

REMARKS.—Records excellent. Most of the flow was diverted above gage by Florence Lake tunnel to Huntington Lake on Big Creek. Storage in Florence Lake was 560 acre-feet on September 30, 1923, and 7,850 acre-feet on September 30, 1929. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	2.2	2.0	2.2	2.0	1.7	0.3	0.1	1.0	2.8	2.8	3.1
2	2.5	2.5	2.0	2.2	2.2	2.0	.3	.1	1.2	2.8	2.8	3.1
3	2.5	2.8	2.2	2.2	2.2	2.2	.8	.2	2.0	2.8	2.8	3.1
4	2.8	2.0	2.2	2.2	2.2	2.2	.5	.2	2.0	2.8	2.8	3.1
5	2.8	2.2	2.2	2.2	2.2	2.2	.4	.3	1.7	2.8	3.1	3.1
6	2.5	2.8	2.2	2.2	2.2	2.0	.4	.2	2.0	2.8	2.8	3.1
7	2.5	2.5	2.5	2.2	2.0	2.0	.3	.1	2.0	2.8	2.8	3.1
8	2.5	2.5	2.5	2.2	2.0	2.0	.4	.1	2.0	2.8	2.8	3.1
9	2.5	2.5	2.5	2.2	2.0	2.2	.4	.1	2.0	2.8	2.8	2.8
10	2.5	2.5	2.5	2.2	2.0	2.2	.4	.1	2.0	2.8	2.8	2.8
11	2.5	2.2	2.5	2.2	2.0	2.0	.4	.1	2.2	2.8	2.8	2.8
12	2.5	2.0	2.2	2.2	2.0	2.0	.4	.1	2.8	2.8	2.8	2.8
13	2.5	2.2	2.2	2.2	2.0	2.0	.3	.1	2.8	2.8	3.1	2.8
14	2.5	2.5	2.2	2.2	2.0	2.0	.4	.1	3.1	2.8	3.1	2.8
15	2.5	2.5	2.2	2.2	1.7	2.0	.4	.2	3.4	2.8	3.1	2.8
16	2.5	2.5	2.2	2.2	1.7	2.2	.8	.1	3.4	2.8	3.4	2.8
17	2.5	2.2	2.2	2.2	1.7	2.5	.2	.1	3.1	2.8	2.5	2.8
18	2.5	2.0	2.2	2.2	1.7	2.5	.2	.1	3.1	2.8	2.5	2.8
19	2.2	2.0	2.2	2.2	1.7	2.5	.8	.1	3.1	2.8	2.8	2.8
20	2.5	2.2	2.0	2.2	1.7	2.5	.2	.1	3.4	2.8	2.8	2.8
21	2.5	2.0	2.0	2.0	1.7	2.8	.1	.1	2.8	3.1	2.8	2.8
22	2.5	2.2	2.0	2.0	1.7	3.1	.2	.1	3.1	3.1	2.8	2.8
23	2.5	2.2	2.0	2.0	1.7	2.2	.1	.1	3.1	3.1	2.8	2.8
24	2.5	2.2	2.0	2.0	1.7	2.0	.1	.1	3.1	3.1	2.8	3.1
25	2.5	2.2	2.5	2.0	1.7	2.0	.1	.1	2.8	3.1	2.8	3.1
26	2.2	2.2	2.5	2.0	1.7	1.5	.1	.1	2.8	3.1	2.8	3.1
27	2.0	2.2	2.5	2.0	1.7	1.5	.1	2.0	2.8	2.8	2.8	2.8
28	2.0	2.2	2.5	2.0	1.7	.4	.1	.7	2.8	2.8	2.8	2.8
29	2.0	2.2	2.5	2.0	---	.4	.1	1.7	2.8	2.8	2.8	2.8
30	2.0	2.2	2.5	2.0	---	.3	.1	1.8	2.8	3.1	2.8	2.8
31	2.0	---	2.2	2.0	---	.2	---	1.8	---	3.1	3.1	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.8	2.0	2.46	151
November	2.8	2.0	2.29	136
December	2.5	2.0	2.26	139
January	2.2	2.0	2.13	131
February	2.2	1.7	1.89	105
March	3.1	.2	1.88	116
April	.5	.1	.26	15.5
May	2.0	.1	.33	20.3
June	3.4	1.0	2.57	153
July	3.1	2.8	2.88	177
August	3.4	2.5	2.85	175
September	3.1	2.8	2.91	173
The year	3.8	.1	2.06	1,490

SAN JOAQUIN RIVER ABOVE BIG CREEK, CALIF.

LOCATION.—Water-stage recorder in sec. 11, T. 8 S., R. 24 E., 3 miles above mouth of Big Creek. Altitude, about 2,500 feet.

RECORDS AVAILABLE.—March, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 11,700 second-feet June 16 (gage height, 15.63 feet); minimum, 70 second-feet September 18.

1922-1929: Maximum discharge, 18,000 second-feet June 5, 1922 (gage height, 17.34 feet); minimum, 69 second-feet September 23, 1928.

REMARKS.—Records excellent. 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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	80	94	164	177	222	855	2,140	1,300	1,200	251	112
2	76	80	102	157	240	251	895	2,580	1,140	1,080	232	109
3	82	92	161	161	283	283	882	2,980	1,310	1,020	212	105
4	82	124	164	170	470	345	938	3,220	1,490	965	200	102
5	80	114	142	153	319	426	882	3,070	1,300	938	195	96
6	79	109	130	155	266	482	755	2,820	1,200	882	190	94
7	77	132	118	153	240	466	705	2,720	1,220	830	181	92
8	76	128	111	146	195	418	730	2,640	1,168	780	177	90
9	76	103	109	140	177	387	690	3,080	1,300	705	172	90
10	79	94	122	140	210	1,090	660	3,020	1,380	610	168	89
11	76	90	161	140	212	705	705	2,730	1,180	554	164	86
12	77	89	142	140	212	597	830	2,940	1,200	514	155	83
13	88	109	151	142	207	526	820	3,110	1,460	466	149	80
14	89	177	157	146	204	466	720	3,300	1,740	432	144	77
15	92	184	130	144	197	466	965	3,480	2,180	404	144	76
16	92	149	128	146	197	462	1,400	3,620	7,840	387	153	75
17	92	157	130	142	204	498	1,760	3,510	3,140	376	155	73
18	90	153	130	136	207	530	1,860	4,080	2,320	384	186	73
19	88	134	132	157	202	530	1,540	4,000	2,060	394	186	75
20	86	136	130	161	193	530	1,240	3,380	1,920	362	161	98
21	84	132	128	149	197	566	1,160	3,200	1,990	316	151	138
22	83	134	126	134	212	1,160	1,160	3,330	2,020	292	144	130
23	83	134	126	140	224	965	965	3,480	1,966	274	138	111
24	82	124	130	146	224	730	1,040	3,800	1,860	268	132	100
25	82	114	166	144	207	615	1,060	3,800	1,780	266	128	92
26	80	111	224	144	200	579	1,100	2,800	1,700	263	124	88
27	79	112	204	140	193	615	1,300	1,960	1,570	260	118	83
28	79	111	217	144	200	780	1,540	1,580	1,560	254	111	80
29	79	102	227	144	-----	965	1,460	1,460	1,540	251	109	79
30	80	100	195	146	-----	992	1,700	1,660	1,460	246	111	77
31	80	-----	172	155	-----	910	-----	1,630	-----	249	112	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	92	75	81.9	5,040
November	184	80	120	7,140
December	227	94	147	9,040
January	170	134	148	9,140
February	470	177	224	12,480
March	1,100	222	597	26,790
April	1,860	660	1,070	63,790
May	4,080	1,460	2,940	181,090
June	7,840	1,140	1,840	109,000
July	1,200	246	523	33,260
August	251	109	160	6,840
September	138	73	91.4	5,440
The year	7,840	73	664	481,000

SAN JOAQUIN RIVER NEAR FRIANT, CALIF.

LOCATION.—Water-stage recorder in NE. ¼ sec. 5, T. 11 S., R. 21 E., 1½ miles northeast of Friant.

DRAINAGE AREA.—1,640 square miles at old site 2 miles upstream.

RECORDS AVAILABLE.—October, 1907, to September, 1929.

EXTREMES.—Maximum discharge during year, 12,300 second-feet June 16 (gage height, 12.06 feet); minimum, 102 second-feet February 18.

1907-1929: Maximum discharge, about 46,200 second-feet January 25, 1914 (gage height, 21.72 feet); minimum, 44 second-feet September 15, 1924.

REMARKS.—Records excellent. There are numerous storage reservoirs and power plants above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	745	660	685	690	365	470	1,320	2,530	1,800	1,580	1,350	850
2.....	900	700	630	545	475	500	1,220	2,880	1,880	1,640	1,340	810
3.....	835	640	705	800	465	435	1,500	3,420	1,800	1,600	1,320	875
4.....	935	660	705	690	790	370	1,520	3,740	1,640	1,610	1,180	1,000
5.....	920	690	715	725	670	765	2,060	3,320	1,620	1,600	1,390	955
6.....	885	690	870	625	520	870	1,630	3,020	1,670	1,550	1,400	1,030
7.....	865	680	690	705	585	785	1,200	2,900	1,680	1,680	1,240	930
8.....	820	725	765	685	485	725	1,200	2,740	1,680	1,700	1,260	825
9.....	970	709	645	690	445	706	1,490	3,149	1,420	1,830	1,280	885
10.....	935	770	450	535	445	980	1,240	3,260	1,780	1,760	1,270	770
11.....	865	540	545	600	530	1,720	1,130	3,060	1,700	1,790	1,120	1,010
12.....	875	620	600	610	510	1,320	1,270	2,880	1,680	1,740	1,300	930
13.....	835	680	720	480	465	965	1,270	3,130	1,600	1,760	1,280	765
14.....	815	780	690	360	510	740	1,150	3,400	1,640	1,480	1,290	925
15.....	830	700	720	545	490	845	1,360	3,510	2,140	1,600	1,310	630
16.....	895	780	570	535	485	890	1,620	3,660	6,650	1,660	1,180	695
17.....	960	680	630	440	410	760	1,850	3,560	4,740	1,600	1,250	825
18.....	920	640	670	400	475	855	2,460	3,920	2,780	1,590	1,170	765
19.....	840	620	655	425	455	1,000	2,820	4,000	2,480	1,600	1,170	545
20.....	770	645	620	460	490	885	2,220	3,620	2,270	1,510	1,250	470
21.....	620	735	770	205	510	900	1,770	3,290	2,280	1,400	1,240	620
22.....	775	680	690	450	565	1,200	1,620	3,360	2,320	1,480	1,310	415
23.....	770	720	600	400	520	1,550	1,680	3,440	2,260	1,440	1,290	420
24.....	760	685	670	310	540	1,240	1,800	3,830	2,090	1,430	1,330	595
25.....	760	650	670	375	440	1,090	1,740	3,870	2,100	1,380	1,060	540
26.....	760	630	480	345	535	890	1,780	3,120	2,060	1,360	1,340	545
27.....	740	780	800	395	525	925	1,740	2,400	2,000	1,360	1,310	530
28.....	645	655	650	180	560	1,080	1,610	1,960	1,900	1,280	1,240	520
29.....	830	645	735	340	-----	1,220	1,960	1,780	1,840	1,340	1,260	455
30.....	755	605	630	370	-----	1,320	2,120	1,660	1,820	1,360	1,220	425
31.....	680	-----	650	330	-----	1,040	-----	1,790	-----	1,340	1,030	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	970	620	823	50,600
November.....	780	540	680	40,500
December.....	870	450	668	41,500
January.....	800	180	493	30,300
February.....	790	365	509	28,300
March.....	1,720	370	936	57,600
April.....	2,460	1,130	1,630	97,600
May.....	4,000	1,660	3,100	181,000
June.....	6,650	1,380	2,150	128,600
July.....	1,830	1,260	1,550	95,300
August.....	1,400	1,030	1,260	77,500
September.....	1,030	415	716	42,600
The year.....	6,650	180	1,210	880,000

SAN JOAQUIN RIVER NEAR NEWMAN, CALIF.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 3, T. 7 S., R. 9 E., at drawbridge on Hill's Ferry road, 300 feet below mouth of Merced River and $\frac{3}{4}$ miles northeast of Newman.

RECORDS AVAILABLE.—April, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,660 second-feet February 5 (gage height, 5.60 feet); minimum, 105 second-feet July 26.

1912-1929: Maximum discharge, 20,700 second-feet January 27, 1914 (gage height, 18.0 feet); minimum, 15 second-feet August 9 and 10, 1924.

REMARKS.—Records good. Practically entire low-water flow of main river and tributaries is diverted for irrigation, hence the low-water records show mainly the amount of return water.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	340	195	590	790	670	710	485	302	710	205	119	126
2.	340	195	590	790	670	670	485	290	670	195	112	134
3.	378	195	710	790	750	670	450	630	185	119	150	150
4.	420	205	790	790	910	630	450	278	630	170	184	158
5.	420	215	790	790	1,060	590	455	278	590	176	150	150
6.	420	225	790	790	1,560	555	590	278	555	167	134	142
7.	420	225	750	830	1,510	555	790	278	450	167	119	142
8.	420	235	710	830	1,310	520	790	290	520	167	126	142
9.	420	235	710	830	1,210	485	790	278	520	167	126	150
10.	405	235	710	830	1,210	520	710	315	670	142	119	158
11.	405	245	710	790	1,260	710	670	352	710	142	119	158
12.	420	255	750	830	1,260	750	670	365	710	125	119	158
13.	405	328	830	830	1,210	910	590	420	670	125	119	158
14.	405	390	870	830	1,160	870	590	390	690	134	119	167
15.	405	485	870	830	1,110	870	555	378	555	142	119	167
16.	378	555	830	870	1,060	750	555	405	590	126	119	167
17.	352	590	830	870	1,010	670	485	420	590	125	126	167
18.	315	590	870	870	1,010	670	485	485	555	119	119	167
19.	290	590	870	830	960	670	485	485	520	119	126	167
20.	255	670	830	910	1,010	630	485	555	520	119	126	176
21.	245	710	790	1,160	1,010	590	485	555	450	112	126	176
22.	245	710	750	1,210	960	590	520	630	378	119	112	176
23.	235	710	750	1,160	870	670	555	670	340	119	112	167
24.	225	710	710	1,010	870	710	520	830	328	119	112	158
25.	215	670	750	960	830	710	485	790	315	112	119	158
26.	205	670	790	870	790	710	450	790	290	105	126	150
27.	195	630	830	830	750	590	405	880	255	119	126	158
28.	195	590	790	750	790	520	365	830	245	142	119	158
29.	195	590	830	710	-----	520	365	830	225	142	126	158
30.	195	590	790	670	-----	450	340	790	215	142	134	158
31.	195	-----	750	670	-----	450	-----	750	-----	119	126	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	420	195	321	19,700
November	710	185	448	26,700
December	370	590	772	47,500
January	1,210	670	855	52,600
February	1,660	670	1,050	58,300
March	910	450	642	39,500
April	790	340	536	31,900
May	830	278	497	30,600
June	710	215	501	29,800
July	205	105	141	8,670
August	150	112	128	7,580
September	176	126	167	9,340
The year	1,660	105	500	362,000

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, 1929 (low-water records only).

REMARKS.—Records good. Station maintained for low-water records only.

Practically all water is diverted from tributaries and main river above station during irrigation season; flow at station is largely return water.

Daily and monthly discharge, in second-feet, 1928-29.

Day	Oct.	May	June	July	Aug.	Sept.	Day	Oct.	May	June	July	Aug.	Sept.
1-----	1,390	1,140	2,020	1,160	682	648	16-----	1,900	1,390	1,440	700	580	1,240
2-----	1,440	1,090	2,020	1,090	648	682	17-----	1,900	1,440	1,540	665	565	1,240
3-----	1,600	1,060	1,900	1,140	682	682	18-----	2,140	1,540	1,960	630	595	1,240
4-----	1,600	1,000	1,780	1,160	665	662	19-----	2,300	1,660	3,150	580	595	1,240
5-----	1,720	980	1,660	1,060	665	822	20-----	2,200	2,270	2,970	580	612	1,240
6-----	1,720	1,000	1,490	940	665	1,000	21-----	2,270	2,830	2,780	595	612	1,200
7-----	1,720	1,000	1,390	880	630	1,040	22-----	2,200	2,270	2,270	612	612	1,340
8-----	1,780	980	2,570	805	595	1,060	23-----	2,200	2,270	2,090	612	612	1,340
9-----	1,780	940	2,090	788	580	1,060	24-----	2,270	2,340	1,840	580	612	1,340
10-----	1,780	960	1,720	770	595	1,190	25-----	2,270	2,970	1,600	580	612	1,240
11-----	1,720	940	1,720	735	612	1,190	26-----	2,270	3,250	1,440	580	630	1,300
12-----	1,720	980	1,600	718	612	1,190	27-----	2,270	3,670	1,390	612	648	1,200
13-----	1,840	1,160	1,540	700	595	1,190	28-----	2,270	3,460	1,290	612	612	1,340
14-----	1,900	1,290	1,540	752	595	1,190	29-----	2,270	2,410	1,240	665	580	1,340
15-----	1,900	1,340	1,440	770	580	1,240	30-----	2,340	2,200	1,190	665	565	1,300
							31-----	2,580	2,080		665	580	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	2,550	1,390	1,970	121,600
May-----	3,670	940	1,740	107,000
June-----	3,150	1,190	1,820	108,600
July-----	1,160	580	756	46,800
August-----	682	565	614	37,800
September-----	1,390	648	1,150	68,400

FLORENCE LAKE TUNNEL AT INTAKE, CALIF.

LOCATION.—Water-stage recorders and Venturi meter in NW. $\frac{1}{4}$ sec. 1, T. 8 S., R. 27 E., at entrance of tunnel. Altitude, about 7,250 feet.

RECORDS AVAILABLE.—April, 1925, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 905 second-feet June 28; minimum, 0.3 second-foot October 20-22.

1925-1929: Maximum mean daily discharge, 1,990 second-feet April 30, 1926; practically no flow at times.

REMARKS.—Records good. 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. On September 30, 1928, the storage in Florence Lake was 560 acre-feet; on September 30, 1929, it was 7,850 acre-feet. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	10	10	22	14	17	82	342	11	724	427	562
2	21	10	10	20	15	28	88	362	11	658	427	560
3	21	15	10	20	19	30	94	428	11	563	425	562
4	20	18	10	20	26	51	96	489	11	653	425	568
5	20	18	11	20	26	51	96	501	11	613	4 25	571
6	20	22	10	20	27	51	82	484	11	590	423	577
7	17	26	10	20	27	51	75	489	11	544	421	582
8	12	24	12	19	27	51	75	497	11	476	467	582
9	12	19	16	19	27	60	76	610	11	432	561	584
10	13	14	16	19	26	60	88	690	11	389	501	584
11	14	13	16	18	26	60	98	620	11	344	495	582
12	14	13	15	17	26	51	96	630	11	296	501	584
13	14	14	15	17	26	52	86	660	11	276	503	584
14	13	14	16	17	27	66	86	780	11	236	499	584
15	13	14	20	17	26	71	128	348	11	206	501	584
16	12	20	34	16	26	62	201	331	11	236	499	584
17	66	43	34	16	26	62	210	328	11	209	501	586
18	.8	33	29	16	26	62	216	339	11	202	501	580
19	36	21	28	16	26	62	168	336	11	201	503	566
20	.3	18	27	16	26	62	139	334	11	201	503	495
21	.3	17	20	16	25	77	129	222	11	184	503	320
22	.3	16	17	20	25	153	127	9.5	11	161	501	287
23	1.9	15	15	32	22	91	112	10	11	213	499	387
24	11	11	15	24	18	71	111	11	11	336	501	472
25	12	11	14	19	18	73	130	11	11	346	503	467
26	5.5	10	14	15	18	50	129	11	11	380	537	461
27	2.5	11	17	15	17	65	129	11	513	427	560	459
28	11	11	25	15	17	121	180	11	903	425	569	452
29	10	11	30	15	-----	129	205	11	893	425	571	445
30	10	10	30	14	-----	108	205	11	861	425	564	409
31	10	-----	30	14	-----	91	-----	11	-----	425	564	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	66	0.3	14.0	861
November	43	10	16.7	994
December	34	10	18.6	1,140
January	32	14	18.2	1,120
February	27	14	23.4	1,300
March	153	17	60.4	4,080
April	216	75	124	7,380
May	780	9.5	329	19,700
June	903	11	115	6,840
July	724	161	381	28,400
August	571	421	494	30,400
September	686	237	519	30,900
The year	905	.3	177	128,000

• Estimated.

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.

RECORDS AVAILABLE.—November, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 480 second-feet May 18 (gage height, 5.29 feet); minimum, 2.5 second-feet October 13.

1921-1929: Maximum discharge, 857 second-feet June 4, 1922 (gage height, 5.97 feet); minimum, 1.2 second-feet September 29 to October 5, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined November 16 to March 19 because of ice. No diversions. Gage-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	3.8	4.3					32	112	138	226	63	10
2.....	3.8	4.3					34	144	144	208	50	9.5
3.....	3.8	5					34	173	190	210	42	8.5
4.....	3.8	5					28	180	198	205	37	8
5.....	3.8	* 5					28	168	155	193	34	8
6.....	3.8	* 7.5					32	164	149	177	31	8
7.....	3.5	8					35	170	147	161	29	8
8.....	3.5	4.9					29	199	129	144	28	8
9.....	3.2	* 4.3					28	235	129	130	25	8
10.....	3.2	* 4.3					29	218	130	115	23	6.5
11.....	3.2	* 4.0					28	198	126	106	21	7
12.....	3.2	* 4.0					32	236	161	92	20	6.5
13.....	3.5	* 4.0					29	270	238	83	19	6
14.....	4.0	* 4.6					32	277	302	70	18	5.5
15.....	4.6	* 5.5					54	254	307	63	20	5
16.....	4.6				9		74	260	388	57	25	4.9
17.....	4.6						88	322	253	60	27	4.6
18.....	4.3						76	373	210	67	24	4.3
19.....	4.0						55	366	212	68	23	5
20.....	4.0					24	45	289	260	57	21	6.5
21.....	4.0					26	43	269	312	49	20	6.3
22.....	4.0					33	41	302	328	44	19	6.3
23.....	4.0	* 5.5		8.5		29	38	372	326	42	18	6
24.....	4.0					29	42	378	323	41	16	6
25.....	4.0					* 29	42	368	320	40	15	6
26.....	4.0					* 29	36	272	312	38	13	5.3
27.....	4.0					29	50	182	296	37	13	5
28.....	4.3		10			44	62	147	363	37	15	5
29.....	4.3					45	66	158	287	37	14	4.9
30.....	4.3					41	88	188	232	46	13	4.6
31.....	4.3					33		180		77	12	
Month							Maximum	Minimum	Mean	Run-off in acre-feet		
October.....	4.6						3.2		3.92	241		
November.....									5.24	312		
December.....									* 6.0	369		
January.....									* 8.0	492		
February.....									* 9.0	500		
March.....									* 22.0	1,350		
April.....							88	28	44.3	2,640		
May.....							378	112	239	14,700		
June.....							388	126	233	13,900		
July.....							226	37	96.1	5,910		
August.....							63	12	24.1	1,480		
September.....							10	4.3	6.46	384		
The year.....							388	3.2	58.4	42,300		

* Estimated.

* Result of discharge measurement.

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.

RECORDS AVAILABLE.—November, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 750 second-feet May 24 (gauge height, 6.97 feet); minimum, 9.5 second-feet October 14.

1921-1929: Maximum discharge, 1,420 second-feet June 16, 1927 (gauge height, 8.09 feet); minimum, 8 second-feet September 29 to October 4, 1924.

REMARKS.—Records excellent except those for estimated periods, which are fair. Daily discharge not determined November 16 to March 20 because of ice. No diversions. Gauge-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	12					63	174	259	348	79	27
2	13	13					65	216	250	332	68	25
3	12	15					68	266	300	320	63	23
4	13	16					65	309	308	316	60	22
5	13	* 17					47	302	264	300	57	20
6	12	24					* 57	294	264	284	56	20
7	12	22					* 65	293	288	264	53	20
8	12	16					* 56	324	239	238	49	21
9	11	* 14		* 22			* 54	368	242	221	48	20
10	11	* 15					* 54	365	249	195	47	18
11	11	* 15					* 54	342	232	189	42	18
12	11	* 15					62	374	249	164	40	17
13	* 10	15					59	398	329	148	38	16
14	* 10	* 15					57	429	410	133	37	15
15	* 14	* 15					77	419	458	124	40	15
16	16						99	428	590	119	43	14
17	16						119	490	404	124	48	13
18	14						121	562	380	136	43	13
19	13						107	558	382	124	41	17
20	13		* 19				96	482	402	107	40	20
21	14					48	94	456	443	92	37	20
22	13					65	86	488	459	88	36	13
23	13	* 15			* 22	49	84	548	456	84	35	17
24	13					* 49	88	574	448	84	34	16
25	13					* 49	86	596	444	84	32	15
26	13					* 50	86	466	432	82	30	15
27	13					* 50	101	350	410	79	28	15
28	13					62	114	302	418	75	28	15
29	12					67	119	302	407	75	29	14
30	12					65	141	330	366	82	29	13
31	12					59		315		96	28	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	10	12.6	775
November	24		15.5	922
December			* 17.0	1,050
January			* 19.0	1,170
February			* 20.0	1,110
March			* 42.0	2,580
April	141	47	81.5	4,850
May	586	174	391	24,000
June	590	232	359	21,400
July	348	75	165	10,100
August	79	28	43.2	2,660
September	27	13	17.7	1,050
The year	590	10	99.0	71,700

* Estimated.

* Result of discharge measurement.

BIG CREEK BELOW HUNTINGTON LAKE, CALIF.

LOCATION.—Water-stage recorder in sec. 23, T. 8 S., R. 25 E., one-fourth mile above Grouse Creek and 1 mile below Huntington Lake. Altitude, about 6,600 feet.

RECORDS AVAILABLE.—June, 1925, to September, 1929.

EXTREMES.—No spill from Huntington Lake during year.

1925-1929: Maximum discharge, 2,040 second-feet June 23, 1925 (gage height, 10.3 feet).

REMARKS.—Natural flow of Big Creek is completely regulated at Huntington Lake storage reservoir. Purpose of this record is to show spill from lake. There was no spill during the year.

PITMAN CREEK BELOW TAMARACK CREEK, CALIF.

LOCATION.—Water-stage recorder in 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.

RECORDS AVAILABLE.—December, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 330 second-feet June 16 (gauge height, 5.83 feet); minimum, 0.1 second-foot October 3.

1927-1929: Maximum discharge, that of June 16, 1929; minimum, 0.1 second-foot at times in August, September, and October, 1928.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined October 1 to March 31. No diversions. Gauge-height record and results of discharge measurements furnished by Southern California Edison Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....							*22	122	55	16	1.1	0.2
2.....						*2.5	*24	136	52	14	.9	.2
3.....	*0.1	*0.2					*25	152	53	14	.6	.2
4.....				*0.3			*20	152	51	12	.6	.3
5.....							*17	152	48	11	.6	.2
6.....							*16	147	46	9.5	.6	.2
7.....							*12	137	46	9	.6	.2
8.....							*12	147	46	8.5	.6	.2
9.....			*0.6				*11	162	66	7.5	.6	.3
10.....					*0.9		*11	157	63	7	.6	.2
11.....							*13	157	53	7	.6	.2
12.....							*14	157	46	6.5	.6	.2
13.....							*14	167	42	6	.6	.2
14.....							*14	167	40	5.5	.6	.2
15.....							*20	172	50	4.8	.6	.2
16.....							39	177	231	4.0	.6	.2
17.....							53	177	125	3.7	.6	.2
18.....							54	167	87	3.3	.5	.2
19.....							40	157	69	3.0	.5	1.8
20.....							36	147	59	2.8	.5	1.7
21.....							38	147	51	2.5	.5	.5
22.....							37	152	44	2.2	.5	.4
23.....							36	147	38	2.0	.4	.4
24.....							33	137	34	2.0	.4	.4
25.....							35	124	31	2.0	.4	.3
26.....							35	98	28	2.0	.4	.3
27.....							46	76	25	1.7	.4	.3
28.....							55	68	24	1.4	.4	.3
29.....							79	66	21	1.4	.3	.3
30.....							101	66	18	1.7	.3	.3
31.....								61		1.4	.3	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		0.1	*0.2	12.8
November.....			*.5	23.8
December.....			*.5	30.7
January.....			*.8	49.2
February.....			*1.0	55.5
March.....			*8.0	492
April.....	101	11	32.1	1,910
May.....	177	61	137	8,429
June.....	231	18	54.7	3,230
July.....	16	1.4	5.66	348
August.....	1.1	.3	.54	23.2
September.....	1.8	.2	.35	20.8
The year.....	231	.1	20.3	14,700

* Estimated.

* Result of discharge measurement.

FRESNO RIVER BASIN

FRESNO RIVER NEAR KNOWLES, CALIF.

LOCATION.—Staff gage in N. ½ sec. 15, T. 8 S., R. 20 E., at Fresno Crossing, 6 miles northeast of Knowles.

RECORDS AVAILABLE.—September, 1911, to January, 1914; November, 1915, to September, 1929.

EXTREMES.—Maximum discharge during year, 179 second-feet April 5 (gage height, 1.60 feet); no flow parts of October, August, and September.

1911-1914, 1915-1929: Maximum discharge, about 4,500 second-feet February 21, 1917 (gage height, 6.0 feet); no flow during dry season in 1919, 1924, 1926, 1928, and 1929.

REMARKS.—Records good. Daily discharge not determined January 1-29. Water is diverted above station for irrigation and lumbering.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	0	1.0	17	-----	17	28	52	82	50	19	0.7
2	0	1.0	17	-----	46	25	57	88	46	17	.4
3	0	1.3	19	-----	57	25	53	88	46	15	.2
4	0	1.3	19	-----	111	23	57	88	46	12	.1
5	0	1.3	21	-----	99	23	144	82	43	11	.1
6	0	1.6	21	-----	82	25	144	88	43	10	0
7	0	1.6	21	-----	50	25	82	88	39	8.5	0
8	0	1.9	19	-----	36	25	82	94	39	7	0
9	0	2.2	21	-----	25	28	77	94	39	6	0
10	0	2.5	21	-----	23	57	77	94	36	5.5	0
11	0	3.3	23	-----	23	53	72	88	36	5.5	0
12	0	4.5	31	-----	23	53	72	88	39	4.5	0
13	0	7	25	-----	25	50	67	88	39	4.1	0
14	0	31	21	-----	25	50	67	94	39	3.3	0
15	0	28	19	-----	25	46	67	94	43	3.3	0
16	0	28	15	-----	23	50	77	94	124	2.9	0
17	0	25	12	-----	23	50	82	88	111	2.5	0
18	0	25	12	-----	21	50	82	94	82	2.5	0
19	0	21	12	-----	23	46	124	96	57	2.2	0
20	0	19	11	-----	25	46	144	99	50	1.9	0
21	0	19	11	-----	25	46	131	94	39	1.9	0
22	0	21	12	-----	28	50	111	94	36	1.6	0
23	0.1	21	12	-----	28	50	94	88	31	1.6	0
24	.1	21	12	-----	25	82	77	88	31	1.3	0
25	.2	19	14	-----	25	88	77	82	28	1.3	0
26	.4	21	14	-----	25	77	72	77	25	1.0	0
27	.7	19	14	-----	31	67	72	77	21	1.0	0
28	.8	19	15	-----	28	67	77	72	15	1.0	0
29	.8	19	15	-----	-----	62	77	72	15	1.0	0
30	.8	17	15	15	-----	62	82	67	15	1.0	0
31	.8	-----	14	15	-----	57	-----	62	-----	.8	0
Month	Maximum			Minimum			Mean			Run-off in acre-feet	
October	0.8			0			0.15			2.2	
November	31			1.0			13.4			797	
December	31			11			16.9			1,040	
January	-----			-----			18.0			1,110	
February	111			17			35.6			1,989	
March	88			23			47.9			2,950	
April	144			52			85.0			5,060	
May	99			62			86.5			5,320	
June	124			15			43.4			2,590	
July	19			.8			5.07			312	
August	.7			0			.05			3.1	
The year	144			0			29.2			21,200	

* Estimated.

NOTE.—No flow during September.

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.

DRAINAGE AREA.—181 square miles.

RECORDS AVAILABLE.—August, 1915, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,520 second-feet June 16 (gage height, 5.88 feet); minimum, 2.2 second-feet October 7.

1915-1929: Maximum discharge, 3,800 second-feet May 28, 1919 (gage height, 7.10 feet); minimum, 1.5 second-feet September 30, 1926.

REMARKS.—Records good; slightly affected by ice February 9 to March 2. No diversions. Gage-height record furnished by officials of Yosemite National Park.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	3.6	8.5	22	21	32	178	630	481	461	82	15
2	3.0	3.6	8.5	22	23	38	180	821	417	413	68	14
3	2.8	4.9	11	23	25	50	185	965	544	402	60	14
4	3.0	7.5	11	22	26	67	185	1,030	650	391	54	13
5	2.8	6	10	23	24	83	148	965	530	377	50	12
6	2.4	10	9	24	26	99	148	905	469	349	47	11
7	2.4	12	8.5	23	24	94	129	911	402	328	44	10
8	2.4	11	7.5	21	22	77	131	998	473	292	42	10
9	2.6	11	7.5	20	22	75	123	1,140	425	262	39	9.5
10	2.6	10	8.5	20	22	102	118	1,060	429	217	36	8.5
11	2.4	10	8.5	21	23	83	131	965	498	189	35	8
12	2.6	9.5	12	22	23	86	150	1,140	449	170	32	7.5
13	3.2	10	12	23	23	78	144	1,200	660	152	30	6.5
14	3.4	12	12	22	23	76	144	1,280	821	132	28	6
15	3.8	14	12	22	23	77	222	1,200	1,100	118	40	5
16	3.6	16	12	22	23	80	340	1,380	1,940	106	54	4.3
17	3.4	16	12	20	25	89	413	1,350	998	105	50	3.8
18	3.0	16	12	20	26	91	398	1,460	838	123	43	3.6
19	3.2	15	13	20	23	89	325	1,420	785	142	39	4.0
20	3.2	14	14	20	24	94	274	1,310	815	125	35	7
21	3.0	14	14	17	25	115	250	1,420	857	102	33	9
22	3.0	14	14	18	27	222	228	1,540	845	87	31	19
23	2.8	14	14	19	28	156	205	1,460	785	77	28	26
24	2.8	12	15	18	26	129	212	1,460	758	74	27	26
25	2.8	12	26	18	26	115	228	1,460	724	70	25	22
26	3.0	12	34	18	25	108	265	1,030	692	69	23	19
27	3.0	11	28	18	26	134	328	708	660	68	21	17
28	3.0	8.5	28	18	28	189	391	590	675	67	19	16
29	3.2	8	27	19	-----	230	377	585	605	66	18	14
30	3.4	8	23	20	-----	217	461	702	548	109	17	10
31	3.6	-----	22	20	-----	183	-----	670	-----	112	16	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.8	2.4	2.98	183
November	16	3.6	10.9	649
December	34	7.5	14.7	904
January	23	17	20.4	1,250
February	28	21	24.4	1,369
March	230	32	108	6,640
April	461	118	234	12,908
May	1,540	585	1,060	67,880
June	1,940	402	696	41,400
July	461	66	186	11,400
August	82	16	37.6	2,310
September	26	3.6	11.7	696
The year	1,940	2.4	204	148,000

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.

RECORDS AVAILABLE.—November, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,890 second-feet June 16 (gage height, 9.25 feet); minimum, 8 second-feet October 27.

1916-1929: Maximum discharge, 6,370 second-feet June 5, 1922 (gage height, 10.0 feet); minimum, 3.3 second-feet September 29 and October 1, 1924.

REMARKS.—Records good. No diversions. Gage-height record furnished by officials of Yosemite National Park.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	9.5	14	37	32	72	389	1,240	848	640	115	29
2	12	9.5	14	36	37	84	402	1,550	736	586	98	28
3	12	12	20	37	45	92	437	1,800	825	569	88	28
4	12	14	18	35	61	122	421	1,960	965	552	80	28
5	12	14	18	34	55	176	338	1,880	848	518	75	26
6	12	14	16	34	52	213	285	1,760	758	484	69	26
7	12	16	14	34	52	198	276	1,760	758	450	65	25
8	12	18	14	34	46	160	295	1,880	716	402	63	24
9	12	16	14	32	47	159	267	2,060	535	359	58	24
10	12	16	16	32	48	246	272	1,960	501	312	56	23
11	11	16	18	32	51	168	295	1,800	604	275	53	22
12	12	15	16	31	52	172	347	2,000	716	246	52	22
13	13	16	18	32	52	156	350	2,060	915	220	49	21
14	14	21	18	34	53	146	355	2,330	1,070	194	44	20
15	14	20	18	34	53	155	535	2,240	1,460	176	44	19
16	14	20	17	34	54	155	758	2,510	3,790	155	60	19
17	14	21	18	32	56	178	940	2,510	1,880	147	63	18
18	14	20	18	31	59	190	940	2,690	1,480	155	60	18
19	14	19	18	32	56	182	736	2,600	1,300	178	56	18
20	12	19	18	32	56	196	604	2,330	1,210	166	52	21
21	9	18	19	29	58	222	569	2,420	1,180	139	49	20
22	9	18	19	27	60	484	518	2,600	1,150	122	47	24
23	8.5	18	19	27	64	318	464	2,420	1,070	110	44	23
24	8.5	17	19	27	68	254	484	2,420	1,020	102	42	26
25	8.5	16	31	28	65	227	518	2,330	940	99	40	26
26	8.5	16	37	28	65	227	586	1,720	892	96	39	23
27	8.5	16	36	27	63	280	696	1,240	848	93	36	31
28	9	16	43	27	66	399	848	1,040	848	90	35	29
29	8.5	21	43	26	-----	484	802	990	780	89	32	26
30	9	14	39	27	-----	464	940	1,120	696	100	32	25
31	9.5	-----	37	29	-----	392	-----	1,106	-----	182	30	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	14					8.5			11.2		689	
November	21					9.5			16.5		982	
December	43					14			21.8		1,340	
January	37					26			31.3		1,920	
February	68					32			54.5		3,090	
March	484					72			224		13,900	
April	940					267			522		31,100	
May	2,690					990			1,960		120,000	
June	3,790					501			1,040		61,900	
July	640					89			258		15,900	
August	115					30			55.7		3,420	
September	36					18			25.2		1,500	
The year	3,790					8.5			353		256,000	

MERCED RIVER AT HORSESHOE BEND, CALIF.

LOCATION.—Water-stage recorder in sec. 26, T. 3 S., R. 16 E., 1 mile above Horseshoe Bend of Merced River and one-fourth mile below Kittridge. Prior to November 24, 1928, gage was 1 mile downstream.

RECORDS AVAILABLE.—November, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,280 second-feet June 16 (gage height, 11.65 feet); minimum, 28 second-feet September 19 and 20.

1922-1929: Maximum discharge, 20,900 second-feet March 25, 1928 (gage height, 19.20 feet); minimum, 13 second-feet October 5, 1925.

REMARKS.—Records good after March 12; no record October 1 to November 23, December 12-15, December 30 to January 20, and February 26 to March 11. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.		61		182		875	2,080	1,380	875	192	40
2.		62		357		2,610	1,170	794	145	38	
3.		68		763		896	3,100	1,200	734	122	38
4.		106		2,000		1,050	3,400	1,380	714	106	37
5.		100		938		1,520	3,300	1,320	675	96	36
6.		86		527		1,170	3,000	1,170	637	90	36
7.		79		400		1,100	3,000	1,120	597	81	36
8.		75		315		1,120	3,000	1,140	562	78	36
9.		73		257		1,140	3,400	1,140	510	74	36
10.		81		231		1,080	3,300	1,420	462	71	36
11.		138		222		1,000	3,000	1,170	413	68	35
12.				209	1,070	1,020	3,300	1,070	372	64	34
13.				207	834	1,000	3,400	1,200	339	63	33
14.				196	714	917	3,710	1,420	304	59	32
15.				194	656	1,000	3,600	1,520	277	56	31
16.		96		186	637	1,380	3,930	5,610	252	54	30
17.		92		188	618	1,770	4,040	3,500	229	59	29
18.		91		194	656	1,880	4,150	2,520	214	76	29
19.		85		196	694	1,630	4,040	2,000	225	69	28
20.		86		186	637	1,350	3,600	1,770	247	65	28
21.		88	265	184	637	1,170	3,500	1,790	231	60	31
22.		86	162	186	938	1,100	3,820	1,630	206	58	26
23.		85	160	194	1,020	1,000	3,660	1,490	178	54	38
24.	76	86	156	203	884	1,000	3,660	1,350	158	52	40
25.	76	100	138	203	814	1,000	3,600	1,280	147	51	41
26.	72	190	143		774	1,070	2,800	1,200	138	50	43
27.	70	180	135		814	1,200	2,060	1,120	128	49	42
28.	72	180	126		938	1,460	1,660	1,100	125	48	41
29.	68	214	125		1,100	1,460	1,520	1,050	119	46	41
30.	65		149		1,070	1,630	1,630	938	117	43	40
31.			158		959		1,630		128	42	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March 12-31	1,100	618	821	32,600
April	1,880	854	1,190	70,800
May	4,150	1,520	3,110	191,000
June	5,610	938	1,570	93,400
July	875	117	358	22,000
August	192	42	72.4	4,450
September	43	28	35.7	2,120
The period				416,000

LAKE McCLURE AT EXCHEQUER, CALIF.

LOCATION.—Staff gage at Exchequer Dam at Exchequer, and indicator in power house in SW. $\frac{1}{4}$ sec. 13, T. 4 S., R. 15 E., 5 miles northeast of Merced Falls. Zero of gage is at mean sea level. Spillway crest is 693.0 feet above mean sea level, and spillway gate is 707.0 feet.

DRAINAGE AREA.—1,020 square miles.

RECORDS AVAILABLE.—April, 1926, to September, 1929.

REMARKS.—Lake McClure, formed by construction of Exchequer Dam on Merced River, is used as storage reservoir by Merced Irrigation District. Power is also developed at the dam. Small diversions above the lake. There was 35,200 acre-feet of storage September 30, 1928, and 1,750 acre-feet September 30, 1929.

Daily elevation, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	552.7	530.0	537.0	545.2	554.1	561.8	578.8	590.3	653.1	661.7	614.5	523.1
2.....	560.4	530.1	537.1	545.5	554.7	561.2	578.8	592.0	652.9	661.1	612.6	517.1
3.....	548.2	530.1	537.3	545.8	555.4	560.7	578.5	594.5	662.5	660.8	610.6	511.0
4.....	546.0	530.2	537.5	546.2	560.0	560.2	576.2	597.5	662.3	659.5	608.5	503.5
5.....	543.6	530.2	537.7	546.5	565.5	569.7	577.1	601.1	652.1	668.7	606.4	494.5
6.....	541.1	530.2	538.0	546.8	567.3	569.7	578.6	603.8	651.9	657.8	604.2	489.8
7.....	538.4	530.3	538.2	547.0	568.3	569.7	579.7	606.0	651.6	656.8	602.1	487.7
8.....	535.8	530.4	538.4	547.2	569.0	569.7	590.6	608.1	651.2	655.8	599.8	485.8
9.....	533.0	530.5	538.6	547.5	568.8	569.2	581.4	610.4	650.9	654.6	597.4	484.0
10.....	531.2	530.7	538.8	547.8	568.6	569.1	582.0	613.0	650.7	653.3	595.0	481.6
11.....	531.0	530.8	539.1	547.9	568.3	564.3	582.5	615.3	650.7	652.0	592.6	479.6
12.....	531.0	531.0	539.4	548.0	568.0	566.8	582.9	617.3	650.6	650.6	590.1	477.6
13.....	531.0	531.1	539.8	548.1	567.8	568.2	583.3	619.6	650.4	649.1	587.6	475.6
14.....	531.0	531.8	540.2	548.3	567.5	569.2	583.6	622.1	650.4	647.6	586.0	473.4
15.....	531.0	532.6	540.6	548.4	567.1	569.8	583.7	624.7	650.6	646.0	582.3	471.3
16.....	531.0	533.0	540.9	548.6	566.7	570.3	584.1	627.4	652.0	644.4	579.6	469.0
17.....	530.9	533.5	541.0	548.8	566.2	570.7	585.4	630.5	657.1	642.7	576.7	466.6
18.....	530.9	534.0	541.0	549.0	565.8	571.2	586.8	633.5	658.8	641.0	573.9	464.8
19.....	530.8	534.6	541.1	549.3	565.4	571.7	588.3	636.5	660.0	639.2	570.9	463.5
20.....	530.7	534.9	541.3	550.0	565.0	572.3	589.3	639.1	660.9	637.4	568.0	462.2
21.....	530.6	535.0	541.5	550.9	564.6	572.7	589.6	641.3	661.6	635.7	565.1	461.8
22.....	530.5	535.1	541.7	551.5	564.2	572.7	589.8	643.6	662.1	634.0	562.1	461.8
23.....	530.4	535.4	541.9	551.9	563.8	573.7	589.8	646.0	662.6	632.2	559.0	462.0
24.....	530.3	535.7	542.0	552.1	563.3	574.2	589.5	648.1	662.9	630.8	556.7	462.2
25.....	530.2	536.0	542.1	552.4	563.2	574.6	589.2	650.1	663.1	628.3	552.3	462.4
26.....	530.1	536.2	542.5	552.5	562.9	574.8	588.8	651.9	663.2	626.3	548.8	462.6
27.....	530.0	536.4	543.0	552.9	562.7	574.9	588.6	652.8	663.2	624.2	545.3	462.6
28.....	530.0	536.5	543.5	553.0	562.3	575.1	588.6	652.9	663.0	622.8	541.6	463.0
29.....	530.0	536.7	543.9	553.3	-----	575.6	589.0	653.0	662.7	620.4	537.6	463.1
30.....	530.0	536.8	544.4	553.6	-----	576.4	589.4	652.9	662.2	618.5	533.2	463.1
31.....	530.0	-----	544.8	553.9	-----	576.7	-----	653.0	-----	616.5	528.4	-----

MERCED RIVER AT EXCHEQUER, CALIF.

LOCATION.—Water-stage recorder about on section line between secs. 14 and 23, T. 4 S., R. 15 E., half a mile below Exchequer Dam at Exchequer and 5 miles northeast of Merced Falls.

DRAINAGE AREA.—1,020 square miles at old site 1 mile above gage.

RECORDS AVAILABLE.—November, 1915, to September, 1929. Records 1915-1922 at station 1 mile above present site.

EXTREMES.—Maximum discharge during year, 1,820 second-feet May 16 (gage height, 4.10 feet); minimum, 24 second-feet October 10.

1915-1929: Maximum discharge, about 22,000 second-feet January 17, 1916 (gage height, 20.0 feet); minimum, 13 second-feet November 9-11, 1927.

REMARKS.—Records fair. No diversions. Flow is completely regulated in Lake McClure by Exchequer Dam. There was 35,200 acre-feet in the lake September 30, 1928, and 1,750 acre-feet September 30, 1929.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	810	51	31	54	72	366	950	1,400	1,540	1,460	1,460	1,260
2	810	39	31	54	72	373	1,010	1,400	1,580	1,460	1,430	1,260
3	810	39	35	56	77	371	1,040	1,460	1,540	1,460	1,430	1,260
4	810	39	37	56	80	373	1,100	1,500	1,500	1,500	1,460	1,220
5	810	39	39	66	77	364	940	1,350	1,500	1,460	1,430	894
6	755	39	39	56	80	407	810	1,580	1,500	1,500	1,400	201
7	755	39	39	56	93	412	810	1,580	1,500	1,580	1,400	191
8	725	34	39	65	342	494	865	1,620	1,460	1,580	1,460	188
9	705	33	39	68	332	630	892	1,660	1,460	1,580	1,430	177
10	53	32	41	69	347	428	892	1,660	1,400	1,660	1,430	175
11	51	29	54	69	350	440	920	1,700	1,360	1,660	1,400	170
12	35	33	54	69	346	434	920	1,660	1,260	1,660	1,400	163
13	39	31	54	69	347	441	920	1,700	1,260	1,660	1,400	169
14	40	31	54	69	352	438	920	1,700	1,260	1,660	1,360	163
15	44	31	54	69	351	445	920	1,780	1,260	1,660	1,400	164
16	54	30	54	69	349	442	950	1,740	1,220	1,620	1,400	169
17	56	29	54	69	353	449	1,100	1,740	1,220	1,620	1,400	145
18	56	29	51	69	349	445	1,160	1,740	1,220	1,660	1,360	69
19	56	29	46	72	351	441	1,160	1,700	1,189	1,660	1,320	65
20	56	29	46	70	353	445	1,160	1,700	1,100	1,660	1,290	49
21	59	29	46	68	359	667	1,160	1,700	1,100	1,620	1,320	39
22	59	29	46	68	363	674	1,160	1,660	1,160	1,620	1,290	38
23	61	29	46	69	360	681	1,220	1,700	1,130	1,620	1,290	37
24	55	29	46	69	364	711	1,220	1,700	1,160	1,580	1,260	34
25	51	29	46	69	353	708	1,260	1,700	1,160	1,580	1,260	35
26	51	31	46	69	371	757	1,260	1,700	1,260	1,580	1,220	35
27	54	31	46	69	367	770	1,260	1,660	1,360	1,540	1,220	35
28	56	32	46	69	369	774	1,260	1,660	1,400	1,500	1,220	36
29	67	32	54	69	-----	836	1,320	1,620	1,430	1,460	1,260	36
30	65	31	54	72	-----	848	1,320	1,540	1,460	1,460	1,290	35
31	61	-----	54	70	-----	920	-----	1,580	-----	1,500	1,260	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	810	35	264	16,200
November	51	29	32.9	1,660
December	54	31	45.8	2,820
January	72	54	66.0	4,060
February	371	72	285	15,800
March	920	364	545	33,700
April	1,320	810	1,060	62,100
May	1,780	1,350	1,630	104,000
June	1,580	1,100	1,330	79,100
July	1,660	1,460	1,570	94,500
August	1,460	1,220	1,350	83,000
September	1,260	34	283	16,800
The year	1,780	29	710	513,000

MERCED RIVER NEAR LIVINGSTON, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 20, T. 6 S., R. 11 E., $3\frac{1}{4}$ miles west of Livingston.

RECORDS AVAILABLE.—March, 1922, to September, 1924; October, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,450 second-feet February 4 (gage height, 5.73 feet); minimum, 65 second-feet July 24.

1922-1929: Maximum discharge, 8,100 second-feet June 5, 1922 (gage height, 15.80 feet, present datum); minimum, 18 second-feet August 30, 1924.

REMARKS.—Records fair. 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.

Daily and monthly discharge, in second-feet, 1922-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	* 85	109	138	156	314	345	148	196	90	85	108
2	167	* 78	109	136	163	282	312	151	190	75	91	109
3	142	* 80	110	138	209	262	268	139	185	77	107	102
4	163	* 85	112	136	796	242	296	144	169	81	133	89
5	159	* 90	110	138	768	232	334	159	177	88	136	81
6	161	* 92	112	140	389	224	356	146	156	85	108	83
7	163	* 95	112	145	306	226	314	148	160	91	105	81
8	170	* 98	112	145	278	246	306	157	178	103	112	82
9	147	* 100	112	144	345	258	290	150	201	78	98	82
10	142	100	112	142	422	433	300	158	206	77	94	83
11	181	100	120	142	434	500	308	168	* 206	82	104	105
12	173	103		144	434	472	300	192	* 205	96	105	108
13	147	121		144	422	500	292	198	* 204	90	111	106
14	132	142		144	422	486	294	182	* 203	103	108	111
15	122	157		144	422	486	296	190	* 202	114	100	114
16	116	161		144	422	422	266	184	* 201	107	95	108
17	115	154		145	434	400	242	201	200	96	95	102
18	110	145		144	422	411	236	212	206	95	111	100
19	97	138		144	422	389	300	212	210	93	126	109
20	90	138	* 139	276	422	400	306	210	192	107	111	100
21	90	* 128		390	422	400	282	266	173	93	102	105
22	88	* 122		266	422	500	272	258	156	95	90	100
23	88	* 117		218	422	530	232	195	136	90	85	99
24	88	112		190	411	530	230	182	126	73	100	85
25	88	112		179	389	545	258	174	109	79	103	85
26	88	110		172	389	472	234	201	95	105	109	89
27	88	110		168	389	378	228	226	89	115	91	86
28	90	109		164	356	354	212	236	81	129	87	88
29	90	109	142	181		324	221	228	65	138	89	79
30	90	109	140	157		312	179	185	90	94	95	86
31	* 90		139	156		334		166		84	93	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	181	88	124	7,620
November	161	78	113	6,720
December			125	7,620
January	399	136	168	10,300
February	796	156	403	62,400
March	545	224	383	23,000
April	356	179	276	16,400
May	260	139	185	12,400
June	210	81	166	9,600
July	138	73	94.3	5,600
August	136	85	103	5,300
September	114	79	95.6	5,600
The year	796	73	185	134,000

* Estimated.

TENAYA CREEK NEAR YOSEMITE, CALIF.

LOCATION.—Water-stage recorder at Tenaya Bridge in Yosemite National Park, five-eighths mile above junction with Merced River and 1½ miles east of Yosemite, Mariposa County.

DRAINAGE AREA.—47 square miles.

RECORDS AVAILABLE.—July, 1904, to June, 1909; January, 1912, to September, 1920.

EXTREMES.—Maximum discharge during year, 1,360 second-feet June 16 (gage height, 6.59 feet); minimum, 1.5 second-feet September 29 and 30.

1904-1909, 1912-1929: Maximum discharge, 1,730 second-feet May 28, 1919 (gage height, 7.05 feet); minimum, 0.5 second-foot September 12 and most of October, 1906.

REMARKS.—Records good. Discharge estimated January 24-26. No diversions. Gage-height record furnished by officials of Yosemite National Park.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	3.7	4.5	9	8	12	79	290	143	42	5	2.7
2	2.0	3.5	4.5	9	8	10	83	370	132	37	4.8	2.7
3	1.8	4.0	4.5	9	8.5	10	88	423	136	30	4.6	2.6
4	1.9	4.1	4.5	8.5	9.5	30	81	422	132	26	4.4	2.6
5	1.9	4.3	4.5	8.5	9.5	49	66	407	121	22	4.4	2.4
6	2.0	4.3	4.5	8.5	10	46	64	392	112	20	4.4	2.4
7	2.0	4.3	4.5	8.5	10	30	64	390	120	13	4.2	2.3
8	2.2	4.9	4.5	8.5	10	32	69	423	113	16	4.2	2.3
9	2.2	4.3	4.5	8	10	32	67	437	166	14	4.0	2.2
10	2.2	4.3	4.0	8	10	43	69	392	149	12	4.0	2.2
11	2.2	4.3	4.6	8	10	34	77	392	116	11	3.8	2.1
12	2.3	4.5	4.6	8	10	35	87	429	110	10	3.8	2.1
13	2.3	4.5	4.6	8	10	32	91	453	116	8.5	3.7	2.1
14	2.3	4.5	4.6	8	10	31	107	469	117	8	3.5	2.1
15	2.4	4.5	4.6	8	10	30	176	484	320	5	3.5	2.1
16	2.4	4.6	4.8	8.5	10	30	238	516	704	4.2	3.4	2.1
17	2.5	4.6	4.8	8.5	10	34	258	532	407	6	3.4	2.0
18	2.5	4.6	4.8	8	10	36	229	549	312	6.5	3.4	2.0
19	2.8	4.6	4.8	8	10	35	179	532	240	7	3.4	1.9
20	2.8	4.6	4.8	8	10	37	131	484	190	6	3.4	2.0
21	3.0	4.6	4.8	8	10	44	116	484	160	6	3.4	1.9
22	3.1	4.5	4.8	8	11	114	105	484	138	6	3.2	1.9
23	3.1	4.5	4.8	7.5	11	63	93	437	120	6	3.2	1.9
24	3.1	4.5	4.8	7.5	12	60	94	407	106	5.5	3.2	1.9
25	3.2	4.5	5	7	12	55	100	367	92	5	3.2	1.9
26	3.2	4.5	5	7	11	59	118	294	82	5	3.0	1.7
27	3.4	4.5	6	7	11	65	157	225	74	5	3.0	1.6
28	3.4	4.3	8.5	7	11	90	179	188	61	4.8	2.9	1.6
29	3.5	4.5	9.5	7	-----	109	176	183	55	4.8	2.9	1.5
30	3.5	4.5	9.5	7	-----	94	231	181	49	5.5	2.7	1.5
31	3.7	-----	9.5	7.5	-----	78	-----	169	-----	6	2.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3.7	1.9	2.61	160
November	4.6	3.7	4.39	261
December	9.5	4.5	5.30	326
January	9	7	7.97	400
February	12	8	10.1	561
March	114	12	47.4	2,910
April	258	64	122	7,260
May	548	169	394	24,200
June	704	49	163	9,700
July	42	4.2	11.9	732
August	5	2.7	3.64	224
September	2.7	1.5	2.06	123
The year	704	1.5	64.8	46,900

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., at Hetch Hetchy. Zero of gage is at mean sea level.

RECORDS AVAILABLE.—May, 1923, to September, 1929.

EXTREMES.—Maximum elevation during year, 3,721.0 feet June 16; reservoir empty January 5 to March 9.

1923-1929: Maximum elevation, 3,721.3 feet June 8-11, 1923; reservoir empty January 5 to March 9, 1929.

Daily elevation, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139.9	102.6	64.5	26.8	-----	33.4	59.1	206.9	220.9	207.9	185.1
2	138.5	101.3	62.7	25.5	-----	33.7	63.1	207.7	220.7	207.3	184.4
3	137.3	99.9	60.8	23.5	-----	34.1	68.1	208.6	220.6	206.7	183.6
4	136.0	98.6	58.9	20.0	-----	34.2	73.6	210.0	220.5	206.0	182.8
5	134.6	97.6	57.4	-----	-----	35.2	78.9	211.4	220.4	205.4	182.0
6	133.3	96.5	55.6	-----	-----	35.7	83.9	212.5	220.3	204.7	181.1
7	132.0	95.5	53.8	-----	-----	36.2	88.0	213.2	220.1	204.0	180.3
8	131.0	94.4	52.0	-----	-----	36.2	92.2	214.1	220.0	203.4	179.5
9	129.9	93.2	50.0	-----	-----	36.3	96.9	215.0	219.8	202.7	178.7
10	128.6	92.0	47.9	-----	20.0	36.4	104.5	216.0	219.6	202.0	178.0
11	127.4	91.0	46.0	-----	21.5	36.5	109.3	217.0	219.3	201.3	177.2
12	126.3	89.7	43.8	-----	22.5	36.6	114.4	218.0	219.0	200.5	176.5
13	124.8	88.5	42.8	-----	23.5	37.0	120.0	219.7	218.6	199.9	175.6
14	123.7	87.3	40.8	-----	24.0	37.1	126.2	220.9	218.2	199.2	174.7
15	122.6	86.1	38.9	-----	23.0	37.5	131.8	220.9	217.7	198.5	173.8
16	121.6	84.9	36.9	-----	22.5	38.8	137.7	220.6	217.3	197.8	173.1
17	120.5	83.5	34.8	-----	21.0	40.9	144.0	220.3	216.8	197.1	172.3
18	119.4	82.2	32.8	-----	21.0	43.3	150.7	220.1	216.3	196.2	171.5
19	118.3	81.0	30.9	-----	22.5	45.3	157.7	220.8	215.8	195.4	170.4
20	117.5	79.6	29.4	-----	22.0	46.5	163.6	220.9	215.3	194.5	169.5
21	115.9	78.3	30.1	-----	22.0	47.3	168.9	220.6	214.9	193.7	168.7
22	114.7	77.0	28.9	-----	24.5	47.9	174.7	220.6	214.2	193.0	167.9
23	113.6	75.6	28.5	-----	27.5	48.4	180.7	220.5	213.5	192.3	167.0
24	112.5	74.2	28.4	-----	29.5	48.9	186.9	220.4	212.7	191.5	166.0
25	111.5	72.9	28.7	-----	29.7	49.3	192.3	220.8	212.1	190.6	165.2
26	110.2	71.5	29.0	-----	29.9	49.9	196.4	221.0	211.5	189.9	164.3
27	109.0	70.2	29.0	-----	29.8	51.0	198.7	220.9	210.9	189.0	163.4
28	107.5	68.8	29.0	-----	30.1	52.7	200.4	220.9	210.3	188.3	162.3
29	106.5	67.3	29.0	-----	31.3	54.4	202.0	220.9	209.6	187.5	161.3
30	105.0	66.9	29.2	-----	32.5	56.1	203.7	220.9	209.0	186.6	160.3
31	103.8	-----	28.2	-----	33.0	-----	205.5	-----	208.5	185.9	-----

NOTE.—Add 3,500 feet to obtain elevation above mean sea level. No storage Jan. 5 to Mar. 9.

TUOLUMNE RIVER NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 17, T. 1 N., R. 20 E., in Yosemite National Park, three-fourths mile below O'Shaughnessy Dam at Hetch Hetchy.

RECORDS AVAILABLE.—December, 1914, to September, 1929.

EXTREMES.—Maximum discharge during year, 12,000 second-feet June 16 (gage height, 13.58 feet); minimum, 14 second-feet December 24.

1914-1929: Maximum discharge, that of June 16, 1929; minimum, 1.3 second-feet November 2 and 3, 1923.

REMARKS.—Records good. No diversions. Flow regulated in Hetch Hetchy Reservoir. There was 97,400 acre-feet in reservoir September 30, 1928, and 120,000 acre-feet September 30, 1929.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	760	615	628	346	73	150	530	615	715	1,280	615	590
2	760	615	715	391	94	182	562	615	670	1,160	615	578
3	775	602	730	470	107	208	565	628	628	1,090	615	602
4	775	552	715	400	170	272	540	615	628	1,050	602	628
5	780	540	700	208	140	304	565	615	640	990	602	628
6	745	540	715	108	133	304	540	602	655	912	590	638
7	640	530	745	93	121	320	520	615	670	842	602	628
8	602	540	745	84	96	312	520	615	670	790	615	590
9	640	578	745	75	98	304	510	615	628	745	615	540
10	640	578	760	73	102	410	510	615	615	700	615	552
11	615	552	730	72	108	364	520	628	615	700	615	578
12	775	530	715	72	121	250	530	602	615	685	602	615
13	670	552	700	73	121	328	540	590	700	655	615	615
14	578	565	700	74	124	420	520	590	2,350	640	628	628
15	578	578	685	74	122	440	510	602	8,430	628	615	590
16	602	602	655	73	126	420	552	615	7,330	615	615	578
17	615	602	628	66	136	420	578	615	3,480	628	685	602
18	628	602	602	62	144	420	520	602	3,020	655	730	628
19	615	602	578	65	130	420	540	602	2,130	715	715	615
20	602	615	57	64	128	410	602	590	3,060	615	670	615
21	578	615	243	55	130	410	590	565	2,330	628	640	628
22	552	602	176	56	146	480	565	590	2,680	715	628	628
23	565	602	78	62	164	520	590	628	2,440	775	628	615
24	565	615	14	57	156	500	590	615	2,010	700	640	628
25	590	615	59	58	139	470	578	615	1,780	615	628	628
26	615	602	120	56	126	480	590	578	1,980	615	628	628
27	602	602	131	57	121	500	615	565	1,890	615	628	628
28	590	602	134	58	126	510	640	578	1,850	615	615	628
29	602	602	90	56	-----	520	640	640	1,780	615	628	628
30	615	602	190	58	-----	540	615	745	1,380	615	628	655
31	615	-----	364	63	-----	520	-----	760	-----	615	628	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	775	552	641	39,400
November	615	530	585	34,800
December	760	14	479	29,500
January	470	55	115	7,070
February	170	73	125	6,940
March	540	150	391	24,080
April	640	510	559	33,300
May	760	565	615	37,890
June	7,330	615	1,810	108,000
July	1,280	615	749	46,100
August	730	590	629	38,700
September	655	540	611	36,400
The year	7,330	14	610	442,000

TUOLUMNE RIVER NEAR BUCK MEADOWS, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 24, T. 1 S., R. 17 E., 1 mile below junction with South Fork of Tuolumne River and 2 miles north of Buck Meadows.

RECORDS AVAILABLE.—September, 1907, to September, 1929.

EXTREMES.—Maximum discharge during year, 16,200 second-feet June 16 (gage height, 11.0 feet); minimum, 14 second-feet October 4.

1907-1929: Maximum discharge, 27,200 second-feet January 14, 1909 (gage height, 14.0 feet); minimum, 12 second-feet September 25, 1928.

REMARKS.—Records excellent. Discharge estimated June 16. City of San Francisco diverts water from Tuolumne River and Cherry Creek and uses it to develop power, after which it is returned to the river through Moecasin Creek. Flow partly regulated by storage in Hetch Hetchy Reservoir and Lake Eleanor.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	52	46	47	70	123	420	1,620	862	1,020	52	27
2	18	45	45	45	119	164	428	1,920	735	840	51	26
3	18	51	54	54	185	201	473	2,160	645	676	43	26
4	17	51	62	53	52	263	600	2,210	735	627	39	26
5	16	75	54	48	208	240	580	2,160	810	622	74	27
6	38	60	45	46	130	272	431	1,920	712	587	74	35
7	107	107	40	43	88	208	347	1,920	580	484	46	48
8	89	54	40	43	67	142	407	1,780	690	381	36	44
9	106	51	42	42	65	115	311	1,700	984	279	43	60
10	86	72	52	41	66	1,000	317	1,700	1,240	179	44	50
11	55	48	75	41	62	452	350	1,880	920	105	36	39
12	42	49	65	42	50	329	484	2,110	810	118	35	38
13	91	60	53	43	58	235	560	2,110	835	85	34	32
14	42	122	45	43	62	201	466	2,210	2,010	69	32	32
15	41	107	40	42	58	197	645	2,110	3,240	81	36	35
16	40	75	39	43	63	203	1,040	2,710	11,500	61	34	35
17	37	73	43	40	73	232	1,380	2,650	5,750	55	43	28
18	32	57	39	44	98	269	1,420	2,530	4,950	57	63	27
19	32	44	40	50	230	260	1,270	2,480	2,960	72	23	29
20	32	42	96	50	180	280	1,100	2,110	3,170	96	16	30
21	34	57	53	47	152	268	1,010	1,920	2,960	50	21	37
22	53	65	49	47	153	700	735	2,060	2,710	52	27	32
23	39	60	40	49	158	470	398	2,110	2,650	70	25	40
24	40	46	41	46	130	350	462	2,260	2,360	51	41	33
25	38	40	87	47	115	278	470	2,110	1,710	51	44	41
26	32	65	140	45	93	250	560	1,540	1,900	48	46	37
27	32	48	62	45	76	290	862	1,040	1,850	44	42	37
28	32	43	84	45	80	448	1,240	862	1,790	40	34	34
29	72	39	79	46	-----	540	1,140	760	1,580	40	31	33
30	57	39	124	52	-----	520	1,300	1,610	1,230	48	29	44
31	58	-----	75	54	-----	431	-----	1,070	-----	46	30	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	107	16	48.4	2,800
November	122	39	59.9	3,000
December	140	39	59.4	3,400
January	54	40	45.1	2,300
February	520	58	123	6,000
March	1,090	115	322	15,000
April	1,420	311	705	42,000
May	2,710	760	1,890	116,000
June	11,500	580	2,160	120,000
July	1,020	40	224	13,000
August	74	16	39.5	2,400
September	69	28	36.5	2,170
The year	11,500	16	476	345,000

TUOLUMNE RIVER NEAR JACKSONVILLE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 18, T. 1 S., R. 15 E., three-fourths mile east of Jacksonville and 1 mile west of highway bridge on Big Oak Flat Road.

RECORDS AVAILABLE.—July, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 23,900 second-feet June 16 (gage height, 10.17 feet); minimum, 90 second-feet September 8.

1923-1929: Maximum discharge, 35,300 second-feet March 25, 1928 (gage height, 12.38 feet); minimum, 37 second-feet October 18, 1926.

REMARKS.—Records good. For diversions and regulation see record of Tuolumne River near Buck Meadows.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	715	850	805	285	430	492	1,630	3,210	1,740	1,890	792	552
2	860	810	730	295	538	595	1,700	3,590	1,270	1,690	898	780
3	770	810	875	490	622	442	1,740	3,920	1,550	1,520	898	965
4	770	310	845	625	2,550	735	1,860	4,060	1,700	865	415	762
5	780	860	850	700	1,400	948	2,260	3,740	1,680	1,370	780	772
6	770	695	840	270	845	1,080	1,520	3,760	1,720	1,330	890	770
7	310	785	835	226	648	880	1,060	3,570	1,520	885	896	795
8	805	800	825	260	328	862	1,620	3,520	1,450	1,200	792	170
9	895	900	810	260	315	770	1,610	3,300	1,340	1,300	732	785
10	910	880	845	230	260	2,140	1,540	3,240	2,270	1,190	855	688
11	870	460	890	255	370	1,860	1,480	3,260	2,020	965	665	942
12	800	890	910	220	518	1,500	1,710	3,340	1,860	892	853	915
13	905	935	865	270	462	1,280	1,850	3,710	1,900	902	806	818
14	410	920	700	235	508	1,150	1,140	3,920	2,940	745	775	795
15	915	1,080	835	250	550	1,230	1,800	3,500	4,370	910	785	675
16	920	920	775	195	610	1,130	2,420	4,420	16,700	870	770	778
17	865	850	730	260	272	850	3,050	4,430	7,890	825	796	915
18	800	670	425	185	520	1,330	3,120	4,220	6,070	812	295	762
19	785	950	245	390	562	1,420	2,920	3,700	4,220	832	846	768
20	790	850	245	275	585	1,280	2,620	3,700	4,040	875	870	778
21	800	825	380	290	505	1,180	2,360	3,400	4,000	880	896	818
22	740	835	290	255	462	1,840	2,350	3,440	3,640	798	822	780
23	875	840	350	250	515	1,640	1,690	3,410	3,630	830	788	785
24	850	830	350	260	480	1,000	1,650	3,440	3,370	822	805	755
25	910	630	260	240	520	1,360	1,810	3,520	2,600	825	808	512
26	800	915	520	375	540	1,380	1,940	2,540	2,780	820	802	785
27	790	900	510	225	520	1,380	2,160	2,200	2,690	835	802	790
28	420	820	770	245	512	1,600	2,710	1,980	2,620	822	792	798
29	890	775	750	225	-----	1,910	2,600	1,850	2,430	792	792	725
30	905	800	310	240	-----	1,860	2,680	2,000	2,160	808	795	872
31	810	-----	466	280	-----	1,210	-----	1,840	-----	808	798	-----
Month												
	Maximum					Minimum			Mean		Run-off in acre-feet	
October	920					310			775		47,700	
November	1,080					310			813		48,400	
December	910					245			641		39,400	
January	700					185			289		17,800	
February	2,550					260			606		32,700	
March	2,140					442			1,240		76,200	
April	3,120					1,060			2,020		120,000	
May	4,420					1,840			3,350		206,000	
June	16,700					1,270			3,280		196,000	
July	1,890					745			996		61,200	
August	898					295			779		47,900	
September	955					170			773		46,000	
The year	16,700					170			1,300		939,000	

DON PEDRO RESERVOIR NEAR LA GRANGE, CALIF.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 35, T. 2 S., R. 14 E., at Don Pedro Dam, $5\frac{1}{2}$ miles above La Grange. Zero of gage is at mean sea level.

RECORDS AVAILABLE.—October, 1924, to September, 1929.

EXTREMES.—Maximum elevation during year, 585.7 feet July 4; minimum, 500.2 feet September 30.

REMARKS.—Record of daily elevation furnished by Turlock Irrigation District.

Daily elevation, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	561.4	536.1	516.5	510.3	500.9	503.5	512.1	534.8	548.2	584.9	576.0	550.6
2	560.9	535.1	516.3	509.9	501.0	502.5	513.1	535.4	547.3	585.2	575.4	549.8
3	560.2	533.9	516.1	509.6	501.3	502.0	513.8	536.4	546.3	585.4	574.8	549.1
4	559.5	533.3	516.0	509.5	503.0	501.0	514.5	537.7	545.6	585.7	574.1	548.1
5	558.9	533.1	515.9	509.4	508.0	500.9	515.9	538.9	545.4	585.5	573.1	547.1
6	558.2	533.0	515.8	510.0	509.1	500.9	517.1	539.5	545.1	585.5	572.5	546.1
7	557.5	532.9	515.5	509.8	509.7	500.9	517.5	541.3	544.8	585.5	571.9	545.2
8	556.6	532.7	515.3	509.3	509.4	500.8	517.5	541.9	544.3	585.3	571.2	544.1
9	555.9	532.5	515.0	508.9	509.2	500.5	518.3	541.4	543.8	585.5	570.4	542.6
10	555.2	532.4	514.5	508.4	508.9	500.2	518.9	541.9	543.3	585.6	569.8	541.6
11	554.6	532.4	514.2	508.0	508.4	503.3	519.3	542.0	544.0	585.4	569.1	540.8
12	553.8	532.1	514.0	507.8	508.0	505.0	519.9	542.4	544.5	585.2	568.3	539.9
13	553.1	531.4	513.9	507.3	507.9	505.2	520.8	542.8	544.9	585.0	567.4	538.9
14	552.4	530.5	513.5	507.0	507.8	505.3	521.5	544.3	546.4	584.9	566.6	537.9
15	551.7	530.0	513.1	506.5	507.5	505.4	521.8	545.0	546.4	584.7	565.7	536.8
16	551.1	529.2	512.9	506.0	507.4	505.5	522.9	545.5	554.2	584.5	564.9	535.5
17	550.4	528.4	512.5	505.3	507.4	505.5	524.9	546.5	555.0	584.3	564.1	534.5
18	549.6	527.2	511.9	505.3	507.1	505.3	527.1	547.4	558.5	584.0	563.2	533.5
19	548.7	526.1	510.9	505.1	507.0	505.7	529.1	548.3	570.3	583.5	562.2	532.5
20	548.2	525.1	510.3	505.5	507.0	506.2	531.1	548.7	572.5	583.1	561.4	531.5
21	547.6	524.0	509.7	505.4	507.0	506.2	532.5	549.5	574.4	582.8	560.5	530.5
22	546.4	522.9	509.4	505.0	506.9	506.4	533.1	549.9	576.6	582.1	559.8	529.5
23	545.6	521.7	509.1	504.9	506.8	506.9	533.5	550.4	577.2	581.5	559.0	528.5
24	544.7	520.3	508.9	504.7	506.7	508.2	533.4	551.0	578.4	581.0	558.3	527.5
25	543.9	519.1	508.9	504.0	506.7	508.1	533.5	551.8	579.4	580.3	557.3	526.6
26	542.8	517.9	508.9	503.3	506.0	508.3	533.6	552.2	580.4	579.7	556.4	525.4
27	541.7	517.4	509.1	503.0	505.3	508.7	533.3	551.8	581.4	579.1	555.5	524.8
28	540.5	517.2	509.3	502.7	504.5	509.2	533.8	551.3	582.4	578.5	554.6	523.8
29	539.3	517.0	509.3	502.3	-----	510.0	534.3	550.4	583.3	577.9	553.8	522.2
30	538.1	516.8	510.3	501.9	-----	511.1	534.3	549.6	584.2	577.2	552.9	521.2
31	537.1	-----	509.9	501.3	-----	512.0	-----	548.9	-----	576.6	551.9	-----

TUOLUMNE RIVER ABOVE LA GRANGE DAM, NEAR LA GRANGE, CALIF.

LOCATION.—Water-stage recorder in NE. ¼ sec. 3, T. 3 S., R. 14 E., half a mile below Don Pedro Dam, 3¼ miles above La Grange Dam, and 5 miles above La Grange.

RECORDS AVAILABLE.—March, 1915, to September, 1929; also, 1895 to 1917, at La Grange Dam.

EXTREMES.—Maximum discharge during year, 3,330 second-feet May 16 and 17 (gage height, 9.50 feet); minimum, 165 second-feet January 28.

1915-1929: Maximum discharge, 38,100 second-feet March 25, 1928 (gage height, 29.6 feet); minimum, 1.4 second-feet November 26 to December 1, 1922.

REMARKS.—Records good. A small amount of water is diverted for irrigation. Flow completely regulated by gates in Don Pedro Dam. There was 165,000 acre-feet of water in Don Pedro Reservoir September 30, 1928, and 79,900 acre-feet September 30, 1929. Water is also stored in Hetch Hetchy Reservoir and Lake Eleanor.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1,540	1,920	1,030	485	562	1,150	1,180	2,610	2,700	1,150	1,660	1,600
2.....	1,600	1,920	815	580	515	1,100	1,180	2,580	2,360	1,180	1,660	1,660
3.....	1,600	915	1,000	562	485	1,000	1,250	2,970	2,200	1,180	1,660	1,720
4.....	1,600	875	1,060	580	545	1,060	1,250	2,970	2,180	1,120	1,660	1,720
5.....	1,600	915	1,100	580	545	960	1,300	2,790	2,060	1,360	1,660	1,660
6.....	1,600	988	1,150	485	632	982	1,300	2,580	2,060	1,150	1,660	1,660
7.....	1,540	960	1,180	580	685	982	1,200	2,580	2,060	1,080	1,660	1,720
8.....	1,570	960	1,180	632	668	982	1,280	2,970	1,950	1,100	1,720	1,600
9.....	1,570	960	1,000	562	660	1,080	1,280	2,970	1,950	1,120	1,780	1,680
10.....	1,540	895	1,100	530	545	1,000	1,250	2,970	1,660	1,120	1,780	1,680
11.....	1,600	855	1,120	515	650	1,080	1,250	2,970	1,480	1,120	1,660	1,660
12.....	1,600	1,540	1,180	530	668	1,180	1,220	3,150	1,480	1,120	1,780	1,680
13.....	1,600	1,660	1,150	455	668	1,260	1,220	2,360	1,510	1,120	1,780	1,680
14.....	1,540	1,720	1,120	545	668	1,200	1,100	2,790	1,480	1,060	1,780	1,660
15.....	1,570	1,720	1,060	515	650	1,220	1,180	3,240	1,450	1,100	1,780	1,570
16.....	1,570	1,720	1,030	515	632	1,200	1,180	3,240	1,980	1,100	1,780	1,630
17.....	1,570	1,720	1,120	515	545	1,100	1,100	3,330	2,360	1,200	1,720	1,540
18.....	1,450	1,680	1,120	515	632	1,220	1,250	3,240	2,130	1,220	1,660	1,540
19.....	1,570	1,720	815	500	650	1,200	1,250	3,240	1,980	1,250	1,780	1,540
20.....	1,600	1,720	580	440	632	1,180	1,250	3,060	1,780	1,450	1,780	1,540
21.....	1,570	1,720	580	500	615	1,150	1,680	2,790	1,720	1,570	1,780	1,540
22.....	1,660	1,720	580	515	580	1,220	1,850	2,790	1,780	1,600	1,780	1,425
23.....	1,780	1,780	470	500	615	1,250	1,680	2,580	1,780	1,680	1,780	1,480
24.....	1,780	1,780	515	650	545	1,120	1,720	2,580	1,780	1,680	1,780	1,510
25.....	1,780	1,660	375	632	795	1,250	1,780	2,580	1,480	1,660	1,660	1,480
26.....	1,850	1,250	470	598	1,050	1,220	1,985	2,790	1,150	1,660	1,720	1,510
27.....	1,850	1,030	470	530	1,030	1,200	2,200	2,790	1,180	1,660	1,780	1,510
28.....	1,780	1,080	590	545	1,060	1,180	2,130	2,790	1,130	1,680	1,780	1,510
29.....	1,850	960	500	545	-----	1,200	2,620	2,790	1,150	1,660	1,850	1,420
30.....	1,850	1,080	410	515	-----	1,250	2,700	2,580	1,120	1,660	1,850	1,450
31.....	1,920	-----	515	562	-----	1,100	-----	2,790	-----	1,660	1,850	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,920	1,450	1,650	101,090
November.....	1,920	855	1,380	82,100
December.....	1,180	375	846	52,000
January.....	650	440	539	33,180
February.....	1,050	485	659	36,600
March.....	1,280	960	1,130	69,560
April.....	2,700	1,100	1,490	88,700
May.....	3,330	2,360	2,920	180,000
June.....	2,700	1,120	1,770	105,000
July.....	1,660	1,050	1,330	81,900
August.....	1,850	1,600	1,740	107,600
September.....	1,720	1,420	1,580	94,000
The year.....	3,330	375	1,420	1,030,000

PALES CREEK NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 8, T. 1 N., R. 20 E., in Yosemite National Park, one-fourth mile above Wapama Falls and 2 miles northeast of Hetch Hetchy.

RECORDS AVAILABLE.—November, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,590 second-feet June 16 (gage height, 6.15 feet); no flow October 1 to November 14 and September 9-30. 1915-1929: Maximum discharge, 1,740 second-feet March 25, 1928 (gage height, 6.45 feet); no flow at times during summers of 1921, 1924, 1926, 1928, and 1929.

REMARKS.—Records excellent except those for December 13-27 and January 2 to March 5, which were estimated because of ice. No diversions.

Daily and monthly discharge, in second-feet, 1920-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1.4	11	14	28	121	340	213	144	8	0.2
2	0	1.3	10	16	35	127	410	162	115	8	.2
3	0	2.4	18	18	50	136	477	180	108	6.5	.2
4	0	3.4	10	20	60	140	512	264	99	5.5	.2
5	0	3.2	10	18	70	117	480	224	90	4.5	.1
6	0	2.8	9	12	88	104	440	175	77	3.9	.1
7	0	2.4	9	17	74	96	446	171	67	3.4	.1
8	0	2.4	9	17	61	73	404	166	58	3.0	.1
9	0	2.3	9	16	149	71	549	219	80	2.7	0
10	0	3.3	9	16	124	72	480	233	43	2.4	0
11	0	8	9	16	86	88	466	196	37	2.1	0
12	0	7	9	16	88	104	512	216	31	2.0	0
13	0	7	9	16	59	99	549	207	28	1.8	0
14	0	7	9	16	57	88	626	362	25	1.4	0
15	2.0	6	9	16	58	181	487	560	22	1.2	0
16	3.6	6	9	16	67	188	689	1,270	20	1.2	0
17	3.3	6	9	16	76	289	689	606	13	1.2	0
18	3.1	6	9	16	71	266	782	486	17	1.1	0
19	3.4	6	9	16	71	244	689	365	31	1.0	0
20	4.0	6	9	16	72	183	567	386	21	.9	0
21	4.5	6	9	16	136	151	606	389	16	.8	0
22	4.6	6	9	18	227	127	689	315	13	.8	0
23	4.1	6	9	18	184	114	775	283	11	.7	0
24	3.6	9	9	20	97	114	754	261	9	.6	0
25	3.0	40	9	20	80	121	668	260	8	.6	0
26	2.6	25	9	20	80	144	466	244	7	.5	0
27	2.3	30	9	20	108	185	275	222	6.5	.4	0
28	2.0	36	9	24	136	244	227	222	6	.4	0
29	1.7	19	9		151	233	268	208	6	.3	0
30	1.5	15	10		140	269	315	166	6	.3	0
31		12	12		123		312		7	.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	4.3	0	1.36	32.3
December	40	1.3	8.84	544
January	12	9	9.32	573
February	24	14	17.4	968
March	227	28	91.8	5,640
April	269	71	146	8,690
May	775	227	516	31,700
June	1,270	162	304	18,160
July	144	6	38.3	2,360
August	8	.2	2.17	133
September	.2	0	.04	1.4
The year	1,270	0	95.1	68,890

NOTE.—No flow during October.

CHERRY CREEK NEAR HETCH HETCHY, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 28, T. 2 N., R. 19 E., 3 miles by trail from Lake Eleanor and $7\frac{1}{2}$ miles northwest of Hetch Hetchy.

DRAINAGE AREA.—114 square miles (above dam site in sec. 5, T. 1 N., R. 19 E.).

RECORDS AVAILABLE.—April, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, about 7,750 second-feet June 16 (gage height, 13.57 feet); minimum 0.5 second-foot October 11.

1910-1929: Maximum discharge, that of June 16, 1929; no flow September 6-12, 1910.

REMARKS.—Records good except those for December 12-24, January 11-31, February 9-25, and April 2-11, which were estimated. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.6	0.8	8	45	68	136	278	912	406	226	8	1.0
2.	.6	.7	8	41	73	164	276	1,106	319	194	8	1.0
3.	.6	12	26	48	117	188	280	1,200	396	167	8	1.0
4.	.6	24	44	54	108	265	280	1,200	482	153	8	1.0
5.	.6	6.5	38	50	80	299	285	1,106	413	139	8	1.0
6.	.6	57	80	44	78	269	280	4,000	344	124	7	.9
7.	.6	22	24	41	69	216	260	1,060	368	108	6.5	.9
8.	.6	10	29	39	67	164	270	1,180	351	98	5.5	.9
9.	.6	6.5	18	37	65	362	265	1,200	712	87	5	.9
10.	.6	4.2	19	37	66	572	265	1,060	572	75	4.4	.9
11.	.6	3.1	80	36	66	242	270	1,060	423	67	3.9	.8
12.	.6	2.4	28	35	66	210	309	1,160	456	69	3.5	.8
13.	.7	3.9	26	34	66	179	272	1,260	592	50	3.1	.8
14.	.8	36	24	33	60	170	248	1,330	712	44	2.9	.8
15.	.8	48	22	52	66	179	436	4,350	2,240	40	2.7	.8
16.	.8	68	20	31	66	191	632	1,660	3,640	36	2.4	.8
17.	.8	72	20	60	60	228	734	1,620	1,180	32	2.3	.8
18.	.8	48	20	64	65	239	672	1,560	765	29	2.0	.8
19.	.7	49	30	80	65	185	592	1,440	682	26	1.9	.8
20.	.7	53	20	80	65	204	402	1,220	572	24	1.8	.8
21.	.7	60	20	80	70	302	333	1,220	552	22	1.7	.8
22.	.7	67	22	80	75	652	282	1,360	526	20	1.6	.8
23.	.7	47	24	80	80	387	256	1,380	499	18	1.6	.8
24.	.7	31	26	80	85	456	309	1,380	440	16	1.5	.8
25.	.7	26	194	64	84	447	362	1,220	413	14	1.4	.8
26.	.7	23	108	80	78	376	446	845	394	14	1.3	.8
27.	.7	19	87	80	87	362	612	543	355	12	1.2	.8
28.	.7	16	126	80	114	358	602	493	344	10	1.2	.8
29.	.7	12	82	85	-----	408	572	544	312	9.5	1.2	.8
30.	.8	10	61	40	-----	380	784	662	265	8.5	1.1	.8
31.	.8	-----	48	50	-----	402	-----	682	-----	8	1.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.8	0.6	0.68	41.8
November	72	.7	27.9	1,660
December	194	8	40.7	2,500
January	54	30	36.2	2,230
February	117	60	74.1	4,120
March	652	136	206	18,200
April	734	248	396	23,600
May	1,680	493	1,130	69,500
June	3,640	265	666	39,000
July	226	8	62.3	3,830
August	8	1.0	3.54	218
September	1.0	.8	.86	51.2
The year	3,640	.6	228	165,000

LAKE ELEANOR NEAR HETCH HETCHY, CALIF.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 3, T. 1 N., R. 19 E., at dam at Lake Eleanor $5\frac{1}{2}$ miles northwest of Hetch Hetchy. Zero of gage is 4,600 feet above mean sea level. Crest of dam is gage height 61.00 feet.

RECORDS AVAILABLE.—October, 1919, to September, 1929.

EXTREMES.—Maximum stage during year, 61.6 feet May 26; minimum, 12.8 feet February 28.

1919-1929: Maximum stage, 62.0 feet March 25, 1928, water 1 foot deep over crest of dam; no storage November 28 to December 21, 1921.

REMARKS.—When reservoir is full, waste gates on left end of dam are left open.

Daily elevation, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51.0	41.5	26.3	27.8	26.4	13.4	49.2	58.8	60.7	60.9	56.2	45.8
2	51.0	41.1	27.1	27.7	26.5	15.4	49.8	58.8	60.7	60.9	55.8	45.4
3	50.9	40.6	27.0	27.6	26.8	18.9	50.5	58.8	60.8	61.0	55.5	45.0
4	50.9	40.2	26.9	27.3	27.4	25.0	51.3	58.9	60.9	61.0	55.1	44.6
5	50.9	39.8	26.8	27.1	27.8	28.5	52.0	58.8	60.8	61.0	54.8	44.2
6	50.8	39.3	26.7	27.0	28.1	29.6	52.6	58.8	60.7	61.0	54.4	43.8
7	50.5	38.9	26.7	27.2	28.3	30.6	53.0	58.7	60.8	61.0	54.1	43.4
8	50.2	38.5	26.6	27.2	28.4	31.4	53.4	58.9	60.8	61.0	53.7	43.0
9	49.9	38.1	26.5	27.1	28.5	32.1	53.8	59.8	60.9	61.0	53.4	42.6
10	49.5	37.6	26.5	27.1	28.6	34.6	54.2	60.5	60.9	61.0	53.0	42.2
11	49.1	37.1	26.6	27.0	28.8	36.0	54.6	60.6	60.9	60.9	52.7	41.8
12	48.8	36.5	26.6	27.0	28.8	37.0	55.0	60.3	60.8	60.8	52.3	41.4
13	48.7	36.0	26.6	27.0	28.8	37.5	55.3	60.2	60.9	60.7	52.0	41.0
14	48.4	35.6	26.6	27.0	28.8	38.0	55.5	60.3	61.0	60.5	51.6	40.5
15	48.0	35.2	26.5	26.9	28.8	38.4	55.7	60.6	61.0	60.4	51.3	40.0
16	47.7	34.9	26.5	26.9	28.7	38.8	56.0	60.5	61.2	60.2	50.9	39.6
17	47.4	34.4	26.5	26.8	28.7	39.3	56.2	60.5	60.7	60.0	50.6	39.2
18	47.0	34.1	26.4	26.8	27.7	39.8	56.4	60.4	60.3	59.8	50.4	38.6
19	46.7	33.7	26.3	26.8	24.1	40.4	56.4	60.4	59.7	59.6	50.4	38.1
20	46.3	33.3	26.3	26.8	21.0	40.9	56.3	60.3	60.2	59.4	50.4	37.6
21	45.9	32.9	26.3	26.8	19.7	41.4	55.9	60.4	60.6	59.1	50.1	37.1
22	45.6	32.5	26.2	26.8	18.8	42.6	55.7	60.6	61.0	59.0	49.7	36.6
23	45.1	32.1	26.1	26.8	18.0	43.6	56.2	60.9	61.0	58.9	49.3	36.0
24	44.8	31.7	26.1	26.7	17.2	44.3	56.7	61.0	61.0	58.8	48.9	35.4
25	44.4	31.1	26.5	26.6	15.8	44.9	57.2	60.9	61.0	58.5	48.5	34.9
26	44.0	30.5	27.1	26.6	14.2	45.3	57.8	60.8	61.0	58.8	48.1	34.3
27	43.6	29.9	27.3	26.5	13.2	45.8	58.2	60.7	61.0	57.9	47.7	33.7
28	43.2	29.3	27.7	26.4	12.9	46.4	58.5	60.6	61.0	57.6	47.3	33.1
29	42.7	28.5	28.1	26.3	-----	47.2	58.6	60.6	61.0	57.2	47.0	32.5
30	42.3	27.8	28.2	26.3	-----	48.0	58.7	60.7	61.0	56.9	46.6	31.9
31	41.9	-----	28.0	26.3	-----	48.6	-----	60.7	-----	56.6	46.2	-----

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, one-third mile below Lake Eleanor Dam and $5\frac{1}{2}$ miles northwest of Hetch Hetchy.

DRAINAGE AREA.—79 square miles (above dam site in sec. 3, T. 1 N., R. 19 E.). RECORDS AVAILABLE.—November, 1909, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,570 second-feet June 16 (gauge height, 8.70 feet); minimum, 0.3 second-foot October 13, caused by regulation.

1909-1929: Maximum discharge, 6,400 second-feet March 25, 1928 (gauge height, 11.0 feet); no flow September 8-14, 1910.

REMARKS.—Records good. No diversions. Flow regulated by gates in Eleanor Dam. There was 18,300 acre-feet in the lake September 30, 1928, and 3,850 acre-feet September 30, 1929.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	182	125	106	57	106	1.0	550	212	114	172	172
2	6.5	184	63	104	58	110	1.0	635	159	66	172	172
3	6.5	176	63	104	60	115	.9	680	77	32	172	172
4	6.5	182	60	104	38	52	2.2	702	170	44	172	172
5	7	182	57	104	32	1.0	2.1	702	240	53	172	175
6	144	182	42	76	52	1.9	1.8	658	144	53	172	182
7	154	172	28	57	52	1.6	1.8	612	89	49	172	180
8	157	184	28	57	52	1.5	1.7	315	198	45	172	182
9	159	184	28	57	52	1.8	1.7	186	295	41	172	185
10	159	190	28	57	52	3.0	1.8	378	353	36	172	178
11	180	190	28	57	52	2.5	1.7	635	283	58	172	178
12	119	190	28	57	76	2.2	.46	658	232	73	172	175
13	96	190	28	57	89	2.2	146	590	172	90	172	175
14	184	190	28	57	89	2.2	170	462	230	100	172	175
15	184	172	28	57	90	2.2	205	590	641	117	172	175
16	182	146	28	57	101	2.1	392	725	2,030	127	178	175
17	180	125	29	57	100	2.0	494	680	838	127	96	178
18	178	133	30	57	188	2.1	502	668	792	84	1.7	178
19	186	144	30	57	235	2.0	498	685	395	82	2.0	175
20	190	149	30	57	172	1.6	494	510	6.5	146	92	178
21	188	152	31	57	150	1.6	490	430	8	115	127	175
22	184	147	31	57	139	2.0	223	381	131	82	168	178
23	190	144	31	57	133	2.1	3.8	450	232	3.0	185	178
24	188	152	32	57	128	2.0	1.8	550	200	91	185	172
25	180	163	34	57	122	2.0	4.9	518	185	160	185	168
26	180	172	34	57	114	2.0	107	398	180	160	182	168
27	182	170	51	56	107	1.9	240	298	172	160	172	168
28	180	170	32	56	104	1.6	395	230	119	162	172	168
29	182	176	30	56	-----	1.5	470	178	108	172	172	168
30	182	184	76	56	-----	1.3	515	195	155	172	172	180
31	182	-----	107	56	-----	1.1	-----	215	-----	172	172	-----
Month						Maximum	Minimum	Mean		Run-off in acre-feet		
October						190	6.5	145		8,920		
November						190	125	169		10,100		
December						125	28	41.9		2,580		
January						106	56	65.1		4,000		
February						235	32	96.2		5,340		
March						115	1.0	14.0		861		
April						510	.9	180		10,700		
May						725	178	497		30,600		
June						2,030	6.5	302		18,200		
July						172	3.0	96.3		5,920		
August						185	1.7	156		9,590		
September						135	130	173		10,300		
The year						2,030	.9	161		117,000		

SOUTH FORK OF TUOLUMNE RIVER AT ITALIAN FLAT, NEAR SEQUOIA, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 20, T. 1 S., R. 19 E., at Italian Flat, $1\frac{1}{4}$ miles northeast of highway bridge on Big Oak Flat Road and $1\frac{1}{4}$ miles northwest of Sequoia.

RECORDS AVAILABLE.—October, 1924, to December, 1929 (discontinued).

EXTREMES.—Maximum discharge during year, 577 second-feet June 16 (gage height, 3.80 feet); minimum, 2.5 second-feet September 13.

1924-1929: Maximum discharge, 695 second-feet March 27, 1928 (gage height, 4.45 feet); minimum, 0.5 second-foot August 20, 1928.

REMARKS.—Records excellent except those for December 3 to February 2 and February 8-28, which were estimated because of ice. No diversions.

Daily discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1923-29												
1	3.6	6	8	9	10	20	68	164	77	28	8.5	3.6
2	4.1	6	7.5	9	10	23	68	153	72	26	8.5	3.6
3	4.6	8.5	14	9	33	25	71	200	76	26	8.5	3.6
4	4.1	8.5	11	8	45	30	124	210	77	25	8.5	4.1
5	4.1	7.5	8.5	8	30	36	89	201	72	24	8	4.1
6	4.1	7	8	8	31	38	74	191	68	23	8	4.1
7	3.6	7.5	8	8	18	35	70	193	68	22	7.5	4.6
8	3.0	6.5	8	7	17	33	66	201	65	21	7.5	4.6
9	3.0	6	8	7	17	66	65	205	82	21	7	4.6
10	3.0	6	8	7	16	208	64	185	88	20	7	4.1
11	3.0	6	8	7	16	77	76	183	72	19	6.5	3.6
12	4.1	6	8	7	15	58	78	191	68	18	6.5	3.6
13	5	8.5	8	7	14	50	70	194	66	17	6.5	3.0
14	6	12	8	7	13	44	68	200	65	16	6	3.0
15	6	9	8	7	13	46	89	210	98	16	6	3.0
16	6	8.5	8	7	12	48	116	216	318	16	6	3.0
17	5	8.5	8	7	12	48	132	215	151	15	6	3.0
18	5	8.5	8	7	12	55	129	211	113	14	6	3.0
19	4.6	8.5	8	7	12	54	117	196	88	14	6	3.0
20	4.6	8.5	8	7	12	54	97	177	76	13	6	6
21	4.1	8	8	7	12	59	92	167	66	13	4.6	8
22	4.1	8.5	8	7	12	86	90	191	61	12	4.6	6
23	4.1	7.5	8	7	13	64	82	194	55	12	4.1	5
24	4.1	7.5	8	7	14	59	84	178	47	12	4.1	4.3
25	4.1	7.5	8	7	14	52	88	156	42	12	4.1	4.3
26	4.6	7	9	7	14	52	88	122	39	11	4.1	4.3
27	4.6	8	10	7	14	61	103	98	36	11	4.1	4.1
28	4.6	7	12	7	15	71	114	92	38	10	3.6	4.1
29	4.6	7.5	10	7	-----	78	113	89	32	10	3.6	4.3
30	5	8.5	9	7	-----	77	138	92	30	10	3.6	5
31	6	-----	9	7	-----	68	-----	88	-----	9	3.0	-----

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1929											
1	4.6	4.6	4.6	11	5	4.1	20	21	3.0	3.6	7.5
2	4.6	4.6	4.1	12	4.6	3.6	11	22	3.0	4.1	6.5
3	5	4.6	4.1	13	4.1	3.0	14	23	3.0	5	-----
4	4.6	4.1	4.6	14	3.6	4.1	12	24	3.0	4.6	-----
5	4.6	4.1	4.6	15	3.6	4.1	9	25	3.0	4.6	-----
6	4.1	4.1	4.1	16	3.6	4.1	16	26	3.0	4.6	-----
7	4.6	4.1	4.1	17	3.0	3.5	12	27	3.0	5	-----
8	5	3.6	5	18	3.0	4.1	9	28	3.0	4.1	-----
9	6	3.6	8	19	3.6	3.6	8.5	29	3.6	4.1	-----
10	5	3.0	20	20	3.0	3.6	8.5	30	4.1	4.1	-----
								31	4.1	-----	-----

*Monthly discharge, in second-feet, of South Fork of Tuolumne River at Italian Flat,
near Sequoia, Calif., 1928-29*

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1928-29				
October.....	6	3.0	4.40	271
November.....	12	6	7.68	467
December.....	14	7.5	8.65	532
January.....	9	7	7.32	480
February.....	55	10	16.9	989
March.....	208	20	57.4	3,530
April.....	138	64	90.7	5,400
May.....	216	88	174	10,700
June.....	318	30	76.7	4,560
July.....	28	9	16.6	1,020
August.....	8.5	3.0	5.87	361
September.....	8	2.8	4.15	247
The year.....	318	2.8	39.3	28,500
1929				
October.....	6	3.0	3.90	240
November.....	5	3.0	4.09	243
December 1-22.....	20	4.1	8.96	391
The period.....				874

SOUTH FORK OF TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 29, T. 1 S., R. 18 E., 20 feet below highway bridge on Big Oak Flat road and half a mile southwest of Oakland Recreation Camp.

RECORDS AVAILABLE.—March, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 698 second-feet June 16 (gauge height, 4.85 feet); minimum, 2.3 second-feet September 18.

1923-1929: Maximum discharge, about 1,500 second-feet April 16, 1923 (gauge height, 7.03 feet); minimum, 1.9 second-feet September 6-10, 1924.

REMARKS.—Records good except those for December 9-23, December 27 to January 3, January 8-30, and February 9-28, which were estimated. No diversions.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	9	13	21	27	26	76	167	74	30	8.5	2.3
2	6	9	14	21	43	28	75	186	70	28	8	2.3
3	7	11	22	21	85	32	80	204	71	27	7.5	2.9
4	6.5	15	20	20	160	36	131	212	73	26	7.5	2.9
5	7	12	17	20	67	42	140	206	68	24	7	2.9
6	7	12	15	19	44	45	100	194	62	23	6.5	3.0
7	6.5	12	13	17	32	45	84	192	63	22	6	3.1
8	6.5	11	13	17	24	42	89	200	59	21	6	3.3
9	6	11	13	17	24	56	81	208	74	21	5.5	3.2
10	6	10	13	16	23	291	81	186	85	19	5	3.1
11	6	10	13	16	22	109	89	181	70	19	4.9	2.9
12	6.5	10	13	15	22	76	95	194	64	18	4.8	2.9
13	7.5	16	13	15	21	62	90	194	62	17	4.6	2.7
14	8.5	25	13	15	20	58	82	202	59	16	4.4	2.6
15	9	18	12	15	20	56	102	206	75	16	4.3	2.6
16	9	16	12	15	20	56	132	210	332	16	4.2	2.5
17	8.5	16	12	15	20	58	154	210	159	15	4.0	2.4
18	8	14	12	15	20	62	151	208	117	14	3.8	2.4
19	7.5	15	12	15	20	64	144	194	86	14	3.7	2.4
20	7.5	14	12	16	20	64	121	176	73	13	3.7	3.0
21	7	14	12	16	20	63	109	165	63	12	3.6	5.5
22	7	14	13	16	20	96	103	176	57	11	3.5	5
23	7	14	14	16	20	76	92	190	51	11	3.4	4.6
24	7	13	15	16	20	69	92	172	48	10	3.3	3.7
25	7	13	24	16	20	59	94	154	44	10	3.3	3.4
26	7	14	26	16	20	59	92	124	42	10	3.3	3.4
27	7	14	25	16	20	66	107	96	39	9.5	3.3	3.4
28	7	11	24	17	22	83	121	89	36	9	3.2	3.4
29	7	12	23	18	-----	84	114	84	34	9	3.1	3.5
30	7.5	13	22	20	-----	91	140	89	32	9.5	3.0	3.5
31	8.5	-----	21	22	-----	31	-----	85	-----	9	2.9	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	9					6			7.15		440	
November	25					9			13.3		791	
December	26					12			16.0		984	
January	22					15			17.1		1,050	
February	160					20			32.0		1,780	
March	291					26			69.2		4,280	
April	154					75			105		6,250	
May	212					84			173		10,600	
June	332					32			74.7		4,440	
July	30					9			16.4		1,010	
August	8.5					2.9			4.70		289	
September	5.5					2.4			3.17		189	
The year	332					2.4			44.4		32,100	

MIDDLE FORK OF TUOLUMNE RIVER NEAR MATHER, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 15, T. 1 S., R. 19 E., at highway bridge 3 miles south of Mather.

RECORDS AVAILABLE.—October, 1924, to December, 1929 (discontinued).

EXTREMES.—Maximum discharge during year, 750 second-feet June 16 (gage height, 3.76 feet); minimum, 0.3 second-foot October 9.

1924-1929: Maximum discharge, 810 second-feet March 25, 1928 (gage height, 4.00 feet); minimum, 0.1 second-foot August 17, 1926.

REMARKS.—Records good except those for December 26 to January 3 and February 5-28, which were estimated because of ice. Small diversions for irrigation above station.

Daily discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1923-29												
1	0.5	0.8	1.2	5	3.5	4.8	28	111	111	30	7	0.5
2	.5	.8	1.1	5	6	5.5	30	129	105	27	4.8	.5
3	.5	1.0	1.4	4	9	6.5	31	148	107	26	4.0	.5
4	.5	1.4	1.4	2.8	12	8	41	160	109	25	3.2	.5
5	.5	1.2	1.4	2.8	8	10	29	160	99	22	2.8	.5
6	.5	1.3	1.5	2.8	4.4	12	27	142	95	21	2.5	.5
7	.4	1.3	1.5	2.2	4.2	11	42	160	91	19	2.2	.5
8	.4	1.2	1.5	2.5	4	10	26	172	89	18	2.0	.5
9	.4	1.1	1.5	2.0	4	16	24	188	105	18	1.8	.5
10	.4	.9	1.5	2.5	4	44	26	178	107	16	1.5	.5
11	.4	.9	2.5	2.8	4	26	29	170	87	15	1.5	.5
12	.4	.8	2.8	2.5	4	22	30	190	85	15	1.4	.4
13	.5	1.1	3.8	2.2	4	18	27	205	79	14	1.3	.4
14	.7	1.4	3.2	2.0	4	15	26	210	75	13	1.2	.4
15	.7	1.2	3.2	2.0	4	16	32	228	105	12	1.2	.4
16	.7	1.3	3.2	1.5	4	15	48	248	410	12	1.1	.4
17	.7	1.5	3.2	2.0	4	15	64	252	165	11	1.0	.4
18	.6	1.4	3.2	1.8	4	18	73	272	131	10	1.0	.4
19	.6	1.3	3.2	2.0	4	18	70	272	105	10	1.0	.4
20	.5	1.2	3.2	2.2	4	17	64	260	87	8.5	1.0	.5
21	.5	1.3	3.2	2.8	4	18	51	245	77	8	1.0	1.5
22	.5	1.3	3.2	3.2	4	30	50	265	68	7.5	.9	1.3
23	.5	1.2	3.2	3.2	4	23	44	265	61	7	.9	1.0
24	.5	1.1	3.2	3.2	4	24	48	262	54	6.5	.8	.9
25	.5	1.1	3.5	3.2	4	27	51	222	48	6	.7	.8
26	.5	1.2	5	3.2	4	23	56	175	44	5.5	.7	.7
27	.5	1.1	7	3.2	4	21	64	188	41	5	.6	.7
28	.5	.9	10	3.2	4	26	71	129	37	4.8	.6	.7
29	.5	1.0	8	3.5	---	30	73	127	35	4.4	.5	.8
30	.6	1.1	7	4.0	---	30	93	183	31	4.8	.5	.8
31	.7	---	6	3.2	---	28	---	127	---	6	.5	---

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1929											
1	0.7	0.7	0.6	11	0.7	0.7	8	21	0.5	0.7	---
2	.7	.7	.6	12	.7	.6	3.2	22	.5	.5	---
3	.7	.7	.5	13	.6	.5	6.5	23	.5	.6	---
4	.7	.7	.5	14	.6	.7	4	24	.5	.5	---
5	.7	.7	.5	15	.5	.7	3.5	25	.5	.6	---
6	.7	.6	.6	16	.5	.7	6.5	26	.5	.6	---
7	.7	.6	.6	17	.5	.7	4	27	.5	.6	---
8	.7	.6	.6	18	.5	.7	3.2	28	.5	.6	---
9	.7	.6	1.8	19	.5	.8	---	29	.6	.6	---
10	.7	.7	8.5	20	.5	.7	---	30	.6	.6	---
								31	.6	---	---

Monthly discharge, in second-feet, of Middle Fork of Tuolumne River near Mather, Calif., 1928-29

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1928-29				
October.....	0.7	0.4	0.52	32.0
November.....	1.5	.8	1.15	68.4
December.....	10	1.1	3.38	208
January.....	5	1.5	2.85	175
February.....	12	3.5	4.68	260
March.....	44	4.8	19.0	1,170
April.....	93	24	45.3	2,700
May.....	272	111	192	11,800
June.....	410	31	94.8	5,640
July.....	30	4.4	13.2	812
August.....	7	.5	1.65	101
September.....	1.5	.4	.61	36.3
The year.....	410	.4	31.7	23,000
1929				
October.....	0.7	0.5	0.59	36
November.....	0.8	0.5	.64	38
Dec. 1-18.....	8.5	0.5	2.98	106
The period.....				180

MIDDLE FORK OF TUOLUMNE RIVER NEAR BUCK MEADOWS, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ 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.

RECORDS AVAILABLE.—November, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 820 second-foot June 16 (gage height, 6.27 feet); minimum, 0.3 second-foot September 19.

1916-1929: Maximum discharge, 1,330 second-feet May 28, 1919 (gage height, 8.15 feet); no flow September 4-14, 1924.

REMARKS.—Records good except those for December 12-23, January 8 to February 28, and July 22 to August 1, which were estimated. Small irrigation diversion above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	2.9	5.5	12	8	14	36	110	111	26	6	0.4
2	.6	3.5	6	11	14	15	40	131	106	25	5.5	.4
3	.6	4.4	8	12	20	16	43	154	102	23	4.4	.4
4	.6	5	8.5	11	30	18	65	170	103	22	3.8	.4
5	.7	5.5	8	11	16	20	64	172	95	21	3.3	.5
6	.8	5.5	7.5	11	14	23	47	164	91	20	3.1	.6
7	.8	5	6.5	9	12	24	47	170	88	19	2.8	.5
8	.8	5	6.5	9	11	23	55	180	87	20	2.4	.5
9	.8	5	7.5	8	11	25	44	202	99	22	2.4	.5
10	.8	4.7	9	8	11	116	44	197	109	21	2.2	.6
11	.8	4.7	10	8	11	57	51	186	88	20	1.9	.5
12	.8	4.7	9	8	11	39	55	202	85	19	1.5	.6
13	.9	6.5	9	8	11	31	51	216	81	18	1.4	.6
14	1.4	12	9	8	11	25	44	233	77	17	1.4	.4
15	1.9	9	8	8	10	26	51	234	81	15	1.3	.4
16	2.0	7	8	8	10	26	61	258	433	15	1.2	.4
17	2.3	7	8	7	10	27	74	266	211	16	1.0	.4
18	2.4	7	8	7	10	32	84	278	159	15	.8	.4
19	2.3	7	8	7	10	33	88	290	111	14	.8	.3
20	2.3	7	8	7	10	29	73	278	94	14	.7	.4
21	1.8	7	8	7	10	27	66	266	82	14	.7	.4
22	1.7	6.5	8	8	10	40	62	264	72	13	.7	.4
23	1.9	6.5	8	8	10	37	54	274	64	13	.7	.7
24	1.9	6.5	9.5	8	10	33	57	270	55	12	.7	.8
25	2.0	6	12	8	10	30	61	246	49	12	.6	.7
26	2.0	6	14	8	10	29	61	197	44	11	.6	.6
27	2.0	6	14	8	10	33	68	146	41	10	.5	.6
28	2.0	6	19	8	12	39	76	130	37	9	.5	.5
29	2.1	4.9	17	8	-----	42	76	124	33	8	.5	.6
30	2.3	5	13	8	-----	42	91	134	29	8	.5	.6
31	2.5	-----	12	8	-----	37	-----	128	-----	7	.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.5	0.6	1.50	92.2
November	12	2.9	5.96	355
December	19	5.5	9.44	589
January	12	7	8.55	525
February	30	8	11.9	661
March	116	14	32.5	2,006
April	91	38	59.7	3,550
May	290	110	202	12,400
June	433	29	97.2	5,780
July	26	7	16.1	990
August	6	.4	1.75	166
September	.8	.3	.50	29.6
The year	433	.3	37.5	27,100

WOODS CREEK NEAR JACKSONVILLE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 12, T. 1 S., R. 14 E., $1\frac{1}{2}$ miles above mouth and $1\frac{1}{2}$ miles northwest of Jacksonville.

RECORDS AVAILABLE.—October, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,270 second-feet February 4 (gage height, 3.68 feet); no flow August 1 to September 30.

1925-1929: Maximum discharge, 5,600 second-feet March 25, 1928 (gage height, 7.00 feet); no flow August 1 to September 30, 1929.

REMARKS.—Records good. Discharge estimated July 30 and 31. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	3.3	5.5	9.5	20	22	16	22	24	11	2.3
2	3.3	5.5	10	18	47	16	22	150	11	1.5
3	3.3	7.5	12	29	172	16	22	102	9	1.5
4	3.3	9	12	34	709	15	38	34	8	1.1
5	3.3	8.5	12	28	202	15	140	22	8.5	.9
6	3.3	8	11	24	94	15	96	18	9	1.1
7	3.3	8	11	21	70	15	80	24	9	1.5
8	3.3	8	11	20	55	15	75	23	10	1.1
9	3.3	7.5	11	16	43	16	132	21	12	.7
10	3.3	7.5	23	16	42	82	77	24	16	.5
11	3.3	7.5	42	15	38	200	60	21	14	.4
12	3.3	9	30	14	34	123	52	22	12	.4
13	3.3	26	37	14	29	70	45	20	11	.5
14	3.7	53	24	14	25	53	40	22	9.5	.5
15	3.7	40	20	14	24	50	37	20	11	.9
16	4.5	20	17	14	22	45	38	16	62	.9
17	4.5	16	14	14	22	41	33	14	24	.5
18	4.1	14	14	16	20	37	32	12	16	.5
19	4.1	12	13	43	72	40	39	12	14	.5
20	3.7	11	13	71	22	34	50	10	12	.5
21	3.3	11	13	52	20	29	39	9.5	11	.4
22	3.3	11	13	38	19	28	35	9.5	14	.2
23	3.3	10	13	32	19	46	33	9	14	.2
24	3.3	10	14	28	18	48	32	9	14	.2
25	3.7	10	34	25	17	48	29	9	13	.3
26	4.1	9.5	31	24	18	44	28	9	12	.2
27	4.5	10	23	22	18	41	26	7.5	11	.2
28	4.5	9.5	32	21	18	38	28	7.5	9.5	.1
29	4.9	10	29	20	-----	34	23	8	5.5	.1
30	5.5	10	21	20	-----	34	26	7.5	3.3	.1
31	5.5	-----	19	20	-----	28	-----	8.5	-----	.1
Month	Maximum		Minimum		Mean		Run-off in acre-feet			
October	5.5		3.3		3.78		232			
November	53		5.5		12.8		762			
December	42		9.5		19.0		1,170			
January	71		14		24.4		1,500			
February	709		17		68.2		3,790			
March	200		15		43.0		2,640			
April	140		22		47.6		2,830			
May	150		7.5		22.7		1,400			
June	62		3.3		13.2		736			
July	2.3		.1		.04		39.4			
The year	709		0		20.9		15,100			

NOTE.—No flow during August and September.

MODESTO CANAL NEAR LA GRANGE, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 17, T. 3 S., R. 14 E., below waste gates, 500 feet below intake at La Grange Dam on Tuolumne River, and $1\frac{1}{2}$ miles northeast of La Grange.

RECORDS AVAILABLE.—April, 1903, to September, 1929.

EXTREMES.—1903-1929: Maximum discharge, 1,750 second-feet May 17, 1928.

REMARKS.—Records good. Discharge estimated May 12. This canal diverts from right bank of Tuolumne River at the La Grange Dam. Water used for irrigation in the Modesto and Waterford irrigation districts. Gage-height record furnished by Modesto Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	310	226	0	96	538	854	1,000	495	513	462
2.....	310	226	0	99	538	1,060	982	495	513	432
3.....	310	226	0	101	538	1,220	982	495	513	432
4.....	304	226	0	105	538	1,160	961	478	513	432
5.....	804	226	0	106	558	1,090	940	495	513	418
6.....	304	226	0	106	538	1,110	940	495	513	418
7.....	304	226	0	106	538	1,160	898	495	513	397
8.....	304	226	0	107	538	1,160	856	513	513	338
9.....	304	226	0	108	558	1,220	856	495	513	338
10.....	304	226	0	108	538	1,220	752	495	513	338
11.....	304	226	0	108	538	1,280	612	495	513	370
12.....	304	232	0	108	538	1,300	478	495	572	376
13.....	304	232	0	194	538	1,330	495	495	612	376
14.....	304	232	0	267	538	1,310	495	478	612	383
15.....	304	232	0	267	538	1,290	478	495	592	404
16.....	370	226	0	267	558	1,290	495	495	612	418
17.....	377	232	0	267	538	1,310	495	495	613	418
18.....	377	232	0	273	538	1,310	478	495	592	418
19.....	370	232	0	273	538	1,310	478	513	612	447
20.....	370	232	0	267	558	1,110	478	513	612	447
21.....	267	232	0	336	578	961	495	513	612	447
22.....	232	232	0	456	664	919	495	513	612	448
23.....	232	232	0	482	686	940	495	513	612	404
24.....	232	232	0	518	686	961	495	513	612	404
25.....	232	226	0	538	686	961	495	513	612	397
26.....	232	226	0	538	710	961	462	513	612	370
27.....	226	226	22	538	710	919	495	513	592	363
28.....	226	226	96	538	710	919	462	513	572	376
29.....	226	226	-----	538	710	982	478	513	572	363
30.....	226	151	-----	538	854	982	495	513	562	338
31.....	226	-----	-----	538	-----	982	-----	513	495	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	377	226	290	17,800
November.....	232	151	226	13,400
February.....	86	0	3.86	214
March.....	538	96	287	17,600
April.....	854	538	594	35,300
May.....	1,330	854	1,120	68,900
June.....	1,000	462	634	37,700
July.....	513	478	502	30,900
August.....	612	495	565	34,700
September.....	462	338	398	23,700
The year.....	1,330	0	387	290,000

NOTE.—No flow during December and January.

TURLOCK CANAL NEAR LA GRANGE, CALIF.

LOCATION.—Water-stage recorder near north line of NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 21, T. 3 S., R. 14 E., 2,400 feet below intake at La Grange Dam and $1\frac{1}{4}$ miles northeast of La Grange.

RECORDS AVAILABLE.—July, 1899, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,940 second-feet April 30 (gage height, 8.77 feet); practically no flow for several months.

1907-1929: Maximum discharge, 2,040 second-feet July 5, 1927; practically no flow during periods each year.

REMARKS.—Records good. This canal diverts from left bank of Tuolumne River at La Grange Dam. Water is used for irrigation in the Turlock irrigation district, and to supply town of La Grange. Gage-height record furnished by Turlock Irrigation District through R. V. Meikle, chief engineer.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	606		1,030	590	1,790	1,610	554	1,090	1,220
2.	673		922	623	1,790	1,420	594	1,110	1,240
3.	682		726	664	1,820	1,280	654	1,120	896
4.	724		622	682	1,820	1,150	594	1,070	856
5.	764		512	712	1,790	1,150	784	1,090	860
6.			531	714	1,790	1,150	740	1,140	866
7.			520	647	1,790	1,150	574	1,160	860
8.			514	686	1,820	1,150	569	1,180	854
9.			532	706	1,820	1,120	614	1,230	836
10.			500	678	1,820	854	617	1,250	882
11.			518	669	1,820	821	621	1,170	814
12.			596	664	1,790	924	620	1,180	803
13.			1,020	668	1,010	924	606	1,190	791
14.			936	581	1,350	924	555	1,200	804
15.			920	604	1,820	900	587	1,190	780
16.			893	628	1,820	1,390	602	1,200	726
17.			844	584	1,820	1,820	602	1,160	666
18.			910	688	1,820	1,640	728	1,090	657
19.			913	699	1,820	1,440	744	1,140	621
20.			890	694	1,820	1,250	868	1,190	624
21.			797	977	1,790	1,180	1,040	1,150	618
22.			726	1,220	1,790	1,200	1,030	1,180	566
23.			713	928	1,820	1,180	1,060	1,180	610
24.			586	996	1,820	1,230	1,050	1,150	678
25.			563	664	1,020	1,820	970	1,090	642
26.		1,080	676	1,260	1,790	594	1,090	1,120	678
27.		1,000	682	1,420	1,820	634	1,090	1,200	698
28.		876	614	1,390	1,820	654	1,070	1,270	685
29.			636	1,640	1,820	554	1,080	1,270	568
30.			556	1,760	1,820	554	1,110	1,280	700
31.			594		1,760		1,110	1,350	
Month	Maximum			Minimum			Mean		Run-off in acre-feet
October	782						350		21,400
February	1,080						126		7,000
March	1,030			500			727		44,700
April	1,760			581			860		51,200
May	1,820			1,010			1,770		100,000
June	1,820			554			1,090		64,900
July	1,110			554			798		49,100
August	1,350			1,070			1,170		71,900
September	1,240			566			767		45,800
The year	1,820						642		465,000

NOTE.—No flow Oct. 17 to Feb. 24, except a small amount to supply town of La Grange.

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.'s diversion dam at Sand Bar Flat, 11 miles southeast of Avery.

DRAINAGE AREA.—329 square miles, above diversion dam.

RECORDS AVAILABLE.—September, 1905, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,060 second-feet on June 16; minimum, 37 second-feet on December 8.

1905-1929: Maximum mean daily discharge, 9,760 second-feet March 19, 1907; minimum, 30 second-feet August 24, 1924.

REMARKS.—Regulation and diversion into Middle Fork from South Fork above station. Record of daily discharge furnished by Pacific Gas & Electric Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	79	83	89	60	61	90	486	1,170	742	610	206	199
2.....	79	83	62	62	72	118	489	1,350	672	568	185	201
3.....	79	84	56	74	86	162	543	1,490	665	555	187	203
4.....	78	84	55	76	129	197	549	1,530	735	540	212	203
5.....	79	90	51	76	87	245	471	1,420	696	513	219	203
6.....	82	93	49	86	83	272	399	1,320	623	471	217	203
7.....	81	104	49	82	70	243	376	1,340	647	420	197	203
8.....	79	97	43	62	51	223	399	1,440	626	378	181	206
9.....	78	89	45	59	*54	219	356	1,480	661	351	194	206
10.....	78	89	54	53	*56	373	366	1,330	682	315	196	206
11.....	76	89	54	55	*59	289	396	1,260	600	291	197	180
12.....	77	87	49	55	*62	249	429	1,350	637	272	194	203
13.....	84	95	45	55	*63	217	457	1,390	696	291	197	201
14.....	83	107	56	56	67	201	438	1,470	944	287	199	196
15.....	82	92	*53	56	67	172	577	1,280	1,170	270	197	182
16.....	85	87	*56	56	63	190	757	1,570	2,990	255	201	194
17.....	85	100	*61	55	68	214	901	1,560	1,880	289	196	194
18.....	83	101	*61	53	70	231	936	1,570	1,240	285	208	190
19.....	81	97	*61	71	70	221	771	1,520	1,210	283	206	192
20.....	82	109	*62	66	68	225	675	1,410	1,140	225	203	201
21.....	82	98	*63	*64	70	285	675	1,420	1,110	203	203	206
22.....	82	101	*60	*63	75	492	616	1,440	1,110	194	199	197
23.....	82	101	*59	*62	81	366	584	1,720	1,060	188	205	196
24.....	82	95	*59	*60	84	326	630	1,640	971	194	208	196
25.....	82	93	*59	*59	78	295	654	1,720	949	205	205	196
26.....	81	93	*69	*57	77	302	703	1,270	922	208	206	164
27.....	81	95	69	*56	75	338	825	936	864	205	205	152
28.....	79	95	86	*54	78	440	905	829	853	208	205	152
29.....	81	86	75	53	-----	531	845	829	771	217	197	152
30.....	82	84	69	56	-----	528	980	853	703	219	188	150
31.....	83	-----	61	57	-----	448	-----	901	-----	253	188	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	85	76	80.9	4,970
November.....	107	83	93.1	5,540
December.....	89	43	59.0	3,630
January.....	86	53	61.6	3,750
February.....	129	51	72.3	4,020
March.....	531	90	281	17,300
April.....	980	356	606	36,100
May.....	1,720	829	1,350	83,000
June.....	2,990	600	942	56,100
July.....	610	188	310	19,100
August.....	219	181	200	12,800
September.....	206	180	192	11,400
The year.....	2,990	43	355	257,000

* Estimated.

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 Goodwin Dam, and 6 miles above Knights Ferry.

RECORDS AVAILABLE.—December, 1915, to September, 1929. Also at Knights Ferry, May, 1903, to April, 1916.

EXTREMES.—Maximum discharge during year, 5,330 second-feet June 6 (gage height, 4.45 feet); minimum, 14 second-feet October 13.

1915-1929: Maximum discharge, about 40,000 second-feet March 25, 1928 (gage height, 17.0 feet, from floodmarks); minimum, 1 second-foot parts of August and November, 1926.

REMARKS.—Records good. Numerous diversions and several storage reservoirs above dam, largest storage being Melones Reservoir.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	258	104	260	60	38	28	903	1,100	1,480	1,600	814	748
2.....	245	242	87	45	142	24	845	1,140	1,300	1,610	814	748
3.....	245	217	124	69	202	20	1,050	1,210	1,270	1,600	814	748
4.....	258	52	114	69	722	20	1,040	1,200	1,200	1,200	803	787
5.....	264	52	109	102	814	36	1,040	1,180	1,200	1,000	803	737
6.....	264	60	114	86	711	246	1,030	1,180	2,280	847	803	737
7.....	271	56	109	133	759	397	1,040	1,200	3,280	847	803	726
8.....	271	94	104	185	801	375	1,040	1,210	1,170	836	814	726
9.....	277	104	104	188	737	162	1,040	1,210	1,120	847	803	726
10.....	304	90	120	200	737	202	1,060	1,220	1,100	847	803	715
11.....	191	52	125	273	726	300	1,050	1,340	1,050	940	803	715
12.....	139	118	140	116	715	445	1,050	1,370	952	1,400	803	715
13.....	81	230	145	56	693	430	1,050	1,490	904	1,060	803	704
14.....	97	504	120	331	682	430	1,050	1,580	952	836	792	704
15.....	237	358	286	475	671	415	1,060	1,650	1,000	836	792	704
16.....	238	275	94	450	650	393	1,060	1,660	994	836	792	704
17.....	245	203	126	421	379	148	1,060	1,660	3,210	847	792	693
18.....	268	71	211	456	65	34	1,080	1,680	2,820	858	781	693
19.....	348	107	478	510	31	31	1,080	3,740	2,520	858	781	693
20.....	104	267	365	252	31	338	1,090	2,450	2,120	858	781	682
21.....	60	272	56	168	31	561	1,160	1,650	1,800	858	770	671
22.....	65	148	38	420	31	773	1,130	1,650	1,810	858	770	660
23.....	114	114	38	214	31	459	1,100	2,070	1,660	858	770	580
24.....	109	104	42	197	31	304	1,100	2,860	1,420	847	770	415
25.....	120	60	81	165	91	789	1,100	3,130	1,550	847	770	270
26.....	130	196	52	139	38	828	1,120	3,960	1,600	847	770	278
27.....	135	363	45	48	31	730	1,120	2,360	1,830	847	759	275
28.....	104	145	45	38	31	852	1,120	1,610	1,540	836	748	273
29.....	109	60	168	38	-----	929	1,100	1,630	1,490	836	748	268
30.....	104	69	107	34	-----	495	1,100	1,610	1,230	836	748	270
31.....	104	-----	111	38	-----	408	-----	1,610	-----	814	748	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	348	60	186	11,400
November.....	504	52	159	9,480
December.....	478	38	133	8,180
January.....	510	34	193	11,900
February.....	814	31	379	21,000
March.....	929	20	374	23,000
April.....	1,160	845	1,060	63,100
May.....	3,960	1,100	1,750	108,000
June.....	3,280	904	1,580	94,000
July.....	1,610	814	963	59,200
August.....	814	748	786	48,300
September.....	748	268	610	36,300
The year.....	3,960	20	683	494,000

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.

RECORDS AVAILABLE.—July, 1914, to September, 1922; November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,000 second-feet June 16 (gage height, 6.90 feet); minimum, 6 second-feet December 23.

1914-1922, 1928-29: Maximum discharge, 5,250 second-feet May 11, 1915 (gage height, 8.7 feet); minimum, that of December 23, 1928.

REMARKS.—Records good. Discharge estimated January 31, February 27 and 28. Some regulation and storage above station and diversion into North Fork from Beaver Creek. Gage-height record furnished by Utica Mining Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		12	37	38	66	440	1,130	300	129	34	52
2		10	31	56	87	440	1,340	288	113	42	52
3		15	34	112	112	515	1,460	264	103	39	52
4		13	29	190	112	600	1,420	266	95	38	52
5		10	29	56	126	645	1,300	266	86	37	52
6		9.5	27	56	140	288	1,240	240	77	36	52
7		9.5	24	47	172	288	1,270	250	70	36	50
8		8.5	24	56	156	208	1,340	254	64	34	45
9		8	22	56	156	190	1,300	337	55	32	44
10	23	12	22	38	795	226	1,160	388	51	33	44
11		22	16	22	38	600	1,100	300	46	32	44
12		23	13	22	38	475	340	1,160	268	42	32
13		33	14	23	38	288	355	1,160	262	55	30
14		46	12	24	47	126	298	1,240	264	57	29
15		42	12	26	38	126	515	1,070	533	55	29
16		40	14	25	56	140	795	1,200	510	53	28
17		41	14	23	56	172	928	1,130	1,130	51	29
18		36	12	23	56	190	928	1,100	928	48	36
19		34	12	25	56	190	670	982	645	45	36
20		33	10	26	56	226	515	900	495	43	36
21		32	10	24	56	475	585	900	412	42	35
22		33	10	25	66	745	458	900	343	40	35
23		32	10	23	66	555	402	872	293	38	35
24		29	12	23	66	208	475	820	264	36	35
25		26	46	23	56	190	553	720	246	35	35
26		24	48	18	56	190	645	535	221	33	35
27		22	40	18	59	288	845	416	199	32	35
28		20	72	18	62	440	928	352	179	31	35
29		16	56	23		645	795	332	161	30	35
30		14	46	30		795	982	332	143	30	42
31			39	34		795		323		29	52
Month	Maximum				Minimum				Mean		Run-off in acre-feet
November 10-30	46				14				29.6		1,230
December	72				8				20.2		1,240
January	37				18				25.1		1,540
February	190				38				59.7		3,320
March	795				66				316		19,400
April	982				190				536		31,900
May	1,460				323				984		60,500
June	2,010				143				406		24,100
July	129				29				55.3		3,400
August	52				28				35.1		2,160
September	57				42				48.1		2,860
The period											162,000

SOUTH SAN JOAQUIN CANAL NEAR KNIGHTS FERRY, CALIF.

LOCATION.—Water-stage recorder in sec. 15, T. 1 S., R. 12 E., three-fourths mile below head gate at Goodwin Dam on Stanislaus River and 4 miles above Knights Ferry.

RECORDS AVAILABLE.—May, 1914, to September, 1929. Also miscellaneous measurements and rough estimates of flow for 1913.

EXTREMES.—Maximum discharge during year, 999 second-feet July 11 (gage height, 8.00 feet); no flow parts of several months.

1914-1929: Maximum discharge, 1,080 second-feet May 18, 1922 (gage height, 8.43 feet); no flow several months each year.

REMARKS.—Records excellent. This canal diverts from right bank of Stanislaus River at Goodwin Dam; water used for irrigation in the Oakdale and South San Joaquin irrigation districts. Gage-height record furnished by South San Joaquin Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162			0	25	0	482	897	965	965	600	524
2	145			0	51	0	671	948	982	965	600	524
3	140			0	212	0	863	965	965	965	600	524
4	140			0	356	0	914	965	965	948	584	509
5	150			0	668	0	897	982	965	868	584	509
6	150			0	696	89	897	965	965	632	584	626
7	150			0	744	268	914	965	965	648	584	576
8	150			0	761	334	914	982	965	648	584	509
9	150			0	744	167	914	982	965	648	584	494
10	104		25	0	744	152	914	982	965	648	584	494
11				0	728	244	914	965	897	704	584	494
12				0	712	404	897	948	778	982	584	494
13				0	712	419	914	948	712	824	584	494
14				0	696	404	914	948	778	648	569	494
15				0	696	334	914	880	846	632	569	494
16		25		0	582	162	914	761	795	632	569	494
17				0	369	0	914	696	606	632	569	479
18				0	97	0	914	680	434	632	569	479
19				89	0	0	931	696	464	616	584	479
20			134	0	0	0	931	500	588	616	600	494
21	25		86	0	0	0	931	200	696	632	569	494
22			35	104	0	161	948	200	696	632	554	494
23			25	269	0	269	931	200	696	616	539	435
24			5.5	191	0	269	812	200	728	616	539	144
25			5.5	160	0	269	812	206	812	616	554	114
26			79	171	0	295	812	497	846	616	539	99
27			115	38	0	328	812	948	846	600	539	104
28			54	29	0	348	812	948	880	600	616	109
29			45	26		434	812	948	914	600	593	107
30			140	26		452	812	965	914	600	539	100
31			75	24		390		965		600	524	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	162		63.4	3,900
November			25.0	1,490
December	140	5.5	43.2	2,660
January	269	0	33.5	2,060
February	761	0	343	19,000
March	452	0	200	12,800
April	948	482	868	51,600
May	982	200	772	47,500
June	982	434	820	48,800
July	982	600	696	42,800
August	616	524	573	35,200
September	626	99	413	24,600
The year	982	0	403	292,000

NOTE.—The small estimated discharge for Oct. 11 to Dec. 18 was carried for the town of Knights Ferry and for stock water. About 10 second-feet was wasted back into the river.

OAKDALE CANAL NEAR KNIGHTS FERRY, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 10, T. 1 S., R. 12 E., half a mile below head gate at Goodwin Dam on Stanislaus River and 4 miles above Knights Ferry.

RECORDS AVAILABLE.—May, 1914, to September, 1929. Also miscellaneous measurements and rough estimates of flow for 1913.

EXTREMES.—1914-1929: Maximum mean daily discharge, 252 second-feet March 26, 1923; no flow during periods of each year.

REMARKS.—Records good. This canal diverts from left bank of river at Goodwin Dam. The water is used for irrigation in the Oakdale irrigation district. Gage-height record furnished by Oakdale Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	161	0	124	198	242	231	248	226
2	172	0	145	209	236	242	248	231
3	166	0	160	214	236	242	248	231
4	172	0	160	209	236	242	248	231
5	172	0	160	214	231	236	248	231
6	172	0	160	226	226	242	248	89
7	172	0	160	226	226	242	248	206
8	172	0	160	231	226	242	248	231
9	172	0	160	231	226	242	248	226
10	160	0	160	231	226	242	248	226
11	0	0	160	236	220	242	248	220
12	0	0	160	236	220	242	248	220
13	0	0	160	236	220	242	248	214
14	0	0	160	242	220	236	248	214
15	0	0	160	242	214	236	248	214
16	0	0	160	242	204	242	248	214
17	0	0	160	242	209	248	248	214
18	0	0	176	242	209	248	248	204
19	0	0	187	236	209	248	188	198
20	0	0	187	236	204	248	234	187
21	0	0	187	242	214	248	248	182
22	0	0	187	242	214	248	248	170
23	0	19	187	242	214	248	248	170
24	0	37	192	242	214	248	242	165
25	0	56	198	242	226	248	236	165
26	0	63	198	236	231	248	236	154
27	0	73	198	236	231	248	236	154
28	0	88	198	242	236	248	127	154
29	0	91	198	236	236	248	190	148
30	0	26	198	236	220	248	236	148
31	0	51		236		248	231	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	172	0	54.5	3,350
March	91	0	16.3	1,000
April	198	124	172	10,200
May	242	198	233	14,300
June	242	204	223	13,300
July	248	231	244	15,000
August	248	127	238	14,600
September	231	89	195	11,600
The year	248	0	115	83,400

NOTE.—No flow during months for which no discharge is given.

CALAVERAS RIVER BASIN

CALAVERAS RIVER AT JENNY LIND, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 22, T. 3 N., R. 10 E., at highway bridge on Milton Road, a quarter of a mile southeast of Jenny Lind. North and South Forks unite 15 miles above station.

DRAINAGE AREA.—395 square miles.

RECORDS AVAILABLE.—January, 1907, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,060 second-feet February 4 (gage height, 7.47 feet); no flow October 1 to November 14 and July 9 to September 30.

1907-1929: Maximum discharge, about 69,600 second-feet January 31, 1911; stage was reported higher about midnight; no flow during fall of 1913 to 1915, 1917 to 1922, and 1924 to 1929.

REMARKS.—Records good. Small storage above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.....	0	14	44	83	49	67	57	12	3.0
2.....	0	14	39	301	57	63	52	15	2.6
3.....	0	14	69	660	70	57	46	17	1.8
4.....	0	15	148	1,620	75	68	44	15	1.5
5.....	0	16	96	779	65	286	41	13	1.2
6.....	0	18	67	375	44	255	41	12	.6
7.....	0	17	60	276	41	221	40	12	.3
8.....	0	16	48	199	42	202	38	16	.1
9.....	0	16	42	155	42	339	35	28	0
10.....	0	17	39	130	929	241	33	34	0
11.....	0	28	37	121	603	187	31	33	0
12.....	0	54	34	110	371	160	29	24	0
13.....	0	125	33	100	262	142	27	19	0
14.....	0	94	32	88	202	125	27	15	0
15.....	139	56	32	81	162	114	22	14	0
16.....	73	42	51	74	142	106	11	62	0
17.....	38	34	50	68	123	98	10	108	0
18.....	28	30	40	67	112	92	16	83	0
19.....	23	28	79	62	104	98	22	50	0
20.....	21	26	326	59	102	179	22	39	0
21.....	19	25	254	54	94	144	22	30	0
22.....	18	24	161	52	88	125	20	24	0
23.....	17	23	120	50	96	118	19	20	0
24.....	16	24	103	49	114	108	17	16	0
25.....	16	132	92	47	104	98	15	11	0
26.....	16	176	83	46	102	88	34	7.5	0
27.....	14	94	79	47	92	79	19	6.5	0
28.....	14	71	81	49	86	72	14	5	0
29.....	14	83	67	-----	81	67	13	3.8	0
30.....	14	65	65	-----	77	62	12	3.2	0
31.....	-----	53	65	-----	70	-----	12	-----	0
Month	Maximum			Minimum			Mean		Run-off in acre-feet
November.....	139			0			16.0		952
December.....	176			14			46.6		2,870
January.....	326			32			81.8		5,030
February.....	1,620			46			207		11,500
March.....	929			41			148		9,100
April.....	339			57			135		8,030
May.....	57			10			27.1		1,670
June.....	108			3.2			24.9		1,480
July.....	3.0			0			.36		22.1
The year.....	1,620			0			56.2		40,700

NOTE.—No flow during months for which no discharge is given.

BEAR CREEK BASIN

BEAR CREEK NEAR LOCKEFORD, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 14, T. 3 N., R. 7 E., at highway bridge 3 miles south of Lockeford.

DRAINAGE AREA.—52 square miles.

RECORDS AVAILABLE.—October, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 525 second-feet January 20 (gage height, 8.88 feet); no flow part of every month except January, February, and March.

1926-1929: Maximum discharge, 916 second-feet February 4, 1927 (gage height, 10.22 feet); no flow several months each year.

REMARKS.—Records fair. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1-----	0	0	1.0	1.2	1.0	0.1	16-----	0.3	1.2	104	1.8	1.5	0
2-----	0	0	.7	23	.6	.1	17-----	.9	.8	21	1.6	1.0	0
3-----	0	0	.6	24	.4	0	18-----	.3	.4	8.5	1.6	.8	0
4-----	0	0	8.5	108	.3	0	19-----	.1	.3	93	1.7	.6	0
5-----	0	0	4.0	71	.2	0	20-----	0	.2	238	1.4	.5	0
6-----	0	0	2.4	25	.2	0	21-----	0	.1	31	1.3	.5	0
7-----	0	0	1.6	18	.2	0	22-----	0	.1	15	1.1	.4	0
8-----	0	0	1.1	10	.3	0	23-----	0	.1	10	1.0	.4	0
9-----	0	0	.8	6.5	.3	0	24-----	0	.1	6.5	.9	.4	0
10-----	0	0	.5	5	1.6	0	25-----	0	43	4.0	.7	.2	0
11-----	0	0	.4	4.0	13	0	26-----	0	14	2.9	.7	.2	0
12-----	0	0	.4	3.3	5	0	27-----	0	5.5	2.2	.6	.2	0
13-----	0	.8	.3	2.9	3.8	0	28-----	0	2.9	1.8	.4	.2	0
14-----	0	6.5	.3	2.5	3.7	0	29-----	0	2.8	1.5	-----	.2	0
15-----	.2	2.3	.3	2.2	2.1	0	30-----	0	2.6	1.3	-----	.2	0
							31-----		1.6	1.2	-----	.1	-----
Month							Maximum	Minimum	Mean	Run-off in acre-feet			
November-----							0.9	0	0.06	3.6			
December-----							43	0	2.98	183			
January-----							238	.3	18.2	1,120			
February-----							108	.4	11.5	659			
March-----							13	.1	1.29	79.3			
April-----							.1	0	.007	.4			
The year-----							238	0	2.80	2,030			

NOTE.—No flow during months for which no discharge is given.

MOKELUMNE RIVER BASIN

NORTH FORK OF MOKELUMNE RIVER ABOVE MOORE CREEK, CALIF.

LOCATION.—Water-stage recorder in sec. 33, T. 8 N., R. 16 E., one-fourth mile below Salt Springs Dam and $3\frac{1}{2}$ miles above Moore Creek. Altitude, about 3,600 feet.

DRAINAGE AREA.—160 square miles.

RECORDS AVAILABLE.—September, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 5,690 second-feet June 16 (gage height, 11.32 feet); minimum, 14 second-feet November 12.

1926-1929: Maximum discharge, 8,740 second-feet March 25, 1928 (gage height, 13.62 feet); minimum, 2.9 second-feet August 15, 1928.

REMARKS.—Records good except those for estimated periods, which are fair. Small amount of storage at Blue Lakes. Salt Springs Dam has been under construction since 1927. Gage-height record and results of discharge measurements furnished by Pacific Gas & Electric Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	102	28	29	40	40	71	330	1,060	492	186	73	73
2.....	102	27	29	38	60	91	360	1,220	442	168	70	86
3.....	102	35	34	42	78	107	410	1,440	468	155	69	91
4.....	101	38	32	36	120	148	420	1,440	505	142	66	89
5.....	103	31	30	40	73	186	320	1,290	442	129	65	85
6.....	104	42	28	38	71	199	280	1,200	* 425	116	72	80
7.....	103	38	27	32	* 50	172	255	1,350	* 408	107	72	75
8.....	101	27	24	34	* 48	140	262	1,500	390	96	* 74	92
9.....	101	23	26	34	* 48	142	248	1,590	545	86	76	92
10.....	102	21	36	34	* 48	295	248	1,440	492	80	77	74
11.....	112	17	33	35	48	186	240	1,380	410	72	73	67
12.....	114	16	29	35	48	161	290	1,530	430	68	73	73
13.....	114	19	32	38	48	139	280	1,710	492	60	72	76
14.....	69	26	34	36	50	131	255	1,650	505	56	71	77
15.....	50	22	* 28	36	47	144	390	1,590	1,260	53	81	81
16.....	48	* 22	* 28	34	51	156	545	1,830	2,590	50	81	82
17.....	50	* 22	* 28	31	56	176	655	1,830	1,320	46	81	82
18.....	51	* 22	* 28	33	59	170	725	1,710	1,080	42	79	82
19.....	50	22	* 28	32	52	152	545	1,590	785	40	79	83
20.....	51	22	* 28	30	53	158	430	1,530	655	38	78	83
21.....	52	22	* 28	* 28	60	184	410	1,530	575	34	77	82
22.....	51	36	* 28	* 28	69	428	390	1,590	492	48	77	81
23.....	50	36	* 28	* 28	78	255	360	1,530	442	56	74	81
24.....	53	34	* 30	* 26	70	206	420	1,440	400	55	74	81
25.....	41	34	92	* 26	64	186	455	1,200	360	55	79	81
26.....	29	32	71	* 26	57	186	530	890	330	63	85	60
27.....	28	32	60	* 26	58	240	672	672	290	64	83	56
28.....	27	31	85	* 25	63	340	765	620	262	63	80	55
29.....	26	28	60	26	-----	390	638	605	232	62	78	58
30.....	26	28	46	28	-----	370	845	655	212	70	77	56
31.....	26	-----	41	34	-----	310	-----	620	-----	73	74	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October.....	114		26		69.0		4,240					
November.....	42		16		27.8		1,650					
December.....	92		24		37.4		2,300					
January.....	42		25		32.5		2,000					
February.....	120		40		59.5		3,300					
March.....	428		71		201		12,400					
April.....	845		240		432		25,700					
May.....	1,830		605		1,330		81,800					
June.....	2,590		212		591		35,200					
July.....	186		34		78.5		4,830					
August.....	85		65		75.5		4,640					
September.....	92		55		77.1		4,590					
The year.....	2,590		16		252		183,000					

* Estimated.

SAN JOAQUIN RIVER BASIN

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NORTH FORK OF MOKELUMNE RIVER NEAR WEST POINT, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 17, T. 7 N., R. 15 E., $\frac{9}{16}$ miles northeast of West Point. Blue Creek enters 1 mile below and Bear River 4 miles above station.

RECORDS AVAILABLE.—April, 1917, to September, 1918; February, 1924, to September, 1929, incomplete.

EXTREMES.—Maximum discharge during year, about 8,730 second-feet June 16 (gage height, 13.3 feet); minimum, 22 second-feet November 12 (uncertain owing to incomplete record).

1917-1918, 1924-1929: Maximum discharge, 15,500 second-feet Mar. 25, 1928 (gage height, 17.2 feet); minimum, 2.5 second-feet October 22 and 25-28, 1924.

REMARKS.—Records fair. Discharge estimated December 16-24, January 21-28, and February 9-11. No record November 21 to December 6 and July 25 to September 30. Storage in Blue Lakes and on Bear River; Salt Springs Dam under construction since 1927. Gage-height record and results of discharge measurements furnished by Pacific Gas & Electric Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1.	104	30	-----	43	60	92	495	1,780	680	263
2.	104	32	-----	42	85	114	512	2,070	582	286
3.	104	36	-----	46	104	140	600	2,420	565	210
4.	104	38	-----	42	184	195	800	2,370	640	195
5.	104	37	-----	45	116	265	565	2,120	582	177
6.	105	46	-----	42	101	297	478	2,020	512	161
7.	104	52	32	47	81	250	410	2,220	548	152
8.	103	36	31	51	75	198	410	2,470	565	144
9.	100	29	33	67	75	184	362	2,520	845	136
10.	100	27	39	69	75	460	362	2,270	845	129
11.	101	25	51	58	75	294	394	2,170	600	123
12.	107	23	36	54	75	236	460	2,420	565	120
13.	110	29	44	54	67	198	495	2,640	600	115
14.	89	42	38	54	69	184	426	2,690	640	113
15.	56	39	35	51	66	198	600	2,370	1,450	109
16.	55	32	33	50	69	216	898	2,860	4,490	116
17.	54	36	33	47	74	258	1,160	2,860	2,120	113
18.	54	34	33	44	80	255	1,220	2,470	1,740	112
19.	54	28	33	50	75	226	898	2,270	1,160	111
20.	54	29	33	48	70	231	702	2,170	878	112
21.	54	-----	33	45	76	268	702	2,270	778	111
22.	54	-----	33	45	84	583	640	2,170	665	108
23.	54	-----	33	42	97	410	565	2,170	605	105
24.	55	-----	35	38	96	305	660	1,920	545	101
25.	54	-----	84	38	85	278	725	1,520	488	-----
26.	32	-----	92	38	81	272	820	1,040	438	-----
27.	30	-----	67	38	76	347	1,070	770	394	-----
28.	30	-----	87	38	80	495	1,320	702	365	-----
29.	29	-----	69	39	-----	582	1,040	702	329	-----
30.	30	-----	55	41	-----	565	1,290	795	294	-----
31.	30	-----	46	47	-----	478	-----	770	-----	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet			
October	110		29		71.5		4,400			
January	69		38		46.9		2,880			
February	184		60		84.0		4,670			
March	583		92		293		18,000			
April	1,320		362		696		41,400			
May	2,860		702		2,000		123,000			
June	4,490		294		850		50,600			
July 1-24	263		101		140		6,660			

MOKELUMNE RIVER NEAR MOKELUMNE HILL, CALIF.

LOCATION.—Water-stage recorder in sec. 1, T. 5 N., R. 11 E., at highway bridge 1¼ miles northwest of Mokelumne Hill.

RECORDS AVAILABLE.—November, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 10,100 second-feet June 16 (gage height, 10.18 feet); minimum, 17 second-feet September 29.

1927-1929: Maximum discharge, 23,300 second-feet March 25, 1928 (gage height, 16.10 feet); minimum, that of September 29, 1929.

REMARKS.—Records good. Discharge estimated August 24 and 25. Storage and diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	125	39	54	76	140	136	686	2,040	840	322	111	24
2-----	132	70	39	110	308	122	700	2,380	664	275	100	24
3-----	106	47	62	110	421	74	784	2,640	694	272	54	136
4-----	114	42	75	166	980	195	1,090	2,810	708	150	34	163
5-----	99	54	86	136	625	355	1,120	2,300	712	240	81	94
6-----	74	50	84	72	370	348	857	2,270	617	210	118	92
7-----	34	62	84	99	290	404	638	2,410	592	124	88	57
8-----	80	63	68	116	180	268	692	2,680	656	124	98	20
9-----	86	76	46	75	178	294	830	2,840	741	136	98	18
10-----	71	68	58	68	93	630	678	2,500	1,170	156	78	58
11-----	62	60	122	80	124	654	660	2,340	778	150	34	130
12-----	84	42	144	86	165	520	668	2,480	660	172	80	112
13-----	92	119	113	60	168	390	730	2,700	698	120	94	152
14-----	68	239	99	95	136	322	610	3,030	721	47	101	34
15-----	75	162	104	104	111	330	725	2,560	1,170	68	82	18
16-----	65	85	57	58	128	350	1,120	3,080	5,360	82	88	50
17-----	50	67	52	66	89	385	1,470	3,140	2,440	103	34	64
18-----	73	57	51	98	144	504	1,650	2,900	2,240	125	20	112
19-----	78	64	48	156	154	423	1,370	2,460	1,570	110	88	18
20-----	90	67	62	134	136	397	1,250	2,330	1,180	65	113	74
21-----	29	60	76	90	147	348	1,040	2,570	1,020	56	112	78
22-----	48	56	62	82	114	688	1,080	2,510	846	94	88	26
23-----	50	60	66	95	124	712	928	2,440	612	86	79	78
24-----	64	56	94	91	82	535	1,020	2,320	652	84	65	82
25-----	46	54	179	86	142	460	1,100	1,980	596	82	40	79
26-----	48	58	302	140	170	454	1,200	1,220	519	82	49	67
27-----	40	67	198	104	163	618	1,360	1,020	454	45	100	65
28-----	33	70	201	98	178	727	1,550	920	444	36	103	110
29-----	34	44	210	90	-----	823	1,370	870	404	79	126	35
30-----	70	42	204	98	-----	808	1,580	840	231	88	132	68
31-----	38	-----	139	122	-----	691	-----	970	-----	117	139	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October-----	132	29	69.6	4,280
November-----	239	39	70.0	4,170
December-----	302	39	104	6,400
January-----	166	58	98.7	6,070
February-----	980	82	216	12,000
March-----	823	74	450	27,700
April-----	1,650	610	1,020	60,700
May-----	3,140	840	2,240	138,000
June-----	5,360	231	1,000	59,500
July-----	322	36	126	7,760
August-----	139	20	84.8	5,210
September-----	163	18	71.3	4,240
The year-----	5,360	18	464	336,000

PARDEE RESERVOIR NEAR VALLEY SPRINGS, CALIF.

LOCATION.—Reference point on top of Pardee Dam on Mokelumne River in SW. $\frac{1}{4}$ sec. 26, T. 5 N., R. 10 E., 5 miles north of Valley Springs. Elevation of south spillway is 567.5 feet; crest, 580.0 feet; mean sea level datum.

RECORDS AVAILABLE.—March to September, 1929.

EXTREMES.—Maximum elevation during period, 458.3 feet June 16.

REMARKS.—Pardee Reservoir provides storage for water supply and power development project of East Bay Municipal Utility District, which furnishes this record.

Daily elevation in feet, 1928-29

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....		381.5	435.0	448.9	456.9	446.2	433.6
2.....		384.0	438.0	450.5	456.9	445.9	433.1
3.....		384.0	438.5	451.0	456.7	445.7	432.5
4.....		384.0	439.5	451.6	456.5	445.4	432.4
5.....		389.5	439.5	452.5	456.2	444.9	432.3
6.....		393.5	439.0	453.6	456.0	444.6	432.1
7.....		396.0	440.9	454.5	455.8	444.5	431.8
8.....		396.5	444.1	454.5	455.4	444.0	431.4
9.....	263.0	398.5	445.6	455.7	454.9	443.5	430.6
10.....	287.0	400.5	444.9	456.8	454.7	443.1	429.9
11.....	307.0	401.3	443.8	456.1	454.5	442.6	429.5
12.....	311.0	402.5	442.5	455.6	454.3	442.0	429.2
13.....	321.0	403.5	441.6	455.9	454.1	441.5	428.8
14.....	325.0	404.0	441.8	456.2	453.8	441.1	428.6
15.....	330.0	405.0	441.7	456.4	453.5	440.7	428.0
16.....	333.0	406.0	441.7	458.3	453.2	440.2	427.0
17.....	335.0	409.5	442.8	456.7	452.8	439.8	426.7
18.....	338.0	410.0	443.8	456.2	452.6	439.4	426.2
19.....	342.0	411.5	441.3	456.7	452.4	438.8	425.8
20.....	344.0	412.0	439.5	456.4	452.0	438.5	425.3
21.....	345.0	415.0	441.3	456.6	451.4	438.1	425.1
22.....	347.0	419.0	443.3	456.6	451.0	437.7	424.8
23.....	354.0	421.0	443.9	456.4	450.5	437.2	424.4
24.....	356.0	424.0	444.1	456.8	450.1	436.8	424.1
25.....	360.0	425.0	443.4	457.2	449.6	436.5	423.9
26.....	363.0	428.0	442.3	457.4	449.1	435.7	423.6
27.....	364.5	429.0	442.0	457.5	448.7	435.1	423.4
28.....	368.0	430.0	442.7	457.4	448.1	434.6	422.9
29.....	371.0	431.5	443.9	457.4	447.5	434.3	422.5
30.....	375.0	432.5	445.1	457.3	447.0	433.9	421.8
31.....	379.0		446.9		446.6	433.7	

MOKELUMNE RIVER AT LANCHA PLANA, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 4, T. 4 N., R. 10 E., above old Westmoreland suspension bridge, 1 mile east of Lancha Plana.

DRAINAGE AREA.—584 square miles.

RECORDS AVAILABLE.—June, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,090 second-feet June 16 (gage height, 8.90 feet); minimum, 8 second-feet February 2.

1926-1929: Maximum discharge, 27,300 second-feet March 25, 1928 (gage height, 19.65 feet); minimum that of February 2, 1929.

REMARKS.—Records good. Pardee Dam, above station, was completed during year. Storage in Pardee Reservoir began March 9 and diversion to East Bay Municipal Utility District started June 19. The reservoir capacity is 205,000 acre-feet.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	63	45	49	416	65	166	292	1,130	242	274	149	80
2.....	144	44	54	101	234	136	424	1,920	396	264	98	80
3.....	114	56	48	134	564	130	922	2,600	495	236	84	80
4.....	110	28	64	159	691	122	504	2,600	436	217	84	80
5.....	116	24	73	161	950	320	423	2,600	369	204	83	80
6.....	90	29	80	132	487	330	428	1,970	302	204	84	89
7.....	76	59	83	88	288	439	441	1,440	360	202	125	106
8.....	53	66	89	112	288	327	446	1,900	436	192	166	106
9.....	78	66	70	119	202	258	464	2,900	500	166	169	106
10.....	84	87	67	80	166	180	464	2,900	1,070	142	163	108
11.....	72	41	70	65	126	361	446	2,900	1,110	142	147	101
12.....	74	133	100	92	149	188	441	2,900	685	142	136	116
13.....	87	107	98	89	186	174	482	2,900	545	140	134	116
14.....	112	124	27	71	156	89	605	2,900	700	118	134	118
15.....	68	155	32	109	157	108	590	2,900	890	104	134	111
16.....	84	349	33	104	134	212	595	2,900	4,510	164	134	103
17.....	69	123	27	73	120	222	955	2,800	3,280	104	120	101
18.....	62	58	113	61	122	225	1,330	3,300	1,680	111	84	101
19.....	82	45	164	169	169	228	1,390	3,200	1,760	138	96	101
20.....	83	71	179	217	164	233	764	2,320	1,190	138	132	56
21.....	76	74	93	161	156	236	344	1,880	944	140	130	53
22.....	38	67	98	102	138	242	352	2,140	862	153	130	54
23.....	54	66	23	101	126	247	340	2,360	570	153	132	55
24.....	60	64	39	80	122	254	356	2,500	396	153	130	55
25.....	78	60	46	48	92	254	615	2,230	396	153	130	59
26.....	54	57	88	156	161	257	868	1,600	396	153	130	70
27.....	54	62	111	122	170	260	1,100	936	391	153	130	80
28.....	52	71	111	151	180	268	1,100	500	360	149	130	80
29.....	39	76	235	120	-----	258	1,110	495	302	149	130	80
30.....	48	58	444	96	-----	308	1,110	341	274	151	128	82
31.....	68	-----	339	90	-----	291	-----	230	-----	147	106	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	144	38	75.5	4,640
November.....	349	24	78.8	4,690
December.....	444	23	102	5,270
January.....	416	48	122	7,500
February.....	950	65	234	13,000
March.....	439	89	236	14,500
April.....	1,390	292	656	39,000
May.....	3,300	230	2,140	132,000
June.....	4,510	242	862	51,300
July.....	274	104	161	9,900
August.....	166	83	124	7,620
September.....	118	53	86.9	5,170
The year.....	4,510	23	407	296,000

MOKELUMNE RIVER NEAR CLEMENTS, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 15, T. 4 N., R. 8 E., at highway bridge 1 mile north of Clements.

DRAINAGE AREA.—631 square miles.

RECORDS AVAILABLE.—October, 1904, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,220 second-feet June 16 (gage height, 11.69 feet); minimum, 27 second-feet December 15.

1904-1929: Maximum discharge, 25,600 second-feet March 25, 1928 (gage height, 22.45 feet); no flow July 9, August 15, and 20-23, 1924.

REMARKS.—Records good except those for September 21-25, which were estimated. Diversions and storage above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	62	47	45	442	83	175	262	1,060	226	265	142	87
2.....	102	39	47	142	59	162	259	1,640	316	259	114	80
3.....	119	63	50	135	615	130	925	2,590	442	226	89	80
4.....	102	36	48	138	575	96	545	2,590	420	217	85	80
5.....	107	29	64	160	980	229	398	2,590	350	190	85	80
6.....	97	29	75	142	533	336	406	2,160	295	187	83	76
7.....	80	32	85	94	318	390	412	1,360	292	184	83	102
8.....	80	64	91	100	303	310	416	1,620	398	184	158	108
9.....	64	59	85	117	181	289	420	2,870	454	160	158	106
10.....	80	85	70	91	202	199	420	2,870	804	135	145	108
11.....	75	49	63	75	123	332	416	2,800	1,210	128	145	98
12.....	68	59	82	78	145	224	409	2,800	730	130	135	106
13.....	83	168	121	87	175	205	406	2,730	478	130	130	110
14.....	97	143	60	71	187	117	546	2,730	636	130	130	112
15.....	91	162	32	91	165	94	542	2,730	730	104	128	112
16.....	74	240	30	204	140	181	530	2,730	4,060	104	128	100
17.....	76	214	32	89	148	217	795	2,670	3,720	102	123	98
18.....	62	82	43	78	112	226	1,250	3,080	1,800	102	94	98
19.....	71	40	140	239	172	229	1,400	3,220	1,890	123	76	98
20.....	77	53	170	316	178	232	900	2,450	1,330	130	114	96
21.....	76	64	123	181	162	235	322	1,750	1,030	130	121	50
22.....	53	65	91	117	162	241	316	2,030	880	138	125	53
23.....	41	63	55	114	123	247	307	2,240	662	142	125	53
24.....	52	60	37	76	132	250	261	2,450	392	145	125	53
25.....	69	59	93	84	98	250	526	2,240	388	145	125	53
26.....	66	54	65	62	135	253	698	1,750	388	145	123	55
27.....	58	52	123	158	168	256	1,030	1,060	395	148	121	71
28.....	48	60	106	127	172	259	1,030	636	374	148	121	78
29.....	44	67	172	122	-----	256	1,030	546	318	150	121	78
30.....	38	67	384	96	-----	278	1,060	430	274	150	123	82
31.....	55	-----	268	93	-----	283	-----	235	-----	145	121	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	119	38	72.5	4,460
November.....	240	29	76.5	4,550
December.....	384	30	95.2	5,850
January.....	442	62	133	8,180
February.....	980	59	234	13,000
March.....	380	94	231	14,200
April.....	1,400	259	608	36,200
May.....	3,220	235	2,090	129,000
June.....	4,060	226	856	50,900
July.....	285	102	154	9,470
August.....	158	76	119	7,320
September.....	112	50	85.4	5,080
The year.....	4,060	29	397	288,000

MOKELUMNE RIVER NEAR VICTOR, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 34, T. 4 N., R. 7 E., 1 mile north-east of Victor.

RECORDS AVAILABLE.—July, 1927, to September, 1929, incomplete.

REMARKS.—Records fair. Discharge not computed January 25 to March 8 and April 1 to June 28. Diversions and storage above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Mar.	June	July	Aug.	Sept.
1	74	52	54	477	-----	-----	277	137	90
2	80	39	50	225	-----	-----	277	112	76
3	118	44	54	147	-----	-----	245	81	78
4	98	54	48	152	-----	-----	226	78	75
5	97	25	62	176	-----	-----	193	70	75
6	-----	-----	-----	-----	-----	-----	-----	-----	-----
6	102	23	72	158	-----	-----	187	60	71
7	82	23	80	114	-----	-----	192	56	82
8	70	39	84	96	-----	-----	188	105	97
9	53	55	88	112	300	-----	168	137	98
10	72	56	81	96	222	-----	141	126	97
11	-----	-----	-----	-----	-----	-----	-----	-----	-----
11	75	74	78	72	239	-----	128	129	97
12	66	39	80	66	340	-----	125	116	97
13	65	150	125	80	208	-----	125	109	105
14	77	128	95	76	148	-----	133	106	107
15	90	158	48	76	98	-----	104	107	107
16	-----	-----	-----	-----	-----	-----	-----	-----	-----
16	62	152	36	198	148	-----	97	104	97
17	70	307	35	102	215	-----	93	97	90
18	60	110	33	77	222	-----	97	93	89
19	55	69	116	108	226	-----	116	74	90
20	70	51	160	403	230	-----	129	80	91
21	-----	-----	-----	-----	-----	-----	-----	-----	-----
21	74	66	146	208	240	-----	132	104	44
22	62	67	106	146	240	-----	132	109	42
23	38	64	83	111	240	-----	136	115	44
24	46	60	48	91	249	-----	138	116	46
25	54	60	86	-----	249	-----	134	116	48
26	-----	-----	-----	-----	-----	-----	-----	-----	-----
26	69	56	67	-----	249	-----	134	116	54
27	48	54	108	-----	258	-----	134	106	65
28	44	58	95	-----	258	-----	133	107	70
29	42	66	126	-----	258	346	132	107	69
30	36	72	327	-----	249	296	132	100	68
31	41	-----	331	-----	288	-----	133	111	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	118	36	67.4	4,140
November	307	23	75.7	4,500
December	331	33	96.8	5,950
January 1-24	477	72	149	7,090
June 29-30	346	296	321	1,270
July	277	93	152	9,350
August	137	56	103	6,330
September	107	42	78.6	4,680

• Estimated.

MOKELUMNE RIVER AT WOODBRIDGE, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 34, T. 4 N., R. 6 E., at highway bridge a quarter of a mile northeast of Woodbridge.

DRAINAGE AREA.—648 square miles.

RECORDS AVAILABLE.—May, 1924, to September, 1929 (low-water records only for 1924 and 1925).

EXTREMES.—Maximum discharge during year, 3,290 second-feet June 18 (gage height, 19.83 feet); minimum, 2.4 second-feet October 6.

1924-1929: Maximum stage, 26.58 feet March 26, 1928 (discharge not determined); minimum discharge, 0.9 second-foot September 3, 1924.

REMARKS.—Records good. Woodbridge Canal diverts just above station; many other diversions and several storage reservoirs upstream.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	20	71	338	100	117	170	742	106	74	3.9	4.6
2	3.4	23	55	336	95	73	103	822	100	70	4.2	4.4
3	2.6	23	52	144	221	84	284	1,510	168	46	4.3	4.6
4	2.6	25	52	144	466	95	568	1,710	236	26	4.4	4.9
5	2.6	24	52	149	804	79	346	1,770	196	10	4.4	5
6	2.5	20	64	159	578	191	282	1,860	158	8	4.6	5
7	2.6	16	71	143	470	164	282	1,530	122	7.5	4.9	5.5
8	2.6	14	76	106	336	264	298	1,150	147	7	5.0	5.5
9	2.6	18	81	110	279	210	228	1,530	207	6	5.0	5.5
10	2.8	22	81	121	214	201	250	1,950	249	4.2	4.4	5.5
11	3.0	19	79	95	193	168	211	2,210	887	3.6	3.9	5.5
12	3.0	16	73	80	142	283	234	2,380	694	3.5	3.8	6
13	3.0	390	91	84	151	168	234	2,320	379	3.5	3.0	6.5
14	3.0	268	111	86	181	136	274	2,320	256	3.5	3.3	6.5
15	9	185	70	73	170	73	362	2,350	418	3.5	3.5	7
16	10	169	48	121	156	66	346	2,280	1,370	3.5	3.8	7
17	11	274	43	155	133	136	338	2,280	2,490	3.3	4.3	7.5
18	9	180	39	94	131	170	596	2,280	2,770	2.8	4.3	7.5
19	6.5	107	51	85	114	165	896	2,460	1,650	2.8	4.3	7
20	6	74	119	280	146	174	990	2,420	1,440	3.2	4.3	7
21	6	74	151	266	142	172	157	2,140	886	3.4	4.0	7
22	6	76	114	185	129	185	144	1,650	751	3.5	3.3	6
23	4.8	75	92	130	122	118	190	1,770	713	3.5	3.3	6
24	4.6	71	67	122	102	150	87	1,830	341	3.6	3.6	5.5
25	5	69	57	103	106	184	159	1,920	224	3.6	3.9	5.5
26	6.5	67	76	89	79	176	322	1,830	168	3.6	4.4	5.5
27	13	62	68	100	108	181	682	1,300	158	3.6	4.8	5.5
28	16	62	99	142	129	177	764	675	142	3.8	4.6	5.5
29	19	66	94	136	-----	170	764	427	123	3.8	4.4	5.5
30	19	72	176	127	-----	156	720	350	90	3.8	4.6	5.5
31	18	-----	338	103	-----	184	-----	196	-----	3.6	4.6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	19	2.5	6.76	416
November	390	14	86.0	5,120
December	338	39	87.5	5,380
January	338	73	142	8,730
February	804	79	214	11,900
March	283	66	157	9,650
April	990	87	376	22,400
May	2,460	196	1,680	103,000
June	2,770	90	588	35,000
July	74	2.8	10.7	658
August	5	3.0	4.16	256
September	7.5	4.4	5.85	348
The year	2,770	2.5	280	203,000

MOKELUMNE RIVER NEAR THORNTON, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 12, T. 4 N., R. 5 E., $2\frac{1}{2}$ miles southeast of Thornton.

DRAINAGE AREA.—690 square miles.

RECORDS AVAILABLE.—July, 1926, to September, 1929 (low-water records only).

EXTREMES.—Minimum discharge during year, 6.0 second-feet September 13.

1926-1929: Minimum discharge, that of September 13, 1929.

REMARKS.—Records good. Many diversions and several storage reservoirs above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.
1	8	20	78	286	108	154	218		117	9.5	7.5
2	8	23	67		97	99	163		105	9.5	7.5
3	7.5	26	60	214		69			94	9.5	7.5
4	8	26	62	173		109			65	9.5	7
5	8	28	57	164		88			48	9.5	7
6											
7	8	28	65	183		156			35	10	7.5
8	8	24	73	171					30	10	7.5
9	8	21	79	131					27	10	7.5
10	7.5	20	87	117					24	9.5	8
	7	23	91	130					23	11	8
11											
12	6.5	25	86	114		210			20	9	8.5
13	7	24	84	98	182				20	9	8.5
14	8	160	86	90	173				20	8.5	7
15	8.5	276	125	99	201	191			19	8.5	8
	9	183	109	93	210	118			15	8	9.5
16											
17	12	174	70	98	185	73			12	8	11
18	15	208	53	198	154	111			12	8	11
19	16	223	46	130	152	175			12	8	11
20	16	142	40	99	122	178			12	7	11
	12	109	90		156	182			11	7.5	11
21											
22	11	88	144		161	176			11	7.5	11
23	12	87	141	232	151	187			11	7	11
24	12	87	110	173	146	163			10	7	8.5
25	11	82	94	142	120	111			10	7	9.5
	9.5	78	65	115	125	182			10	7	10
26											
27	9.5	76	82	109	98	191			10	7	10
28	9.5	72	74	83	105	189		227	10	7	9
29	13	68	104	163	144	196		201	10	7	9.5
30	17	68	109	142		198		185	10	7.5	9.5
31	20	75	143	142		187		146	10	7.5	9
	20		296	120		203			10	7.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	20	6.5	10.7	658
November	276	20	84.8	5,050
December	296	40	92.6	5,690
June 27-30	227	146	190	1,510
July	117	10	26.9	1,650
August	11	7	8.34	513
September	11	7	8.95	533

* NOTE.—The discharge was above 300 second-feet during nearly all the periods for which no records are given; rating curve not developed above this point.

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 and 5 miles southwest of Mokelumne Peak.

DRAINAGE AREA.—23 square miles.

RECORDS AVAILABLE.—July, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,250 second-feet June 15 (gage height, 6.00 feet); minimum not determined.

1927-1929: Maximum discharge, 2,330 second-feet March 25, 1928 (gage height, 7.79 feet); minimum, 0.3 second-foot October 20, 1927.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined February 5-28.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	1.4	3.4	11	6		70	246	53	11	1.5	1.1
2	.8	1.3	3.6	7.5	5.5		84	280	46	9	1.4	1.0
3	.8	1.7	3.3	6.5	5.5		86	305	44	8	1.4	.9
4	.9	1.9	3.4	7	5		70	267	46	7	1.3	.9
5	.9	1.5	3.3	6.5		* 30	54	243	39	6	1.2	.8
6	.9	2.1	3.1	5.5			49	256	33	5.5	1.2	.8
7	.9	2.1	3.1	5			44	284	44	4.8	1.2	.8
8	.8	2.0	3.3	5.5		25	39	308	51	4.2	1.2	.7
9	.8	2.1	3.7	6.5		24	48	287	120	3.8	1.1	.6
10	.8	2.0	3.6	5.5		61	40	261	87	3.4	1.1	.6
11	.8	1.9	3.4	* 5		34	37	263	59	3.1	1.2	.6
12	.9	1.9	3.6	* 5		26	48	278	49	2.8	1.2	.6
13	1.1	2.1	3.3	* 5		22	49	322	48	2.6	1.2	.6
14	1.5	3.3	3.2	* 5		21	37	284	44	2.5	1.2	.6
15	* 1.5	3.8	3.2	* 5		20	84	300	299	2.3	1.3	.6
16	* 1.5	3.1	3.1	* 5		26	132	326	402	2.1	1.3	.6
17	* 1.4	2.9	3.0	5		33	158	295	240	2	1.5	.5
18	* 1.4	2.8	3.0	4.2		33	138	236	162	1.9	1.6	.5
19	* 1.4	2.8	2.9	3.9		24	90	210	96	1.7	1.6	* 5
20	* 1.3	2.8	2.8	3.9		30	73	206	72	1.6	1.7	* 5
21	* 1.3	2.8	2.9	3.6		45	82	216	60	1.5	1.7	* 5
22	* 1.3	2.8	17	3.4		102	65	206	51	1.4	1.7	* 5
23	* 1.2	2.7	13	3.4		50	64	203	42	1.4	1.6	* 5
24	* 1.2	2.5	8.5	3.4		36	88	163	36	1.3	1.5	* 5
25	* 1.2	2.5	26	* 3.4		32	106	122	30	1.3	1.5	* 5
26	* 1.1	2.6	* 21	* 3.4		32	138	82	25	1.2	1.4	* 5
27	* 1.1	2.7	* 20	* 3.4		60	180	63	21	1.2	1.4	* 5
28	* 1.1	2.8	* 19	* 3.4		88	170	59	18	1.2	1.3	* 5
29	1.1	2.9	* 18	3.4		88	158	58	14	1.2	1.2	* 5
30	1.2	3.1	* 17	3.6		75	221	.60	12	1.3	1.2	* 5
31	1.4		16	5		66		57		1.7	1.1	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.5	0.8	1.11	68.2
November	3.8	1.3	2.43	145
December	26	2.8	7.86	433
January	11	3.4	4.93	303
February			* 6.00	333
March	102		40.7	2,500
April	221	37	90.0	5,360
May	326	57	218	13,400
June	402	12	78.1	4,050
July	11	1.2	3.23	199
August	1.7	1.1	1.35	83.0
September	1.1	.5	.63	37.5
The year	402	.5	38.1	27,600

* Estimated.

BEAR RIVER AT PARDOE CAMP, CALIF.

LOCATION.—Water-stage recorder in sec. 18, T. 8 N., R. 16 E., at Pardoe Camp. 2 miles below Bear River Reservoir of the Pacific Gas & Electric Co. Altitude, about 5,650 feet.

DRAINAGE AREA.—33 square miles.

RECORDS AVAILABLE.—July, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,130 second-feet June 15 (gage height, 7.65 feet); no flow October 1-4 and 7-29.

1927-1929: Maximum discharge, 3,350 second-feet March 25, 1928 (gage height, 9.75 feet); no flow September 8-30, October 1-4, and 7-29, 1928.

REMARKS.—Records good except those for estimated periods, which are fair. About 6,000 acre-feet is stored each year at reservoir above station and usually released between July and October. Gage-height records and results of discharge measurements furnished by Pacific Gas & Electric Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1-----	0	0.7	0.4	*17	*4	*10	35	424	93	25	16	12
2-----	0	.5	.4				41	475	86	24	16	12
3-----	0	1.3	.8				43	528	66	24	15	12
4-----	0	1.6	.9				61	460	69	24	15	12
5-----	.1	.8	.8				103	418	68	24	15	12
6-----	.1	1.3	.7	17	3.5	14	79	421	61	24	15	11
7-----	0	1.2	.7			12	64	457	69	24	15	11
8-----	0	.7	.6			11	40	528	92	24	15	11
9-----	0	.4	.6			18	53	486	263	23	15	10
10-----	0	.2	.6			17	3.7	91	*50	430	188	22	15	10
11-----	0	.1	.6	16	4.0	20	*48	427	88	22	14	10
12-----	0	.1	.6	15	4.4	14	*53	469	65	22	14	10
13-----	0	.7	.7	10	4.2	13	*62	528	66	22	15	10
14-----	0	1.8	16	2.7	4.0	13	*58	496	68	21	15	10
15-----	0	1.7	18	2.7	4.4	14	*97	500	556	24	15	9.5
16-----	0	1.1	18	2.6	5.5	16	191	545	769	35	15	9.5
17-----	0	1.1	18	2.5	*5	16	265	496	406	33	15	9.5
18-----	0	1.0	18	2.5		16	268	409	268	34	14	9
19-----	0	.9	*18	2.7		15	173	364	132	39	14	9
20-----	0	.9		2.8		17	128	358	85	44	14	9
21-----	0	1.0		2.7		21	130	385	70	44	14	9
22-----	0	1.1		3.0		35	105	331	63	30	14	9
23-----	0	1.3		3.2	*4	22	90	296	50	18	14	9
24-----	0	1.0	3.8	18		113	236	42	18	14	9	
25-----	0	.8	3.9	17		152	148	37	18	13	9	
26-----	0	.6	*18	4.6		18	193	88	29	18	13	8.5
27-----	0	.6		5		25	262	66	27	17	13	8.5
28-----	0	.5		*4	4.0	31	300	49	26	17	13	8.5
29-----	0	.4			*4	34	228	62	26	17	13	8.5
30-----	.2	.4	*4		33	334	93	26	17	12	8.5	
31-----	.6		*4		32		96		16	12		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0.6	0	0.03	1.8
November.....	1.8	.1	.86	51.2
December.....		.4	10.7	658
January.....		2.5	8.76	539
February.....			4.45	247
March.....	91		20.5	1,260
April.....	334	35	128	7,620
May.....	545	49	357	22,000
June.....	769	26	132	7,860
July.....	44	16	24.6	1,510
August.....	16	12	14.3	879
September.....	12	8.5	9.87	587
The year.....	769	0	59.6	43,200

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.

RECORDS AVAILABLE.—October, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 346 second-feet February 4 (gage height, 3.02 feet); minimum, 0.8 second-foot August 23 to September 19.

1911-1929: Maximum discharge, 2,550 second-feet January 23, 1914 (gage height, 10.0 feet at site 1,000 feet upstream); minimum, 0.2 second-foot August 18-23, 1924.

REMARKS.—Records good. Several diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	1.5	4.3	* 7	12	24	14	42	65	18	7.5	1.3	0.8
2.	1.6	3.9	* 7	12	70	14	40	65	17	6.5	1.3	.8
3.	1.7	8	9	20	85	14	41	67	15	5.5	1.2	.8
4.	1.8	9.5	10	16	189	16	117	66	14	6.5	1.1	.8
5.	1.8	6	8.5	14	88	18	116	61	14	6	1.1	.8
6.	1.9	8.5	8	13	55	18	83	60	14	5.5	1.1	.8
7.	1.9	8.5	7.5	12	38	20	70	58	16	5	1.1	.8
8.	1.9	6.5	6.5	12	27	20	81	57	17	5	1.1	.8
9.	1.9	6	6.5	11	24	20	80	56	22	4.3	1.0	.8
10.	1.8	6	11	11	24	73	71	53	22	3.9	1.0	.0
11.	1.9	5.5	14	11	23	58	66	48	18	3.5	1.0	.8
12.	2.0	10	14	10	22	46	65	45	16	3.0	1.0	.8
13.	2.2	20	15	9	20	40	62	44	14	3.0	1.0	.8
14.	2.6	27	13	* 9	20	39	58	45	14	3.2	1.1	.8
15.	2.8	18	10	* 9	18	38	58	41	29	2.9	* 1.0	.8
16.	2.9	13	10	* 9	18	38	67	36	74	2.6	* 1.0	.8
17.	2.8	11	11	* 9	18	36	64	36	53	2.8	* 1.0	.8
18.	2.8	9	9	* 9	18	37	66	35	39	2.4	* 1.0	.8
19.	2.8	8	10	* 15	16	37	95	33	32	1.9	* 9	.8
20.	2.6	7.5	10	16	15	36	99	32	25	1.5	* 9	.9
21.	2.6	7.5	10	16	15	35	86	30	22	1.8	* 9	1.0
22.	2.9	7.5	10	16	14	43	93	26	20	1.6	* 9	1.0
23.	3.0	7.5	10	15	14	48	85	25	17	1.6	* 8	1.0
24.	3.0	7.5	12	14	14	43	80	24	15	1.5	* 8	1.0
25.	3.2	7.5	42	15	14	44	75	22	13	1.2	* 8	1.0
26.	3.4	7.5	25	15	14	46	70	20	11	1.2	.8	1.0
27.	3.4	* 7.5	18	14	14	46	68	20	10	1.3	.8	1.0
28.	3.5	* 7.5	* 30	14	14	46	69	18	10	1.4	.8	1.0
29.	3.7	* 7.5	* 25	14	-----	47	65	15	8	1.6	.8	1.0
30.	4.3	* 7	* 20	18	-----	46	64	14	8	1.4	.8	1.0
31.	4.7	-----	14	19	-----	43	-----	16	-----	1.4	.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.7	1.5	2.61	160
November	27	3.9	9.02	537
December	42	6.5	13.3	818
January	20	9	13.2	812
February	189	14	33.0	1,880
March	73	14	36.1	2,220
April	117	40	73.2	4,360
May	67	14	39.8	2,450
June	74	8	20.6	1,280
July	7.5	1.2	3.18	196
August	1.3	.8	.97	59.6
September	1.0	.8	.87	51.8
The year	189	.8	20.3	14,700

* Estimated.

SOUTH FORK OF MOKELUMNE 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.

RECORDS AVAILABLE.—October, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 153 second-feet February 4, (gauge height, 2.12 feet); minimum, 1.5 second-feet September 18.

1911-1929: Maximum discharge, 3,330 second-feet January 25, 1914 (gauge height, 6.9 feet); minimum, 1.4 second-feet several days in July, August, and September, 1924.

REMARKS.—Records good. Discharge estimated November 18 and 19. Small diversion above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	5.5	6	9.5	20	12	35	66	19	12	5	2.8
2	4.4	5.5	6	9	49	13	84	67	18	11	5	2.6
3	4.6	10	8.5	13	56	14	35	67	16	10	5	3.0
4	4.8	8	8	11	94	16	76	65	16	10	5	2.8
5	4.8	6.5	7	10	49	17	62	63	16	9.5	4.6	2.6
6	4.8	8.5	7	9.5	34	18	52	59	15	9.5	4.6	2.6
7	4.8	7	7	9	26	18	48	57	19	9.5	4.6	2.6
8	4.6	6	7	9	20	17	52	55	19	9.5	4.6	2.4
9	4.4	6	7	8	18	18	51	52	24	8.5	4.4	2.4
10	4.2	6	9	8	18	62	48	45	22	8	4.0	2.4
11	4.4	6	9.5	8	16	43	48	45	19	8	4.2	2.2
12	4.8	7	8.5	8	15	84	48	43	17	8	4.2	2.2
13	5.5	12	9.5	8	14	51	48	41	16	7.5	4.2	2.2
14	5.5	17	8	8	13	81	47	42	14	7.5	4.2	2.4
15	5.5	11	7.5	8	13	80	48	39	31	7.5	3.8	2.2
16	5	9	7.5	8	12	31	50	38	52	7	3.4	2.1
17	4.8	8	7.5	7.5	12	32	52	36	40	7	3.0	2.1
18	4.8	7.5	7	7.5	12	33	56	33	31	7	3.2	1.8
19	4.6	7.5	7.5	10	12	33	71	32	26	6.5	3.2	2.0
20	4.6	7	7.5	9.5	12	32	69	30	24	6	3.0	2.6
21	4.6	7	7.5	9.5	12	31	67	29	21	6	2.7	2.8
22	4.8	7	7	9	12	38	67	28	19	6	2.7	2.8
23	4.6	7	7	9	12	37	63	25	18	6	2.7	2.7
24	4.6	6.5	8	8.5	12	31	63	24	18	6	2.7	2.8
25	4.8	6	29	9	12	30	63	22	16	6	2.8	2.4
26	5	6	17	9	12	30	63	21	15	6	2.8	2.2
27	5	6	13	9	12	31	64	20	14	6	3.0	2.4
28	5	6	23	9	12	36	66	19	13	5.5	3.0	2.4
29	5	6	14	9.5	-----	38	65	18	12	5.5	2.8	2.6
30	5	6	12	11	-----	38	66	18	12	5.5	2.7	2.6
31	6	-----	10	13	-----	36	-----	19	-----	5	2.7	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6	4.2	4.83	297
November	17	5.5	7.48	445
December	29	6	9.68	596
January	13	7.5	9.16	563
February	94	12	21.8	1,210
March	62	12	29.5	1,810
April	76	34	55.9	8,330
May	67	18	39.4	2,420
June	52	12	20.4	1,210
July	12	5	7.52	462
August	5	2.7	3.67	226
September	3.0	1.8	2.46	146
The year	94	1.8	17.6	12,700

WOODBIDGE CANAL AT WOODBRIDGE, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 34, T. 4 N., R. 6 E., at Woodbridge, a quarter of a mile below point of diversion.

RECORDS AVAILABLE.—April, 1926, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 263 second-feet May 6; no flow October 28 to March 7.

1926-1929: Maximum mean daily discharge, that of May 6, 1929; no flow part of each year.

REMARKS.—Records fair. Discharge estimated April 4-10 and June 1-5. This canal diverts from a reservoir on Mokelumne River in sec. 34, T. 4 N., R. 6 E., in Woodbridge. The water is used for irrigation in the territory south and west of Woodbridge.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	68	0	54	236	179	179	103	86
2.....	63	0	73	242	179	161	104	75
3.....	72	0	84	236	179	167	90	64
4.....	82	0	55	249	179	167	77	54
5.....	82	0	60	256	179	167	69	48
6.....	82	0	65	263	179	173	59	43
7.....	82	0	70	242	173	173	54	38
8.....	75	5	80	222	167	185	47	43
9.....	68	15	95	256	167	191	57	53
10.....	59	14	110	256	167	167	68	57
11.....	52	9	155	256	167	136	77	62
12.....	52	10	145	216	155	114	87	57
13.....	49	9	141	242	155	106	87	59
14.....	48	9	135	229	197	106	80	62
15.....	56	8	147	236	236	103	73	66
16.....	58	8	161	242	85	96	67	67
17.....	48	9	173	242	12	93	58	67
18.....	44	9	197	242	78	85	51	67
19.....	41	9	197	242	118	80	40	63
20.....	38	9	191	216	135	87	29	57
21.....	39	12	154	210	74	95	29	52
22.....	42	20	185	203	185	100	33	36
23.....	26	30	173	222	179	102	42	31
24.....	39	48	152	229	155	101	57	28
25.....	38	37	179	229	185	97	70	27
26.....	40	31	185	210	210	94	80	27
27.....	20	34	203	173	216	106	82	30
28.....	0	32	203	185	216	113	85	38
29.....	0	36	216	185	216	116	86	46
30.....	0	44	236	179	191	110	85	50
31.....	0	48		179		102	84	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	82	0	47.2	2,900
March.....	48	0	16.0	984
April.....	236	54	142	8,450
May.....	263	173	227	14,000
June.....	236	12	164	9,760
July.....	191	80	125	7,690
August.....	104	29	68.1	4,190
September.....	86	27	51.8	2,080
The year.....	263	0	70.4	51,100

NOTE.—No flow during months for which no discharge is given.

DRY CREEK NEAR IONE, CALIF.

LOCATION.—Water-stage recorder near Sacramento-San Joaquin County line, at highway bridge at Forni ranch in Arroyo Seco grant, 7 miles southwest of Ione, Amador County.

DRAINAGE AREA.—279 square miles.

RECORDS AVAILABLE.—October, 1911, to June, 1912; December, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,770 second-feet February 4 (gage height, 8.90 feet); no flow for several months.

1925-1929: Maximum discharge, 5,450 second-feet March 25, 1928 (gage height, 11.90 feet); no flow part of each year.

REMARKS.—Records good. Small diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	0	20	51	27	45	12	0
2.....	0	0	18	162	26	41	11	0
3.....	0	0	49	240	24	36	9.5	0
4.....	0	0	80	868	24	51	11	0
5.....	0	0	43	501	24	166	12	0
6.....	0	0	36	317	26	119	12	0
7.....	0	0	29	255	27	100	11	0
8.....	0	0	23	165	26	93	6	0
9.....	0	0	20	129	28	150	2.8	0
10.....	0	0	18	109	743	117	2.2	0
11.....	0	1.4	32	99	402	98	1.5	0
12.....	0	30	19	90	229	84	1.1	0
13.....	0	55	12	80	166	74	.8	0
14.....	0	33	10	70	126	67	.4	0
15.....	18	21	12	63	108	60	0	0
16.....	.8	16	50	56	96	57	0	.8
17.....	0	14	22	55	36	47	0	26
18.....	0	8.5	19	54	82	45	0	26
19.....	0	5	147	51	76	58	1.4	5
20.....	0	5	288	44	68	70	2.3	2.2
21.....	0	5	161	39	62	57	.7	1.1
22.....	0	3.4	113	37	54	53	.1	8.5
23.....	0	3.4	97	36	64	52	0	.5
24.....	0	7	80	34	77	46	0	0
25.....	0	72	71	32	70	40	0	0
26.....	0	50	63	31	67	38	0	0
27.....	0	28	59	30	64	33	0	0
28.....	0	28	54	29	59	25	0	0
29.....	0	35	49	-----	53	23	0	0
30.....	0	29	50	-----	50	16	0	0
31.....	-----	23	49	-----	48	-----	0	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
November.....	18		0		0.63		37.5	
December.....	72		0		15.2		935	
January.....	288		10		57.8		3,550	
February.....	868		29		133		7,390	
March.....	743		24		99.4		6,110	
April.....	166		16		65.4		3,890	
May.....	12		0		3.15		194	
June.....	26		0		2.30		137	
The year.....	868		0		30.7		22,200	

NOTE.—No flow during months for which no discharge is given.

DRY CREEK NEAR GALT, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 34, T. 5 N., R. 6 E., at Southern Pacific Railway trestle 1 mile south of Galt.

DRAINAGE AREA.—346 square miles.

RECORDS AVAILABLE.—December, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 690 second-feet February 5 (gage height, 7.60 feet); no flow October 1 to December 25 and May 15 to September 30.

1926-1929: Maximum discharge, 5,250 second-feet March 26, 1928 (gage height, 10.2 feet); no flow several months each year.

REMARKS.—Records good. Small irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Day	Dec.	Jan.	Feb.	Mar.	Apr.	May
1.....	0	4.6	30	21	40	9.5	16.....	0	31	48	105	54	0
2.....	0	1.9	50	20	37	7	17.....	0	48	46	85	46	0
3.....	0	1.1	179	19	33	4.7	18.....	0	24	44	76	40	0
4.....	0	36	230	18	34	3.5	19.....	0	34	44	68	40	0
5.....	0	40	470	17	91	4.2	20.....	0	167	39	61	56	0
6.....	0	26	340	16	138	3.9	21.....	0	222	35	54	57	0
7.....	0	20	285	18	108	4.2	22.....	0	142	32	49	46	0
8.....	0	15	214	16	88	2.6	23.....	0	89	30	45	46	0
9.....	0	10	156	16	112	1.0	24.....	0	64	28	64	42	0
10.....	0	7.5	114	47	142	.3	25.....	0	54	25	62	36	0
11.....	0	6.5	91	399	106	.2	26.....	23	46	24	60	32	0
12.....	0	21	79	270	85	.1	27.....	21	42	22	58	28	0
13.....	0	7.5	69	214	71	.1	28.....	7	36	22	55	23	0
14.....	0	3.0	62	165	63	.1	29.....	11	34	-----	50	19	0
15.....	0	1.9	55	126	58	0	30.....	14	30	-----	46	16	0
							31.....	8.5	30	-----	42	-----	0
Month							Maximum	Minimum	Mean	Run-off in acre-feet			
December.....							23	0	2.73	168			
January.....							222	1.1	41.8	2,570			
February.....							470	22	102	5,660			
March.....							399	16	76.2	4,690			
April.....							142	16	59.6	3,550			
May.....							9.5	0	1.34	82.4			
The year.....							470	0	23.1	16,700			

NOTE.—No flow during months for which no discharge is given.

GOOSE CREEK NEAR ELLIOTT, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 29, T. 5 N., R. 8 E., $1\frac{1}{2}$ miles above mouth and $4\frac{1}{2}$ miles northeast of Elliott.

DRAINAGE AREA.—8.5 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 238 second-feet January 19 (gage height, 5.11 feet); no flow for several months.

1927-1929: Maximum discharge, 271 second-feet March 25, 1928 (gage height, 5.36 feet); no flow several months each year.

REMARKS.—Records good. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Day	Nov.	Dec.	Jan.	Feb.	Mar.
1.....	0	0	1.0	4.2	0.1	16.....	1.5	0.5	51	0.7	0.4
2.....	0	0	.7	11	.1	17.....	.3	.4	8	.6	.2
3.....	0	0	9.5	13	.1	18.....	.1	.3	11	.6	.2
4.....	0	0	5	44	0	19.....	.1	.1	88	.5	.1
5.....	0	0	2.8	12	0	20.....	0	.1	36	.4	.1
6.....	0	0	2.0	11	0	21.....	0	.1	11	.3	.1
7.....	0	0	1.5	7.5	0	22.....	0	.1	7	.2	.1
8.....	0	0	1.1	4.2	0	23.....	0	.1	4.8	.2	.1
9.....	0	0	.8	3.2	.3	24.....	0	14	3.5	.2	.1
10.....	0	0	.8	2.3	5.5	25.....	0	21	8.0	.1	0
11.....	0	0	.7	2.2	3.5	26.....	0	5	2.3	.1	0
12.....	0	0	.7	1.8	1.3	27.....	0	3.0	2.0	.1	0
13.....	0	6	.7	1.3	1.3	28.....	0	2.8	1.6	.1	0
14.....	0	1.8	.7	1.1	.8	29.....	0	2.3	1.6	-----	0
15.....	3.0	.8	1.3	.8	.6	30.....	0	1.6	1.5	-----	0
						31.....	-----	1.3	1.5	-----	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	3.0	0	0.17	10.1
December.....	21	0	1.98	122
January.....	88	.7	8.49	522
February.....	44	.1	4.42	245
March.....	5.5	0	.50	30.7
The year.....	88	0	1.28	930

NOTE.—No flow during months for which no discharge is given.

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.

RECORDS AVAILABLE.—February, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 190 second-feet March 10 (gage height, 2.30 feet); minimum, 0.9 second-foot September 1.

1922-1929: Maximum stage, 7.5 feet February 6, 1925 (discharge not determined); stream practically dry, except for town waste, during summer of 1924.

REMARKS.—Records good except those for low water, which are fair. Stream regulated to some extent by a small dam above town of Sutter Creek and by release of mine water.

Daily and monthly discharge, in second-feet, 1922-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.9	7	13	16	6	26	21	6.5	4.4	1.6	0.9
2	1.4	2.0	7.5	12	127	5	25	21	6.5	4.1	1.4	1.2
3	1.4	6	12	60	127	4.8	24	18	6	3.8	1.4	1.4
4	1.4	5.5	11	27	165	4.6	53	16	6	3.8	1.4	1.7
5	1.4	5	11	21	104	4.1	65	14	6	3.6	1.6	1.9
6	1.4	6	10	19	70	3.6	53	14	6	3.5	1.6	2.0
7	1.4	6	9.5	19	47	3.6	47	13	7.5	3.2	1.5	2.2
8	1.4	4.7	9.5	19	33	3.5	42	12	12	3.2	1.4	2.2
9	1.5	5	9.5	19	25	6	39	12	12	3.0	1.4	1.9
10	1.4	5	14	18	21	154	35	12	12	3.0	1.4	1.9
11	1.4	4.7	16	16	18	121	33	11	11	2.5	1.5	1.7
12	1.4	6	58	14	17	86	32	10	10	2.0	1.5	1.6
13	1.5	26	27	12	15	81	32	9.5	10	1.9	1.4	1.6
14	1.4	43	19	11	14	74	30	9	9.5	1.7	1.4	1.4
15	1.4	25	19	10	13	68	30	8.5	25	1.7	1.4	1.3
16	1.4	15	18	13	12	62	29	8	41	1.6	1.4	1.4
17	1.4	12	18	12	11	58	26	7.5	29	1.8	1.4	1.4
18	1.4	10	18	13	10	56	26	7.5	7	1.6	1.3	1.5
19	1.4	9	18	27	20	53	35	7	15	1.5	1.3	1.4
20	1.4	9	18	32	18	50	36	7.5	11	1.4	1.3	1.4
21	1.4	8	16	32	14	49	34	7.5	7.5	1.4	1.3	1.4
22	1.4	9	16	27	11	52	32	8	6	1.6	1.3	1.4
23	1.4	8	16	25	9.5	52	32	8	5	1.7	1.2	1.4
24	1.6	9	20	22	9.5	45	30	7.5	4.7	1.6	1.3	1.4
25	2.0	8	56	21	9	37	29	8	4.4	1.9	1.2	1.4
26	2.0	8	53	18	8	34	28	8	4.1	2.0	1.2	1.4
27	1.9	7.5	43	16	7	32	27	8	3.8	2.0	1.2	1.3
28	2.0	7.5	30	14	6.5	30	27	7.5	3.4	2.0	1.1	1.3
29	1.9	7.5	22	16	-----	29	27	6.5	3.0	1.9	1.0	1.4
30	1.9	7.5	15	15	-----	28	24	6.5	2.5	1.9	1.0	1.4
31	1.9	-----	14	14	-----	26	-----	6.5	-----	1.7	1.0	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	2.0					1.4			1.54		94.7	
November	43					1.9			9.56		569	
December	58					7			20.4		1,250	
January	60					10			19.6		1,210	
February	165					6.5			34.2		1,900	
March	154					3.5			42.5		2,610	
April	65					24			33.6		2,000	
May	22					6.5			10.4		640	
June	41					2.5			9.78		582	
July	4.4					1.4			2.35		144	
August	1.6					1.0			1.34		82.4	
September	2.2					.9			1.53		91.0	
The year	165					.9			15.4		11,200	

NORTH FORK OF COSUMNES RIVER NEAR ELDORADO, CALIF.

LOCATION.—Staff gage in sec. 23, T. 9 N., R. 10 E., at Celio ranch 5 miles south of Eldorado. Martinez Creek enters $1\frac{1}{2}$ miles above station.

DRAINAGE AREA.—197 square miles.

RECORDS AVAILABLE.—August, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 920 second-feet February 4 (gage height, 6.8 feet); minimum, 0.5 second-foot several days in August and September.

1911-1929: Maximum discharge, about 7,600 second-feet March 25, 1928 (gage height, 15.2 feet); no flow July 17 to October 7, 1924, and July 23 to September 29, 1926.

REMARKS.—Records fair. Irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.				
1.....	3.3	6	22	37	37	46	162	280	68	26	1.3	0.6				
2.....	3.7	6	22	65	308	46	162	280	68	22	1.3	.6				
3.....	3.7	9	22	162	204	46	162	280	60	22	1.3	.6				
4.....	3.7	13	22	68	920	46	162	280	58	21	1.2	.6				
5.....	3.7	13	22	56	336	46	280	280	56	19	1.0	.5				
6.....	5.5	13	20	56	200	46	220	274	56	16	1.0	.5				
7.....	5.5	19	19	51	122	53	190	267	56	14	.9	.5				
8.....	5.5	26	16	46	90	60	182	254	56	11	.8	.6				
9.....	5.5	13	44	43	68	68	254	248	80	9	.8	.6				
10.....	5.5	13	39	40	68	684	210	241	68	7	.8	.6				
11.....	5.5	13	34	37	62	254	204	204	62	7	.8	.6				
12.....	5	13	34	33	56	182	205	193	56	7	.7	.7				
13.....	5	34	34	29	56	162	193	182	51	5.5	.7	.6				
14.....	5	94	34	25	52	142	205	172	46	5	.7	.6				
15.....	5	34	34	21	49	142	216	162	46	4.4	.8	.6				
16.....	5	26	34	30	46	142	228	162	308	4.4	.8	.5				
17.....	6	26	34	25	46	137	241	162	204	4.4	.8	.5				
18.....	6	26	34	21	46	132	254	162	142	3.6	.7	.5				
19.....	6	26	34	56	46	132	366	155	122	3.3	.6	.5				
20.....	6	26	31	46	46	132	430	148	106	2.8	.6	.5				
21.....	6	24	28	44	46	135	390	142	92	2.5	.6	.5				
22.....	6	22	26	43	46	138	350	130	80	2.2	.5	.5				
23.....	6	20	26	42	46	142	308	118	68	2.2	.5	.5				
24.....	6	19	80	29	46	182	300	106	56	1.6	.5	.5				
25.....	6	19	181	29	46	142	290	92	46	1.6	.5	.5				
26.....	6	19	110	30	46	142	280	92	42	1.6	.5	.6				
27.....	6	19	56	31	46	154	280	84	37	1.6	.5	.7				
28.....	6	20	56	32	46	162	280	76	37	1.4	.5	.7				
29.....	6	21	80	33	-----	172	280	68	29	1.3	.6	.8				
30.....	6	22	65	33	-----	182	280	61	28	1.3	.7	1.0				
31.....	6	-----	46	37	-----	172	-----	64	-----	1.0	.7	-----				
Month													Maximum	Minimum	Mean	Run-off in acre-feet
October.....													6	3.3	5.36	330
November.....													94	6	21.8	1,300
December.....													181	16	43.2	2,660
January.....													162	21	42.9	2,040
February.....													920	37	115	6,390
March.....													684	46	143	8,790
April.....													430	162	252	15,000
May.....													280	61	175	10,800
June.....													308	28	76.1	4,530
July.....													26	1.0	7.51	462
August.....													1.3	.5	.76	46.7
September.....													1.0	.5	.59	35.1
The year.....													920	.5	73.1	53,000

• Estimated.

COSUMNES RIVER AT MICHIGAN BAR, CALIF.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 36, T. 8 N., R. 8 E., at highway bridge at Michigan Bar, $5\frac{1}{2}$ miles southwest of Latrobe. North and Middle Forks unite 12 miles above station.

DRAINAGE AREA.—524 square miles.

RECORDS AVAILABLE.—October, 1907, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,160 second-feet March 10 (gage height, 5.7 feet); minimum, 0.8 second-foot parts of August and September. 1907–1929: Maximum discharge, 23,800 second-feet February 6, 1925 (gage height, 11.2 feet); no flow part of 1908, 1918, 1919, 1924, and 1926.

REMARKS.—Records good. Diversions above station.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	7	13	29	98	120	111	325	504	132	61	5.5	0.8
2.....	7	15	29	98	470	115	320	525	136	51	5	.8
3.....	7	15	31	132	815	115	320	525	115	51	5	.8
4.....	7	15	36	228	2,800	126	345	490	115	51	5	.8
5.....	7.5	16	38	132	1,010	136	720	490	115	51	4.0	.9
6.....	8.5	22	38	98	640	136	525	490	115	45	3.8	.9
7.....	8.5	22	38	98	430	136	460	460	100	39	2.5	.9
8.....	9.5	29	31	84	320	141	442	460	111	37	2.5	.9
9.....	9.5	28	29	78	250	136	680	460	136	29	2.5	1.0
10.....	9	22	34	63	210	1,240	460	430	199	29	2.2	1.0
11.....	8.5	22	56	63	192	860	430	370	157	26	2.2	1.0
12.....	7.5	22	98	63	177	640	442	370	136	26	2.2	1.0
13.....	8	38	84	63	177	460	370	370	115	28	1.8	1.0
14.....	8.5	109	63	63	157	370	370	370	111	23	1.8	.9
15.....	9.5	160	60	63	136	320	400	345	106	22	1.0	.9
16.....	9.5	72	56	102	136	320	442	370	511	21	1.0	.8
17.....	9.5	63	50	70	132	320	490	370	460	18	1.0	.8
18.....	10	50	60	63	132	320	490	320	320	15	1.0	.8
19.....	10	38	44	322	132	320	600	320	291	15	.8	.9
20.....	10	38	38	295	119	315	765	296	237	13	.8	.9
21.....	10	36	38	200	115	281	640	271	229	12	.8	.9
22.....	10	36	38	160	115	271	640	271	192	11	.8	.9
23.....	10	34	44	132	115	320	600	237	149	10	.8	.9
24.....	10	29	50	132	115	430	560	229	115	10	.8	.9
25.....	10	29	120	109	113	320	560	210	115	9	.8	.9
26.....	10	29	248	98	111	320	504	192	100	7.5	.8	1.0
27.....	10	29	145	98	106	296	490	162	96	5	.8	1.0
28.....	10	29	145	98	106	325	525	136	88	5	.8	1.0
29.....	10	29	228	98	-----	350	490	136	79	5	.8	1.0
30.....	10	29	160	98	-----	370	490	134	76	5	.8	1.0
31.....	10	-----	132	120	-----	370	-----	119	-----	5	.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	10	7	9.08	558
November.....	160	13	37.3	2,220
December.....	248	29	73.5	4,520
January.....	322	63	117	7,190
February.....	2,800	106	338	18,800
March.....	1,240	111	332	20,400
April.....	765	320	496	29,500
May.....	525	119	337	20,700
June.....	511	76	165	9,820
July.....	61	5	23.7	1,460
August.....	5.5	.8	1.95	120
September.....	1.0	.8	.91	54.1
The year.....	2,800	.8	159	115,000

GOOSE LAKE BASIN

DREW CREEK NEAR LAKEVIEW, OREG.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ 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 18 miles southwest of Lakeview.

DRAINAGE AREA.—211 square miles.

RECORDS AVAILABLE.—January, 1909, to September, 1919; February to September, 1921; October, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 66 second-feet July 15–29 (gage height, 1.4 feet); minimum, 3 second-feet September 14–30 (gage height, 0.12 foot).

1909–1919, 1925–1929: Maximum discharge (estimated), 3,000 second-feet March 1 and 2, 1910; stream dry at times.

REMARKS.—Records poor, October 1 to June 10; fair, June 13 to September 30. Considerable regulation caused by operation of Drew Creek Reservoir, 1 mile above station. (See table for contents of Drew Creek Reservoir.) The North Drew Canal of the Goose Lake Valley Irrigation Co. diverts water past gage. (See table for run-off of North Drew Canal.) Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			11			17	10	10	60	62	62	17
2	19	10			13							
3			11	11		18	10		60	62	62	
4	19	10			13			10				16
5	19			11					60		57	17
6	9		11		13	18	11	10		62		
7	9	10		11							57	17
8	9		11		13	18	12		56	62	57	
9								17				17
10	9	10	11	11			12		34		57	
11					13	16		17		62		14
12	9	11	11	11							53	
13						16	13	23	16	62		
14	9	11		12	13				9		53	8
15			11	11			13	25		66		
16	9	11		14	13	13		31				3
17	9		10				15		7	66	53	
18		12		14	13	13		56				8
19	9		11						7	66	53	
20		12			13	10	18	56	7			
21	9			14		11		56				8
22			11		14		19		24	66	53	
23		13				10						3
24	9		11	13			14	56	24		32	
25		11			15	10				66		3
26	9		11	13							32	
27		11			17		13	60	34	66		
28	9		11	13		10					21	3
29		11					10		62	66		
30				13		10	10	60				3
31	9		11								17	
Month						Maximum	Minimum		Mean		Run-off in acre-feet	
October						19	9		10.8		664	
November						13	10		11.0		655	
December						11	10		10.9		670	
January						14	11		12.3		756	
February						17	13		13.6		755	
March						18	10		13.6		836	
April						19	10		12.9		768	
May						60	10		34.8		2,140	
June						62	7		32.9		1,960	
July						66	62		64.2		3,950	
August						62	17		47.9		2,950	
September						17	3		8.71		518	
The year						66	3		23.7		16,600	

NOTE.—Gage read about three times a week. Monthly mean discharge is mean of days when gage was read.

Monthly stage and contents of Drew Creek Reservoir near Lakeview, Oreg., 1928-29

Date	Gage height in feet	Contents in acre-feet	Gain or loss during month in acre-feet	Date	Gage height in feet	Contents in acre-feet	Gain or loss during month in acre-feet
Sept. 30.....	41.8	19,560	-----	May 2-8.....	45.6	29,080	-----
Oct. 31.....	41.3	18,460	-1,100	May 31.....	43.6	23,800	-4,720
Nov. 30.....	41.2	18,240	-220	June 30.....	39.7	15,260	-8,540
Dec. 31.....	41.2	18,240	0	July 31.....	34.4	7,308	-7,952
Jan. 31.....	41.2	18,240	0	Aug. 31.....	26.3	1,997	-5,331
Feb. 28.....	41.2	18,240	0	Sept. 30.....	20.5	861	-1,116
Mar. 31.....	43.3	23,050	+4,810				
Apr. 30.....	45.4	28,520	+5,470	The year.....	-----	-----	-18,690

NOTE.—Records for Drew Creek Reservoir from June to September are not consistent with outflow past gaging stations on Drew Creek and North Drew Canal; accuracy of reservoir record poor.

Monthly run-off, in acre-feet, of North Drew Canal near Lakeview, Oreg., 1928-29

Month	Run-off	Month	Run-off
April.....	54	August.....	4,930
May.....	2,640	September.....	4,732
June.....	5,080		
July.....	5,780	The year.....	19,200

NOTE.—No flow during months for which no run-off is given.

COTTONWOOD CREEK NEAR LAKEVIEW, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 29, T. 38 S., R. 19 E., 200 feet 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, 1929.

EXTREMES.—Maximum discharge during year, 48 second-feet May 22 and 24-27 (gage height, 1.8 feet); minimum, 1.3 second-feet August 12 to September 7. 1908-1919, 1925-1929; Maximum discharge, 500 to 1,000 second-feet during April 26 to May 1, 1927, when natural mean flow estimated at 170 second-feet was augmented by water escaping from reservoir through break in outlet conduit above control gate; no flow at times.

REMARKS.—Records good April 5 to June 24; poor for other periods. Considerable regulation caused by operation of Cottonwood Reservoir, 200 feet above gage. (See table for contents of Cottonwood Reservoir.) Records furnished by State engineer of Oregon.

*Daily and monthly discharge, in second-feet, of Cottonwood Creek near
Lakeview, Oreg., 1928-29*

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	2.6	2.8	5.0			1.8	1.8	15	37	3.9	9.4	1.3
2.....	2.6	2.8	5.0			1.8	1.8	19	37	3.9	7.4	1.3
3.....	2.8	3.2	3.7			12	1.8	19	32	3.9	7.4	1.3
4.....	3.7	3.7	3.7			34	1.8	19	27	3.7	2.4	1.3
5.....	4.1	3.7	2.6			1.4	8.0	19	23	3.7	2.0	1.3
6.....	4.1	4.1	2.6			1.8	8.0	19	19	2.2	1.8	1.3
7.....	4.1	3.9				1.8	8.0	19	12	2.2	1.8	1.3
8.....	3.7	3.7				1.8	8.0	19	11	1.9	1.6	1.5
9.....	3.7	3.7				1.8	8.0	19	10	2.0	1.5	2.0
10.....	3.7	3.7				1.8	4.6	19	10	2.0	1.5	2.0
11.....	3.5	3.7			1.4	1.8	4.6	19	9.4	2.0	1.4	2.0
12.....	3.7	3.7	1.6			1.8	4.6	18	9.4	2.0	1.3	2.0
13.....	3.7	3.7				1.8	6.5	18	5.0	2.0	1.3	2.0
14.....	3.9	3.7				1.8	6.5	18	4.1	2.0	1.3	2.0
15.....	3.5	3.0				1.8	8.0	25	3.2	3.2	1.3	2.0
16.....	2.8	3.7		1.4		1.7	12	34	3.2	3.2	1.3	1.8
17.....	2.8	3.7				1.6	17	34	4.6	5.6	1.3	1.8
18.....	2.8	4.1	1.5			1.6	14	42	4.6	8.0	1.3	1.8
19.....	2.8	4.1				1.6	14	42	5.0	9.8	1.3	1.8
20.....	2.8	4.1				1.6	14	42	5.0	10	1.3	1.8
21.....	2.8	4.1			1.4	1.6	14	42	5.0	10	1.3	1.8
22.....	2.8	4.1	1.5			1.7	14	48	5.0	10	1.3	1.8
23.....	2.8	4.1				1.8	14	42	5.0	10	1.3	1.8
24.....	2.8	5.0				1.8	14	48	5.0	10	1.3	1.8
25.....	2.8	5.0			1.4	1.8	14	48	3.2	10	1.3	1.8
26.....	2.8	5.0				1.8	15	48	2.8	10	1.3	1.8
27.....	2.8	5.0	5.6			1.8	15	48	3.9	10	1.3	1.8
28.....	2.8	4.1	2.8			1.8	15	45	3.9	10	1.3	1.8
29.....	2.8	4.1	3.7			1.8	15	45	3.9	8.7	1.3	2.0
30.....	2.8	5.0	3.2			1.8	15	45	3.9	9.4	1.3	2.0
31.....	2.8		2.8			1.8		45		9.4	1.3	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4.1	2.6	3.17	195
November.....	5.0	2.8	3.94	234
December.....	5.6		2.32	143
January.....			1.40	86
February.....			1.40	78
March.....	34	1.4	3.12	192
April.....	17	1.8	9.93	591
May.....	48	15	31.7	1,950
June.....	37	2.8	10.4	619
July.....	10	1.9	5.96	366
August.....	9.4	1.3	2.07	127
September.....	2.0	1.3	1.73	103
The year.....	48		6.47	4,680

Monthly stage and contents of Cottonwood Reservoir near Lakeview, Oreg., 1928-29

Date	Gage height in feet	Contents in acre- feet	Gain or loss during month in acre-feet	Date	Gage height in feet	Contents in acre- feet	Gain or loss during month in acre-feet
Sept. 30.....	670.0	0		May 13.....	692.9	1,851	
Oct. 31.....	670.0	0	0	May 31.....	686.8	901	-604
Nov. 30.....	670.0	0	0	June 30.....	683.9	598	-303
Dec. 31.....	670.0	0	0	July 31.....	676.0	89	-509
Jan. 31.....	670.0	0	0	Aug. 31.....	670.0	0	-89
Feb. 28.....	670.0	0	0	Sept. 30.....	670.0	0	0
Mar. 31.....	685.9	798	+798				
Apr. 30.....	691.0	1,505	+707	The year.....			0

SACRAMENTO RIVER BASIN

MAIN STREAM

SACRAMENTO RIVER AT ANTLER, CALIF.

LOCATION.—Staff gage in SE. ¼ sec. 13, T. 35 N., R. 5 W., at highway bridge at Antler. Gregory Creek enters 200 feet below gage and Pit River 14 miles below.

DRAINAGE AREA.—461 square miles.

RECORDS AVAILABLE.—November, 1910, to December, 1911; April, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,920 second-feet February 4 (gage height, 8.40 feet); minimum, 122 second-feet August 20 to September 23.

1910-1911, 1919-1929: Maximum discharge, 34,000 second-feet March 26, 1928 (gage height, 19.4 feet); minimum, 110 second-feet July 3 to September 23, except August 19, 1924.

REMARKS.—Records good. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	176	256	290	710	620	485	810	1,330	462	255	144	122
2	176	256	290	650	1,700	485	810	1,420	440	228	144	122
3	176	570	290	590	3,260	590	775	1,420	440	228	144	122
4	213	750	290	535	5,660	710	775	1,330	418	203	144	122
5	241	750	290	535	2,460	845	710	1,240	510	203	133	122
6	213	750	290	510	1,600	882	710	1,070	775	203	133	122
7	200	750	290	462	1,240	845	650	1,070	562	203	133	122
8	200	750	290	462	995	995	650	1,070	485	203	133	122
9	200	750	290	440	845	2,000	590	1,150	485	179	133	122
10	200	750	290	395	775	5,140	590	1,070	462	179	133	122
11	200	750	290	395	710	2,460	562	1,070	440	179	133	122
12	200	750	290	395	650	1,900	562	1,150	418	179	133	122
13	200	820	290	395	590	1,420	562	1,070	395	179	133	122
14	200	960	290	395	562	1,240	775	1,070	395	179	133	122
15	200	655	290	395	535	1,150	995	1,070	485	179	133	122
16	200	598	290	395	510	1,070	920	1,070	535	156	133	122
17	200	515	290	395	510	1,070	920	1,070	485	156	133	122
18	200	515	290	395	510	995	920	995	440	156	133	122
19	200	465	290	395	510	995	1,070	920	395	156	133	122
20	200	415	290	395	510	995	1,070	920	375	156	122	122
21	200	370	290	395	485	1,150	1,240	920	355	156	122	122
22	200	349	290	395	485	1,420	1,510	845	320	156	122	122
23	200	328	290	355	510	1,070	1,420	775	320	156	122	122
24	200	290	290	355	510	920	1,330	775	302	156	122	133
25	200	290	290	355	510	845	1,330	650	285	156	122	133
26	200	290	290	355	485	775	1,240	590	285	156	122	144
27	200	290	855	355	485	775	1,330	535	270	156	122	144
28	200	290	1,650	395	485	920	1,420	485	255	156	122	144
29	241	290	1,600	395	-----	882	1,420	485	255	156	122	144
30	256	290	1,240	355	-----	845	1,330	462	255	156	122	144
31	256	-----	995	462	-----	775	-----	462	-----	144	122	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	256	176	205	12,600
November	960	256	528	31,400
December	1,650	290	448	27,500
January	710	355	433	26,600
February	5,660	485	1,030	57,200
March	5,140	485	1,180	72,600
April	1,510	562	967	57,500
May	1,420	462	954	58,700
June	775	255	410	24,400
July	255	144	176	10,800
August	144	122	130	7,990
September	144	122	126	7,500
The year	5,660	122	545	395,000

SACRAMENTO RIVER AT KENNETT, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 2, T. 33 N., R. 5 W., at highway bridge at Kennett.

DRAINAGE AREA.—6,600 square miles (not including area of Goose Lake).

RECORDS AVAILABLE.—November, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 25,800 second-feet February 4 (gage height, 10.46 feet); minimum, 2,770 second-feet September 23.

1925-1929: Maximum discharge, 94,900 second-feet March 26, 1928 (gage height, 25.1 feet); minimum, 2,430 second-feet August 11, 1926.

REMARKS.—Records excellent. Discharge estimated January 6-11 and September 6. Storage and many diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,210	3,330	3,580	4,920	6,780	4,280	4,750	7,960	3,850	3,330	2,990	2,820
2	3,210	3,330	3,580	4,590	10,600	4,430	4,750	7,160	3,850	3,210	2,990	2,820
3	3,210	4,280	3,710	4,920	14,100	4,430	4,590	6,760	3,850	3,100	2,940	2,820
4	3,330	3,850	3,710	4,920	20,300	4,590	4,920	6,370	3,850	3,100	2,940	2,820
5	3,450	3,580	3,580	4,590	12,800	4,750	4,920	6,180	3,850	3,210	2,880	2,820
6	3,330	3,990	3,580	4,500	9,880	5,090	4,920	5,990	4,430	3,210	2,880	2,820
7	3,330	3,710	3,580	4,400	7,960	5,260	4,430	5,800	3,990	3,100	2,880	2,820
8	3,210	3,580	3,580	4,300	6,960	5,800	4,590	5,800	3,990	3,100	2,880	2,820
9	3,210	3,580	3,450	4,290	6,180	6,960	4,590	5,800	3,850	3,100	2,880	2,820
10	3,210	3,710	3,850	4,100	5,440	13,500	4,590	5,620	3,850	3,100	2,820	2,820
11	3,210	8,710	3,850	4,050	5,260	10,600	4,430	5,440	3,850	3,100	2,880	2,820
12	3,100	4,130	3,990	3,990	5,090	8,780	4,430	5,440	3,850	3,100	2,880	2,820
13	3,210	5,090	3,850	3,990	4,920	8,160	4,590	5,260	3,710	3,100	2,880	2,820
14	3,210	7,560	3,710	3,990	4,590	7,360	5,260	5,260	3,710	3,100	2,880	2,820
15	3,210	5,440	3,710	3,990	4,590	6,760	7,560	5,260	4,280	3,100	2,880	2,820
16	3,210	4,430	3,710	4,280	4,590	6,370	6,760	5,260	5,090	2,990	2,820	2,820
17	3,210	4,280	3,710	3,990	4,590	6,180	6,370	5,090	4,750	2,990	2,820	2,820
18	3,210	3,990	3,710	3,550	4,590	5,800	6,370	5,090	4,280	2,990	2,820	2,820
19	3,210	3,850	3,580	3,990	4,590	5,620	9,220	4,920	3,990	2,990	2,820	2,820
20	3,210	3,710	3,580	3,990	4,430	5,620	9,880	4,750	3,850	2,990	2,880	2,820
21	3,210	3,710	3,580	3,850	4,430	5,800	9,000	4,750	3,710	2,940	2,820	2,880
22	3,210	3,710	3,580	3,850	4,430	6,180	11,800	4,590	3,710	2,940	2,820	2,820
23	3,210	3,710	3,580	3,850	4,430	5,800	11,100	4,590	3,580	2,940	2,820	2,820
24	3,210	3,710	3,580	3,850	4,430	5,260	10,300	4,430	3,580	2,990	2,820	2,820
25	3,210	3,580	3,710	3,850	4,430	5,090	9,220	4,280	3,450	2,940	2,820	2,820
26	3,210	3,580	3,990	3,710	4,430	5,260	9,000	4,130	3,450	2,940	2,820	2,880
27	3,210	3,580	4,750	3,850	4,280	5,090	8,560	3,990	3,450	2,940	2,820	2,820
28	3,210	3,710	8,160	4,430	4,280	5,260	7,960	3,990	3,450	2,940	2,820	2,820
29	3,210	3,580	7,960	5,440	-----	5,440	7,760	3,990	3,450	2,990	2,820	2,880
30	3,330	3,580	7,560	6,180	-----	5,260	7,560	3,850	3,330	2,990	2,820	2,880
31	3,330	-----	5,620	5,990	-----	4,920	-----	3,850	-----	2,990	2,820	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,450	3,100	3,230	199,000
November	7,560	3,330	3,990	237,000
December	8,160	3,450	4,180	257,000
January	6,180	3,710	4,340	267,000
February	20,300	4,280	6,550	364,000
March	13,500	4,280	6,120	376,000
April	11,800	4,430	6,810	405,000
May	7,960	3,850	5,210	320,000
June	5,090	3,330	3,860	230,000
July	3,330	2,940	3,050	188,000
August	2,990	2,820	2,860	176,000
September	2,880	2,820	2,840	169,000
The year	20,300	2,820	4,400	3,190,000

SACRAMENTO RIVER NEAR RED BLUFF, CALIF.

LOCATION.—Water-stage recorder in lot 4, sec. 34, T. 28 N., R. 3 W., at lower end of Iron Canyon, 4 miles northeast of Red Bluff.

DRAINAGE AREA.—9,300 square miles (not including area of Goose Lake).

RECORDS AVAILABLE.—January, 1902, to September, 1929. Also, April, 1895, to June, 1902, at Jelleys Ferry, 12 miles above Red Bluff.

EXTREMES.—Maximum discharge during year, 75,800 second-feet February 4 (gage height, 16.08 feet); minimum, 2,980 second-feet August 12.

1902-1929: Maximum discharge, 278,000 second-feet February 3, 1909 (gage height, 35.2 feet); minimum, 2,640 second-feet July 22, 1926.

REMARKS.—Records excellent. Discharge estimated November 24 to December 3 and April 28 to May 5. Storage and many diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,660	4,010	4,490	7,160	8,600	5,210	5,880	10,000	4,590	3,830	3,150	3,150
2	3,580	4,010	4,490	6,630	24,500	5,210	5,650	8,900	4,490	3,740	3,150	3,150
3	3,660	4,690	4,490	6,630	30,700	5,320	5,650	8,400	4,390	2,580	3,150	3,150
4	3,830	5,430	4,490	6,890	57,800	5,430	5,880	7,800	4,390	3,490	3,150	3,150
5	4,010	4,590	4,490	6,370	26,700	5,650	6,370	7,400	4,390	3,490	3,150	3,060
6	4,010	5,210	4,490	5,880	17,800	5,880	6,120	7,160	4,690	3,490	3,060	3,060
7	3,920	5,210	4,390	5,650	13,300	6,120	5,880	6,890	5,000	3,400	3,060	3,060
8	3,830	4,590	4,390	5,430	10,900	6,370	5,650	6,630	4,790	3,400	3,060	3,060
9	3,830	4,490	4,390	5,320	9,540	6,890	5,880	6,630	4,590	3,400	3,060	3,060
10	3,740	4,390	7,570	5,210	8,300	14,400	5,650	6,630	4,590	3,400	3,060	3,060
11	3,660	4,690	7,980	5,000	7,710	17,400	5,650	6,370	4,590	3,400	3,060	3,060
12	3,660	6,600	7,090	5,000	7,160	12,200	5,430	6,120	4,390	3,400	3,060	3,060
13	3,660	8,600	8,000	5,000	6,890	10,500	5,650	6,120	4,300	3,320	3,060	3,060
14	3,660	15,900	6,120	5,000	6,630	9,540	5,880	6,120	4,200	3,320	3,060	3,060
15	3,740	10,200	5,430	5,000	6,370	8,600	7,430	6,120	4,390	3,320	3,060	3,060
16	3,740	6,630	5,100	5,100	6,120	8,300	8,000	5,880	10,500	3,240	3,060	3,150
17	3,740	5,650	4,900	5,210	6,120	7,710	7,430	5,880	7,160	3,240	3,060	3,150
18	3,740	5,320	4,790	4,900	6,120	7,430	7,160	5,880	5,880	3,320	3,060	3,150
19	3,920	5,100	4,690	5,100	5,880	7,160	7,710	5,650	5,210	3,240	3,060	3,150
20	3,830	4,790	4,590	5,650	5,880	6,890	12,900	5,650	4,900	3,240	3,060	3,150
21	3,830	4,690	4,490	5,430	5,650	6,890	10,900	5,650	4,690	3,240	3,060	3,150
22	3,740	4,690	4,490	5,000	5,650	7,160	17,400	5,430	4,490	3,240	3,060	3,150
23	3,740	4,690	4,490	5,000	5,650	7,430	16,100	5,320	4,390	3,240	3,060	3,150
24	3,830	4,690	4,490	4,900	5,650	6,890	13,300	5,210	4,300	3,240	3,060	3,150
25	3,830	4,690	5,430	4,790	5,650	6,630	11,900	5,000	4,200	3,240	3,060	3,150
26	3,830	4,690	6,370	4,790	5,430	6,370	10,900	4,790	4,200	3,240	3,150	3,150
27	3,830	4,590	6,630	4,790	5,430	6,370	10,200	4,690	4,010	3,240	3,150	3,150
28	3,830	4,590	13,300	5,880	5,320	6,120	9,700	4,590	3,830	3,240	3,150	3,240
29	3,830	4,590	10,900	7,710	-----	6,370	9,400	4,490	3,830	3,150	3,150	3,240
30	3,920	4,590	12,200	8,600	-----	6,370	9,200	4,390	3,830	3,150	3,150	3,400
31	4,100	-----	8,910	8,910	-----	6,120	-----	4,390	-----	3,150	3,150	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,100	3,580	3,800	224,000
November	15,900	4,010	5,550	330,000
December	13,300	4,390	6,070	373,000
January	8,910	4,790	5,740	353,000
February	57,800	5,320	11,300	628,000
March	17,400	5,210	7,580	466,000
April	17,400	5,430	8,330	496,000
May	10,000	4,390	6,130	377,000
June	10,500	3,830	4,770	284,000
July	3,830	3,150	3,340	205,000
August	3,150	3,060	3,090	190,000
September	3,400	3,060	3,130	186,000
The year	57,800	3,060	5,700	4,120,000

SACRAMENTO RIVER AT BUTTE CITY, CALIF.

LOCATION.—Water-stage recorder in sec. 32, T. 19 N., R. 1 W., at highway bridge at Butte City.

RECORDS AVAILABLE.—April, 1921, to November, 1929, low-water records only.

REMARKS.—Records good. Discharge estimated May 9-14. Storage and many diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	May	June	July	Aug.	Sept.	Oct.	Nov.
1.....	3,270	8,300	3,480	2,630	1,850	1,780	2,700	3,080
2.....	3,270	8,100	3,560	2,560	1,920	1,780	2,860	3,080
3.....	3,270	7,660	3,560	2,410	1,920	1,780	2,780	3,080
4.....	3,270	7,440	3,480	2,340	1,850	1,780	2,780	3,000
5.....	3,440	7,000	3,400	2,270	1,850	1,780	2,860	3,160
6.....	3,600	6,780	3,400	2,200	1,850	1,780	2,780	3,240
7.....	3,690	6,340	3,640	2,200	1,780	1,850	2,860	3,320
8.....	3,600	6,120	3,960	2,200	1,780	1,920	2,930	3,320
9.....	3,520	5,990	3,880	2,130	1,850	1,920	3,160	3,240
10.....	3,520	5,850	3,800	2,060	1,720	1,990	3,240	3,240
11.....	3,440	5,720	3,800	2,060	1,720	2,060	3,240	3,160
12.....	3,440	5,590	3,800	2,060	1,720	2,130	3,160	3,160
13.....	3,440	5,450	3,640	2,060	1,720	2,130	3,160	3,160
14.....	3,440	5,320	3,480	2,060	1,720	2,130	3,080	3,160
15.....	3,440	5,190	3,480	2,060	1,720	2,130	3,080	3,160
16.....	3,520	5,190	3,770	2,060	1,720	2,200	3,080	3,160
17.....	3,520	5,020	6,900	1,990	1,650	2,270	3,080	3,240
18.....	3,600	5,020	5,830	1,920	1,650	2,270	3,080	3,240
19.....	3,520	4,850	5,020	1,920	1,650	2,340	3,000	3,240
20.....	3,690	4,850	4,520	1,920	1,650	2,410	3,080	3,320
21.....	3,600	4,680	4,200	1,920	1,650	2,410	3,080	3,320
22.....	3,600	4,680	3,880	1,920	1,720	2,480	3,080	3,320
23.....	3,520	4,520	3,720	1,990	1,650	2,560	3,000	3,320
24.....	3,520	4,520	3,560	1,920	1,720	2,480	3,000	3,320
25.....	3,520	4,360	3,400	1,920	1,720	2,630	3,000	3,320
26.....	3,600	4,120	3,240	1,920	1,780	2,630	2,930	3,400
27.....	3,600	3,960	3,080	1,850	1,780	2,630	2,930	3,480
28.....	3,600	3,800	2,860	1,850	1,780	2,630	2,860	3,480
29.....	3,600	3,720	2,700	1,850	1,780	2,780	2,860	3,480
30.....	3,690	3,640	2,700	1,850	1,780	2,700	2,860	3,480
31.....	3,690	3,480		1,850	1,780		3,000	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1928				
October.....	3,690	3,270	3,520	216,000
1929				
May.....	8,300	3,480	5,400	322,000
June.....	6,900	2,700	3,700	226,000
July.....	2,630	1,850	2,060	127,000
August.....	1,920	1,650	1,780	108,000
September.....	2,780	1,780	2,210	132,000
October.....	3,240	2,700	2,990	184,000
November.....	3,480	3,000	3,260	194,000
The period.....				1,300,000

NOTE.—No record Nov. 1 to Apr. 30.

SACRAMENTO RIVER BASIN

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SACRAMENTO RIVER AT COLUSA, CALIF.

LOCATION.—Water-stage recorder in sec. 29, T. 16 N., R. 1 W., at highway bridge at Colusa.

RECORDS AVAILABLE.—April, 1921, to November, 1929, low-water records only.

REMARKS.—Records good. Discharge estimated October 22 and 23. Storage and many diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	3,310	7,880	3,300	2,470	1,640	1,700	2,790	3,120
2	3,400	7,640	3,390	2,310	1,700	1,700	2,870	3,120
3	3,400	7,640	3,390	2,240	1,700	1,700	2,870	3,210
4	3,400	7,280	3,300	2,240	1,700	1,640	2,870	3,210
5	3,490	6,920	3,210	2,240	1,700	1,700	2,870	3,120
6	3,580	6,580	3,210	2,100	1,700	1,700	2,870	3,210
7	3,670	6,250	3,210	2,100	1,700	1,700	2,790	3,300
8	3,670	5,920	3,660	2,030	1,640	1,820	2,870	3,300
9	3,580	5,700	3,660	1,960	1,640	1,890	3,120	3,300
10	3,580	5,600	3,570	1,890	1,640	1,890	3,210	3,300
11	3,490	5,500	3,570	1,820	1,580	1,960	3,210	3,300
12	3,490	5,400	3,570	1,820	1,580	2,080	3,210	3,300
13	3,400	5,300	3,480	1,820	1,580	2,100	3,210	3,300
14	3,400	5,300	3,300	1,820	1,580	2,100	3,210	3,300
15	3,490	5,100	3,210	1,820	1,550	2,170	3,120	3,300
16	3,490	5,100	3,300	1,760	1,580	2,240	3,120	3,300
17	3,490	4,900	5,790	1,820	1,580	2,310	3,030	3,300
18	3,490	4,800	6,710	1,700	1,580	2,310	3,030	3,300
19	3,490	4,800	5,640	1,700	1,580	2,390	3,030	3,300
20	3,580	4,600	4,800	1,700	1,580	2,390	3,030	3,300
21	3,490	4,500	4,300	1,700	1,550	2,470	3,030	3,390
22	3,490	4,400	3,930	1,700	1,580	2,550	3,030	3,390
23	3,490	4,440	3,750	1,700	1,550	2,550	2,950	3,390
24	3,490	4,300	3,480	1,700	1,550	2,550	2,950	3,390
25	3,490	4,200	3,210	1,700	1,610	2,550	3,030	3,480
26	3,580	4,110	3,030	1,640	1,640	2,630	3,030	3,480
27	3,580	3,930	2,950	1,640	1,700	2,630	3,030	3,480
28	3,670	3,750	2,790	1,640	1,700	2,710	3,030	3,480
29	3,670	3,570	2,550	1,640	1,700	2,790	3,030	3,480
30	3,670	3,480	2,550	1,640	1,700	2,790	2,950	3,480
31	3,760	3,390	-----	1,640	1,700	-----	3,030	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
October 1928	3,760		3,310		3,520		216,000	
May 1929	7,880		3,390		5,230		322,000	
June	6,710		2,550		3,660		218,000	
July	2,470		1,640		1,860		114,000	
August	1,700		1,550		1,630		100,000	
September	2,790		1,640		2,190		130,000	
October	3,210		2,790		3,010		185,000	
November	3,480		3,120		3,320		198,000	
The period	-----		-----		-----		1,300,000	

NOTE.—No record Nov. 1 to Apr. 30.

SACRAMENTO RIVER AT KNIGHTS LANDING, CALIF.

LOCATION.—Water-stage recorder in sec. 14, T. 11 N., R. 2 E., at Southern Pacific Railroad bridge at Knights Landing.

RECORDS AVAILABLE.—April, 1921, to November, 1929, low-water records only.

REMARKS.—Records good. Discharge estimated May 1-13 and November 1-5.

Storage, many diversions, and considerable return water affect the flow.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	May	June	July	Aug.	Sept.	Oct.	Nov.
1.	3,500	8,500	3,520	2,470	1,580	1,760	2,820	3,100
2.	3,500	8,200	3,520	2,330	1,580	1,760	2,820	3,000
3.	3,570	8,200	3,660	2,120	1,580	1,700	2,890	3,100
4.	3,500	8,000	3,660	2,120	1,640	1,640	2,960	3,100
5.	3,570	7,800	3,590	2,120	1,640	1,640	2,960	3,000
6.	3,640	7,500	3,590	2,000	1,520	1,760	2,960	3,100
7.	3,700	7,200	3,590	1,940	1,520	1,820	2,960	3,240
8.	3,760	6,900	3,660	1,820	1,520	1,940	2,960	3,310
9.	3,640	6,500	4,080	1,700	1,520	2,000	3,100	3,380
10.	3,700	6,200	4,220	1,640	1,520	2,000	3,170	3,450
11.	3,700	6,000	4,400	1,580	1,520	2,120	3,240	3,520
12.	3,640	5,700	4,400	1,580	1,460	2,260	3,240	3,380
13.	3,570	5,500	4,220	1,580	1,460	2,400	3,240	3,380
14.	3,570	5,340	4,080	1,580	1,430	2,470	3,240	3,450
15.	3,570	5,340	3,870	1,640	1,430	2,540	3,170	3,450
16.	3,500	5,340	3,830	1,580	1,400	2,610	3,170	3,520
17.	3,440	5,420	5,060	1,520	1,400	2,680	3,170	3,500
18.	3,570	5,340	6,240	1,520	1,400	2,750	3,170	3,520
19.	3,640	5,340	6,180	1,430	1,430	2,750	3,100	3,450
20.	3,640	5,200	5,520	1,370	1,400	2,820	3,100	3,520
21.	3,700	4,970	4,890	1,370	1,370	2,960	3,100	3,660
22.	3,700	5,040	4,350	1,430	1,400	2,960	3,100	3,660
23.	3,640	5,040	4,080	1,460	1,400	2,960	3,170	3,660
24.	3,640	4,970	3,870	1,460	1,400	2,960	3,170	3,660
25.	3,640	4,900	3,660	1,460	1,460	2,890	3,170	3,660
26.	3,700	4,600	3,380	1,460	1,460	2,890	3,170	3,660
27.	3,700	4,440	3,170	1,460	1,460	2,890	3,170	3,730
28.	3,760	4,080	3,030	1,460	1,520	2,890	3,380	3,730
29.	3,760	3,870	2,750	1,520	1,640	2,890	3,240	3,800
30.	3,700	3,660	2,610	1,520	1,700	2,890	3,100	3,800
31.	3,760	3,590	-----	1,580	1,700	-----	3,170	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
October.....	3,760		3,440		3,630		223,000	
May.....	8,500		3,590		5,760		354,000	
June.....	6,240		2,610		4,020		239,000	
July.....	2,470		1,370		1,670		103,000	
August.....	1,700		1,370		1,500		92,200	
September.....	2,960		1,640		2,420		144,000	
October.....	3,380		2,820		3,110		191,000	
November.....	3,800		3,000		3,450		205,000	
The period.....	-----		-----		-----		1,330,000	

NOTE.—No record Nov. 1 to Apr. 30.

SACRAMENTO RIVER AT VERONA, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 23, T. 11 N., R. 3 E., three-fourths mile southeast of Verona and 1 mile below mouth of Feather River.

RECORDS AVAILABLE.—May, 1926, to September, 1929, low-water records only.

REMARKS.—Records good. Discharge estimated May 29–31. Storage, many diversions, and considerable return water affect the flow.

Daily and monthly discharge, in second-feet, 1928–29.

Day	Oct.	May	June	July	Aug.	Sept.	Day	Oct.	May	June	July	Aug.	Sept.
1	5,230	14,700	6,060	3,890	2,970	3,300	16	5,230	12,600	6,850	2,420	2,750	4,630
2	5,230	14,700	5,930	3,640	2,870	3,300	17	5,230	12,800	11,200	2,420	2,860	4,630
3	5,400	14,900	6,060	3,410	2,970	3,300	18	5,540	13,000	12,600	2,420	2,860	4,890
4	5,400	15,500	5,930	3,410	2,970	3,300	19	5,680	12,800	12,100	2,420	2,860	4,890
5	5,400	15,700	5,930	3,410	2,970	3,300	20	5,680	12,200	10,400	2,320	2,750	5,020
6	5,540	15,500	5,930	3,190	2,750	3,520	21	5,820	11,900	8,700	2,320	2,860	5,150
7	5,680	14,700	5,930	2,970	2,860	3,640	22	5,820	11,700	7,600	2,530	2,860	5,150
8	5,680	14,100	5,930	2,860	2,860	3,880	23	5,680	11,500	7,080	2,640	2,860	5,280
9	5,540	13,500	6,590	2,750	2,860	4,000	24	5,820	11,200	6,450	2,640	2,860	5,150
10	5,400	13,300	6,870	2,640	2,860	3,880	25	5,820	10,600	5,800	2,750	2,860	5,150
11	5,540	13,000	6,870	2,640	2,860	4,000	26	5,820	9,550	5,410	2,750	2,860	5,150
12	5,400	12,800	6,870	2,530	2,970	4,120	27	5,960	8,870	5,150	2,750	2,750	5,150
13	5,400	12,400	6,730	2,530	2,860	4,270	28	6,100	7,900	4,690	2,860	2,860	5,150
14	5,400	12,400	6,320	2,530	2,860	4,500	29	6,100	7,440	4,500	2,970	3,060	5,150
15	5,540	12,400	6,190	2,530	2,860	4,630	30	5,820	6,980	4,120	2,750	3,190	5,150
							31	5,960	6,520		2,860	3,190	
Month						Maximum	Minimum	Mean	Run-off in acre-feet				
October						6,100	5,230	5,610	345,000				
May						15,700	6,520	12,200	780,000				
June						12,600	4,120	6,900	411,000				
July						3,880	2,320	2,860	172,000				
August						3,190	2,750	2,900	178,000				
September						5,230	3,300	4,420	263,000				

NOTE.—No record Nov. 1 to Apr. 30.

25585—31—13

PIT RIVER BASIN

PIT RIVER AT FALL RIVER MILLS, CALIF.

LOCATION.—Water-stage recorder in sec. 6, T. 36 N., R. 5 E., three-fourths mile below mouth of Fall River and town of Fall River Mills.

RECORDS AVAILABLE.—March, 1921, to September, 1929; not complete for 1923.

EXTREMES.—Maximum discharge during year, 930 second-feet April 25 (gage height, 2.40 feet); minimum, 37 second-feet August 15.

1921-1929: Maximum discharge, 10,800 second-feet March 28, 1928 (gage height, 7.89 feet); minimum, 12 second-feet August 5, 1926.

REMARKS.—Records good. Discharge estimated December 8-15. Many irrigation diversions above station, also return water from McArthur and Knoch diversions. Gage-height record and results of discharge measurements furnished by Mount Shasta Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	77	78	108	197	200	308	188	560	82	78	77	81
2.....	77	77	107	200	243	308	170	452	103	84	64	74
3.....	82	84	108	246	826	335	161	304	96	82	70	71
4.....	80	84	110	229	625	412	176	232	96	75	74	82
5.....	80	82	110	232	810	518	170	270	95	67	86	78
6.....	80	102	110	215	710	592	185	250	90	67	77	77
7.....	78	107	114	182	573	606	185	209	108	84	75	98
8.....	80	96	126	164	458	560	194	191	110	78	81	82
9.....	84	96	128	142	830	548	236	170	105	75	78	77
10.....	80	96	131	128	262	625	243	135	103	71	71	90
11.....	77	102	120	126	229	834	254	124	102	71	67	87
12.....	84	112	113	124	206	914	250	138	107	72	82	81
13.....	87	116	111	122	300	826	226	128	102	72	77	68
14.....	84	130	111	118	197	718	232	108	103	74	63	70
15.....	84	135	109	120	188	660	250	103	105	74	44	88
16.....	77	128	96	122	209	580	270	98	108	75	54	82
17.....	67	120	86	124	229	506	266	92	112	72	100	78
18.....	68	114	87	140	246	440	274	98	112	53	82	82
19.....	60	114	87	152	258	407	266	92	110	64	78	86
20.....	59	114	86	138	299	375	232	90	103	78	74	81
21.....	62	114	86	126	304	330	274	59	100	77	77	80
22.....	68	114	93	135	317	317	407	58	98	77	70	80
23.....	68	114	93	132	330	380	755	72	93	77	74	80
24.....	67	114	92	128	845	340	898	74	84	80	71	80
25.....	68	114	93	128	340	326	930	72	87	80	65	80
26.....	60	110	98	126	326	335	922	78	96	78	78	82
27.....	60	110	112	124	290	240	930	87	72	63	84	82
28.....	62	110	350	124	312	317	882	86	68	70	77	81
29.....	68	110	304	138	-----	282	768	82	86	72	78	75
30.....	70	110	236	200	-----	236	639	77	81	84	75	77
31.....	82	-----	209	197	-----	222	-----	86	-----	87	88	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	87	59	73.1	4,490
November.....	135	77	107	5,270
December.....	350	86	137	7,330
January.....	246	118	154	4,470
February.....	810	188	384	12,300
March.....	914	222	468	25,000
April.....	930	161	384	25,400
May.....	560	66	151	5,280
June.....	112	68	97.2	5,780
July.....	87	63	74.5	4,580
August.....	100	44	74.5	4,580
September.....	90	63	79.6	4,740
The year.....	930	44	177	128,000

PIT RIVER BELOW PIT NO. 4 DAM, CALIF.

LOCATION.—Water-stage recorder in 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.

RECORDS AVAILABLE.—July, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,700 second-feet April 23 (gage height, 8.55 feet); minimum, 1,600 second-feet October 11, caused by regulation.

1927-1929: Maximum discharge, 14,800 second-feet March 29, 1928 (gage height, 14.20 feet); minimum, 715 second-feet March 21, 1928, caused by regulation.

REMARKS.—Records excellent except those for estimated periods, which are fair. Storage and many diversions above station. Gage-height record and results of discharge measurements furnished by Mount Shasta Power Corporation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,930	1,990	2,050	2,110	2,290	2,230	2,170	*3,000	1,870	1,870	1,820	1,700
2	1,930	1,930	2,050	2,170	2,410	2,290	2,050	*2,600	1,870	1,820	1,830	1,700
3	1,930	2,050	2,050	2,230	2,660	2,290	1,990	*2,410	1,870	1,760	1,820	1,700
4	1,930	2,050	2,650	2,390	2,930	2,350	2,050	*2,170	1,870	*1,830	*1,790	1,700
5	1,930	2,050	2,050	2,230	3,300	2,350	2,230	*2,170	1,870	*1,820	1,760	1,700
6	1,930	2,050	2,050	2,170	3,000	2,410	2,110	*2,170	1,870	1,830	1,760	1,700
7	1,930	2,050	2,650	2,170	2,800	2,600	1,990	*2,170	1,870	1,820	1,760	1,700
8	1,930	2,050	2,650	2,110	2,600	2,660	2,110	*2,170	1,870	1,820	1,760	1,700
9	1,930	2,050	2,050	2,050	2,290	2,600	*2,170	2,110	1,870	1,820	1,760	1,700
10	1,930	2,110	2,110	2,050	2,230	2,600	*2,170	2,110	1,930	1,830	1,760	1,700
11	1,870	2,110	2,230	2,110	2,230	2,600	*2,230	2,050	1,870	1,820	*1,760	1,700
12	1,870	2,050	2,110	2,110	2,230	2,880	*2,230	1,990	1,930	1,820	1,760	1,700
13	1,870	2,050	2,110	2,110	*2,170	3,000	2,230	1,990	1,870	1,760	1,760	1,700
14	1,870	2,110	2,050	2,110	*2,110	2,800	2,170	1,990	1,930	1,760	1,760	1,820
15	1,930	2,110	1,990	2,290	*2,230	2,660	2,170	1,990	1,870	1,760	1,760	1,870
16	1,930	2,170	1,990	2,290	2,170	2,660	2,230	1,990	1,990	1,760	1,760	1,870
17	1,930	2,110	1,990	2,110	*2,170	2,540	2,350	1,990	2,230	1,760	1,760	1,870
18	1,930	2,170	1,990	2,110	*2,290	2,290	2,350	1,930	1,990	1,760	1,760	1,870
19	1,990	2,050	1,990	2,110	*2,230	2,290	2,350	1,930	1,990	1,760	1,760	1,870
20	1,990	2,050	1,990	2,110	*2,170	2,350	2,230	1,930	1,990	1,760	1,760	1,870
21	*1,990	1,990	1,990	2,110	*2,230	2,350	1,990	1,930	1,930	1,760	1,760	1,820
22	*1,990	2,050	1,990	2,110	*2,230	2,290	2,230	1,930	1,930	1,760	1,820	1,700
23	1,990	2,050	1,990	2,110	2,290	2,170	3,460	1,930	1,870	1,760	1,820	1,700
24	1,990	2,050	1,990	2,110	*2,290	2,170	3,150	1,930	1,930	1,760	1,820	1,700
25	1,990	1,990	1,990	2,110	*2,410	2,230	3,150	1,870	1,930	1,760	1,760	1,700
26	1,990	1,990	2,050	2,110	2,350	2,290	3,300	1,930	1,930	1,760	1,760	1,700
27	1,990	2,050	2,050	2,050	2,230	2,350	3,150	1,930	1,990	1,760	1,820	1,700
28	1,930	2,050	2,410	2,110	2,170	2,410	2,680	1,930	1,990	1,760	1,760	1,700
29	1,930	2,050	2,800	2,170	-----	2,410	2,680	1,930	1,930	1,820	1,760	1,700
30	1,980	2,050	2,470	2,350	-----	2,290	*3,140	1,930	1,930	1,690	1,760	1,700
31	1,930	-----	2,110	2,200	-----	2,170	-----	1,930	-----	1,820	1,760	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,990	1,870	1,940	119,000
November	2,170	1,930	2,060	126,000
December	2,800	1,990	2,090	130,000
January	2,350	2,050	2,150	130,000
February	3,300	2,110	2,390	132,000
March	3,000	2,170	2,440	140,000
April	3,460	1,930	2,420	144,000
May	3,090	1,870	2,070	137,000
June	2,230	1,870	1,990	114,000
July	1,870	1,760	1,760	110,000
August	1,820	1,760	1,770	106,000
September	1,870	1,760	1,790	107,000
The year	3,460	1,760	2,070	1,500,000

* Estimated.

PIT RIVER AT BIG BEND, CALIF.

LOCATION.—Water-stage recorder in sec. 36, T. 37 N., R. 1 W., one-fourth mile above Big Bend. Nelson Creek enters half a mile above and Kosk Creek 1 mile below station.

DRAINAGE AREA.—4,920 square miles (not including area of Goose Lake).

RECORDS AVAILABLE.—September, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,010 second-feet April 23 (gage height, 9.27 feet); minimum, 1,630 second-feet October 11, caused by regulation.

1910-1929: Maximum discharge, 14,400 second-feet March 29, 1925 (gage height, 13.40 feet); minimum, 664 second-feet July 9 and 10, 1925, caused by storage at Lake Britton.

REMARKS.—Records excellent. Storage, regulation, and many diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,940	2,010	2,080	2,150	2,300	2,300	2,220	3,350	2,010	1,940	1,940	1,750
2	1,940	2,010	2,080	2,150	2,440	2,300	2,080	2,540	1,940	1,880	1,940	1,750
3	1,940	2,080	2,080	2,300	2,840	2,370	2,080	2,600	1,940	1,810	1,880	1,750
4	2,010	2,080	2,150	2,300	3,170	2,440	2,150	2,870	1,940	1,880	1,880	1,750
5	2,010	2,150	2,080	2,220	3,350	2,370	2,370	2,370	2,010	1,880	1,880	1,750
6	1,940	2,150	2,080	2,150	3,170	2,440	2,300	2,370	2,010	1,880	1,880	1,750
7	1,940	2,080	2,080	2,150	2,920	2,680	2,010	2,370	2,010	1,880	1,810	1,750
8	1,940	2,150	2,080	2,080	2,750	2,750	2,150	2,370	2,010	1,940	1,810	1,810
9	1,940	2,080	2,080	2,010	2,440	2,750	2,220	2,300	1,940	1,880	1,810	1,810
10	1,940	2,150	2,150	2,010	2,300	2,840	2,220	2,220	2,010	1,880	1,810	1,810
11	1,880	2,080	2,220	2,010	2,300	2,760	2,220	2,150	2,010	1,880	1,810	1,810
12	1,880	2,080	2,220	2,080	2,300	3,000	2,370	2,150	2,010	1,880	1,810	1,810
13	1,880	2,080	2,150	2,080	2,220	3,260	2,370	2,220	2,010	1,880	1,810	1,810
14	1,880	2,150	2,080	2,080	2,150	2,920	2,370	2,220	2,010	1,810	1,810	1,880
15	1,940	2,150	2,080	2,220	2,300	2,840	2,440	2,150	2,080	1,880	1,810	1,880
16	1,940	2,150	2,010	2,300	2,220	2,760	2,440	2,150	2,220	1,880	1,750	1,880
17	1,940	2,150	2,010	2,010	2,220	2,680	2,520	2,150	2,370	1,880	1,750	1,880
18	1,940	2,150	2,010	2,010	2,370	2,440	2,600	2,080	2,080	1,880	1,750	1,880
19	2,010	2,080	1,940	2,010	2,300	2,370	2,750	2,080	2,010	1,880	1,750	1,880
20	2,010	2,080	1,940	2,010	2,220	2,440	2,600	2,080	2,010	1,880	1,750	1,880
21	2,010	2,010	1,940	2,010	2,300	2,520	2,300	2,080	2,010	1,880	1,750	1,810
22	1,940	2,080	2,010	2,010	2,300	2,370	2,440	2,080	2,010	1,880	1,750	1,750
23	2,010	2,080	1,940	2,010	2,370	2,220	3,820	2,080	2,010	1,880	1,750	1,750
24	1,940	2,080	2,010	2,010	2,370	2,150	3,620	2,010	2,010	1,880	1,750	1,750
25	1,940	2,010	2,010	2,010	2,440	2,300	3,440	2,010	2,010	1,880	1,750	1,750
26	1,940	2,010	2,010	2,010	2,370	2,370	3,720	2,010	2,010	1,880	1,740	1,750
27	1,940	2,080	2,150	2,010	2,220	2,370	3,530	2,010	2,010	1,880	1,750	1,750
28	1,940	2,080	2,440	2,010	2,220	2,440	3,000	2,010	2,080	1,880	1,750	1,750
29	1,940	2,080	2,920	2,220	-----	2,520	3,000	2,010	2,010	1,880	1,750	1,750
30	1,940	2,080	2,680	2,370	-----	2,370	3,350	2,010	2,010	1,880	1,750	1,750
31	2,010	-----	2,150	2,370	-----	2,150	-----	2,010	-----	1,880	1,750	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,010	1,880	1,950	120,000
November	2,150	2,010	2,090	124,000
December	2,920	1,940	2,120	134,000
January	2,370	2,010	2,110	180,000
February	3,350	2,150	2,460	132,000
March	3,260	2,150	2,580	153,000
April	3,820	2,010	2,620	155,000
May	3,350	2,010	2,220	186,000
June	2,370	1,940	2,030	121,000
July	1,940	1,810	1,880	114,000
August	1,940	1,750	1,800	113,000
September	1,880	1,750	1,790	107,000
The year	3,820	1,750	2,130	1,540,000

PIT RIVER NEAR YDALPOM, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 32, T. 34 N., R. 3 W., at Silverthorne Ferry, $1\frac{1}{2}$ miles southwest of Ydaltom. Squaw Creek enters half a mile above and McCloud River 4 miles below station.

DRAINAGE AREA.—5,260 square miles (not including area of Goose Lake).

RECORDS AVAILABLE.—November, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,100 second-feet February 14 (gage height, 8.54 feet); minimum, 1,800 second-feet August 17-23.

1910-1929: Maximum discharge, about 47,000 second-feet December 31, 1913 (gage height, about 20.7 feet, present datum); minimum, 1,000 second-feet July 10, 1925, caused by storage at Lake Britton.

REMARKS.—Records excellent. Discharge estimated April 22-29. Storage, regulation, and diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,020	2,180	2,240	2,680	3,820	2,550	2,620	4,700	2,300	2,120	1,900	1,850
2	2,020	2,120	2,180	2,620	5,690	2,620	2,550	4,060	2,300	2,070	1,900	1,850
3	2,020	2,550	2,240	2,820	6,630	2,680	2,420	3,820	2,240	2,020	1,900	1,850
4	2,120	2,360	2,240	2,820	7,300	2,750	2,680	3,420	2,240	2,020	1,900	1,850
5	2,120	2,300	2,240	2,750	5,690	2,750	2,750	3,340	2,300	2,070	1,900	1,850
6	2,070	2,550	2,240	2,620	5,020	2,820	2,820	3,280	2,360	2,070	1,900	1,850
7	2,070	2,300	2,240	2,550	4,220	3,040	2,420	3,110	2,300	2,070	1,900	1,850
8	2,070	2,300	2,180	2,480	3,820	3,260	2,550	3,110	2,300	2,070	1,900	1,850
9	2,070	2,300	2,180	2,420	3,340	3,500	2,620	3,040	2,300	2,070	1,900	1,850
10	2,020	2,360	2,360	2,300	3,040	5,020	2,620	2,960	2,300	2,070	1,900	1,850
11	2,020	2,300	2,420	2,360	2,960	4,460	2,550	2,820	2,300	2,070	1,850	1,850
12	1,960	2,620	2,420	2,360	2,890	4,220	2,680	2,750	2,240	2,070	1,850	1,850
13	1,960	2,680	2,420	2,360	2,820	4,300	2,680	2,750	2,240	2,070	1,850	1,850
14	2,020	3,580	2,300	2,360	2,620	3,980	3,040	2,750	2,240	2,020	1,850	1,900
15	2,020	2,820	2,260	2,420	2,750	3,660	4,220	2,680	2,620	2,020	1,850	1,850
16	2,070	2,550	2,240	2,680	2,680	3,580	3,740	2,620	3,260	2,020	1,850	1,850
17	2,020	2,420	2,240	2,360	2,620	3,420	3,580	2,620	3,040	2,020	1,800	1,900
18	2,020	2,420	2,180	2,360	2,760	3,280	3,580	2,550	2,550	2,620	1,800	1,900
19	2,070	2,360	2,180	2,360	2,680	2,960	5,960	2,480	2,420	2,020	1,800	1,900
20	2,070	2,240	2,180	2,360	2,550	3,040	6,030	2,480	2,360	1,960	1,800	1,850
21	2,070	2,240	2,180	2,300	2,680	3,280	4,860	2,480	2,300	1,960	1,800	1,850
22	2,070	2,240	2,180	2,300	2,620	3,110	6,600	2,420	2,300	1,960	1,800	1,850
23	2,070	2,240	2,180	2,300	2,680	2,890	6,400	2,480	2,240	1,960	1,800	1,850
24	2,070	2,240	2,180	2,300	2,680	2,680	6,000	2,420	2,240	1,960	1,850	1,850
25	2,070	2,180	2,240	2,300	2,750	2,750	5,200	2,360	2,240	1,900	1,850	1,850
26	2,070	2,180	2,360	2,300	2,750	2,820	5,300	2,300	2,180	1,960	1,850	1,850
27	2,070	2,180	3,010	2,420	2,620	2,820	4,900	2,300	2,180	1,900	1,850	1,850
28	2,070	2,240	3,900	2,890	2,550	2,890	4,400	2,300	2,240	1,900	1,850	1,900
29	2,070	2,240	4,060	3,740	-----	2,960	4,300	2,300	2,240	1,900	1,850	1,900
30	2,120	2,240	3,960	4,220	-----	2,890	4,380	2,300	2,120	1,900	1,850	1,900
31	2,120	-----	2,890	3,900	-----	2,620	-----	2,360	-----	1,960	1,850	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,120	1,960	2,050	126,000
November	3,580	2,120	2,380	142,000
December	4,060	2,180	2,460	161,000
January	4,220	2,300	2,610	160,000
February	7,300	2,550	3,450	192,000
March	5,020	2,550	3,210	197,000
April	6,600	2,420	3,880	231,000
May	4,700	2,300	2,820	173,000
June	3,260	2,120	2,350	140,000
July	2,120	1,900	2,000	123,000
August	1,960	1,800	1,860	114,000
September	1,900	1,850	1,870	111,000
The year	7,300	1,800	2,570	1,860,000

PINE CREEK NEAR ALTURAS, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 35, T. 42 N., R. 13 E., at hydroelectric plant, 6 miles above mouth of creek and 9 miles southeast of Alturas. Prior to April 22, 1929, staff gage at same site.

DRAINAGE AREA.—31 square miles.

RECORDS AVAILABLE.—May, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year, 83 second-feet April 22 (gage height, 2.17 feet); minimum, 2.9 second feet September 15.

1918-1929: Maximum discharge, 147 second-feet March 29, 1919, and December 30, 1920 (gage height, 3.20 feet); minimum, 2.3 second-feet January 5 and 26, 1919.

REMARKS.—Records good. Diversion for and regulation by power plant above station. Staff-gage record furnished by Peoples California Hydroelectric Corporation; water-stage recorder record and results of discharge measurements furnished by Modoc County in cooperation with State Division of Water Resources.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	14	10	8.5	14	11	12	16	32	22	8.5	5
2	14	13	9.5	11	14	10	11	16	31	27	8	7.5
3	14	13	12	10	8	7.5	12	18	33	27	8.5	11
4	15	11	12	11	8.5	11	11	20	29	22	8	8.5
5	15	14	10	10	11	11	11	16	26	22	11	7.5
6	15	16	10	7.5	10	11	10	20	25	21	12	6.5
7	8.5	13	10	12	10	11	10	18	25	18	10	9.5
8	12	14	11	12	10	11	11	19	27	22	16	5.5
9	12	13	9.5	12	9.5	11	13	20	24	20	16	8.5
10	13	12	11	10	7.5	11	12	20	25	16	14	8.5
11	14	12	12	10	11	11	13	20	23	16	11	7.5
12	14	11	11	11	11	11	14	22	22	16	12	5.5
13	12	12	11	8	9	12	14	27	20	16	12	6
14	9.5	9	11	12	9.5	12	12	25	19	13	12	10
15	11	13	11	10	9.5	10	14	26	24	14	11	4.1
16	12	12	9.5	12	10	10	13	28	30	16	8	5.5
17	12	10	9.5	12	6	10	14	32	30	16	7.5	6
18	12	10	11	11	11	11	14	36	30	14	5.5	6
19	11	9.5	9	9	11	9.5	14	40	29	16	7	6
20	12	10	10	10	10	9.5	14	46	31	13	7	6
21	12	10	10	8	10	12	11	49	31	10	9	6
22	12	11	9	9.5	9	12	30	49	34	14	10	5
23	13	10	8.5	11	10	12	86	53	31	14	9	7
24	14	10	9	12	7.5	10	24	54	32	14	8	6.5
25	14	9	8	10	11	12	16	54	32	11	6.5	6.5
26	13	12	12	10	10	11	14	49	31	9.5	8	8.5
27	12	12	13	8.5	11	12	13	47	32	9.5	8.5	7.5
28	11	12	14	12	10	12	13	42	30	9	12	6.5
29	12	11	11	12	10	12	11	24	38	31	12	8.5
30	12	12	9	13	13	11	20	35	22	10	7	6
31	13	12	12	14	14	9	35	35	22	9	6.5	6.5
Month							Maximum	Minimum	Mean	Run-off in acre-feet		
October							15	8.5	12.6	775		
November							16	9	11.7	696		
December							14	8	10.5	646		
January							14	7.5	10.6	652		
February							14	6	9.96	553		
March							12	7.5	10.8	644		
April							36	10	15.0	893		
May							54	16	31.9	1,960		
June							34	19	28.0	1,670		
July							27	9	15.8	972		
August							16	5.5	9.61	591		
September							11	4.1	6.79	404		
The year							54	4.1	14.5	10,500		

HORSE CREEK AT LITTLE VALLEY, NEAR PITTVILLE, CALIF.

LOCATION.—Water-stage recorder in sec. 15, T. 35 N., R. 7 E., at lower end of Little Valley, 16 miles southeast of Pittville.

RECORDS AVAILABLE.—December, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 37 second-feet April 22 (gauge height, 1.56 feet); minimum, 4.1 second-feet August 16-28.

REMARKS.—Records fair. Diversions above station. *Gage-height record furnished through cooperation of Red River Lumber Co., Lassen County, and State of California.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.		13	* 13	8	* 10	14	8.5	4.5	6.5	* 4.3
2.		12	* 17	8	* 9	14	8	4.5	6.5	* 4.3
3.		11	* 21	7.5	7.5	15	8.5	4.5	6.5	4.3
4.		11	26	7.5	8	16	9	4.5	6.5	4.3
5.		10	25	8	8	* 14	9.5	4.5	6	4.5
6.		8	16	8.5	8.5	12	9.5	4.5	4.5	4.5
7.		8	8.5	8.5	8.5	12	11	7	4.5	4.5
8.		7.5	6.5	8.5	9	11	12	7.5	4.5	4.5
9.		7.5	6	9.5	10	12	12	7.5	4.5	4.5
10.		7.5	6.5	22	9.5	10	11	7.5	4.5	4.5
11.		7.5	7	34	9	8	9.5	7.5	4.5	4.5
12.	7.5	8	8	30	9	7	8	7.5	* 4.5	4.5
13.	7.5	9	8.5	22	9.5	7	7	7.5	4.5	4.5
14.	7.5	9	9	17	9.5	7	6.5	7.5	4.3	4.5
15.	7.5	9	10	14	9.5	7	6.5	* 7	4.3	4.5
16.	7.5	9	9.5	13	9	5.5	7	* 6.5	4.1	4.5
17.	7.5	9	10	12	9	6.5	7.5	* 6	4.1	4.5
18.	7.5	9	10	12	9	7	8	* 5.5	4.1	4.5
19.	7.5	7	8.5	12	9	7	7.5	5.5	4.1	4.5
20.	7.5	6	8	11	9.5	8	6.5	5.5	* 4.1	4.5
21.	7.5	4.8	8	12	14	8	6.5	5.5	* 4.1	4.5
22.	7.5	6	8	19	18	8.5	5.5	6	* 4.1	4.5
23.	7.5	6	8	22	29	9	6.5	6.5	* 4.1	4.5
24.	7.5	7	8	20	26	8.5	6.5	6.5	* 4.1	4.5
25.	8	7.5	8	16	20	9	6	6.5	4.1	4.5
26.	8	7.5	8	12	16	9	5.5	6.5	* 4.1	4.5
27.	15	* 7.5	8	11	12	9	4.8	6.5	* 4.1	4.8
28.	25	* 7.5	8	11	12	9.5	4.5	6.5	* 4.1	4.5
29.	20	* 8		11	11	9	4.5	6.5	* 4.2	5
30.	16	* 11		12	12	9	4.5	6.5	* 4.2	6.5
31.	14	* 12		* 11		8.5		6.5	* 4.2	
Month					Maximum	Minimum	Mean	Run-off in acre-feet		
December 12-31					25	7.5	10.2	405		
January					13	4.8	8.48	521		
February					26	6	10.6	589		
March					34	7.5	13.9	855		
April					29	7.5	11.7	696		
May					16	5.5	9.58	589		
June					12	4.5	7.59	452		
July					7.5	4.5	6.21	382		
August					6.5	4.1	4.60	283		
September					6.5	4.3	4.57	272		
The period								5,040		

* Estimated.

SURFACE WATER SUPPLY, 1929. PART XI

McARTHUR DRAINAGE CANAL AT McARTHUR, CALIF.

LOCATION.—Staff gage in sec. 4, T. 37 N., R. 5 E., $1\frac{1}{4}$ miles north of McArthur.
RECORDS AVAILABLE.—December, 1923, to September, 1929.

REMARKS.—Records fair. Daily discharge is result of daily current meter measurement and may not be mean for day. The canal diverts from the headwaters of Fall River, and its lower end spills into Pit River. It is used for power development and irrigation and drainage of lands on the north side of Pit River, and for irrigation on the south side. Records furnished by Mount Shasta Power Corporation.

Daily discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	52	24	22				59	64	48	46		
2.	54			26	41	28					50	
3.	53	24	22	31			61	58	54	53	49	54
4.			23	29		27		56				
5.	53	24		26	63		58	56	55	50	49	55
6.												
7.	54	27	22				58	55		52		
8.		21	24	25					58		49	57
9.	59	26	23				58	55	60	50		
10.	54	25		26	31	28	60				49	53
11.	60	23					58	49	61	52	49	
12.			25	25				49	60			54
13.	58	23					54			55	50	
14.	57	25			27		53	47	58	52		51
15.		27		25	27	32					50	48
16.	57		24				58	51	56	54		
17.				25	31	31					52	51
18.	38	24										
19.	33	28	23				61	52	60	50	58	
20.	26				32			51				48
21.		28	21	26		63			58	49	47	
22.	25	25	22				70	49		47		50
23.												
24.		24	21		30				57		49	48
25.	24	24	22	25			78	46	58			
26.	24				29	58				50	49	46
27.	24	23	22	25			77	45	57		53	
28.	21			26	30	59		46		49		47
29.		23	25	26			68					
30.	26	23	24			60	69	40	50	48	47	49
31.		23			28	62			50		49	51
1.	25		30				66	52	44	52		
2.	23	23		53		60					50	50
3.	24		27	49				54		48	49	

NOTE.—No discharge measurements made on days for which no discharge is given.

HAT CREEK NEAR HAT CREEK CAMP.

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.

RECORDS AVAILABLE.—July, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 248 second-feet June 15 (gauge height, 3.40 feet); minimum, 85 second-feet August 17.

1926-1929: Maximum discharge, 419 second-feet March 26, 1928 (gauge height, 4.00 feet); minimum, 79 second-feet September 4-6, 1926.

REMARKS.—Records good. Discharge estimated December 17-21, 24-28, and February 25-27. Small irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	114	114	117	113	110	107	119	127	101	100	87
2	109	112	113	119	112	112	108	123	123	100	100	88
3	110	126	116	117	116	112	103	124	126	98	101	87
4	113	127	113	113	113	113	105	127	127	96	101	87
5	113	127	112	114	113	116	102	126	126	95	102	87
6	112	138	113	112	110	113	100	124	128	93	102	88
7	112	126	110	112	106	113	104	121	130	95	102	88
8	110	120	112	113	107	112	102	123	128	96	101	82
9	110	119	112	113	107	110	102	127	129	97	97	97
10	110	119	116	113	109	119	101	127	124	101	91	97
11	110	117	109	113	110	116	102	130	119	105	91	97
12	110	117	109	113	110	110	102	138	112	103	91	97
13	110	119	109	113	110	107	102	139	113	102	90	97
14	110	112	109	113	110	107	103	139	116	103	88	96
15	110	113	110	114	110	107	106	140	166	102	87	96
16	112	117	110	114	110	107	106	150	165	105	86	96
17	114	114	110	112	112	107	107	158	134	105	86	96
18	113	113	114	114	112	109	107	154	126	105	87	83
19	110	116	111	113	110	110	107	153	121	105	93	91
20	110	116	114	112	110	112	106	156	128	97	96	90
21	110	116	112	110	112	110	106	148	127	93	97	90
22	110	113	112	110	112	117	106	148	126	92	100	90
23	110	110	123	110	110	113	106	148	124	88	98	92
24	110	112	123	110	110	110	106	145	121	88	100	93
25	110	112	123	112	110	109	106	138	121	88	100	92
26	110	112	122	110	110	110	107	130	120	87	98	92
27	109	112	121	110	110	112	109	124	119	88	98	92
28	109	109	121	109	110	114	112	126	117	88	97	90
29	110	110	120	107	112	112	112	127	116	87	91	100
30	113	114	116	107	109	114	126	107	93	87	101	101
31	113	116	116	112	112	107	127	127	98	86	101	101

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	114	109	111	6,820
November	138	108	117	6,960
December	123	109	114	7,010
January	119	107	112	6,890
February	116	106	110	6,110
March	119	107	111	6,820
April	114	101	105	6,280
May	158	119	135	8,308
June	165	107	125	7,449
July	105	87	96.6	5,940
August	102	86	95.0	5,640
September	101	87	92.9	5,530
The year	165	86	110	79,900

MCCLOUD RIVER AT BAIRD, CALIF.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 23, T. 34 N., R. 4 W., at United States fishery at Baird, 2 miles above junction with Pit River.

DRAINAGE AREA.—665 square miles.

RECORDS AVAILABLE.—December, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,380 second-feet February 4 (gage height, 4.85 feet); minimum, 815 second-feet several days in August and September.

1910-1929: Maximum discharge, 27,600 second-feet February 2, 1917 (gage height, 14.3 feet); minimum, 740 second-feet August 29 to September 11, 1924.

REMARKS.—Records good. No diversions. Gage-height record furnished by W. K. Hancock, superintendent of the United States fishery.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	940	940	915	1,110	1,240	995	1,050	1,400	1,020	890	840	840
2	915	940	915	1,110	1,980	995	1,050	1,400	1,020	890	840	840
3	915	1,310	940	1,110	2,610	995	1,050	1,400	1,020	890	840	815
4	995	995	915	1,050	4,380	1,020	1,110	1,380	1,020	890	840	815
5	968	968	915	1,020	2,720	1,050	1,110	1,380	1,020	890	840	815
6	940	1,110	915	1,020	1,890	1,050	1,050	1,380	1,110	890	840	815
7	940	995	915	995	1,620	1,050	1,050	1,310	1,050	890	840	815
8	940	968	915	995	1,380	1,110	1,110	1,310	1,020	890	840	815
9	940	968	915	995	1,310	1,480	1,050	1,310	995	890	840	815
10	940	995	995	968	1,240	2,940	1,050	1,310	995	915	840	815
11	940	968	915	968	1,170	2,280	1,050	1,240	995	915	840	815
12	940	1,110	915	968	1,110	1,800	1,050	1,240	968	890	840	815
13	940	1,240	915	940	1,110	1,620	1,050	1,240	968	890	840	815
14	940	1,890	915	940	1,110	1,540	1,310	1,240	968	890	840	815
15	940	1,240	890	940	1,050	1,380	1,890	1,240	1,110	890	840	815
16	940	1,020	890	940	1,050	1,380	1,710	1,170	1,050	890	840	815
17	915	995	890	940	1,050	1,380	1,710	1,240	1,050	890	840	815
18	915	968	890	940	1,050	1,240	1,460	1,170	1,050	890	840	815
19	915	940	890	968	1,050	1,240	1,800	1,170	1,020	865	840	815
20	940	940	890	940	1,020	1,240	1,890	1,170	1,020	865	840	815
21	940	940	890	915	995	1,240	2,080	1,110	995	865	815	815
22	940	940	890	915	995	1,240	2,500	1,110	968	865	815	815
23	940	940	890	915	995	1,240	2,280	1,110	940	865	815	815
24	940	915	890	915	995	1,170	2,080	1,110	940	865	815	815
25	915	915	890	915	995	1,110	1,890	1,110	940	865	815	815
26	915	915	915	915	995	1,110	1,800	1,110	940	865	815	815
27	940	915	940	940	995	1,140	1,710	1,050	915	865	815	815
28	940	915	968	915	995	1,110	1,540	1,050	915	865	815	815
29	915	915	1,620	1,050	-----	1,110	1,540	1,050	915	865	815	815
30	940	915	1,620	1,110	-----	1,110	1,540	1,020	915	865	815	815
31	940	-----	1,710	1,170	-----	1,110	-----	1,020	-----	840	815	-----
Month	Maximum			Minimum			Mean			Run-off in acre-feet		
October	995			915			936			87,600		
November	1,890			915			1,020			69,700		
December	1,710			890			963			60,400		
January	1,170			915			965			60,660		
February	4,380			995			1,400			77,860		
March	2,940			995			1,300			74,960		
April	2,500			1,050			1,490			88,700		
May	1,460			1,020			1,220			75,600		
June	1,110			915			965			59,200		
July	915			840			880			54,100		
August	840			815			831			51,100		
September	840			815			817			48,600		
The year	4,380			815			1,070			774,000		

ELK CREEK NEAR McCLLOUD, CALIF.

LOCATION.—In sec. 3, T. 39 N., R. 2 W., half a mile upstream from McCloud-Bartel road crossing and 4 miles east of McCloud.

RECORDS AVAILABLE.—March, 1927, to September, 1929.

EXTREMES.—1927-1929: Maximum mean daily discharge, 38 second-feet May 10, 1928.

REMARKS.—Mud Creek, which is notable for its large load of glacial silt from Mt. Shasta, is diverted into Elk Creek above the station, and the record is practically the flow of Mud Creek. Tributary springs add about 10 second-feet to Elk Creek below the gaging station. Record of daily discharge furnished by H. L. Haehl.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	9	9	9	9	10	7.5	13	8	21	13	9.5
2	9.5	8.5	10	9	9.5	10	8.5	13	8	23	10	9
3	9	8	10	9	10	10	8	13	7.5	25	10	8
4	9	7.5	10	8	10	11	7.5	14	7.5	21	10	7
5	8.5	7.5	9.5	7.5	10	11	7	12	9	24	10	8.5
6	8.5	8	8	8.5	10	11	6	11	8.5	24	9.5	10
7	8.5	7.5	7	8.5	10	11	6.5	12	8	24	10	9
8	8.5	7.5	5.5	8.5	10	11	6.5	13	7	24	10	8
9	8.5	7.5	5	8.5	10	11	4.8	14	6.5	24	13	9
10	8.5	7	5	8.5	10	11	5.5	15	7	23	11	8.5
11	8.5	7	4.8	8.5	10	11	5.5	14	8	22	15	9
12	8	7	5	8	10	10	6	15	8	19	17	9.5
13	8	7	5.5	8	10	10	6	14	11	14	20	10
14	8	6.5	5.5	8	10	9.5	6.5	16	12	13	23	9.5
15	8	6.5	6	8.5	10	8.5	6	19	20	15	17	12
16	8	6.5	6.5	8.5	10	8	6.5	22	17	17	15	12
17	8	6.5	6	8.5	10	7.5	8.5	18	14	16	13	12
18	8	9	5.5	8	10	7	8	21	10	17	12	14
19	8	10	5	7.5	11	7	7	23	11	15	14	16
20	8	12	5	7.5	10	6.5	6	23	13	14	11	14
21	8	12	5	7.5	10	6.5	6.5	26	13	16	12	13
22	7.5	11	5	7	11	6	6	26	14	17	12	13
23	7.5	11	5.5	6.5	10	5.5	6.5	27	15	16	12	13
24	7.5	11	5.5	6.5	10	4.8	6.5	20	17	16	11	7
25	8	8.5	6	7	10	4.6	7.5	18	20	18	11	7
26	7.5	8	7	6.5	10	4.8	9	14	20	18	9	5.5
27	7.5	7.5	7.5	7.5	11	5	9.5	12	22	16	9	4.7
28	8	6.5	7.5	8	10	5	10	13	24	18	8.5	5
29	8	6	7.5	8	-----	5.5	11	12	24	22	9.5	5
30	8	7	8	8.5	-----	6	11	12	21	18	9.5	5
31	7.5	-----	8	9	-----	6.5	-----	9.5	-----	14	9.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	9.5	7.5	8.18	508
November	12	6	8.15	435
December	10	4.8	6.65	409
January	9	6.5	8.00	492
February	11	9	10.1	531
March	11	4.6	8.14	501
April	11	4.8	7.24	431
May	27	9.5	16.3	1,000
June	29	6.5	13.3	791
July	25	13	18.8	1,160
August	23	8.5	12.1	744
September	16	4.7	9.42	561
The year	29	4.6	10.6	7,640

• Estimated.

MILL CREEK BASIN

MILL CREEK NEAR MINERAL, CALIF.

LOCATION.—Staff gage in sec. 23, T. 29 N., R. 4 E., on the Morgan Springs ranch, 8 miles east of Mineral.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 326 second-feet May 8 (gage height, 2.10 feet); a higher stage probably occurred June 16; minimum, 22 second-feet September 29 and 30.

REMARKS.—Records fair. Daily discharge not determined June 9 to August 31. Small irrigation diversion above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1	27	30	30	35	40	30	54	94	125		24
2	27	32	30	35	35	30	54	94	125		24
3	27	38	30	35	35	30	54	104	108		24
4	40	43	30	35	35	30	54	114	104		24
5	38	47	30	35	35	30	54	120	89		24
6	35	54	30	35	35	30	54	125	77		24
7	35	40	30	35	35	30	54	180	77		24
8	35	40	30	30	30	30	54	326	77		24
9	30	40	30	30	30	30	54	230			24
10	30	40	30	30	30	40	54	230			24
11	30	40	30	30	30	40	54	212			24
12	30	40	30	30	30	54	62	212			24
13	30	47	30	30	30	54	62	212	85		24
14	30	40	30	30	30	54	62	248			24
15	27	35	30	30	30	54	62	196			24
16	27	35	30	30	30	54	62	212			24
17	27	35	30	30	30	54	69	286			24
18	27	30	30	30	30	54	77	230			24
19	27	30	30	30	30	62	77	230			24
20	27	30	30	30	30	54	77	230			24
21	27	30	30	30	30	54	77	267			24
22	27	30	30	30	30	40	85	286			24
23	27	30	30	30	30	40	85	230			24
24	27	30	30	30	30	40	77	286			24
25	27	30	30	30	30	40	77	196			24
26	27	30	35	30	30	40	77	204			24
27	27	30	77	35	30	54	77	212			24
28	27	30	125	38	30	54	77	125			24
29	27	30	40	40		62	85	85			24
30	27	30	40	40		54	89	94			24
31	30		35	40		54		94			24

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	40	27	29.2	1,800
November	54	30	35.5	2,119
December	125	30	35.6	2,199
January	40	30	32.5	2,004
February	40	30	31.4	1,740
March	62	30	44.4	2,738
April	89	54	67.0	3,594
May	326	85	192	11,801
June			85	5,000
July			40	2,460
August			27	1,680
September	24	22	23.9	1,420
The year		22	53.9	39,000

* Estimated.

* Result of discharge measurement.

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.

DRAINAGE AREA.—173 square miles.

RECORDS AVAILABLE.—September, 1909, to September, 1913, fragmentary; October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,520 second-feet February 3 (gage height, 6.15 feet); minimum, 70 second-feet September 11.

REMARKS.—Records excellent. Discharge estimated October 1-9 and 14. No diversions of importance.

Daily and monthly discharge, in second-feet, 1928-29.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		98	104	139	150	114	152	271	175	128	84	73
2		98	106	135	477	118	154	276	163	124	84	75
3		139	108	144	965	122	161	288	159	120	82	73
4		128	106	135	716	135	175	295	199	116	82	73
5		108	106	128	445	148	194	278	155	114	82	73
6	96	163	102	122	308	152	172	259	163	112	82	73
7		137	100	118	213	152	161	254	159	108	80	73
8		118	100	116	180	157	159	261	159	106	82	73
9		108	100	114	161	172	155	280	170	104	82	72
10	98	110	353	112	148	484	146	280	182	104	82	72
11	98	112	225	112	139	321	144	271	155	104	80	70
12	98	163	228	112	133	249	150	288	150	102	80	72
13	98	278	211	112	128	220	148	261	150	100	80	72
14	97	500	192	110	124	194	150	285	148	98	78	72
15	96	224	133	112	120	180	150	303	220	96	78	72
16	96	148	122	114	118	175	161	321	327	96	78	72
17	96	138	118	106	118	170	166	334	266	95	78	72
18	96	118	112	106	116	172	172	311	216	95	78	72
19	91	114	116	120	114	175	199	311	189	91	78	78
20	91	112	108	124	114	168	232	313	175	91	77	77
21	91	112	106	114	114	175	266	321	170	89	77	77
22	96	112	106	114	114	204	331	334	168	89	77	77
23	91	112	106	112	116	182	339	313	166	87	77	77
24	96	110	114	106	114	177	311	313	161	85	77	78
25	93	108	132	110	114	161	233	273	157	89	80	78
26	91	106	150	116	112	152	273	235	152	89	82	80
27	91	106	162	119	112	152	268	204	148	89	80	80
28	91	104	314	114	112	161	280	194	144	87	78	78
29	93	104	204	120		166	266	187	139	87	77	78
30	110	102	170	128		166	261	180	133	87	77	78
31	102		136	133		157		177		85	75	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	110	91	95.4	5,870
November	500	98	140	8,330
December	358	100	147	9,040
January	144	106	118	7,260
February	965	112	211	11,700
March	484	114	182	11,200
April	431	144	209	12,400
May	334	177	273	15,500
June	327	133	173	10,300
July	128	85	98.3	6,600
August	84	75	79.5	4,800
September	80	70	74.5	4,400
The year	965	70	150	108,000

THOMAS CREEK BASIN

THOMAS CREEK AT PASKENTA, CALIF.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 4, T. 23 N., R. 6 W., at highway bridge at Paskenta.

RECORDS AVAILABLE.—January, 1921, to September, 1929. Also gage heights October, 1920, to January, 1921.

EXTREMES.—Maximum discharge during year, 2,620 second-feet December 25 (gage height, 5.0 feet); no flow August 8 to September 30.

1921-1929: Maximum discharge, about 16,000 second-feet March 26, 1928 (gage height, 10.5 feet); no flow for periods in 1921, 1922, 1924, 1926, and 1929.

REMARKS.—Records good. Discharge estimated November 16-28. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1.	1.2	4.0	19	555	78	109	128	216	90	5	0.6
2.	2.0	5	39	491	141	115	128	230	78	3.8	.8
3.	2.0	5	46	330	1,300	125	128	216	78	3.0	.8
4.	4.0	5	56	160	725	128	112	199	74	3.0	.8
5.	4.0	4.0	60	109	300	135	106	185	68	2.6	.4
6.	4.0	2.0	60	109	260	171	101	185	68	2.0	.8
7.	4.0	1.7	83	109	212	186	88	185	58	1.0	.1
8.	4.0	1.2	88	83	212	186	88	165	58	.8	0
9.	4.0	.8	104	72	178	186	88	165	58	.9	0
10.	2.8	.5	125	60	135	178	88	148	58	1.0	0
11.	2.0	.5	109	83	104	171	91	148	50	1.4	0
12.	2.0	.5	104	72	83	148	91	148	45	1.0	0
13.	2.0	2.0	83	60	83	135	91	158	42	.8	0
14.	2.0	6	72	72	83	125	91	165	42	.6	0
15.	2.0	18	72	125	83	109	104	148	42	.5	0
16.	2.0	5	72	160	83	109	115	148	42	.2	0
17.	2.0	4	72	125	83	88	122	148	42	.2	0
18.	1.2	3	60	104	83	104	148	148	35	.2	0
19.	1.2	2	60	83	83	109	156	148	28	.2	0
20.	1.2	2	60	83	83	125	156	130	18	.1	0
21.	1.2	2	60	83	72	141	220	116	18	.2	0
22.	1.2	2	60	83	72	160	207	108	18	.2	0
23.	1.2	2	60	83	72	178	191	102	18	.2	0
24.	1.2	2	60	78	72	171	178	102	18	.3	0
25.	2.0	2	1,420	72	72	135	160	102	15	.4	0
26.	2.0	2	125	72	78	109	156	102	12	.5	0
27.	2.0	2	160	72	88	109	145	90	9.5	.5	0
28.	2.0	3	438	60	88	125	171	90	8	.8	0
29.	2.0	5	330	60	-----	125	182	97	7	.4	0
30.	2.0	7.5	330	60	-----	125	208	90	5	.4	0
31.	2.0	-----	491	60	-----	125	-----	90	-----	.5	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.0	1.2	2.21	136
November	13	.5	8.22	192
December	1,420	19	161	9,900
January	555	60	123	7,500
February	1,300	72	179	9,940
March	186	88	137	8,420
April	220	88	134	7,976
May	230	90	144	8,880
June	90	5	40.1	2,390
July	5	.1	1.06	64.6
August	.8	0	.12	7.4
The year	1,420	0	76.6	55,400

NOTE.—No flow Aug. 8 to Sept. 30.

DEER CREEK BASIN

DEER CREEK AT DEER CREEK MEADOWS, CALIF.

LOCATION.—Water-stage recorder in sec. 29, T. 28 N., R. 5 E., 1 mile west of Deer Creek Meadows.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 150 second-feet March 10 (gauge height, 2.10 feet); minimum, 18 second-feet August 2.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined December 8-31 and August 4-31. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	32	32		36	40	58	70	38	26	19	
2	30	32	32		37	44	60	68	34	26	19	
3	36	53	33		42	50	60	68	32	26	19	
4	42	36	34		57	57	77	66	31	25		
5	33	36	39		51	60	67	68	32	25		• 20
6												
7	31	56	32		45	61	58	60	36	24		
8	30	39	30		40	62	53	58	37	24		
9	30	34		• 30	39	64	52	58	36	24		20
10	29	32			36	79	52	54	57	24		20
11	29	36			36	119	52	52	47	24		21
12												
13	29	34			34	87	57	50	38	24		22
14	30	36			34	71	57	49	33	23		22
15	30	41			33	61	56	49	32	23		22
16	29	38			33	60	56	47	30	23		22
17	30	36			32	62	60	46	64	22		22
18												
19	30	39		31	32	63	63	44	68	22		22
20	30	39		31	33	64	61	42	67	22		22
21	31	36		31	33	66	62	41	46	22		22
22	30	36		31	32	68	80	39	39	22		22
23	31	36		31	32	68	99	39	64	22		22
24												
25	31	37		29	33	76	87	40	32	22		22
26	30	36		30	34	78	95	38	30	22		22
27	31	35		30	35	62	93	37	30	22		22
28	31	34		29	34	57	82	35	28	21		22
29	31	33		30	34	• 57	• 77	34	28	20		22
30												
31	30	34		30	33	57	72	34	28	20		23
1	30	33		30	34	61	72	34	26	20		23
2	30	32		30	36	68	74	32	26	20		23
3	31	31		32		68	75	32	26	20		23
4	36	31		32		63	71	32	26	20		23
5	34			35		57		32		20		
Month					Maximum	Minimum			Mean	Run-off in acre-feet		
October					42	29			31.1	1,910		
November					56	31			36.4	2,170		
December									• 36	2,216		
January									30.4	1,870		
February					57	32			36.4	2,020		
March					119	40			64.8	3,969		
April					90	52			68.2	4,060		
May					70	32			46.5	2,860		
June					68	26			37.1	2,210		
July					26				22.6	1,390		
August									• 19	1,170		
September					23				21.6	1,260		
The year					119				37.5	27,100		

• Estimated.

DEER CREEK AT POLK SPRINGS, CALIF.

LOCATION.—Staff gage in sec. 8, T. 26 N., R. 3 E., half a mile northeast of Polk Springs.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 504 second-feet February 3 (gage height, 2.7 feet); minimum, 53 second-feet many days in September.

REMARKS.—Records fair. Daily discharge not determined August 6-24. No diversions.

Daily and monthly discharge, in second-feet, 1928-29.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	74	81	85	109	103	85	122	190	97	74	58	* 53
2.	74	80	85	97	161	97	122	196	97	74	58	* 53
3.	97	122	85	97	343	97	122	180	91	68	58	* 53
4.	109	97	85	97	412	109	152	180	85	68	58	* 53
5.	88	85	85	97	251	122	152	170	85	68	58	* 53
6.	74	136	85	97	186	122	136	161	97	68	—	* 53
7.	74	103	80	97	122	122	136	152	91	68	—	* 53
8.	74	97	80	97	109	122	122	144	97	68	—	* 53
9.	74	85	80	85	109	136	122	144	97	63	53	53
10.	74	85	109	85	109	430	122	144	116	63	—	53
11.	74	85	109	85	109	264	122	136	97	63	—	53
12.	74	85	109	85	97	202	122	136	85	63	—	53
13.	74	97	97	85	97	161	122	136	85	63	—	53
14.	74	129	85	85	97	161	122	129	85	63	—	53
15.	74	97	85	85	97	161	122	122	116	63	—	53
16.	77	97	85	85	97	152	144	122	170	63	—	53
17.	77	97	85	85	97	152	136	122	170	63	—	53
18.	76	91	85	85	91	152	152	122	122	63	—	53
19.	75	91	85	85	91	152	180	122	109	63	—	53
20.	74	85	85	85	91	152	190	122	97	63	—	53
21.	* 74	85	85	85	91	152	214	116	97	63	—	53
22.	* 74	85	85	85	91	152	310	109	91	63	—	53
23.	74	91	85	85	85	136	279	109	85	60	—	55
24.	74	85	85	85	85	136	238	109	85	60	—	55
25.	74	85	122	85	85	122	214	109	85	60	—	55
26.	74	85	109	85	85	122	214	109	80	58	—	55
27.	74	85	122	85	85	122	214	103	80	58	—	55
28.	74	85	202	85	85	136	202	97	74	58	—	55
29.	74	85	152	103	—	152	190	91	74	58	—	55
30.	85	85	122	97	—	144	190	91	74	58	—	55
31.	85	—	109	97	—	122	—	91	—	58	—	55
Month							Maximum	Minimum	Mean	Run-off in acre-feet		
October							109	74	77.2	4,780		
November							136	80	92.9	5,530		
December							202	80	98.5	6,060		
January							109	85	89.8	5,520		
February							412	85	127	7,060		
March							430	85	150	8,220		
April							310	122	166	8,880		
May							190	91	131	8,060		
June							170	74	97.1	5,780		
July							74	58	63.4	3,660		
August							58	—	* 57	3,500		
September							58	53	54.1	3,220		
The year							430	53	100	72,400		

* Estimated.

DEER CREEK NEAR VINA, CALIF.

LOCATION.—Water-stage recorder in N.E. $\frac{1}{4}$ sec. 23, T. 25 N., R. 1 W., three-fourths mile above concrete diversion dam and 9 miles northeast of Vina. Prior to October 9, 1928, station was situated three-fourths mile downstream, just above diversion dam.

RECORDS AVAILABLE.—October, 1911, to December, 1915; March, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,460 second-feet February 3 (gauge height, 5.90 feet); minimum, 60 second-feet several days in August and September.

1911-1915, 1920-1929: Maximum discharge, 12,200 second-feet March 26, 1928 (gauge height, 15.0 feet); minimum, 60 second-feet June 29, 30, and July 1, 1924, and several days in August and September, 1929.

REMARKS.—Records fair. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	98	90	136	152	105	148	212	201	73	65	61
2	81	91	91	139	428	109	148	207	200	72	65	61
3	81	130	94	136	1,350	112	147	205	96	72	64	61
4	81	129	94	130	1,010	122	156	209	91	70	62	61
5	86	96	98	129	516	132	190	190	90	70	62	62
6	99	122	90	114	347	138	158	183	96	70	62	62
7	88	129	88	109	242	138	149	174	98	70	62	62
8	86	103	86	107	197	143	147	169	100	72	61	62
9	82	93	85	107	179	186	145	165	109	70	61	61
10	84	90	382	100	160	665	144	160	134	70	61	61
11	86	93	236	96	149	412	148	154	100	70	61	61
12	86	114	223	98	138	308	149	152	98	70	61	61
13	88	176	190	98	132	256	147	152	91	70	61	60
14	89	428	143	96	128	223	149	149	88	69	61	60
15	90	192	129	96	122	202	149	145	96	69	61	60
16	90	132	114	109	120	209	154	143	192	67	61	61
17	88	129	110	96	118	192	156	141	176	67	62	62
18	86	110	105	96	116	192	160	136	147	67	62	61
19	86	108	108	120	112	190	178	132	120	67	61	62
20	85	102	104	114	110	185	228	128	107	66	61	64
21	85	101	100	109	109	185	242	126	96	66	61	64
22	83	109	98	109	109	205	366	129	93	66	60	64
23	83	98	98	100	109	190	351	116	88	66	61	64
24	85	98	104	94	109	176	306	110	89	65	60	64
25	85	92	167	94	107	160	269	105	83	65	62	64
26	85	91	154	96	105	149	248	101	89	65	62	64
27	85	93	154	96	103	149	234	101	80	65	62	64
28	85	93	291	103	105	160	228	100	77	65	62	64
29	86	90	207	110	-----	160	239	98	76	66	61	65
30	86	90	178	128	-----	158	223	96	74	66	61	65
31	96	152	132	-----	-----	149	-----	94	-----	66	61	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	98	81	86.1	5,299
November	428	90	119	7,069
December	382	85	140	8,610
January	136	94	108	5,040
February	1,350	103	239	13,900
March	665	105	195	12,000
April	366	141	194	11,500
May	212	94	144	8,869
June	192	74	103	6,130
July	73	65	68.1	4,190
August	65	60	61.6	3,790
September	66	60	62.4	3,710
The year	1,350	60	126	91,100

• Estimated

STONY CREEK BASIN

STONY CREEK NEAR STONYFORD, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 35, T. 18 N., R. 7 W., at East Park feed canal diversion dam, $3\frac{1}{2}$ miles west of Stonyford.

DRAINAGE AREA.—97 square miles.

RECORDS AVAILABLE.—April, 1913, to December, 1914; November, 1918, to September, 1929.

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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	33	27	97	100	66	72	114	58	40	27	22
2	32	33	32	88	206	66	69	114	58	37	27	22
3	34	37	51	148	912	73	72	123	55	34	27	22
4	37	37	38	96	657	81	79	119	54	32	27	22
5	37	34	46	78	304	84	79	119	55	29	27	22
6	37	42	38	78	256	80	72	114	58	29	27	22
7	37	37	33	74	183	76	73	114	58	29	27	22
8	37	37	31	67	137	78	72	114	58	29	27	22
9	37	37	31	63	128	91	79	111	58	29	27	22
10	37	37	58	59	112	168	73	107	58	29	24	22
11	34	37	112	57	109	119	73	107	58	29	24	22
12	34	52	69	55	99	115	76	107	55	29	24	22
13	34	63	62	55	93	108	76	107	48	29	24	22
14	34	222	52	55	91	102	84	107	46	29	24	22
15	34	71	48	58	82	99	137	107	51	29	22	22
16	34	47	42	55	84	99	137	107	51	29	22	22
17	34	41	42	59	84	96	128	107	48	27	22	22
18	34	33	40	48	79	91	124	107	48	27	22	22
19	34	31	36	48	75	88	138	107	46	27	22	22
20	34	31	38	48	70	88	160	107	46	27	22	22
21	34	31	36	44	70	89	155	108	46	27	22	22
22	34	31	35	46	70	110	169	98	46	27	24	22
23	34	31	35	46	70	102	164	95	46	27	24	24
24	34	31	36	48	70	94	155	84	43	27	24	24
25	34	31	220	48	70	84	138	84	43	27	24	24
26	34	32	140	48	66	80	124	72	40	27	24	24
27	34	34	142	48	66	78	124	64	40	27	24	24
28	34	34	214	48	66	78	124	64	40	27	22	24
29	34	34	190	57	-----	78	115	64	40	27	22	24
30	34	27	144	97	-----	70	115	64	40	27	22	24
31	34	-----	120	105	-----	75	-----	61	-----	27	22	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	37	29	34.5	2,120
November	222	27	43.6	2,590
December	220	27	71.7	4,419
January	148	43	64.2	3,959
February	912	66	157	8,729
March	168	66	90.6	5,379
April	169	69	108	6,430
May	123	61	99.1	6,096
June	58	40	49.7	2,960
July	40	27	28.9	1,760
August	27	22	24.2	1,460
September	24	22	22.5	1,349
The year	912	22	65.6	47,400

STONY CREEK NEAR ELK CREEK, CALIF.

LOCATION.—Staff gage in sec. 16, T. 20 N., R. 6 W., at Stony Gorge Dam, 1½ miles south of Elk Creek. Prior to November 15, 1923, record was obtained at county road bridge 1 mile south of dam.

DRAINAGE AREA.—301 square miles; 298 square miles above county road bridge.

RECORDS AVAILABLE.—May, 1919, to September, 1929.

EXTREMES.—1919-1929: Maximum discharge, about 10,200 second-feet January 31, 1921 (gage height, 7.80 feet); no flow part of July to October, 1924.

REMARKS.—Water is stored in East Park Reservoir on Little Stony Creek, and since November, 1923, 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.

Daily and monthly discharge, in second-feet, 1920-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	19	14	25	40	18	10	97	408	11	5	2
2	11	21	12	15	90	16	10	455	401	10	5	2
3	9	22	38	28	160	14	11	476	399	10	4	2
4	9	23	30	24	1,210	14	12	477	397	9	4	2
5	9	23	25	22	550	12	13	463	397	9	3	2
6	9	23	20	22	210	15	14	461	359	8	2	2
7	9	22	18	21	100	15	15	459	293	8	2	2
8	9	20	18	21	50	18	40	457	218	7	2	2
9	9	19	17	20	40	20	50	455	120	7	1	2
10	9	22	17	20	35	30	55	455	98	7	1	2
11	9	27	17	20	30	70	55	451	72	7	1	2
12	9	30	175	19	30	43	58	443	60	7	1	2
13	9	37	55	18	28	22	58	447	54	7	1	1
14	9	32	38	18	27	16	58	445	51	7	1	1
15	9	158	30	18	27	15	58	445	49	7	1	1
16	8	55	23	17	26	12	90	443	48	7	1	1
17	8	38	22	17	26	12	108	443	47	7	1	1
18	8	25	20	16	39	12	100	443	41	6	2	1
19	7	28	20	16	28	10	98	443	38	6	2	1
20	7	20	18	16	27	10	100	441	36	6	2	1
21	7	19	16	15	25	10	120	441	33	6	2	1
22	8	19	15	15	24	35	120	438	29	5	2	2
23	9	19	15	14	23	30	140	436	25	5	2	2.5
24	11	19	18	14	22	30	140	433	22	5	2	2.5
25	13	18	208	14	22	20	136	427	19	5	2	2.5
26	13	18	228	13	21	14	130	423	18	5	1	2.5
27	13	18	80	12	20	12	128	418	17	5	1	2.5
28	16	18	99	12	20	12	115	415	16	6	1	2.5
29	16	17	110	12	-----	12	110	411	15	6	1	2.5
30	18	16	58	12	-----	10	100	408	14	6	2	2.5
31	18	-----	45	11	-----	10	-----	405	-----	6	2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18	7	10.5	646
November	155	16	29.4	1,750
December	225	12	48.4	2,980
January	25	11	17.3	1,060
February	1,210	20	105	5,830
March	70	10	19.2	1,180
April	140	10	74.3	4,420
May	477	97	431	26,500
June	403	14	126	7,500
July	11	5	6.87	422
August	5	1	1.97	121
September	2.5	1	1.83	109
The year	1,210	1	72.5	52,500

STONY CREEK NEAR ORLAND, CALIF.

LOCATION.—Water-stage recorder in NW $\frac{1}{4}$ 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, 1929.

EXTREMES.—1920-1929: Maximum discharge, 19,500 second-feet January 30, 1921 (gauge height, 10.3 feet); no flow November 11, 1920, and August 24 to September 30, 1924.

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.

Daily and monthly discharge, in second-feet, 1920-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.				
1	45	8	6	85	73	41	47	114	131	147	189	155				
2	22	8	6	68	290	41	46	143	129	166	189	180				
3	22	9	6	85	1,420	45	48	173	126	168	175	149				
4	20	9	6	93	330	54	44	187	124	166	187	149				
5	19	6	6	77	430	58	44	173	129	197	175	136				
6	18	6	6	65	290	58	42	172	123	208	166	131				
7	17	6	6	55	205	58	40	167	122	212	157	120				
8	15	5	6	44	155	58	74	189	118	212	155	137				
9	18	5	6	42	130	61	72	190	107	212	148	115				
10	12	5	7	40	100	77	70	189	63	210	148	123				
11	12	4	60	38	91	86	72	168	56	200	148	118				
12	11	5	48	36	85	75	75	180	34	200	148	118				
13	10	17	48	34	69	70	78	173	22	197	149	117				
14	9	45	36	32	45	68	82	167	109	158	148	115				
15	8	60	22	30	67	61	144	186	59	133	148	112				
16	7	34	17	30	64	62	128	162	52	129	148	109				
17	5	22	12	29	61	63	109	163	45	126	148	99				
18	5	13	11	29	58	64	80	163	41	147	148	87				
19	5	12	10	26	63	65	90	156	81	166	148	85				
20	5	10	10	28	61	67	128	157	100	173	148	85				
21	5	9	10	28	60	70	124	154	169	182	148	84				
22	5	8	10	27	58	72	131	160	235	182	148	83				
23	5	8	10	27	48	74	123	169	268	182	148	82				
24	5	8	17	26	47	60	116	169	277	187	148	81				
25	5	8	240	25	45	61	100	162	279	187	149	80				
26	5	7	155	25	44	57	92	168	277	187	149	80				
27	5	7	126	25	42	53	99	168	265	187	149	80				
28	5	7	135	30	42	53	92	157	206	189	149	80				
29	6	6	115	35	55	58	90	156	173	189	149	87				
30	6	6	126	40	52	58	92	131	152	189	153	86				
31	7		108	44		53		129		189	153					
Month													Maximum	Minimum	Mean	Run-off in acre-feet
October													45	5	10.9	570
November													80	4	12.1	720
December													240	6	44.6	3,540
January													93	25	42.0	2,520
February													1,420	42	178	9,500
March													86	41	61.1	3,700
April													144	40	84.5	5,000
May													190	114	164	10,100
June													279	22	135	8,000
July													212	126	180	11,100
August													189	148	155	9,300
September													155	81	108	6,420
The year													1,420	4	97.4	70,600

LITTLE STONY CREEK NEAR LODOGA, CALIF.

LOCATION.—Staff gage at East Park Reservoir Dam, 4 miles above junction with Stony Creek and $3\frac{1}{4}$ 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, 1929.

EXTREMES.—1907-1929: Maximum discharge, 7,060, second-foot February 2, 1909 (gage height, 11.8 feet); no flow during parts of nearly every year.

REMARKS.—East Park Reservoir is used for storage for the Orland project of the United States Bureau of Reclamation. Daily discharge record furnished by United States Bureau of Reclamation, through R. C. E. Weber, project manager.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	6	6	18	45	15	15	12	3	1
2	0	9	18	120	12	14	12	3	1
3	0	55	20	230	12	12	11	3	0
4	0	15	24	550	20	26	11	3	0
5	0	20	28	230	18	20	10	4	0
6	0	15	25	150	15	19	10	4	0
7	0	13	20	130	12	18	10	4	0
8	0	10	15	80	16	17	9	4	0
9	0	9	12	76	24	16	9	4	0
10	0	20	12	74	30	16	10	4	0
11	0	70	12	72	35	15	10	4	0
12	0	45	12	66	40	15	11	4	0
13	2	40	11	56	50	14	12	3	0
14	25	30	10	46	40	13	14	3	0
15	35	30	10	40	34	18	15	3	0
16	10	25	10	38	30	16	14	3	0
17	9	20	10	34	28	15	14	3	0
18	8	15	10	30	25	14	13	3	0
19	7	10	9	28	20	23	12	2	0
20	6	10	9	26	20	19	10	2	0
21	5	10	9	24	24	17	10	2	0
22	4	10	9	22	35	15	9	2	0
23	3	10	8	22	33	15	8	2	0
24	3	15	8	20	30	14	8	1	0
25	3	90	9	18	26	14	7	1	0
26	3	40	9	18	24	14	6	1	0
27	2	25	9	16	20	14	4	1	0
28	2	100	9	16	20	14	3	1	0
29	2	50	10	—	18	13	3	1	0
30	2	40	35	—	18	12	3	1	0
31	—	20	45	—	16	—	3	—	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	35	0	4.37	290
December	100	6	28.3	1,740
January	45	8	14.7	904
February	550	16	81.3	4,520
March	50	12	24.5	1,510
April	26	12	15.9	946
May	15	3	9.45	581
June	4	1	2.63	157
July	1	0	.06	3.7
The year	550	0	14.7	10,600

NOTE.—No flow during months for which no discharge is given.

FEATHER RIVER BASIN

NORTH FORK OF FEATHER RIVER NEAR PRATTVILLE, CALIF.

LOCATION.—In sec. 28, T. 27 N., R. 8 E., at Great Western Power Co.'s dam at Lake Almanor, 4 miles above mouth of Butt Creek and 5 miles southeast of Prattville.

DRAINAGE AREA.—506 square miles.

RECORDS AVAILABLE.—June, 1905, to September, 1929.

EXTREMES.—1905-1929: Maximum discharge, 10,000 second-feet March 19, 1907 (gauge height, 16.2 feet); no flow April 15 and 16, 1914, parts of January to April, 1919, and April 21, 1923.

REMARKS.—Records include flow through diversion tunnel. Water is diverted by a tunnel into Butt Creek and then diverted by another tunnel from Butt Creek to the Caribou plant of the Great Western Power Co. on North Fork of Feather River. Water is stored in Lake Almanor for use at Caribou and Big Bend power plants. There was 662,403 acre-feet of water in reservoir on September 30, 1928, and 265,938 acre-feet on September 30, 1929. Daily-discharge record furnished by Great Western Power Co.

Daily discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	90	922	69	68	965	1,410	1,730	587	275	1,030	1,730	1,660
2.....	90	922	69	68	965	1,470	1,710	799	395	1,030	1,740	1,760
3.....	80	912	69	66	965	1,710	1,710	799	333	1,030	1,670	1,760
4.....	65	902	559	68	965	1,410	1,710	799	333	1,030	1,740	1,760
5.....	203	902	968	68	965	1,410	1,710	799	345	1,030	1,740	1,760
6.....	899	902	968	68	965	1,410	1,710	799	345	1,030	1,760	1,760
7.....	899	922	968	68	965	1,410	1,710	799	305	1,030	1,760	1,760
8.....	900	938	968	68	965	1,410	1,710	799	73	1,030	1,760	1,820
9.....	900	938	968	68	965	1,410	1,430	799	275	1,030	1,760	1,760
10.....	900	938	968	68	965	1,750	1,610	794	130	1,030	1,660	1,816
11.....	900	939	968	68	965	1,540	1,610	794	1,030	1,030	1,690	1,810
12.....	900	939	968	68	965	1,520	1,610	776	1,030	1,030	1,660	1,810
13.....	901	939	966	68	965	1,520	1,700	870	1,030	1,030	1,720	1,810
14.....	900	939	966	68	965	1,520	1,700	1,110	1,030	1,030	1,690	1,740
15.....	901	939	966	738	965	1,520	1,840	1,010	1,030	1,030	1,740	1,750
16.....	1,030	939	966	968	965	1,730	1,840	1,070	1,030	1,030	1,730	1,800
17.....	1,030	569	966	1,070	965	1,730	1,220	1,250	1,030	1,030	1,810	1,800
18.....	1,060	69	966	1,070	965	1,730	495	944	1,030	1,030	2,040	1,790
19.....	1,120	68	966	968	965	1,730	65	1,160	1,030	1,230	1,800	1,790
20.....	1,010	68	966	1,070	1,100	1,700	65	1,160	1,030	1,550	1,790	1,790
21.....	1,120	68	966	1,090	965	1,440	90	1,130	1,030	1,550	1,790	1,790
22.....	1,190	68	966	968	965	1,500	60	1,130	1,030	1,550	1,780	1,790
23.....	1,080	68	966	968	965	1,730	62	1,130	1,030	1,540	1,780	1,790
24.....	1,020	68	966	1,070	965	1,730	68	1,050	1,030	1,660	1,780	1,750
25.....	1,020	68	966	966	1,460	1,770	68	804	1,270	1,740	1,770	1,750
26.....	1,020	68	966	966	1,760	1,760	66	524	1,040	1,740	1,770	1,740
27.....	1,020	68	496	966	1,720	1,760	69	319	1,040	1,670	1,760	1,740
28.....	1,020	68	66	966	1,440	1,760	69	233	1,040	1,710	1,760	1,630
29.....	1,020	69	66	966	-----	1,760	69	278	1,040	1,740	1,760	1,649
30.....	1,020	69	66	966	-----	1,760	450	280	1,040	1,730	1,760	1,730
31.....	921	-----	66	966	-----	1,760	-----	387	-----	1,730	1,750	-----

Monthly discharge, in second-feet, of North Fork of Feather River near Prattville, Calif., 1928-29

Month	Maximum	Minimum	Observed mean	Gain or loss in storage	Corrected for storage	Run-off (acre-feet)		
						Observed	Gain or loss in storage	Corrected for storage
October.....	1,190	65	847	-462	385	52,100	-28,400	23,700
November.....	939	68	543	+18	561	32,300	+1,100	33,400
December.....	938	66	735	-123	612	45,200	-7,600	37,600
January.....	1,090	68	571	-68	503	35,100	-4,150	30,950
February.....	1,760	965	1,060	-480	580	58,900	-26,700	32,200
March.....	1,780	1,410	1,610	-887	719	99,000	-54,500	44,500
April.....	1,730	60	967	-289	678	87,500	-17,200	40,300
May.....	1,250	233	812	-55	757	49,900	-3,380	46,500
June.....	1,270	73	790	-258	531	47,000	-15,400	31,600
July.....	1,740	1,080	1,280	-1,020	258	78,700	-63,800	15,900
August.....	2,040	1,660	1,750	-1,510	240	108,000	-92,700	15,300
September.....	1,820	1,680	1,700	-1,440	322	105,000	-85,700	19,300
The year.....	2,040	60	1,060	-----	513	769,000	-397,000	371,000

NOTE.—Records not corrected for evaporation from Lake Almanor.

NORTH FORK OF FEATHER RIVER AT BIG BAR, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 32, T. 23 N., R. 5 E., one-fourth mile above Big Bar and 7 miles above intake of Great Western Power Co.'s power plant at Big Bend. Zero of gage is 1,348.96 feet above mean sea level.

RECORDS AVAILABLE.—February, 1911, to September, 1929.

EXTREMES.—1911-1929: Maximum mean daily discharge, 35,000 second-feet January 1, 1914; minimum, 423 second-feet June 8, 1924.

REMARKS.—Storage and diversions above station. There was 45,963 acre-feet of water in Butt Valley Reservoir on September 30, 1929. Daily-discharge record furnished by Great Western Power Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,420	1,390	1,400	1,720	2,100	2,320	2,440	1,570	1,310	2,080	1,890
2	1,399	1,370	1,280	1,390	1,920	2,200	2,610	2,520	1,570	1,520	2,020	1,800
3	1,399	1,490	1,250	1,450	2,280	2,010	2,630	2,820	1,430	1,540	2,020	1,920
4	1,320	1,280	1,300	1,420	3,640	2,390	2,660	2,810	1,360	1,440	1,850	2,020
5	1,309	1,310	1,530	1,400	3,040	2,320	2,800	2,690	1,250	1,280	1,990	2,020
6	1,320	1,530	1,190	1,290	2,530	2,150	2,700	2,610	1,260	1,480	2,080	2,000
7	1,160	1,530	1,390	1,330	2,160	2,440	2,670	2,650	1,190	1,420	2,090	1,990
8	1,170	1,490	1,410	1,420	1,930	2,530	2,480	2,680	1,230	1,390	2,080	1,840
9	1,380	1,500	1,200	1,460	1,830	2,720	2,550	2,680	1,070	1,490	2,090	1,910
10	1,380	1,480	1,520	1,480	1,590	4,490	2,390	2,520	1,140	1,540	2,070	2,000
11	1,360	1,290	1,360	1,460	1,490	3,800	2,450	2,550	1,140	1,530	1,900	2,130
12	1,370	1,320	1,520	1,440	1,840	3,240	2,270	2,490	1,290	1,530	2,010	2,140
13	1,390	1,450	1,480	1,490	1,720	2,880	2,240	2,420	1,120	1,530	2,000	2,140
14	1,160	1,520	1,420	1,480	1,680	2,720	2,120	2,610	1,620	1,440	2,010	2,120
15	1,210	1,400	1,440	1,570	1,730	2,620	2,040	2,920	1,580	1,440	2,050	1,940
16	1,330	1,410	1,220	1,520	1,680	2,500	2,120	3,050	2,050	1,520	2,070	2,020
17	1,490	1,350	1,290	1,530	1,490	2,570	2,190	3,170	1,820	1,480	2,060	2,050
18	1,520	1,280	1,400	1,530	1,530	2,590	2,150	3,110	1,760	1,480	1,790	2,000
19	1,600	1,370	1,400	1,750	1,720	2,700	2,300	2,170	1,560	1,490	2,100	1,980
20	1,600	1,340	1,520	1,450	1,710	2,510	2,530	2,620	1,480	1,720	2,090	1,990
21	1,420	1,290	1,470	1,610	1,680	2,690	2,150	2,190	1,500	1,850	2,100	1,980
22	1,500	1,380	1,480	1,640	1,660	2,650	2,130	2,430	1,440	1,870	2,100	1,860
23	1,690	1,300	1,300	1,620	1,620	2,690	2,080	2,240	1,280	1,880	2,060	1,990
24	1,780	1,360	1,300	1,630	1,580	2,460	2,020	2,130	1,410	1,900	2,070	2,010
25	1,500	1,200	1,360	1,710	1,640	2,580	2,030	1,940	1,560	2,010	1,940	2,070
26	1,480	1,280	1,290	1,630	2,220	2,510	2,040	2,280	1,780	2,070	2,020	2,060
27	1,470	1,380	1,360	1,490	2,390	2,580	1,990	1,960	1,610	2,080	2,070	2,050
28	1,280	1,360	1,330	1,620	2,350	2,580	1,890	1,770	1,580	1,900	2,080	2,040
29	1,220	1,380	1,730	1,710	-----	2,610	1,820	1,640	1,530	1,890	2,080	1,840
30	1,400	1,190	1,600	1,790	-----	2,750	2,040	1,550	1,440	2,070	2,080	1,920
31	1,410	-----	1,490	1,730	-----	2,630	-----	1,540	-----	2,070	2,060	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	1,780					1,160			1,390		85,500	
November	1,530					1,190			1,370		81,500	
December	1,830					1,190			1,400		86,100	
January	1,790					1,290			1,530		94,100	
February	3,640					1,490			1,940		108,000	
March	4,490					2,010			2,650		163,000	
April	2,800					1,820			2,280		136,000	
May	3,170					1,540			2,430		149,000	
June	2,050					1,070			1,450		86,300	
July	2,080					1,280			1,650		101,000	
August	2,100					1,790			2,040		125,000	
September	2,140					1,800			1,990		118,000	
The year	4,490					1,070			1,840		1,330,000	

FEATHER RIVER AT OROVILLE, CALIF.

LOCATION.—Water-stage recorder in sec. 8, T. 19 N., R. 4 E., at highway bridge at Oroville.

DRAINAGE AREA.—3,640 square miles.

RECORDS AVAILABLE.—January, 1902, to September, 1929.

EXTREMES.—Maximum discharge during year, 14,000 second-feet February 4 (gage height, 7.36 feet); minimum, 550 second-feet November 30.

1902-1929: Maximum discharge, 211,000 second-feet March 26, 1928 (gage height, 26.08 feet); minimum, 402 second-feet July 30, 1924.

REMARKS.—Records excellent. Minor diversions above station. The operation of the Big Bend plant of the Great Western Power Co. causes diurnal fluctuations in stage, especially during extremely low water. Attendant for water-stage recorder furnished by Sutter Butte Canal Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,400	1,580	1,540	2,000	2,510	2,840	4,400	5,390	2,540	1,740	2,270	2,020
2	1,480	1,550	1,500	1,960	4,330	2,880	4,280	5,800	2,390	1,920	2,269	1,940
3	1,460	1,910	1,530	2,130	6,540	2,790	4,460	6,560	2,440	1,930	2,268	2,060
4	1,480	1,840	1,560	2,080	11,000	3,360	4,980	6,560	2,450	1,640	2,000	2,210
5	1,520	1,850	1,590	1,900	7,140	3,440	5,220	6,320	2,360	1,840	2,120	2,170
6	1,460	1,830	1,470	1,800	5,860	3,550	4,740	5,880	2,500	1,770	2,220	2,200
7	1,320	1,900	1,560	1,730	4,220	3,750	4,180	5,880	2,420	1,740	2,260	2,200
8	1,270	1,790	1,540	1,800	3,400	3,800	4,300	5,880	2,500	1,800	2,206	2,070
9	1,480	1,740	1,380	1,800	3,140	4,060	4,420	5,680	2,260	1,820	2,249	2,060
10	1,500	1,600	2,020	1,800	2,730	10,400	3,960	5,680	2,560	1,780	2,240	2,140
11	1,500	1,550	2,640	1,840	2,620	8,070	4,000	5,480	2,420	1,806	2,090	2,190
12	1,500	1,520	2,280	1,780	2,680	6,400	3,790	5,280	2,260	1,780	2,100	2,210
13	1,470	1,880	2,260	1,740	2,580	5,490	5,480	5,480	2,250	1,700	2,169	2,220
14	1,520	2,540	1,900	1,800	2,620	4,910	3,720	5,680	2,230	1,670	2,080	2,230
15	1,310	2,320	1,780	1,960	2,510	4,510	3,430	6,100	2,850	1,730	2,269	2,060
16	1,420	1,860	1,560	1,940	2,480	4,240	3,520	6,100	5,180	1,710	2,200	2,120
17	1,640	1,700	1,560	1,900	2,340	4,130	3,760	6,330	3,960	1,710	2,190	2,180
18	1,680	1,560	1,800	1,980	2,340	4,310	3,960	6,100	3,190	1,720	1,960	2,160
19	1,690	1,570	1,640	2,240	2,500	4,450	4,480	4,920	2,740	1,730	2,190	2,140
20	1,740	1,540	1,700	1,920	2,480	4,340	5,490	5,480	2,500	2,000	2,290	2,200
21	1,560	1,500	1,900	2,020	2,560	4,400	4,620	5,280	2,380	2,060	2,200	2,160
22	1,710	1,610	1,620	2,020	2,410	4,820	4,700	5,320	2,260	2,100	2,220	2,040
23	1,760	1,520	1,510	1,960	2,390	5,240	4,640	4,940	2,090	2,130	2,200	2,140
24	1,750	1,540	1,530	1,920	2,340	4,770	4,460	4,660	2,060	2,170	2,220	2,160
25	1,700	1,380	2,360	1,900	2,320	4,520	4,460	4,080	2,190	2,260	2,070	2,180
26	1,680	1,480	2,160	1,930	2,640	4,320	4,460	3,370	2,320	2,340	2,160	2,160
27	1,600	1,560	2,060	1,800	3,100	4,200	4,600	2,900	2,140	2,320	2,200	2,180
28	1,440	1,540	3,000	1,960	3,080	4,330	4,820	2,760	2,100	2,050	2,230	2,160
29	1,500	1,470	3,000	2,260	---	4,420	4,630	2,600	2,020	2,130	2,200	1,940
30	1,600	1,360	2,460	2,560	---	5,000	4,960	2,480	1,820	2,280	2,180	2,100
31	1,650	---	2,100	2,540	---	4,440	---	2,460	---	2,270	2,200	---

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,760	1,270	1,540	94,700
November	2,540	1,360	1,680	100,000
December	3,000	1,380	1,870	115,000
January	2,560	1,730	1,970	121,000
February	11,600	2,320	3,500	194,000
March	10,400	2,760	4,590	282,000
April	5,400	3,430	4,360	259,000
May	6,560	2,460	5,080	312,000
June	5,180	1,820	2,510	149,000
July	2,340	1,640	1,920	118,000
August	2,290	1,960	2,180	134,000
September	2,230	1,940	2,140	127,000
The year	11,600	1,270	2,770	2,010,000

FEATHER RIVER AT NICOLAUS, CALIF.

LOCATION.—Water-stage recorder at highway bridge at Nicolaus, Sutter County.

RECORDS AVAILABLE.—June, 1921, to November, 1929; low-water records only.

REMARKS.—Records good. Considerable water diverted for irrigation above station. Flow partly regulated by power plants of Great Western Power Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	1,400	6,170	2,190	1,340	1,100	1,410	1,830	1,990
2	1,200	6,430	2,360	1,100	1,100	1,340	1,910	1,980
3	1,550	6,960	2,230	1,080	1,190	1,240	1,960	1,950
4	1,630	7,800	2,160	1,100	1,130	1,270	2,070	1,890
5	1,630	8,080	2,160	1,000	1,060	1,440	2,190	1,790
6	1,630	7,660	2,110	745	880	1,520	2,230	1,870
7	1,630	7,240	2,110	745	1,030	1,590	2,190	1,870
8	1,550	6,990	2,160	770	1,100	1,670	2,280	1,910
9	1,400	6,960	2,270	645	1,100	1,590	2,360	1,910
10	1,630	6,960	2,270	645	1,130	1,450	2,360	1,870
11	1,630	6,820	2,480	670	1,160	1,520	2,270	1,710
12	1,710	6,690	2,360	670	1,130	1,750	2,270	1,670
13	1,710	6,430	2,160	670	1,000	1,830	2,230	1,710
14	1,710	6,430	2,080	645	1,130	1,870	2,150	1,870
15	1,710	6,690	1,980	602	1,060	1,790	2,070	1,870
16	1,400	6,820	3,290	540	1,100	1,750	2,150	1,990
17	1,550	7,100	7,360	560	1,100	1,670	2,270	1,910
18	1,630	7,240	6,080	520	1,130	1,750	2,270	1,710
19	1,790	6,960	5,000	520	1,060	1,830	2,150	1,670
20	1,790	6,170	4,050	520	970	1,910	2,230	1,910
21	1,790	6,300	3,420	580	1,160	1,990	2,150	1,910
22	1,710	6,170	2,920	795	1,130	2,070	2,110	1,830
23	1,630	5,910	2,630	795	1,130	2,030	2,190	1,630
24	1,790	5,650	2,360	820	1,200	1,990	2,150	1,520
25	1,880	5,260	1,980	850	1,270	2,110	2,150	1,480
26	1,880	4,680	1,910	940	1,240	2,110	2,190	1,440
27	2,060	3,940	1,910	1,080	1,180	2,070	2,070	1,530
28	2,340	3,220	1,880	1,100	1,270	2,030	1,990	1,590
29	1,880	2,820	1,670	1,080	1,340	2,030	1,950	1,830
30	1,630	2,540	1,480	940	1,380	1,910	2,080	1,440
31	1,790	2,360	-----	1,100	1,380	-----	1,990	-----
Month	Maximum			Minimum		Mean		Run-off in acre-feet
October 1928	2,340			1,260		1,690		104,000
May 1929	8,080			2,360		6,040		371,000
June	7,360			1,480		2,690		160,000
July	1,340			520		809		49,700
August	1,380			880		1,140		70,100
September	2,110			1,240		1,750		104,000
October	2,360			1,830		2,140		132,000
November	1,990			1,440		1,760		105,000
The period	-----			-----		-----		992,000

NOTE.—No record Nov. 1 to Apr. 30.

SPANISH CREEK AT KEDDIE, CALIF.

LOCATION.—Staff gage in SW. ¼ sec. 22, T. 25 N., R. 9 E., at highway bridge at Keddie, 2 miles above junction with Indian Creek.

RECORDS AVAILABLE.—October, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 890 second-feet February 4 (gage height, 6.40 feet); minimum, 6 second-feet parts of August and September. 1911-1929: Maximum discharge, about 11,000 second-feet March 26, 1928 (gage height, 15.5 feet); minimum, 6 second-feet parts of August and September, 1929.

REMARKS.—Records fair. Discharge estimated March 3-10. Water is diverted above station for irrigation in American Valley.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	25	39	50	76	61	56	110	220	76	25	6	6
2.....	26	41	47	72	67	56	72	234	72	25	6	6
3.....	27	61	46	67	122	70	154	234	72	25	6	6
4.....	28	59	45	63	775	100	192	234	72	25	6	6
5.....	32	51	41	59	249	130	192	220	72	20	6	6
6.....	33	68	39	60	234	190	178	205	72	20	6	6
7.....	32	64	39	58	228	180	166	205	81	20	9	9
8.....	29	54	40	56	222	190	166	205	81	20	6	12
9.....	29	51	41	56	220	200	154	178	100	20	9	12
10.....	28	52	46	56	197	700	164	166	106	20	9	12
11.....	29	54	59	56	173	336	154	154	94	20	6	12
12.....	31	56	63	61	149	298	154	154	81	20	6	14
13.....	32	58	66	58	137	205	154	154	72	20	6	14
14.....	33	60	67	54	132	130	154	154	72	20	6	14
15.....	34	59	70	54	120	90	166	154	120	17	6	14
16.....	34	60	67	52	108	110	178	154	178	17	6	14
17.....	34	56	63	51	98	154	178	154	166	17	9	14
18.....	33	60	64	58	88	130	178	154	126	17	6	17
19.....	32	63	59	56	82	90	249	130	100	15	6	14
20.....	32	66	59	59	74	130	264	130	90	14	7.5	14
21.....	32	68	58	58	72	154	249	126	81	14	6	17
22.....	33	68	59	56	64	178	249	110	72	14	6	17
23.....	34	73	61	56	62	130	234	100	72	14	6	17
24.....	34	74	66	55	61	130	234	90	69	14	6	20
25.....	34	68	68	52	59	110	220	81	59	14	6	20
26.....	35	63	76	51	62	130	205	72	45	14	6	20
27.....	35	60	81	54	62	130	205	64	36	14	6	20
28.....	34	59	100	54	56	130	234	64	36	9	6	20
29.....	34	54	201	54	-----	178	234	53	32	9	7.5	20
30.....	34	51	105	56	-----	178	220	42	25	14	6	20
31.....	37	-----	88	59	-----	154	-----	36	-----	9	6	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	37	25	31.9	1,980
November.....	74	39	59.0	3,510
December.....	201	39	65.6	4,030
January.....	76	51	57.6	3,540
February.....	775	56	144	8,000
March.....	700	56	166	10,200
April.....	264	72	188	11,200
May.....	234	36	143	8,790
June.....	178	25	81.0	4,820
July.....	25	9	17.3	1,060
August.....	9	6	6.48	398
September.....	20	6	13.8	821
The year.....	775	6	80.6	58,300

SURFACE WATER SUPPLY, 1929, PART XI

CONCOW CREEK NEAR YANKEE HILL, CALIF.

LOCATION.—Water-stage recorder in NE $\frac{1}{4}$ sec. 16, T. 22 N., R. 4 E., at diverting dam of Spring Valley ditch, 300 feet below Lake Wilenor Dam and 3 miles north of Yankee Hill post office.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 78 second-feet December 12 (gage height, 0.78 foot); no flow for several months.

1927-1929: Maximum discharge, 1,840 second-feet March 26, 1928 (gage height, 5.9 feet); no flow for several months each year.

REMARKS.—Records good. Water is diverted into Spring Valley ditch at station and regulated by Lake Wilenor Reservoir, 300 feet above.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Day	Nov.	Dec.	Day	Nov.	Dec.
1.....	0	0.9	11.....	0	5	21.....	2.2	0
2.....	0	1.0	12.....	0	38	22.....	2.2	0
3.....	0	1.8	13.....	0	41	23.....	1.4	0
4.....	0	1.7	14.....	0	4.5	24.....	1.0	0
5.....	0	2.4	15.....	0	0	25.....	1.0	0
6.....	0	2.4	16.....	0	0	26.....	1.0	0
7.....	0	1.8	17.....	3.5	0	27.....	1.4	0
8.....	0	.9	18.....	1.1	0	28.....	1.4	0
9.....	0	.9	19.....	1.0	0	29.....	2.2	0
10.....	0	5	20.....	1.7	0	30.....	2.6	0
						31.....		0
Month			Maximum	Minimum	Mean	Run-off in acre-feet		
November.....			3.5	0	0.79	47.0		
December.....			41	0	3.53	217		
The year.....			41	0	.86	264		

NOTE.—All flow stored or diverted during months for which no discharge is given.

Daily and monthly discharge, in second-feet, of Concho Creek and Spring Valley ditch,
near Yankee Hill, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	46	4.4	1.2	0.9	1.0	1.0	1.1	1.2	20	32	34
2	11	46	4.5	1.0	.9	1.0	1.0	1.1	1.2	20	39	33
3	11	45	5.5	1.0	.9	1.0	1.0	1.1	1.2	16	29	33
4	11	43	5.5	1.0	1.0	1.0	1.0	1.1	1.2	16	30	33
5	11	41	7	.9	1.0	1.0	1.0	1.1	1.2	22	30	33
6	11	40	7	.9	1.0	1.0	1.0	1.1	1.2	22	33	33
7	22	38	5	.9	1.0	1.0	1.0	1.1	1.2	29	34	33
8	22	35	4.3	.9	1.0	1.0	1.0	1.1	1.2	29	36	32
9	22	13	4.3	.9	1.0	1.0	1.0	1.1	1.2	28	36	32
10	22	14	9	.9	1.0	1.0	1.0	1.1	1.2	28	36	32
11	22	13	8.5	.9	1.0	1.0	1.0	1.1	1.2	24	36	32
12	22	4.7	42	.9	1.0	1.0	1.0	1.1	1.2	18	37	32
13	22	15	45	.9	1.0	1.0	1.0	1.1	1.2	18	37	32
14	21	28	8	.9	1.0	1.0	1.0	1.1	1.2	23	38	21
15	21	47	2.8	.9	1.0	1.0	1.0	1.1	1.2	22	40	14
16	21	46	1.5	.9	1.0	1.0	1.0	1.1	1.2	22	40	14
17	21	24	.9	.9	1.0	1.0	1.0	1.1	1.2	22	40	14
18	21	5.5	.9	.9	1.0	1.0	1.0	1.1	1.2	22	43	14
19	21	5	.9	.9	1.0	1.0	1.0	1.1	1.2	23	43	14
20	21	5.5	.9	.9	1.0	1.0	1.0	1.1	1.2	23	43	14
21	21	6	.9	.9	1.0	1.0	1.0	1.1	1.2	23	43	14
22	21	6	.9	.9	1.0	1.0	1.1	1.1	1.2	23	43	14
23	21	5	.9	.9	1.0	1.0	1.1	1.2	1.2	24	42	13
24	21	4.6	1.4	.9	1.0	1.0	1.1	1.2	1.2	24	42	13
25	49	4.6	1.4	.9	1.0	1.0	1.1	1.2	8	27	43	13
26	49	4.5	1.4	.9	1.0	1.0	1.1	1.2	14	27	43	13
27	49	4.9	1.4	.9	1.0	1.0	1.1	1.2	9	27	45	13
28	48	4.9	1.4	.9	1.0	1.0	1.1	1.2	4.7	28	45	13
29	48	5.5	1.4	.9	1.0	1.0	1.1	1.2	11	28	34	12
30	47	6	1.4	.9	1.0	1.0	1.1	1.2	20	32	34	12
31	47	1.4	.9	1.0	1.0	1.0	1.1	1.2	32	34	34	12

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	49	11	25.5	1,570
November	47	4.5	20.2	1,200
December	45	.9	5.86	380
January	1.2	.9	.92	56.8
February	1.0	.9	.99	55.0
March	1.0	1.0	1.00	61.5
April	1.1	1.0	1.03	61.3
May	1.2	1.1	1.13	69.5
June	20	1.2	3.18	189
July	32	16	23.9	1,470
August	45	29	37.7	2,320
September	34	12	22.0	1,310
The year	49	.9	12.1	8,720

SURFACE WATER SUPPLY, 1929, PART XI

SPRING VALLEY DITCH NEAR YANKEE HILL, CALIF.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 16, T. 22 N., R. 4 E., just below diversion dam, 3 miles north of Yankee Hill post office.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—1927-1929: Maximum mean daily discharge, 49 second-feet October 25-27, 1928.

REMARKS.—Records good. Canal diverts from left bank of Concow Creek 300 feet below Lake Wilenor Reservoir. The water is used for power and irrigation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	46	3.5	1.2	0.9	1.0	1.0	1.1	1.2	20	22	34
2	11	46	3.5	1.0	.9	1.0	1.0	1.1	1.2	20	29	35
3	11	45	3.6	1.0	.9	1.0	1.0	1.1	1.2	16	29	35
4	11	43	2.6	1.0	1.0	1.0	1.0	1.1	1.2	16	30	35
5	11	41	3.5	.9	1.0	1.0	1.0	1.1	1.2	22	30	35
6	11	40	3.5	.9	1.0	1.0	1.0	1.1	1.2	22	33	33
7	22	38	3.4	.9	1.0	1.0	1.0	1.1	1.2	29	34	35
8	22	35	3.4	.9	1.0	1.0	1.0	1.1	1.2	29	36	32
9	22	13	3.4	.9	1.0	1.0	1.0	1.1	1.2	28	36	32
10	22	14	3.8	.9	1.0	1.0	1.0	1.1	1.2	28	36	32
11	22	13	3.6	.9	1.0	1.0	1.0	1.1	1.2	24	36	33
12	22	4.7	3.6	.9	1.0	1.0	1.0	1.1	1.2	18	37	32
13	22	15	4.2	.9	1.0	1.0	1.0	1.1	1.2	18	37	32
14	21	28	3.7	.9	1.0	1.0	1.0	1.1	1.2	23	38	21
15	21	47	2.8	.9	1.0	1.0	1.0	1.1	1.2	22	40	14
16	21	46	1.5	.9	1.0	1.0	1.0	1.1	1.2	22	40	14
17	21	20	.9	.9	1.0	1.0	1.0	1.1	1.2	22	40	14
18	21	4.2	.9	.9	1.0	1.0	1.0	1.1	1.2	22	43	14
19	21	4.1	.9	.9	1.0	1.0	1.0	1.1	1.2	23	43	14
20	21	4.0	.9	.9	1.0	1.0	1.0	1.1	1.2	23	43	14
21	21	3.8	.9	.9	1.0	1.0	1.0	1.1	1.2	23	43	14
22	21	3.6	.9	.9	1.0	1.0	1.1	1.1	1.2	23	43	14
23	21	3.6	.9	.9	1.0	1.0	1.1	1.2	1.2	24	42	13
24	21	3.6	1.4	.9	1.0	1.0	1.1	1.2	1.2	24	42	13
25	49	3.6	1.4	.9	1.0	1.0	1.1	1.2	8	27	48	13
26	49	3.5	1.4	.9	1.0	1.0	1.1	1.2	14	27	43	13
27	49	3.5	1.4	.9	1.0	1.0	1.1	1.2	9	27	45	15
28	48	3.5	1.4	.9	1.0	1.0	1.1	1.2	4.7	28	45	15
29	48	3.5	1.4	.9	-----	1.0	1.1	1.2	11	28	34	12
30	47	3.5	1.4	.9	-----	1.0	1.1	1.2	20	32	34	12
31	47	-----	1.4	.9	-----	1.0	-----	1.2	-----	32	34	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	49	11	25.5	1,579
November.....	47	3.5	19.4	1,150
December.....	4.2	.9	2.33	143
January.....	1.2	.9	.92	56.6
February.....	1.0	.9	.99	55.0
March.....	1.0	1.0	1.00	61.5
April.....	1.1	1.0	1.03	61.3
May.....	1.2	1.1	1.13	69.5
June.....	20	1.2	3.18	189
July.....	32	16	23.9	1,470
August.....	45	29	37.7	2,327
September.....	34	12	22.0	1,316
The year.....	49	.9	11.7	8,400

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 1½ miles northwest of Clio.

RECORDS AVAILABLE.—October, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 590 second-feet March 12 (gage height, 3.68 feet); minimum, 6 second-feet August 24.

1925-1929: Maximum discharge, 11,000 second-feet March 26, 1928 (gage height, 12.0 feet); minimum, 6 second-feet August 8, 1926, and August 24, 1929.

REMARKS.—Records good except those for estimated periods, which are fair.

Daily discharge not determined October 1 to November 30, except for few scattered days. Numerous small irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.				154	69	162	212	160	62	22	11	8
2.				151	87	191	217	141	47	20	11	8.5
3.				163	106	229	217	122	41	22	11	8.5
4.				114	198	263	227	101	38	28	12	9
5.			• 27	116	158	306	196	95	37	30	11	9
6.				87	• 100	334	164	84	37	26	11	10
7.				74	• 80	336	196	76	48	24	11	10
8.				65	• 75	348	229	74	46	21	12	10
9.				59	• 70	369	210	76	74	17	12	11
10.			95	54	• 70	467	227	74	52	14	11	11
11.			59	51	• 65	456	250	72	45	12	12	11
12.	24		43	48	• 60	530	298	71	38	11	8.5	11
13.		30	45	48	• 60	485	286	73	35	10	7.5	11
14.		35	43	48	59	348	276	72	32	10	8	11
15.		42	42	50	58	265	286	71	119	10	8	11
16.	24		42	51	62	222	278	68	81	10	8.5	11
17.			42	54	68	205	237	65	65	10	8	11
18.			41	56	71	203	186	63	56	10	8	11
19.			41	59	71	184	191	62	52	11	8	11
20.			• 40	52	82	184	205	63	48	12	8	12
21.			• 39	52	88	215	198	59	43	12	8	13
22.			• 39	54	100	345	203	55	36	12	8	13
23.			• 39	45	127	268	175	55	34	12	8	14
24.			48	42	121	234	173	52	80	13	7	16
25.			150	42	140	283	198	50	27	13	7.5	16
26.			88	42	127	314	196	46	24	13	8	16
27.			109	42	136	292	198	43	24	13	8	16
28.		28	164	43	162	325	184	40	24	12	8	16
29.	24		103	45		366	191	37	25	12	8	18
30.			138	47		311	177	36	23	12	8	19
31.			145	56		247		40		12	8	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			• 23	1,419
November			• 35	2,080
December			59.3	2,650
January	164	42	68.3	4,089
February	198	58	95.4	5,300
March	530	162	300	18,400
April	286	164	215	12,800
May	160	36	70.8	4,350
June	119	23	44.8	2,579
July	30	10	15.0	922
August	12	7	9.16	563
September	19	8	12.1	720
The year	530	7	78.6	56,900

• Estimated.

MIDDLE FORK OF FEATHER RIVER NEAR NELSON POINT, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 16, T. 23 N., R. 10 E., at Rocky Bar, three-fourths mile below mouth of Nelson Creek and 2 miles below Nelson Point.

RECORDS AVAILABLE.—December, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,140 second-feet June 16 (gage height, 3.19 feet); minimum, 47 second-feet September 17.

1923-1929: Maximum discharge, about 22,000 second-feet March 27, 1928 (gage height, 16.0 feet); minimum, 36 second-feet August 12-14, 1924.

REMARKS.—Records excellent. Discharge estimated December 18-20 and February 8-15. Numerous small irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	96	105	228	152	246	437	690	332	152	66	48
2	81	96	105	222	195	271	442	733	328	144	64	48
3	84	128	106	231	240	297	455	825	300	136	62	49
4	87	132	108	203	428	347	506	825	284	134	62	51
5	87	114	106	190	343	406	492	771	274	132	61	51
6	86	140	105	179	300	460	406	701	274	132	62	51
7	86	122	105	162	231	460	390	675	290	124	62	51
8	84	110	110	180	220	469	433	690	293	118	61	49
9	84	108	112	148	210	540	415	712	374	112	61	51
10	84	105	144	142	200	936	402	690	370	106	60	54
11	86	99	167	142	190	701	446	670	321	101	58	51
12	89	106	132	142	180	701	469	685	297	97	58	49
13	90	122	136	142	170	690	492	744	280	96	56	49
14	92	136	128	144	160	550	474	771	271	92	53	49
15	92	132	128	132	150	446	497	771	481	89	53	49
16	92	124	128	130	140	398	535	798	812	86	52	49
17	92	120	128	136	152	374	533	798	590	84	52	48
18	90	114	126	134	160	374	526	744	469	84	52	49
19	90	112	124	140	155	362	540	744	394	79	52	49
20	92	112	124	138	162	358	535	744	347	79	51	51
21	92	114	122	138	169	402	521	717	317	78	51	52
22	90	116	122	138	152	706	516	701	290	78	51	53
23	90	116	122	144	200	580	492	695	268	74	51	53
24	90	116	122	142	214	469	483	665	246	73	49	54
25	90	112	307	132	211	460	516	565	225	73	49	56
26	92	110	246	124	217	487	555	469	208	72	51	58
27	92	112	274	124	208	487	600	406	195	70	51	58
28	92	110	402	124	231	535	640	366	182	68	51	58
29	92	106	258	128	-----	610	615	343	172	68	51	58
30	99	103	217	128	-----	595	665	328	162	68	51	60
31	97	-----	220	138	-----	497	-----	321	-----	67	49	-----
Month	Maximum					Minimum			Mean		Run-off in acre-feet	
October	99					81			89.2		5,480	
November	136					96			115		6,840	
December	307					105			156		8,520	
January	231					124			151		8,280	
February	428					140			206		11,600	
March	936					246			491		20,620	
April	665					390			501		20,600	
May	825					321			657		40,400	
June	812					162			322		19,300	
July	152					67			95.7		5,580	
August	66					49			58.2		3,390	
September	60					48			51.8		3,080	
The year	936					48			241		175,000	

MIDDLE FORK OF FEATHERS RIVER AT BIDLWELL BAR, CALIF.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ 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.

RECORDS AVAILABLE.—October, 1911, to September, 1920.

EXTREMES.—Maximum discharge during year, 4,720 second-feet February 4 (gage height, 7.4 feet); minimum, 130 second-feet August 27 to September 30.

1911-1929: Maximum discharge, about 100,000 second-feet March 26, 1928 (gage height, 22.8 feet); minimum, 100 second-feet August 30 to September 15, 1924.

REMARKS.—Records fair. Diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	185	205	230	560	520	475	1,500	2,580	1,010	440	185	130
2	185	205	230	520	1,980	520	1,430	2,830	950	480	185	130
3	185	255	255	560	1,580	520	1,360	2,960	890	370	185	130
4	185	370	280	560	4,720	610	1,660	3,240	880	340	185	130
5	185	340	255	* 515	2,350	780	1,740	3,240	770	310	185	130
6	185	370	255	* 470	1,880	1,030	1,500	2,960	770	310	185	130
7	185	370	255	* 435	1,320	960	1,360	2,580	710	340	185	130
8	185	310	230	* 380	1,080	1,030	1,360	2,460	660	340	185	130
9	185	280	230	340	810	1,100	1,430	2,460	830	310	185	130
10	185	255	255	355	780	4,560	1,360	2,580	1,010	280	185	130
11	185	255	610	310	720	2,830	1,220	2,460	830	280	185	130
12	185	255	680	280	660	2,060	1,150	2,580	770	280	185	130
13	185	370	440	310	610	1,740	1,360	2,350	710	280	185	130
14	185	440	370	340	565	1,500	1,430	2,580	660	255	165	130
15	185	* 405	310	340	565	1,430	1,360	2,580	660	255	165	130
16	185	370	310	340	565	1,290	1,500	2,580	2,350	255	165	130
17	185	340	280	370	520	1,150	1,580	2,460	1,980	255	147	130
18	185	310	280	340	475	1,220	1,580	2,350	1,430	230	147	130
19	185	280	280	400	520	1,150	1,980	2,160	1,010	230	147	130
20	185	280	280	400	475	1,220	2,350	2,060	830	230	147	130
21	185	280	255	370	475	1,290	2,060	1,980	660	205	147	130
22	185	255	255	340	475	1,740	2,060	1,980	710	205	147	130
23	185	255	255	310	475	2,060	1,820	1,900	770	205	147	130
24	185	255	255	370	520	1,500	1,820	1,660	610	205	147	130
25	185	255	830	370	520	1,360	1,820	1,580	560	205	147	130
26	205	255	830	370	520	1,290	2,060	1,430	560	205	147	130
27	205	255	770	340	520	1,360	2,250	1,220	560	205	130	130
28	205	255	940	370	475	1,430	2,460	1,010	520	205	130	130
29	205	255	830	440	-----	1,500	2,350	950	480	205	130	130
30	205	230	680	520	-----	1,580	2,350	1,010	* 460	205	130	130
31	230	-----	560	520	-----	* 1,540	-----	1,010	-----	205	130	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	230	185	190	11,700
November	440	205	294	17,500
December	950	230	411	25,360
January	560	280	401	24,700
February	4,720	475	951	52,800
March	4,560	475	1,410	85,740
April	2,460	1,150	1,710	102,000
May	3,240	950	2,190	123,000
June	2,350	460	854	50,800
July	440	205	266	16,400
August	185	130	162	9,000
September	130	130	130	7,740
The year	4,720	130	746	541,000

* Estimated.

25585-31-15

GRIZZLY CREEK NEAR PORTOLA, CALIF.

LOCATION.—Water-stage recorder in NE. ¼ sec. 12, T. 23 N., R. 13 E., 1½ miles below Grizzly Valley Reservoir dam site, 2 miles above Clover Valley Ice Co.'s dam, and 6 miles northeast of Portola.

RECORDS AVAILABLE.—October, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 250 second-feet March 23 (gage height, 2.72 feet); minimum, 0.2 second-foot July 22 to September 2 and September 10-14.

1925-1929: Maximum discharge, 2,680 second-feet March 23, 1928 (gage height, 7.50 feet); minimum, that of July to September, 1929.

REMARKS.—Records good except those for December 12-27, January 7 to March 3, and July 14-25, which were estimated. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	1.6	1.1	8		2.0	57	32	2.2	0.6	0.2	0.2
2	.8	1.6	1.1	6		2.2	70	28	2.2	.5	.2	.2
3	.8	1.6	1.1	5.5		2.6	64	26	2.2	.5	.2	.3
4	.8	1.8	1.2	4.6		4.2	63	24	2.4	.5	.2	.3
5	.8	2.0	1.4	4.6		10	29	23	2.4	.5	.2	.3
6	.8	2.0	1.5	4.0		24	26	20	2.4	.5	.2	.3
7	.8	2.2	1.4	3.8		26	27	18	2.4	.5	.2	.3
8	.8	2.2	1.2	3.6		31	23	16	3.0	.5	.2	.3
9	.8	1.8	1.1	3.4		44	17	15	3.8	.4	.2	.3
10	.8	1.6	1.1	3.2		68	20	14	6	.4	.2	.2
11	.8	1.5	1.1	3.0		46	25	14	7	.4	.2	.2
12	.9	1.4	1.1	2.8		35	51	13	6	.4	.2	.2
13	.9	1.5	1.1	2.6		29	43	12	4.2	.4	.2	.2
14	.9	2.0	1.1	2.5		24	44	12	3.2	.3	.2	.2
15	.9	1.7	1.1	2.4	2.5	21	61	12	2.4	.3	.2	.3
16	.9	1.2	1.0	2.3		20	75	10	5	.3	.2	.2
17	.8	1.1	1.0	2.2		22	80	10	11	.3	.2	.2
18	.8	1.2	1.0	2.1		25	68	9	10	.3	.2	.2
19	.8	1.2	1.0	2.0		26	68	9	8	.3	.2	.2
20	.8	1.1	1.0	1.9		37	53	8	4.6	.3	.2	.3
21	.8	1.1	1.0	1.8		63	49	7	3.0	.3	.2	.2
22	.8	1.1	1.0	1.8		35	54	6	2.1	.2	.2	.3
23	.9	1.2	1.0	1.8		50	43	5.5	1.7	.2	.2	.3
24	1.0	1.4	1.0	1.8		34	42	4.6	1.4	.2	.2	.3
25	1.0	1.4	1.2	1.8		27	38	4.0	1.0	.2	.2	.3
26	1.1	1.2	.5	1.8		26	43	3.6	.9	.2	.2	.3
27	1.1	1.2	10	1.8		61	41	3.2	.8	.2	.2	.3
28	1.2	1.4	30	1.8		121	39	3.0	.8	.2	.2	.3
29	1.4	1.4	23	1.8		121	40	2.8	.7	.2	.2	.3
30	1.4	1.2	17	1.8		84	33	2.4	.6	.2	.2	.3
31	1.6		12	1.8		47		2.2		.2	.2	.2

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.6	0.7	0.93	57.2
November	2.2	1.1	1.50	83.3
December	30	1.0	4.35	267
January	8	1.8	2.91	189
February			2.5	159
March	135	2.0	40.9	2,619
April	80	17	46.2	2,740
May	32	2.2	11.9	773
June	11	.6	3.45	245
July	.6	.2	.34	20.9
August	.2	.2	.20	12.2
September	.3	.2	.28	16.7
The year	135	.2	9.62	6,660

SOUTH FORK OF FEATHER RIVER NEAR LA PORTE, CALIF.

LOCATION.—Water-stage recorder in sec. 32, 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.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 486 second-feet February 4 (gauge height, 4.49 feet); minimum, 1.1 second-feet October 1.

1927-1929: Maximum discharge, 2,600 second-feet March 26, 1928 (gauge height, 7.00 feet); minimum, 1.1 second-feet parts of August, September, and October 1, 1928.

REMARKS.—Records excellent except those for October 23 to November 7 and January 15 to February 2, which were estimated. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	1.6	4.3	12	8	14	105	271	85	28	4.0	1.5
2	1.2	1.6	4.3	11	8	17	114	300	75	25	3.7	1.5
3	1.4	10	4.4	10	26	21	118	331	70	24	3.6	1.5
4	2.0	8	4.5	10	358	28	122	338	66	20	3.2	1.5
5	1.6	6	4.5	10	124	33	111	331	62	18	3.0	1.5
6	1.4	8	4.3	9.5	46	36	95	312	62	17	3.0	1.5
7	1.4	6	4.2	8.5	34	37	86	303	67	15	2.7	1.6
8	1.3	4.4	3.8	8.5	26	38	79	312	65	14	2.6	1.6
9	1.3	4.2	3.7	7	22	85	72	309	92	12	2.4	1.6
10	1.3	3.8	4.6	6.5	20	218	65	306	75	12	2.4	1.6
11	1.3	3.6	6.5	6.5	18	116	62	303	64	11	2.3	1.5
12	1.4	4.4	6	6.5	16	85	62	300	57	10	2.3	1.5
13	1.4	5.5	6.5	6.5	16	64	62	318	51	10	2.1	1.4
14	1.4	8.5	5.5	6	16	54	58	312	47	10	2.0	1.4
15	1.4	6.5	5.5	6	15	50	63	315	146	9.5	2.0	1.4
16	1.4	4.9	5	6	14	48	78	334	162	8.5	1.9	1.4
17	1.4	5	5	6	13	50	94	328	140	8	1.8	1.3
18	1.4	5	4.9	6	12	51	105	306	114	7.5	1.8	1.4
19	1.4	4.8	4.6	6	12	53	126	303	100	6.5	1.8	1.4
20	1.4	4.6	4.5	6	11	58	131	291	88	6.5	1.7	1.3
21	1.4	4.6	4.9	6	11	72	129	274	78	6	1.7	1.5
22	1.4	4.8	5	6	12	119	121	287	69	6	1.7	1.5
23	1.4	4.8	5	5.5	12	92	118	240	61	5.5	1.6	1.5
24	1.4	4.8	6	5.5	12	79	128	211	54	5.5	1.6	1.5
25	1.4	4.6	25	5.5	12	71	142	176	48	5.5	1.6	1.5
26	1.4	4.5	18	5.5	10	65	164	143	44	4.9	1.6	1.5
27	1.4	4.6	20	5.5	12	70	196	121	39	4.6	1.6	1.5
28	1.4	4.8	34	5.5	12	83	208	108	35	4.3	1.6	1.6
29	1.4	4.5	22	5.5	12	101	220	190	32	4.3	1.6	1.5
30	2.0	4.4	15	7	110	244	93	31	4.5	1.5	1.6	1.6
31	1.6	13	7.5	104	89	89	89	89	4.3	1.5	1.5	1.5

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.0	1.2	1.43	37.9
November	10	1.6	5.09	303
December	34	3.7	8.53	524
January	12	5.5	7.08	435
February	358	8	32.4	1,800
March	218	14	68.5	4,210
April	244	58	116	6,900
May	338	89	259	15,900
June	162	31	72.7	4,320
July	28	4.3	10.6	652
August	4.0	1.5	2.19	135
September	1.6	1.2	1.51	89.8
The year	358	1.2	48.9	35,400

SURFACE WATER SUPPLY, 1929 PART XI

SOUTH FORK OF FEATHER RIVER AT ENTERPRISE, CALIF.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 1, T. 19 N., R. 5 E., 800 feet above mouth of Powell Creek and half a mile above highway bridge at Enterprise.

RECORDS AVAILABLE.—October, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,290 second-feet March 10 (gage height, 5.8 feet); minimum, 0.5 second-foot parts of August and September.

1911-1929: Maximum discharge, about 15,200 second-feet March 26, 1928 (gage height, 16.0 feet); minimum, 0.2 second-foot August 11, 1917.

REMARKS.—Records fair: Irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	28	61	48	61	125	264	488	74	28	0.8	0.5
2	.7	28	48	48	465	125	264	518	82	20	.8	.5
3	1.6	48	42	112	430	125	306	580	74	20	.8	.5
4	1.6	48	37	76	800	147	458	580	74	20	.8	.5
5	6	48	37	68	518	147	352	580	74	20	.8	.5
6	3.2	48	37	61	431	170	306	458	74	20	.5	.5
7	3.2	42	32	54	306	170	264	404	74	17	.5	.5
8	1.6	42	32	48	228	170	306	378	82	9	.5	.5
9	1.6	37	32	54	196	196	404	404	90	7	.5	.5
10	1.6	37	32	42	196	1,290	306	431	90	5	.5	.5
11	1.2	37	61	48	170	518	306	458	90	5	.5	.5
12	1.2	37	76	48	170	458	196	458	82	5	.5	.5
13	1.2	76	76	42	158	352	196	431	74	5	.5	.5
14	1.2	112	76	42	147	306	212	378	60	3.0	.5	.5
15	1.2	98	61	37	136	264	228	404	60	3.0	.5	.5
16	1.2	98	48	48	136	228	246	352	264	3.0	.5	.5
17	1.2	61	48	42	125	228	246	352	228	3.0	.5	.5
18	1.2	61	48	42	125	228	264	352	170	2.2	.5	.7
19	1.2	37	42	48	116	212	518	352	186	2.2	.5	.5
20	1.2	37	42	48	116	212	431	352	125	2.2	.5	.5
21	1.2	37	42	48	107	212	404	306	90	1.0	.5	.5
22	1.2	37	37	48	107	352	378	264	74	1.0	.5	.5
23	1.2	37	37	48	107	329	378	228	74	1.0	.5	.5
24	1.2	37	37	48	107	329	352	196	74	1.0	.5	.5
25	1.6	37	132	48	107	265	352	183	60	1.0	.5	.5
26	1.6	37	112	48	125	228	352	147	48	1.0	.5	.5
27	1.6	37	112	48	125	228	404	186	48	.8	.5	.5
28	1.6	61	132	61	125	196	431	116	48	.8	.5	.5
29	1.6	61	132	76	-----	228	458	90	38	.8	.5	1.0
30	1.6	61	63	68	-----	306	458	82	28	.8	.5	1.0
31	28	-----	61	68	-----	285	-----	74	-----	.8	.5	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	28	0.7	2.46	161
November	112	28	49.7	2,960
December	132	32	61.1	3,760
January	112	37	53.7	3,300
February	800	61	212	11,800
March	1,290	125	279	17,200
April	518	196	328	19,500
May	580	74	340	20,000
June	264	28	88.6	5,370
July	28	.8	6.76	418
August	.8	.5	.55	618
September	1.0	.5	.64	32.1
The year	1,290	.5	118	85,300

LOST CREEK NEAR CLIFFER 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 Cliffer Mills.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 560 second-foot March 10 (gauge height, 8.30 feet); minimum, 0.2 second-foot November 25-28, December 28 to January 31, and July 16 to August 13.

1927-1929: Maximum discharge, 2,900 second-foot March 23, 1928 (gauge height, 6.10 feet); minimum, 0.2 second-foot several days in 1929.

REMARKS.—Records excellent except those for estimated periods, which are fair. Forbestown ditch diverts from Lost Creek Reservoir 1,000 feet above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	1.8	2.0	1.5		1.0	20	42	83	1.4	0.5	0.2	0.5
2.....	1.8	2.1	1.6		2.1	35	43	84	1.2	0.5	0.2	0.5
3.....	1.8	6	2.0		2.7	38	47	87	9	0.5	0.2	0.5
4.....	1.8	6.5	2.1		72	43	106	87	8	0.5	0.2	0.5
5.....	1.8	6.5	2.1		130	48	102	81	8	0.5	0.2	0.5
6.....	1.8	6.5	2.0		94	50	68	70	8	0.4	0.2	0.5
7.....	1.8	6.5	2.0		60	51	48	34	8	0.4	0.2	0.5
8.....	1.8	6.5	2.1		46	50	51	7	8	0.4	0.2	0.5
9.....	1.8	6.5	2.0		45	126	43	10	8	0.4	0.2	0.5
10.....	1.8	6	1.7		40	358	38	13	1.4	0.4	0.2	0.5
11.....	1.8	6	.8		38	138	37	14	1.0	0.3	0.2	0.5
12.....	1.8	6	.8		35	97	38	37	8	0.3	0.2	0.5
13.....	1.8	6	.8		34	78	39	36	8	0.3	0.2	0.5
14.....	1.8	10	.8		32	68	42	34	8	0.3	2.2	0.5
15.....	1.8	21	.8		32	63	41	32	8	0.3	3.4	0.5
16.....	1.8	28	1.0	0.2	31	62	46	27	48	0.2	4.0	0.5
17.....	1.8	27	1.2		31	60	59	25	30	0.2	4.2	7.5
18.....	1.8	10	1.4		30	64	65	22	17	0.2	4.4	8
19.....	1.8	0.4	1.4		20	54	157	18	10	0.2	4.8	8
20.....	1.8	0.4	1.4		7.5	41	147	19	5	0.2	4.2	8
21.....	1.8	0.4	1.5		8	50	114	10	2.4	0.2	3.6	8
22.....	1.8	0.3	2.0		8	106	110	12	1.0	0.2	3.8	8
23.....	1.8	0.3	2.1		9.5	70	92	10	8	0.2	4.0	8
24.....	1.8	0.3	2.4		9	56	88	8	7	0.2	4.0	8
25.....	1.8	0.2	.8		19	45	78	6.5	6	0.2	4.2	6.5
26.....	1.8	0.2	0.6		32	39	80	4.8	6	0.2	4.4	6.5
27.....	1.8	0.2	0.4		31	38	81	3.0	6	0.2	5.5	7
28.....	1.8	0.2	0.3		23	43	87	1.4	6	0.2	6	7
29.....	1.8	0.4	0.2			48	81	1.4	6	0.2	6.5	7
30.....	1.8	1.5	0.2			52	83	1.4	6	0.2	6.5	7
31.....	2.0		0.2			46		1.3		0.2	6.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2.0	1.8	1.81	111
November.....	28	.2	5.80	345
December.....	2.4	.2	1.30	78.9
January.....			.2	13.3
February.....	130	1.0	33.0	1,836
March.....	358	20	68.9	4,246
April.....	157	37	71.7	4,270
May.....	87	1.3	28.4	1,750
June.....	48	.6	4.65	277
July.....	5	.2	0.30	18.4
August.....	6.5	.2	2.74	163
September.....	8	4.8	6.83	406
The year.....	358	.2	18.6	13,500

• Estimated.

Daily and monthly discharge, in second-feet, of Lost Creek and Forbestown ditch near Clipper Mills, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	37	35	22		1.0	28	65	107	36	36	24	42
2.....	36	35	22		2.1	35	66	108	36	36	24	42
3.....	36	39	22		2.7	38	70	111	36	36	24	42
4.....	35	36	22		72	43	108	111	36	36	24	42
5.....	35	36	22		130	48	105	107	35	36	24	42
6.....	35	36	22		94	50	88	98	35	36	24	42
7.....	35	36	22		60	51	68	62	35	36	24	39
8.....	35	34	22		46	50	71	36	35	36	24	42
9.....	36	32	23		45	126	63	42	35	36	24	42
10.....	36	31	1.7		40	358	58	47	36	30	24	42
11.....	36	31	.8		38	138	57	48	36	31	24	42
12.....	35	31	.8		35	97	59	71	35	31	24	41
13.....	35	31	.8		34	78	60	70	35	31	25	41
14.....	35	26	.8		32	68	63	68	35	31	28	41
15.....	35	21	.8		32	63	65	66	35	31	39	41
16.....	35	28	1.0	0.2	31	62	68	61	79	31	40	42
17.....	35	27	1.2		31	60	81	59	61	31	40	44
18.....	36	10	1.4		30	64	87	57	48	31	40	43
19.....	36	.4	1.4		34	66	175	53	41	31	40	44
20.....	35	.4	1.4		30	64	167	54	37	31	40	43
21.....	35	.4	1.5		31	73	134	45	37	31	39	44
22.....	34	.3	2.0		31	129	130	47	36	31	39	49
23.....	35	.3	2.1		32	93	112	45	36	31	39	44
24.....	35	.3	2.4		32	79	108	43	36	34	39	45
25.....	35	.2	.8		26	68	100	42	36	34	40	42
26.....	35	.2	.6		32	62	102	40	36	34	39	42
27.....	34	.2	.4		31	61	103	38	36	34	40	42
28.....	34	.2	.3		34	66	109	36	37	34	41	43
29.....	34	14	.2			71	103	36	37	34	42	42
30.....	34	22	.2			75	105	36	37	34	42	42
31.....	33		.2			69		36		34	42	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	37	33	35.1	2,160
November.....	39	.2	19.8	1,180
December.....	23	.2	7.15	440
January.....			.2	12.3
February.....	130	1.0	38.2	2,120
March.....	358	28	78.5	4,830
April.....	175	57	91.7	5,460
May.....	111	36	60.6	3,730
June.....	79	35	38.7	2,300
July.....	36	30	33.2	2,040
August.....	42	34	37.5	2,310
September.....	44	39	42.2	2,510
The year.....	358	.2	40.2	29,100

* Estimated.

FORESTOWN DITCH NEAR CLIPPER MILLS, CALIF.

LOCATION.—Staff gage in sec. 24, T. 20 N., R. 7 E., 1,000 feet below Lost Creek Dam at mouth of tunnel outlet and 2 miles north of Clipper Mills.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 36 second-feet many days during June to September; no flow during several periods.

1927-1929: Maximum mean daily discharge, 37 second-feet July 5-22, 1928; no flow for periods each year.

REMARKS.—Records good. Canal diverts from Lost Creek Reservoir on left bank of Lost Creek. The water is used for irrigation in the Oroville-Wyandotte irrigation district in Butte County.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	33	20	0	8.5	23	24	35	36	34	35
2	34	33	20	0	0	23	24	35	36	34	35
3	34	33	20	0	0	23	24	35	36	34	35
4	33	29	20	0	0	2.8	24	34	36	34	35
5	33	29	20	0	0	2.8	26	34	36	34	35
6	33	29	20	0	0	20	28	34	36	34	35
7	33	29	20	0	0	20	28	34	36	34	34
8	33	28	20	0	0	20	29	34	36	34	35
9	34	25	21	0	0	20	32	35	36	34	35
10	34	25	0	0	0	20	34	35	30	34	35
11	34	25	0	0	0	20	34	35	31	34	35
12	33	25	0	0	0	21	34	34	31	34	35
13	33	25	0	0	0	21	34	34	31	35	35
14	33	16	0	0	0	21	34	34	31	36	35
15	33	0	0	0	0	24	34	34	31	36	35
16	33	0	0	0	0	22	34	31	31	36	35
17	33	0	0	0	0	22	34	31	31	36	36
18	34	0	0	0	0	22	35	31	31	36	35
19	34	0	0	14	12	18	35	31	31	35	36
20	33	0	0	23	23	20	35	32	31	36	35
21	33	0	0	23	23	20	35	35	31	35	36
22	32	0	0	23	23	20	35	35	31	35	35
23	33	0	0	23	23	20	35	35	31	35	36
24	33	0	0	23	23	20	35	35	34	35	35
25	33	0	0	7.5	23	22	35	35	34	36	35
26	33	0	0	0	23	22	35	35	34	35	36
27	32	0	0	0	23	22	35	35	34	35	35
28	32	0	0	11	23	22	35	36	34	35	36
29	32	14	0	-----	23	22	35	36	34	35	35
30	32	20	0	-----	23	22	35	36	34	35	35
31	31	-----	0	-----	23	-----	35	-----	34	35	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	35	31	33.1	2,040
November	33	0	13.9	827
December	21	0	5.84	250
January	23	0	5.27	283
February	23	0	9.56	538
March	24	2.8	19.9	1,180
April	35	24	32.3	1,920
May	36	31	34.2	2,040
June	36	30	33.2	2,040
July	36	34	34.8	2,140
August	36	34	35.2	2,000
September	36	34	35.2	2,000
The year	36	0	21.5	15,600

NOTE.—No flow during January.

PALERMO CANAL AT ENTERPRISE, CALIF.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 1, T. 19 N., R. 6 E., 1,000 feet above the Alm residence at Enterprise and 1 mile below intake at diversion dam on South Fork of Feather River.

RECORDS AVAILABLE.—October, 1911, to September, 1929.

EXTREMES.—1911-1929: Maximum discharge, 43 second-feet July 25, 1927; no flow during periods of every year.

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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Apr.	May	June	July	Aug.	Sept.
1.....	24	0	12	9	0	4.9	32	36	25	22
2.....	24	0	12	9	0	6.5	36	37	24	22
3.....	24	0	10	8.5	0	9.5	34	37	24	22
4.....	26	2.5	10	8.5	0	13	36	37	23	22
5.....	26	2.5	10	8.5	0	14	36	37	22	22
6.....	26	2.5	10	8.5	0	7	36	37	22	23
7.....	25	2.5	10	8.5	0	8	36	37	22	23
8.....	24	2.5	10	8	0	16	33	37	21	20
9.....	24	2.5	10	7.5	0	19	36	37	21	22
10.....	24	2.5	10	7.5	0	19	36	37	21	22
11.....	24	2.5	10	0	0	27	36	37	20	22
12.....	24	2.5	9	0	0	31	36	37	20	22
13.....	24	2.5	9	0	0	28	36	37	19	22
14.....	24	2.5	0	0	0	28	36	36	19	22
15.....	24	2.5	0	0	0	9	36	33	20	22
16.....	24	2.5	0	0	0	23	36	28	22	22
17.....	24	2.5	0	0	0	30	33	32	22	22
18.....	24	2.7	0	0	0	34	20	31	23	23
19.....	24	2.7	0	0	0	37	13	30	23	24
20.....	24	2.7	3.8	0	0	37	12	29	23	24
21.....	24	2.7	9	0	0	31	30	29	22	24
22.....	22	2.7	9	0	0	37	36	28	22	24
23.....	24	2.7	9	0	0	37	36	28	20	24
24.....	24	2.7	9	0	0	37	36	28	20	24
25.....	24	2.5	10	0	0	32	35	28	20	25
26.....	24	2.5	10	0	0	30	36	27	22	24
27.....	24	2.5	10	0	0	28	36	27	21	24
28.....	24	2.5	10	0	0	36	36	26	22	24
29.....	24	9	10	0	4.3	36	36	26	22	24
30.....	24	12	9	0	4.3	36	36	26	22	24
31.....	0	-----	9	0	-----	36	-----	26	22	-----
Month					Maximum	Minimum	Mean		Run-off in acre-feet	
October.....					26	0	23.4		1,440	
November.....					12	0	2.83		168	
December.....					12	0	7.74		476	
January.....					9	0	2.69		144	
April.....					4.3	0	.29		17.3	
May.....					37	4.9	25.1		1,540	
June.....					36	12	33.3		1,680	
July.....					37	26	32.2		1,680	
August.....					25	19	21.6		1,230	
September.....					25	20	22.9		1,240	
The year.....					37	0	14.4		10,590	

NOTE.—No flow during February and March.

MIDDLE FORK OF YUBA RIVER AT MILTON, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 12, T. 19 N., R. 12 E., at diversion dam of Nevada Irrigation District at old town site of Milton and 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, 1929. Record was obtained one-fourth mile below dam 1925-1928.

EXTREMES.—Maximum discharge during year, 322 second-feet June 15 (gage height, 0.56 foot); no spill most of year.

1925-1929: Maximum discharge, 4,070 second-feet at station below dam March 25, 1928 (gage height, 9.45 feet); practically all flow diverted after May 23, 1928, except during May and June, 1929.

REMARKS.—Records good. Discharge estimated May 12-16. Diversion of Middle Fork of Yuba River through Milton-Bowman Tunnel to Bowman Lake began May 21, 1928; all low-water flow diverted. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	May	June	Day	May	June	Day	May	June
1	0	0	11	7	0	21	0	0
2	0	0	12	18	0	22	0	0
3	27	0	13	15	0	23	0	0
4	41	0	14	0	0	24	0	0
5	10	0	15	10	96	25	0	0
6	0	0	16	5	18	26	0	0
7	0	0	17	0	0	27	0	0
8	30	0	18	0	0	28	0	0
9	25	0	19	0	0	29	0	0
10	9	0	20	0	0	30	0	0
						31	0	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May	41	0	6.35	300
June	96	0	3.80	226
The year	96	0	.85	616

NOTE.—No flow during months for which no discharge is given.

MIDDLE FORK OF YUBA RIVER NEAR NORTH SAN JUAN, CALIF.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 23, T. 18 N., R. 8 E., below highway bridge at Freemans Crossing, $1\frac{1}{4}$ miles northeast of North San Juan. Oregon Creek enters three-fourths mile above station.

RECORDS AVAILABLE.—July to October, 1900; October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,290 second-feet February 4 and March 10 (gage height, 6.2 feet); minimum, 23 second-feet September 13, 16, and 17.

1910-1929: Maximum discharge, 26,000 second-feet March 25, 1928 (gage height, 15.3 feet); minimum, 21 second-feet August 12, and 14, 1924.

REMARKS.—Records good. Diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	33	40	46	114	159	119	247	482	173	88	38	24
2.....	33	39	48	105	575	122	219	510	157	93	38	24
3.....	34	60	64	172	440	141	260	510	142	82	37	26
4.....	39	73	56	130	1,290	159	570	802	136	76	37	27
5.....	39	66	52	107	1,200	183	428	570	134	72	36	25
6.....	38	71	49	98	1,110	194	340	510	139	68	36	25
7.....	39	69	51	90	254	198	400	482	136	65	35	26
8.....	38	66	46	80	190	198	455	455	163	64	36	26
9.....	34	66	44	73	130	206	310	455	193	62	36	26
10.....	38	60	52	66	146	1,290	260	428	173	61	35	26
11.....	33	56	112	64	138	510	286	428	153	59	34	25
12.....	33	76	98	69	180	400	310	428	142	56	30	25
13.....	35	102	88	67	124	310	325	482	134	55	30	23
14.....	34	186	82	67	122	278	335	482	125	54	29	24
15.....	35	119	75	66	119	264	340	455	958	52	28	24
16.....	36	159	73	66	119	251	375	510	635	51	28	23
17.....	36	73	67	62	122	264	400	455	540	49	28	23
18.....	36	62	62	64	122	260	428	455	400	49	30	24
19.....	35	60	69	66	117	255	700	455	291	48	29	25
20.....	34	57	69	86	114	251	602	400	231	47	27	25
21.....	34	59	67	82	117	247	570	375	208	46	26	25
22.....	35	60	80	76	122	247	510	375	183	44	27	25
23.....	34	59	84	69	124	482	510	375	166	43	28	25
24.....	34	57	82	60	127	340	482	315	150	43	28	25
25.....	38	82	282	66	124	310	482	260	139	43	28	25
26.....	36	51	950	75	119	278	455	239	125	41	28	25
27.....	36	52	875	73	119	255	482	208	118	42	27	25
28.....	35	51	369	76	117	273	482	183	198	41	26	25
29.....	36	48	231	88	-----	286	455	150	97	41	25	25
30.....	40	46	172	130	-----	296	482	163	97	40	25	25
31.....	40	-----	124	119	-----	264	-----	150	-----	40	25	-----
Month	Maximum				Minimum				Mean		Run-off in acre-feet	
October.....	40				33				35.8		2,200	
November.....	186				39				69.8		4,150	
December.....	950				44				149		9,160	
January.....	172				60				84.7		5,210	
February.....	1,260				114				275		15,300	
March.....	1,290				119				295		18,100	
April.....	700				219				417		24,800	
May.....	602				150				398		24,500	
June.....	958				97				218		18,000	
July.....	98				40				55.3		3,400	
August.....	38				25				30.6		1,880	
September.....	27				23				24.9		1,480	
The year.....	1,290				23				170		123,000	

YUBA RIVER AT SMARTVILLE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 22, T. 16 N., R. 6 E., at Narrows, 1 mile below mouth of Deer Creek and 1 mile north of Smartville. Staff gage at same site and datum used prior to October 11, 1928.

DRAINAGE AREA.—1,220 square miles.

RECORDS AVAILABLE.—June, 1903, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,800 second-feet February 4 (gage height, 6.50 feet); minimum, 115 second-feet September 26.

1903-1929: Maximum discharge, 120,000 second-feet March 26, 1928 (gage height, 26.0 feet); minimum, 71 second-feet July 30, 1924, regulated flow.

REMARKS.—Records good. Water is diverted for power and irrigation above station. Bullards Bar Reservoir has a capacity of 15,000 acre-feet and Bowman Lake, 67,000 acre-feet. Most of the water stored in Bowman Lake is diverted to Bear River Basin.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^a	May	June	July	Aug.	Sept.
1	235	272	419	1,240	857	535	1,570	2,840	1,130	545	290	230
2	235	265	414	1,320	2,000	540	1,530	3,020	1,100	471	284	184
3	200	335	419	1,160	2,170	545	1,570	3,260	1,020	458	280	183
4	235	335	428	920	4,640	649	1,920	3,560	985	448	259	163
5	300	293	424	798	2,270	913	2,380	3,380	943	444	266	163
6	282	293	419	759	2,380	811	2,060	3,140	936	403	273	165
7	300	321	410	746	1,760	837	1,780	2,960	922	375	273	168
8	282	293	419	720	1,360	850	1,920	2,900	1,010	343	266	168
9	265	293	386	708	1,160	899	1,960	3,020	1,060	335	270	171
10	282	300	482	696	1,200	3,120	1,700	2,840	1,330	327	266	174
11	282	290	740	660	1,100	2,380	1,610	2,730	1,210	327	233	174
12	290	296	605	588	1,100	2,380	1,610	2,780	1,060	327	242	168
13	300	455	638	382	1,060	1,920	1,650	2,780	957	331	248	168
14	304	920	632	370	990	1,700	1,650	2,960	922	323	252	135
15	296	864	510	398	955	1,610	1,570	2,840	1,150	319	256	188
16	282	550	464	402	955	1,370	1,650	2,900	4,700	315	289	129
17	272	500	473	394	955	1,330	1,920	2,960	3,380	312	262	121
18	262	464	482	378	955	1,450	2,100	2,730	2,430	312	266	131
19	250	446	468	672	955	1,740	2,580	2,630	1,830	312	270	121
20	256	437	464	836	955	1,530	3,320	2,530	1,490	308	273	129
21	259	419	468	792	920	1,490	2,840	2,380	1,290	298	270	121
22	253	437	455	759	913	2,550	2,840	2,330	1,170	294	266	123
23	256	450	410	740	913	2,680	2,690	2,240	1,020	290	259	125
24	265	450	496	702	906	2,100	2,580	2,140	950	294	262	129
25	272	446	1,360	752	899	1,740	2,480	1,920	894	294	276	129
26	279	437	1,020	752	878	1,650	2,480	1,650	841	290	270	119
27	266	428	837	726	857	1,530	2,580	1,490	822	290	266	119
28	282	424	1,280	678	720	1,570	2,730	1,830	796	284	256	121
29	272	419	1,160	714	-----	1,700	2,730	1,260	679	287	266	125
30	290	419	1,060	792	-----	1,780	2,780	1,170	618	290	269	123
31	293	-----	1,130	818	-----	1,700	-----	1,130	-----	290	259	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	304	200	272	16,700
November	620	265	418	24,900
December	1,360	336	625	38,400
January	1,360	370	721	44,800
February	4,640	720	1,310	72,800
March	3,120	535	1,640	94,700
April	3,320	1,630	2,160	150,000
May	3,560	1,130	2,510	154,600
June	4,700	618	1,290	76,800
July	545	284	340	20,900
August	290	223	264	15,200
September	230	119	148	8,810
The year	4,700	119	953	698,000

MILTON-BOWMAN TUNNEL AT OUTLET, CALIF.

LOCATION.—Water-stage recorder in sec. 4, T. 18 N., R. 12 E., near upper end of Bowman Lake.

RECORDS AVAILABLE.—May, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 343 second-feet May 3 (gage height, 4.83 feet); minimum, about 2.5 second-feet early in October.

1928-1929: Maximum and minimum discharge, same as for 1929.

REMARKS.—Records fair. Daily discharge not determined October 1 to February 24. This tunnel diverts water from Middle Fork of Yuba River at Milton and discharges into Bowman Lake storage reservoir; from there 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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.			8.5	75	280	119	40	8.5	5.5
2.			9.5	84	300	113	36	8	6
3.			10	103	321	106	32	8	6
4.			14	99	321	100	28	8	6
5.			19	85	310	96	26	8	6
6.			24	71	290	94	18	8	6
7.			24	66	290	101	7.5	8	6
8.			24	62	300	106	8	7	6
9.			25	56	300	133	8	7	6
10.			45	46	290	142	8	7	6
11.			47	50	290	120	82	6.5	5.5
12.			40	53	300	107	5.5	6.5	5.5
13.		7.7	34	58	300	104	6	6.5	5
14.			28	56	300	102	6	6.5	5
15.			28	58	300	152	10	6	5
16.			28	86	300	270	11	6	5
17.			29	124	300	250	12	6	5
18.			32	140	290	230	12	6	5
19.			40	121	290	186	12	6	5
20.			46	101	290	150	11	6	5
21.			79	99	300	129	11	6.5	5
22.			121	92	290	112	10	6	5
23.		3.8	105	85	290	98	10	6	5
24.			84	100	290	38	10	6	5
25.		7	79	115	245	78	10	6	5
26.		7.5	83	151	290	67	10	6	5
27.		8	84	200	158	60	10	6	5
28.		8.5	84	220	137	54	9.5	6	5
29.			83	200	128	48	9.5	6	5
30.			86	240	125	42	9.5	5.5	5
31.			77		121		9	6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October			3.0	124
November			4.0	128
December			11.0	128
January			8.0	128
February			8.0	124
March	121	8.5	49.0	3,170
April	240	46	104	6,170
May	321	121	266	16,300
June	270	42	119	7,080
July	40	5.5	14.1	567
August	8.5	5.5	6.63	408
September	6	5	5.35	318
The year	321	5	50.0	36,300

* Estimated.

* Result of discharge measurement.

OREGON CREEK NEAR NORTH SAN JUAN, CALIF.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 28, T. 18 N., R. 8 E., 500 feet above junction with Middle Fork of Yuba River and 2 miles northeast of North San Juan.

RECORDS AVAILABLE.—October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 295 second-feet February 4 (gage height, 5.42 feet); minimum, 1.2 second-feet several days in August and September.

1910-1929: Maximum discharge, about 5,200 second-feet March 25, 1928 (gage height, 9.5 feet); minimum, 1.0 second-foot August 7-10, 1921.

REMARKS.—Records fair except those for extremely low stages, which are poor. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	4.8	6.5	22	29	22	46	95	13	9	1.8	1.6
2	3.0	5	7	19	38	22	46	79	12	8.5	1.8	1.6
3	3.0	12	9	21	26	23	44	69	15	8.5	1.7	1.5
4	4.0	10	8.5	23	295	26	130	66	9	8.5	1.8	1.4
5	4.0	8.5	8	23	178	28	100	68	9	7	1.8	1.3
6	3.8	9	8	18	84	31	89	66	9.5	5	1.8	1.5
7	3.4	6.5	7.5	9.5	54	33	86	61	9	4.5	1.7	1.4
8	3.2	6.5	7	9.5	37	34	96	55	14	4.2	1.7	1.4
9	3.2	6.5	6.5	12	32	35	89	52	17	4.2	1.5	1.3
10	3.6	6	7	13	28	190	84	46	15	4.0	1.4	1.3
11	3.2	5	9	11	26	110	55	40	13	4.0	1.5	1.4
12	3.8	9	9	9	24	96	64	37	11	3.8	1.4	1.5
13	3.8	18	9	12	23	69	66	36	9.5	3.6	1.5	1.5
14	3.8	28	9.5	13	28	62	69	34	9	3.8	1.5	1.4
15	3.8	17	10	10	23	58	79	29	14	3.8	1.7	1.3
16	4.0	15	9.5	9.5	23	54	86	28	46	3.6	1.6	1.3
17	4.0	9.5	9	9.5	22	55	89	23	66	3.2	1.5	1.3
18	4.0	9	9	9	22	54	86	22	40	3.8	1.5	1.3
19	3.6	9	9	10	23	51	112	21	34	3.2	1.4	1.4
20	3.8	9	8.5	15	23	49	165	18	28	2.8	1.5	1.3
21	3.8	9	8.5	14	23	48	150	18	29	3.0	1.4	1.3
22	3.8	9	8.5	13	23	48	182	17	18	2.8	1.4	1.2
23	4.0	8.5	9	9	23	91	124	17	16	2.8	1.3	1.3
24	3.8	8.5	10	9	24	79	118	15	15	3.0	1.4	1.3
25	4.0	7.5	120	10	23	62	110	13	14	2.8	1.3	1.3
26	4.0	7.5	104	12	23	54	100	12	13	2.8	1.3	1.4
27	4.0	7.5	79	11	23	52	116	11	9.5	3.0	1.2	1.4
28	4.0	7	56	13	23	48	112	9.5	9	2.6	1.3	1.3
29	4.0	7	48	15	-----	46	110	9.5	9	2.2	1.2	1.7
30	5	6.5	29	24	-----	46	102	9.5	9	2.0	1.3	1.6
31	4.8	-----	26	27	-----	45	-----	9	-----	1.9	1.4	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5	2.8	3.77	232
November	28	4.8	9.38	558
December	120	6.5	21.4	1,320
January	27	9	14.0	2,601
February	295	22	43.5	2,480
March	190	22	55.5	3,410
April	165	44	95.2	5,669
May	98	9	35.0	3,159
June	66	9	17.5	1,649
July	9	1.9	4.13	264
August	1.8	1.2	1.50	62.2
September	1.8	1.2	1.39	82.7
The year	295	1.2	25.0	18,100

SURFACE WATER SUPPLY, 1929, PART XI

NORTH FORK OF YUBA RIVER NEAR SIERRA CITY, CALIF.

LOCATION.—Water-stage recorder in S. $\frac{1}{4}$ sec. 29, T. 20 N., R. 12 E., $2\frac{1}{4}$ miles below mouth of South Fork of North Fork of Yuba River and $1\frac{1}{2}$ miles west of Sierra City.

DRAINAGE AREA.—93.6 square miles.

RECORDS AVAILABLE.—1911-1913 (fragmentary); December, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,120 second-feet June 15 (gage height, 4.50 feet); minimum, 31 second-feet September 18.

1923-1929: Maximum discharge, about 5,920 second-feet March 25, 1928 (gage height, 8.50 feet); minimum, 28 second-feet September 15, 1926.

REMARKS.—Records good except those for estimated periods, which are fair. Small diversions for mining above station. Gage-height record furnished by Yuba River Power Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	38	44		* 71		* 60	168		237	115	37	41
2.....	40	43		71		* 65	184		229	109	37	41
3.....	40	61		74		* 70	198		212	102	37	41
4.....	45	55		66		79	198		200	97	37	41
5.....	45	49		65		90	172		194	92	37	40
6.....	41	77		61	* 80	91	157	* 550	192	90	37	40
7.....	41	49		59		88	146		217	88	36	40
8.....	39	46		58		83	140		210	83	36	39
9.....	39	44		56		90	137		304	80	36	38
10.....	39	43		54		168	129		237	77	37	38
11.....	41	42		53	55	120	129		214	75	37	37
12.....	43	46		53	55		133	585	207	73	38	37
13.....	44	60		54	55		134	* 600	205	71	38	36
14.....	43	47		53	54		130	* 640	194	69	38	35
15.....	44	50		54	53		137	* 620	497	65	39	34
16.....	44	52	* 60		55		178	* 620	474	62	41	34
17.....	42	50			55		217	650	456	60	42	33
18.....	42				55		234	620	377	59	43	33
19.....	41				54		224	605	310	58	43	33
20.....	41				55	* 120	202	620	265	57	42	34
21.....	41				56			600	248	56	42	34
22.....	41				57			605	229	55	43	34
23.....	41			* 55	58			599	212	54	45	34
24.....	41	* 50			57			583	196	52	43	35
25.....	40				57			443	189	48	43	37
26.....	40				56	* 280		361	166	45	43	37
27.....	41				56			301	154	44	43	36
28.....	40				* 56			274	141	41	43	36
29.....	41					194		262	131	38	43	36
30.....	45					192		245	124	37	44	35
31.....	44					172		234		37	41	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	45	38	41.5	2,560
November.....			49.9	2,970
December.....			* 60	3,090
January.....			57.5	3,040
February.....			64.2	3,570
March.....			116	7,130
April.....			205	12,200
May.....			518	31,900
June.....	497	124	240.	14,300
July.....	115	37	67.4	4,140
August.....	45	36	40.0	2,460
September.....	41	33	36.6	2,180
The year.....	497	33	125	90,600

* Estimated.

NORTH FORK OF YUBA RIVER AT GOODYEAR BAR, CALIF.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 5, T. 10 N., R. 10 E., at highway bridge at Goodyear Bar. Rock Creek enters one-eighth mile and Goodyear Creek one-fourth mile below station.

DRAINAGE AREA.—214 square miles.

RECORDS AVAILABLE.—October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,800 second-feet May 18 (gage height, 5.10 feet); minimum, 90 second-feet August 27 to September 2, 1910-1929. Maximum discharge, about 24,000 second-feet March 26, 1928 (gage height, 15.6 feet); minimum, 80 second-feet August 10 to October 4, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Several mining diversions above station. Gage-height record furnished by United States Forest Service.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	134	134	179	190	* 175	388	900	492	261	139	* 90
2	120	134	134	179	290	* 175	413	* 930	460	248	* 138	* 90
3	129	198	139	195	374	* 180	438	* 970	438	242	* 138	* 95
4	134	184	139	184	474	* 190	552	1,010	438	230	* 137	100
5	134	139	139	158	298	* 200	438	1,050	* 466	224	* 136	100
6	134	134	139	158	252	* 210	388	1,050	* 496	212	* 136	100
7	134	139	139	158	212	* 210	346	* 1,080	* 538	201	* 135	100
8	134	134	134	158	212	* 210	388	* 1,080	* 556	190	* 135	100
9	134	134	134	158	184	290	346	* 1,100	686	190	134	100
10	134	134	252	153	184	724	346	* 1,120	* 626	184	134	100
11	134	134	158	148	179	388	339	1,130	* 566	184	134	100
12	134	158	144	148	171	328	389	1,050	468	184	134	100
13	134	153	144	148	171	262	346	* 1,090	398	179	134	100
14	134	184	139	148	171	274	346	* 1,130	388	179	134	100
15	134	168	139	148	171	274	367	* 1,170	1,060	179	134	98
16	134	144	134	148	168	274	388	1,210	975	168	134	98
17	134	144	134	148	168	274	388	1,210	828	168	134	98
18	134	139	* 130	153	168	274	552	1,300	756	* 163	129	98
19	134	139	* 135	153	168	281	618	1,190	* 600	* 158	123	102
20	134	139	* 135	139	174	281	552	1,210	* 500	153	120	102
21	134	139	* 130	139	* 174	288	585	1,210	* 480	* 150	110	102
22	134	139	* 140	139	* 175	864	552	* 1,100	* 400	* 148	102	106
23	134	139	* 145	139	* 180	522	522	* 990	388	* 146	98	106
24	134	139	* 140	139	* 180	413	552	* 880	346	144	94	106
25	134	139	* 250	139	* 180	354	552	756	310	144	94	106
26	134	139	* 600	139	* 175	363	618	721	308	144	94	106
27	134	134	* 575	139	* 175	371	686	686	282	139	90	106
28	134	134	* 300	144	* 175	388	756	552	281	139	80	106
29	134	134	* 240	158	438	828	552	552	281	139	80	106
30	180	134	* 200	174	413	864	552	552	274	139	* 80	106
31	134	134	* 150	174	388	552	552	552	139	* 90	106	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	139	129	134	8,240
November	198	134	146	8,080
December	600	139	186	11,400
January	195	139	154	9,470
February	474	168	207	11,500
March	864	175	332	20,400
April	864	339	493	29,800
May	1,300	522	977	60,100
June	1,050	274	429	28,700
July	261	139	176	10,800
August	139	90	129	7,390
September	106	90	101	6,610
The year	1,300	90	294	218,000

* Estimated.

ROCK CREEK AT GOODYEAR 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 Goodyear Bar. Woodruff Creek enters 350 feet above station.

DRAINAGE AREA.—10.8 square miles.

RECORDS AVAILABLE.—October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 75 second-foot February 4 (gage height, 5.20 feet); minimum, 0.4 second-foot August 14-21 and September 7-17.

1910-1929: Maximum discharge, about 1,600 second-feet March 25, 1928 (gage height, 10.0 feet); minimum, 0.2 second-foot August 10-14, 1924.

REMARKS.—Records fair. Diversions above station. Gage-height record furnished by United States Forest Service.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.7	1.7	4.6	11	*6	19	46	5.5	3.6	0.5	*0.5
2	.6	1.6	1.7	4.6	24	*6	19	*50	4.7	3.0	*.5	*.5
3	.6	5	2.3	6.5	52	*6	19	*53	4.4	2.1	*.5	*.5
4	.7	2.3	2.1	5.5	75	*6	44	56	4.0	1.7	*.5	*.5
5	.7	1.4	2.1	4.4	36	*7	34	62	*4.0	1.5	*.5	*.5
6	.7	3.0	2.1	4.0	21	*8	27	59	*4.0	1.5	*.5	*.5
7	.7	1.5	2.1	3.6	15	*8	24	*55	*4.0	1.4	*.5	*.5
8	.7	1.4	2.1	3.6	12	*10	28	*51	*6	1.4	*.5	*.5
9	.7	1.3	2.1	3.3	10	16	22	*47	7.5	1.4	*.5	*.5
10	.7	1.3	16	3.3	9	75	21	*44	*6	1.4	*.5	*.5
11	.7	1.3	3.6	2.8	8.5	28	21	41	*5	1.4	*.5	*.5
12	.7	3.0	2.3	2.6	7.5	22	21	42	3.6	1.4	*.5	*.5
13	.7	2.6	2.3	2.3	7.5	18	22	*38	3.6	1.4	*.5	*.5
14	.7	5.5	2.1	2.3	7	16	22	*34	3.6	1.4	*.5	*.5
15	.7	2.6	2.0	2.3	6.5	14	25	*31	49	1.3	*.4	*.5
16	.7	2.3	1.8	2.3	6.5	14	27	28	21	1.3	*.4	*.5
17	.7	2.0	1.8	2.3	6	14	27	21	21	1.2	*.4	*.5
18	.7	1.8	*1.8	2.6	6	14	28	20	16	1.2	*.4	*.5
19	.7	1.8	*1.8	2.6	6	14	59	20	*14	*1.0	*.4	*.5
20	.8	1.8	*1.8	2.3	6	14	51	18	*12	.7	*.4	*.5
21	.8	1.8	*1.8	2.3	*6	15	59	16	*10	*.7	*.4	*.5
22	.8	1.8	*1.8	2.3	*6	42	*14	*8	*.7	*.4	*.5	*.5
23	.9	1.8	*1.8	2.3	*6	28	46	*12	5.5	*.7	*.4	*.5
24	1.6	1.7	*2.0	2.3	*6	21	44	*10	5.5	.7	*.4	*.5
25	.9	1.7	*30	2.3	*6	21	44	8.5	5.5	.7	*.4	*.5
26	.9	1.7	*20	2.3	*6	20	44	8.5	5	*.6	*.4	*.5
27	.9	1.7	*15	2.3	*6	20	42	8.5	5	*.6	*.4	*.5
28	.9	1.5	*10	2.6	*6	20	44	7	5	*.6	*.4	*.5
29	.9	1.5	*8	5.5		26	46	6	5	*.6	*.4	*.5
30	1.7	1.5	*6	6		19	46	6	5	*.6	*.4	*.5
31	1.7		*5	6		19		6		*.6	*.4	*.5

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.7	0.6	0.81	40.8
November	5.5	1.3	2.06	122
December	30	1.7	5.06	311
January	6.5	2.3	3.35	208
February	75		13.6	765
March	75	6	18.1	1,195
April	59	19	34.0	2,028
May	62	6	29.6	1,822
June	49	3.6	8.61	532
July	3.6	.6	1.24	75.2
August	.5	.4	.44	27.1
September	.6	.4	.49	29.2
The year	75	.4	9.74	7,040

* Estimated.

GOODYEAR CREEK AT GOODYEAR BAR, CALIF.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 5, T. 19 N., R. 10 E., 300 feet above junction with North Fork of Yuba River and half a mile north of Goodyear Bar.

DRAINAGE AREA.—12.2 square miles.

RECORDS AVAILABLE.—October, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 128 second-feet June 15 (gage height, 8.50 feet); minimum, 1.0 second-foot August 23 to September 1.

1910-1929: Maximum discharge, about 1,800 second-feet March 25, 1928 (gage height, 9.5 feet); minimum, 1.0 second-foot October 1-6, 1927, and August 23 to September, 1929.

REMARKS.—Records fair. Several small irrigation ditches head above station. Gage-height record furnished by United States Forest Service.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	4.4	4.4	8.5	19	•10	27	64	12	6.5	3.5	•1.0
2	3.8	4.4	4.4	8.5	30	•10	25	•61	11	5.5	•3.4	•2.0
3	3.8	9.5	5	14	41	•11	25	•58	10	5.5	•3.4	3.0
4	4.4	5	5	11	67	•12	44	56	10	5.5	•3.3	3.0
5	4.4	5	5	8.5	41	•13	34	58	•10	4.9	•3.2	3.0
6	4.4	9.5	5	8.5	22	•15	32	58	•10	4.9	•3.2	2.0
7	4.4	5	5	8.5	15	•16	27	•56	•10	4.9	•3.1	3.0
8	4.4	4.4	4.4	7.5	15	•18	32	•54	•12	4.2	•3.1	3.0
9	4.4	4.4	4.4	7.5	14	•28	25	•52	14	4.2	3.0	3.0
10	4.4	4.4	22	6	14	98	24	•51	•12	4.2	3.0	3.0
11	4.4	4.4	9.5	5	12	50	24	50	•10	4.2	3.0	3.0
12	4.4	8.5	7	5	12	32	25	47	9	4.2	3.0	3.0
13	4.4	7.5	7	5	12	24	25	•42	9	4.2	3.0	3.0
14	4.4	14	7	5	12	22	32	•38	9	4.2	3.0	3.0
15	4.4	7.5	6	5	11	22	36	•33	128	4.2	3.0	3.0
16	4.4	6	6	5	11	22	47	29	94	4.2	3.0	3.0
17	4.4	5	6	5	11	22	47	36	64	4.2	3.0	3.0
18	4.4	5	•6	6	11	24	50	36	29	•4.2	3.0	3.0
19	4.4	5	•6	6	11	24	94	36	•25	•4.2	2.5	3.0
20	3.8	5	•6	5	11	24	78	30	•21	4.2	2.5	3.5
21	3.8	5	•6	5	•11	24	64	25	•18	•4.0	1.5	3.5
22	3.2	5	•6	5	•11	70	61	•23	•15	•3.9	1.5	3.5
23	3.2	5	•6	5	•11	50	53	•21	12	•3.7	1.0	3.5
24	3.2	5	•10	5	•11	43	53	•19	12	3.5	1.0	3.5
25	3.2	5	•40	5	•11	36	56	18	11	3.5	1.0	3.5
26	3.2	5	•30	5	•11	33	56	18	10	3.5	1.0	3.5
27	3.2	4.4	•18	5	•11	29	58	15	9	3.5	1.0	3.5
28	3.2	4.4	•15	6	•10	27	61	14	9	3.5	1.0	3.5
29	3.2	4.4	•14	11	-----	34	64	14	8	3.5	•1.0	3.5
30	4.4	4.4	•10	12	-----	27	64	13	8	3.5	•1.0	3.5
31	4.4	-----	•9	12	-----	27	-----	13	-----	3.5	•1.0	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.4	3.2	3.99	245
November	14	4.4	5.72	340
December	40	4.4	9.52	555
January	14	5	6.98	429
February	67	10	17.1	950
March	98	10	28.9	1,760
April	94	24	44.8	2,070
May	64	13	36.7	2,260
June	128	8	20.7	1,260
July	6.5	3.5	4.26	201
August	3.5	1.0	2.36	145
September	3.8	1.0	3.09	194
The year	128	1.0	15.3	11,100

•Estimated.

CANYON CREEK ABOVE JACKSON CREEK, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 3, T. 18 N., R. 12 E., one-fourth mile above Jackson Creek and 3 miles above Bowman Dam. Altitude, about 5,600 feet.

DRAINAGE AREA.—13.6 square miles.

RECORDS AVAILABLE.—January, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 710 second-feet June 16 (gauge height, 5.50 feet); minimum, 2.5 second-feet June 6-8.

1926-1929: Maximum discharge, about 3,200 second-feet March 25, 1928 (gauge height, 8.35 feet); minimum, 0.2 second-foot October 14, 1927.

REMARKS.—Records good except those for estimated periods, which are fair. Flow regulated by storage at French, Faucherie, and Sawmill Lakes. On September 30, 1928, the storage in these lakes was about 11,000 acre-feet; September 30, 1929, no available storage. Gauge-height record and results of discharge measurements furnished by Nevada Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	10	9	*3	4.0	94	79	100	90	94	*17	84	69
2.....	10	39	*3	4.2	93	79	98	90	94	15	84	67
3.....	10	109	*3	4.3	83	79	98	91	90	15	84	67
4.....	10	104	*3	4.0	62	80	97	93	65	14	84	65
5.....	10	104	*3	4.2	4.2	80	93	100	19	13	84	62
6.....	10	104	*3	4.8	46	82	91	106	2.5	12	84	59
7.....	10	104	*3	5	106	83	91	131	2.5	12	84	57
8.....	10	103	*3	5.5	107	84	91	176	2.5	47	84	56
9.....	10	103	*3	4.9	85	85	90	198	2.6	98	83	55
10.....	10	103	61	4.9	60	93	90	184	11	94	83	53
11.....	10	103	71	4.4	106	90	90	178	12	90	83	52
12.....	10	103	103	4.4	81	91	90	188	23	90	82	51
13.....	10	104	125	4.3	62	93	90	200	34	89	82	50
14.....	10	104	85	4.2	64	91	90	220	38	89	83	50
15.....	*10	104	47	4.3	64	90	90	206	146	89	82	49
16.....	*10	104	4.0	4.2	65	91	90	218	394	89	82	47
17.....	*10	104	4.0	4.2	66	91	89	218	163	86	82	44
18.....	*10	104	*4	7	66	90	88	200	125	86	82	43
19.....	*10	104	*4	28	66	90	86	186	78	86	82	41
20.....	*9.5	104	*4	42	65	90	85	186	58	86	82	40
21.....	*9.5	104	*4	27	66	93	85	186	49	88	80	37
22.....	*9.5	104	*4	4.2	65	100	86	186	43	88	80	36
23.....	*9.5	103	*4	19	65	97	85	178	39	88	80	35
24.....	*9	103	*44	48	64	104	86	166	35	86	79	34
25.....	*9	103	*78	27	65	149	86	146	32	86	78	33
26.....	*9	*103	*78	4.3	75	101	86	122	*30	86	77	32
27.....	*9	*103	*78	4.3	78	101	88	106	*27	86	75	32
28.....	*9	*52	*59	4.0	79	97	89	106	*25	86	71	31
29.....	*9	*3	*4	33	-----	100	89	97	*22	85	71	30
30.....	*9	*3	*4	93	-----	100	90	97	*20	84	71	29
31.....	*9	-----	4.0	93	-----	100	-----	94	-----	84	70	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	10	9	9.68	595
November.....	109	3	90.0	5,200
December.....	125	3	29.0	1,790
January.....	93	4.0	16.4	1,810
February.....	107	4.2	71.5	2,370
March.....	149	79	92.7	3,700
April.....	100	85	86.9	3,450
May.....	220	90	153	9,410
June.....	394	2.5	69.2	3,520
July.....	98	12	69.8	4,290
August.....	84	70	80.4	4,940
September.....	69	29	46.9	2,760
The year.....	394	2.5	67.3	48,700

* Estimated.

CANYON CREEK BELOW BOWMAN LAKE, CALIF.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ 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, 1929.

EXTREMES.—Maximum discharge during year, 261 second-feet January 21 (gage height, 2.78 feet); minimum, 0.5 second-foot several days in October, November, and September.

1927-1929: Maximum discharge, 793 second-feet May 13-16, 1927 (gage height, 3.92 feet); no flow at times when there is little or no leakage from dams above.

REMARKS.—Records good except those for estimated periods, which are fair, and for extremely low stages, which are poor. Flow completely regulated by storage in Bowman Lake and diversion into Bowman-Spaulding Canal. On September 30, 1928, the storage in Bowman Lake was about 23,500 acre-feet; on September 30, 1929, it was about 30,500 acre-feet. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.5	*0.8	0.8	1.0	1.0	1.5	0.8	4.7	1.0	0.8	0.8
2	1.6	.5	*.8	.8	.8	1.2	1.8	.9	5	1.0	.8	.8
3	.8	1.2	*.8	.8	1.1	2.3	1.8	.8	5.5	1.0	1.0	.8
4	.8	.7	*.8	.8	3.4	3.0	2.5	.8	5.5	1.0	.8	.7
5	.7	.7	*.8	1.9	1.0	2.6	1.9	1.2	5.5	1.0	.8	.7
6	.6	1.2	*.8	.8	1.1	2.0	1.8	1.6	6	.8	.8	.6
7	.6	.8	*.8	.7	.8	1.6	1.2	2.0	6	.8	1.0	.7
8	.7	.7	*.8	1.8	*14	1.9	.8	2.2	6.5	.8	.9	.7
9	.7	.7	.8	.7	*85	7	.8	2.2	7	.8	.8	.7
10	.6	.7	.8	.7	*126	4.7	.7	2.8	6.5	.8	.8	.8
11	.6	.7	.8	.7	170	1.9	.8	.9	6.5	.8	.9	.8
12	.7	.7	.8	.6	51	1.9	1.0	.8	6.5	.8	.9	.8
13	.7	.8	.8	.6	16	1.3	1.0	.8	6.5	.8	.8	.8
14	.6	.8	.8	.6	1.3	1.2	1.0	.8	7	.8	.8	.9
15	.5	.8	.8	.6	1.0	1.9	1.2	3.1	21	.8	.8	1.0
16	.5	.8	.8	.6	.8	1.6	1.3	1.0	13	.8	.8	1.0
17	.5	.8	.8	.6	2.0	1.8	1.2	.8	11	.8	.8	1.0
18	.5	.8	.8	.6	6	1.6	1.2	2.5	8.6	.8	.9	1.0
19	.5	.8	27	.7	3.9	1.9	1.6	3.0	7	.8	.9	1.1
20	.5	.8	.8	13	1.0	2.2	1.6	3.4	6.5	.8	.9	.8
21	.5	.8	.7	139	.9	10	1.5	3.4	6	.8	.9	.8
22	.5	.8	.6	22	1.0	7	1.5	3.4	6	.8	.9	.8
23	.5	.8	1.7	12	1.2	2.8	1.3	3.4	6	.8	.9	.7
24	.5	.8	9	9.5	1.2	2.0	1.3	7	6	.8	.8	.7
25	.5	.8	1.1	.8	1.1	1.2	1.2	2.3	5.5	.8	.8	.6
26	.5	.8	1.2	.7	1.3	1.3	1.2	4.7	5.5	.8	.8	.6
27	.5	.8	2.6	.6	.8	2.2	1.2	3.0	3.2	.8	.9	.6
28	.5	.8	2.8	.6	.9	2.3	1.0	3.8	1.1	.8	.9	.6
29	.5	.8	1.3	.7	-----	2.2	1.0	3.8	1.0	.8	.8	.5
30	.5	.8	1.0	.8	-----	1.8	1.0	1.3	1.0	.8	.8	.5
31	.5	-----	.9	.8	-----	1.6	-----	4.3	-----	.9	.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.6	0.5	0.61	37.5
November	1.2	.5	.78	40.4
December	27	.6	2.10	139
January	139	.6	6.96	426
February	170	.8	17.7	968
March	10	1.0	2.55	187
April	2.5	.7	1.30	77.4
May	7	.8	2.35	144
June	21	1.0	6.43	388
July	1.0	.8	.84	61.6
August	1.0	.8	.85	52.3
September	1.1	.5	.76	45.2
The year	170	.5	3.50	2,530

* Estimated.

JACKSON CREEK AT MOUTH, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 2, T. 18 N., R. 12 E., 3 miles above Bowman Dam. Altitude, about 5,600 feet.

DRAINAGE AREA.—5.5 square miles.

RECORDS AVAILABLE.—January, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 143 second-feet June 15 (gage height, 2.77 feet); minimum, 0.4 second-foot September 6-9.

1926-1929: Maximum discharge, 1,270 second-feet March 25, 1928 (gage height, 5.30 feet); minimum, that of September 6-9, 1929.

REMARKS.—Records fair. Flow is controlled to some extent by Jackson Lake storage, which is usually released during period July to September. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.6	0.5	0.6	1.3	1.0	1.5	18	52	14	4.7	0.9	0.6
2.	0.6	0.5	0.6	1.2	1.0	2.2	20	57	13	4.3	0.9	0.6
3.	0.6	0.7	0.6	1.2	1.0	3.0	22	63	12	4.2	0.9	0.7
4.	0.6	0.6	0.6	1.2	1.0	5	18	60	10	3.7	0.8	0.6
5.	0.6	0.7	0.6	1.0	1.0	7	14	58	10	3.4	0.8	0.5
6.	0.6	0.8	0.6	1.0	0.9	7.5	12	58	10	3.1	0.8	0.4
7.	0.6	0.8	0.6	1.0	0.9	7	11	59	13	2.9	0.8	0.4
8.	0.6	0.7	0.6	1.0	1.0	6	11	59	12	2.6	0.8	0.4
9.	0.6	0.7	0.6	0.9	1.0	9.5	10	57	20	2.5	0.8	0.4
10.	0.6	0.6	0.6	0.9	1.0	18	9.5	54	17	2.4	0.7	0.5
11.	0.5	0.6	0.6	0.9	1.0	11	10	51	13	2.3	0.7	0.5
12.	0.5	0.6	0.5	0.9	1.0	8.5	11	54	11	2.1	0.7	0.5
13.	0.5	0.6	0.5	0.9	1.0	7	11	52	10	1.9	0.7	0.5
14.	0.5	0.6	0.5	0.9	1.0	6.5	10	53	9	1.8	0.7	0.5
15.	0.5	0.6	0.5	0.9	1.0	6	12	45	51	1.8	0.7	0.5
16.	0.5	0.6	0.5	0.9	1.0	7	19	49	46	1.6	0.7	0.5
17.	0.5	0.6	0.6	0.9	1.0	8	25	46	40	1.5	0.7	0.5
18.	0.5	0.6	0.6	1.0	1.0	8.5	22	40	39	1.5	0.7	0.5
19.	0.5	0.6	0.6	1.0	1.0	8	19	37	20	1.4	0.7	0.5
20.	0.5	0.6	0.6	1.0	1.0	10	17	34	16	1.4	0.7	0.5
21.	0.5	0.6	0.6	0.9	1.0	23	17	32	14	1.3	0.7	0.5
22.	0.5	0.6	0.6	0.9	1.0	48	15	29	12	1.3	0.7	0.5
23.	0.5	0.6	0.6	0.9	1.0	18	15	26	11	1.2	0.7	0.5
24.	0.5	0.6	0.6	0.9	1.0	14	19	23	9.5	1.2	0.7	0.5
25.	0.5	0.6	0.8	0.9	1.1	11	22	20	8.5	1.2	0.7	0.5
26.	0.5	0.6	0.9	0.9	1.2	11	28	17	7.5	1.2	0.6	0.5
27.	0.5	0.6	1.0	0.9	1.2	14	37	15	7	1.1	0.6	0.5
28.	0.5	0.6	1.1	0.9	1.3	19	34	13	6	1.1	0.7	0.5
29.	0.5	0.6	1.2	0.9	-----	21	34	12	5.5	1.0	0.7	0.5
30.	0.5	0.6	1.3	1.0	-----	19	44	11	5	1.0	0.6	0.5
31.	0.5	-----	1.3	1.0	-----	17	-----	12	-----	0.9	0.6	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October	0.6		0.5		0.53		32.6					
November	0.8		0.5		0.62		35.9					
December	1.3		0.5		0.69		42.4					
January	1.3		0.9		0.97		59.6					
February	1.3		0.9		1.02		55.5					
March	48		1.5		11.7		719					
April	44		9.5		18.9		1,120					
May	65		11		41.1		2,530					
June	51		5		15.4		916					
July	4.7		0.9		2.05		120					
August	0.9		0.6		0.73		44.9					
September	0.7		0.4		0.50		29.8					
The year	65		0.4		7.89		5,730					

* Estimated.

BOWMAN-SPAULDING CANAL AT INTAKE, CALIF.

LOCATION.—Water-stage recorder in sec. 8, T. 18 N., R. 12 E., 150 feet below intake and one-fourth mile below Bowman rock-fill dam. Altitude, about 5,400 feet.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 254 second-feet many days in October and November 5; practically no flow February 10-19 and April 1 to June 26.

1927-1929: Maximum mean daily discharge, 262 second-feet August 2-9 and 29, 1928; no flow at times each year.

REMARKS.—Records good except those for estimated periods, which are fair. Canal diverts from left bank of Canyon Creek below Bowman Lake. Water is transported to Fuller Lake and then to Lake Spaulding and is used for power and for irrigation in the Nevada irrigation district. Gage-height record and results of discharge measurements furnished by Nevada Irrigation District.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	June	July	Aug.	Sept.
1	254	114	0	11	132	68	0	235	219	225
2	254	246	* 26	12	102	84	0	204	215	225
3	254	246	* 18	45	99	105	0	200	207	225
4	246	246	* 14	7.5	96	105	0	235	198	225
5	* 246	254	0	17	93	105	0	235	190	225
6	* 246	246	0	19	93	105	0	239	198	210
7	* 246	246	0	17	102	114	0	239	199	230
8	* 254	246	0	20	105	164	0	239	196	234
9	* 254	246	0	28	68	170	0	239	156	236
10	* 254	246	* 50	16	0	170	0	239	227	237
11	254	246	* 50	16	0	178	0	239	234	237
12	254	246	* 50	11	0	190	0	239	234	237
13	246	246	87	19	0	186	0	239	232	238
14	254	238	90	16	0	186	0	239	233	239
15	254	* 225	87	16	0	194	0	243	184	235
16	254	* 225	90	15	0	190	0	243	243	236
17	254	* 225	87	15	0	190	0	243	243	233
18	254	* 225	87	14	0	190	0	243	242	232
19	254	* 225	25	26	0	190	0	243	241	143
20	254	* 225	17	35	65	186	0	243	241	233
21	254	* 230	13	1.8	65	174	0	243	239	194
22	254	* 230	13	3.8	65	136	0	240	237	247
23	254	* 230	13	8.5	66	160	0	243	237	247
24	254	* 230	63	49	65	178	0	242	237	247
25	201	* 230	105	69	65	186	0	240	237	247
26	246	* 230	99	70	66	190	9	239	237	247
27	246	* 230	102	70	66	190	10	238	235	247
28	246	* 230	92	72	67	190	66	234	230	247
29	246	* 230	20	86	-----	190	30	230	224	247
30	246	* 230	27	128	-----	190	143	227	224	247
31	246	-----	12	132	-----	160	-----	224	226	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	254	201	249	15,300
November	254	114	232	13,800
December	105	0	43.1	2,650
January	132	1.8	34.4	2,120
February	132	0	52.9	2,940
March	194	68	162	9,900
June	143	0	8.30	494
July	243	200	236	14,600
August	243	156	222	13,600
September	247	148	232	13,800
The year	254	0	123	89,200

* Estimated.

NOTE.—No flow during April and 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. Staff gage 150 feet upstream used prior to July 17, 1929.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, about 4,520 second feet February 4 (gage height, 6.6 feet); minimum, 3.0 second-feet April 29 to May 6.

REMARKS.—Records good except those for estimated periods, which are fair. Storage, diversions, and inflow above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		244	100	63	162	63	187	* 3	9.5	8	34	130
2		219	93	98	950	60	* 154	* 3	* 9	5	34	122
3		* 272	71	85	2,870	53	120	3	9	4	31	112
4		326	60	104	3,800	51	148	* 3	6.5	* 4.5	31	119
5		274	115	98	950	40	167	* 3	6	5	28	188
6		295	201	98	835	38	174	* 3	4.6	4	24	209
7		305	264	102	765	40	269	40	5	9	24	209
8		264	279	100	337	38	290	65	4.6	10	26	180
9		274	279	71	210	1,690	144	112	14	9.5	26	141
10		264	196	69	215	1,590	300	99	14	9	26	139
11		178	175	65	219	545	369	167	13	12	33	172
12		279	380	56	219	174	331	112	12	11	29	222
13		172	259	58	120	159	331	60	13	9	29	222
14		274	178	63	89	144	269	40	12	17	29	227
15		600	91	76	83	148	284	49	12	19	31	227
16		435	102	74	81	129	107	45	38	21	33	227
17		380	* 81	67	83	120	104	40	178	26	33	227
18		* 260	60	63	73	123	70	45	178	24	34	222
19		139	56	93	68	109	70	40	86	24	58	218
20		98	52	175	68	99	36	42	81	28	67	266
21		100	54	149	60	94	* 5	45	86	26	67	312
22		36	54	129	60	91	* 5	22	86	24	82	306
23		239	8	50	124	53	86	112	10	91	88	284
24		321	4.3	113	120	* 54	120	224	9	70	26	192
25		321	36	518	111	56	123	89	9.5	16	28	156
26		316	78	201	127	60	129	* 40	10	11	28	265
27		660	38	107	102	58	144	* 5	10	9	29	112
28		695	65	21	80	58	192	* 4	9	7.5	28	164
29		274	* 72	134	80		178	* 3	13	12	26	200
30		259	78	71	85		215	* 3	12	15	29	214
31		219		71	78		224		9.5		33	176

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October 23-31	695	219	367	6,550
November	600	4.3	202	12,000
December	518	21	145	8,920
January	175	56	92.4	5,680
February	3,800	53	452	25,100
March	1,690	38	226	18,900
April	369	3	147	8,750
May	167	8	36.5	2,240
June	178	4.6	37.0	2,200
July	33	4	18.1	1,110
August	214	24	72.2	4,440
September	312	112	210	12,500
The period				103,000

* Estimated.

BEAR RIVER CANAL NEAR COLFAX, CALIF.

LOCATION.—Float gage 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.

RECORDS AVAILABLE.—January, 1912, to September, 1929.

EXTREMES.—1912-1929: Maximum mean daily discharge, 302 second-feet September 16 and October 31, 1923, and January 21, 1925; canal dry at times.

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. At times water is wasted into American River. Discharge record furnished by Pacific Gas & Electric Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	300	300	300	165	207	140	0	300	187	139	300	65
2.....	300	300	197	158	287	126	88	300	209	171	298	200
3.....	300	300	275	222	292	109	171	300	212	278	231	300
4.....	300	300	300	196	272	115	212	294	205	260	290	300
5.....	300	300	300	236	300	115	232	300	189	278	260	300
6.....	300	300	300	142	300	118	253	300	198	280	280	300
7.....	300	300	300	151	295	115	242	300	215	278	300	300
8.....	300	300	300	132	271	105	273	300	274	293	293	300
9.....	300	300	283	126	296	110	300	300	278	272	276	300
10.....	300	300	262	129	296	283	300	300	279	270	109	300
11.....	300	300	257	115	292	296	300	300	306	279	96	300
12.....	300	300	238	131	245	300	300	300	300	276	119	300
13.....	300	300	293	92	191	267	225	300	300	270	300	300
14.....	300	286	213	127	136	266	0	300	295	280	299	300
15.....	300	300	258	113	154	240	300	300	293	278	300	300
16.....	300	300	289	101	161	226	300	306	273	278	300	300
17.....	300	300	170	86	176	188	300	300	300	285	300	300
18.....	300	162	111	143	121	231	300	300	300	274	229	300
19.....	300	300	95	279	114	271	300	282	300	247	300	300
20.....	300	300	88	262	118	296	300	297	300	278	300	300
21.....	300	300	91	224	121	300	300	300	300	287	300	300
22.....	300	300	92	138	120	270	300	300	300	244	300	189
23.....	300	300	76	144	134	290	300	297	201	265	300	300
24.....	300	300	84	149	123	210	300	253	234	264	300	300
25.....	300	199	276	170	115	0	298	246	282	275	300	300
26.....	300	209	247	171	99	0	300	177	292	273	237	300
27.....	300	300	171	167	121	0	300	230	291	285	300	300
28.....	300	300	292	172	127	0	299	191	297	278	300	251
29.....	300	208	272	176	-----	0	233	186	232	278	300	223
30.....	300	300	210	286	-----	0	300	217	158	300	300	249
31.....	300	-----	159	239	-----	0	-----	211	-----	300	244	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	300	300	300	18,400
November.....	300	162	285	17,000
December.....	300	76	219	13,600
January.....	286	86	166	10,200
February.....	300	99	196	10,900
March.....	300	0	161	9,900
April.....	300	0	254	15,100
May.....	300	177	277	17,000
June.....	300	158	260	15,600
July.....	300	139	268	16,600
August.....	300	96	270	16,600
September.....	300	65	279	16,600
The year.....	300	0	245	177,000

AMERICAN RIVER BASIN

NORTH FORK OF AMERICAN RIVER NEAR COLFAX, CALIF.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 30, T. 14 N., R. 10 E., at bridge on Colfax-Forest Hill road, 150 feet below mouth of Shirltail Canyon Creek and 5 miles southeast of Colfax.

RECORDS AVAILABLE.—August, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,960 second-feet March 10 (gage height, 6.2 feet); minimum, 32 second-feet parts of August and September.

1911-1929: Maximum discharge, about 55,000 second-feet March 25, 1928 (gage height, 20.2 feet); minimum, 15 second-feet July 22 to August 7 and August 12-15, 1924.

REMARKS.—Records fair. Small storage and diversion above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	40	50	130	162	198	555	1,170	330	164	70	42
2	35	40	46	113	640	239	645	1,250	330	164	54	42
3	40	46	53	211	556	270	740	1,410	280	150	54	42
4	40	53	53	174	2,120	318	775	1,410	280	136	54	42
5	46	46	53	130	820	413	810	1,410	234	136	54	42
6	43	60	53	130	640	392	555	1,250	234	136	54	42
7	40	60	56	113	413	354	468	1,250	215	123	54	42
8	40	46	56	98	336	302	645	1,250	330	110	54	42
9	40	40	53	86	286	302	615	1,250	358	110	54	42
10	40	40	56	86	254	2,230	645	1,330	525	123	54	42
11	40	40	98	75	254	915	615	1,170	358	110	48	42
12	38	50	105	75	224	615	615	1,090	280	99	42	42
13	35	85	105	70	211	555	740	1,250	234	88	42	32
14	35	190	90	75	224	468	615	1,250	280	88	42	32
15	35	138	85	92	198	440	585	1,250	305	88	42	32
16	38	85	80	130	224	412	915	1,250	1,870	70	42	32
17	35	70	70	113	193	412	1,250	1,250	1,170	79	42	32
18	40	60	75	130	198	440	1,330	1,130	985	70	42	32
19	40	60	65	150	211	412	1,570	1,060	675	70	42	32
20	40	53	60	140	198	525	1,410	1,020	525	70	42	32
21	40	53	53	130	198	525	880	985	495	70	42	32
22	35	53	53	113	193	1,980	845	950	440	70	42	32
23	35	53	53	98	224	880	810	1,020	330	70	42	32
24	35	53	56	113	224	585	845	915	305	70	32	42
25	35	53	420	98	224	495	915	775	234	70	32	42
26	35	50	162	98	198	495	985	555	234	70	32	42
27	35	53	125	106	198	555	1,020	440	196	70	32	42
28	35	46	495	113	198	775	1,250	336	164	70	32	42
29	35	46	270	180	-----	775	985	335	150	62	32	42
30	40	46	174	150	-----	740	1,250	330	164	54	32	42
31	40	-----	140	150	-----	645	-----	358	-----	62	42	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	46	35	38.1	2,240
November	190	40	60.4	3,438
December	495	46	108	6,640
January	211	70	117	7,198
February	2,120	162	358	19,669
March	2,230	198	602	37,000
April	1,570	468	863	51,490
May	1,410	330	1,030	63,330
June	1,870	150	417	24,806
July	164	54	94.3	5,800
August	70	32	44.3	2,720
September	54	32	39.2	2,330
The year	2,230	32	313	227,000

AMERICAN RIVER AT FAIROAKS, CALIF.

LOCATION.—Water-stage recorder at highway bridge half a mile southeast of Fair Oaks, Sacramento County, and 10 miles below South Fork.

DRAINAGE AREA.—1,910 square miles.

RECORDS AVAILABLE.—November, 1904, to September, 1929.

EXTREMES.—Maximum discharge during year, 26,000 second-feet June 16 (gauge height, 11.3 feet); minimum, 56 second-feet September 26.

1904-1929: Maximum discharge, 182,000 second-feet March 25, 1928 (gauge height, 30.45 feet); minimum, 3.6 second-feet August 16, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Storage, regulation, and diversions above station.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	256	569	582	852	852	886	* 3,190	* 5,800	2,010	1,000	286	147
2	287	420	396	762	1,070	943	* 2,000	* 6,020	1,860	943	252	111
3	345	444	484	852	* 1,000	1,060	* 2,900	* 6,700	1,680	886	217	102
4	327	436	532	1,190	14,800	1,030	* 2,950	* 7,200	1,640	858	250	142
5	356	428	646	945	6,900	1,240	* 3,100	* 6,600	1,680	774	186	168
6	428	456	472	852	2,980	1,590	* 3,200	* 6,400	1,590	719	222	168
7	404	582	516	740	2,400	1,680	2,610	* 6,300	1,510	676	165	173
8	842	548	500	650	1,960	1,590	2,400	* 6,500	1,590	633	212	174
9	853	540	448	628	1,640	1,519	3,140	* 6,900	1,820	584	198	159
10	860	460	488	552	1,290	* 4,000	2,750	* 6,500	2,340	563	188	141
11	353	364	785	552	1,260	* 6,000	2,610	* 6,300	2,160	532	188	146
12	342	356	898	540	1,260	* 3,100	2,540	* 6,100	1,910	* 520	182	178
13	420	564	1,020	500	1,060	* 2,600	2,750	* 6,600	1,820	* 520	182	166
14	364	995	898	496	1,000	* 2,300	2,540	* 6,900	1,820	* 420	149	231
15	400	1,100	* 700	* 562	* 1,060	* 2,200	2,470	* 5,800	1,960	* 420	152	146
16	400	785	* 540	628	* 900	2,160	2,900	* 6,700	9,440	* 370	147	107
17	440	* 720	* 530	520	* 850	2,160	3,900	* 6,900	9,610	* 420	154	97
18	432	* 650	* 590	532	* 840	2,160	4,230	* 6,700	6,920	350	162	134
19	460	* 610	* 470	641	* 830	2,220	* 4,500	* 6,100	4,700	* 330	128	133
20	440	* 660	* 440	1,100	* 820	2,160	* 5,500	* 5,800	3,500	* 380	109	98
21	309	592	* 410	945	830	2,220	* 4,500	6,260	2,820	* 330	122	130
22	230	610	* 410	830	830	3,430	4,010	6,020	2,610	* 330	171	146
23	323	574	* 410	762	858	4,460	4,010	5,660	2,280	* 320	177	110
24	345	* 600	424	785	830	3,140	3,600	5,420	2,010	* 310	142	89
25	353	* 560	803	718	914	2,470	4,120	4,460	1,820	300	135	82
26	416	* 540	1,410	718	914	2,290	4,230	3,700	1,590	* 280	132	60
27	312	* 510	1,190	672	858	2,290	4,820	2,900	1,470	* 260	100	59
28	298	* 480	1,130	641	886	2,610	5,300	2,280	1,290	* 240	124	160
29	256	* 400	1,640	636	-----	3,140	5,130	1,960	1,180	* 224	147	70
30	412	* 460	1,220	672	-----	* 3,600	* 5,500	1,820	1,120	228	180	78
31	444	-----	1,670	888	-----	* 3,400	-----	1,910	-----	233	164	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	460	230	361	22,200
November	1,100	356	568	33,860
December	1,540	396	705	49,300
January	1,190	496	719	44,200
February	14,800	820	1,830	162,000
March	6,900	886	2,440	120,000
April	5,500	2,400	3,600	214,680
May	7,200	1,820	5,550	341,000
June	9,610	1,120	2,690	158,000
July	1,000	224	482	29,600
August	286	100	171	10,580
September	231	59	129	7,000
The year	14,800	59	1,600	1,160,000

* Estimated.

MIDDLE FORK OF AMERICAN RIVER NEAR EAST AUBURN, CALIF.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 6, T. 12 N., R. 9 E., at Mountain Quarry Co.'s plant, $1\frac{1}{2}$ miles above junction with North Fork of American River and $3\frac{1}{2}$ miles northeast of East Auburn.

RECORDS AVAILABLE.—October, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 13,600 second-feet June 16 (gage height, 11.3 feet); minimum, 46 second-feet September 16-30.

1914-1929: Maximum discharge, about 100,000 second-feet March 25, 1928 (gage height, 35.6 feet at gage 700 feet above cable); minimum, 23 second-feet September 26 to October 3, 1924.

REMARKS.—Records good. Storage and diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	63	97	232	249	232	1,110	3,250	865	530	80	58
2	52	63	97	232	780	266	1,180	3,550	*812	530	80	54
3	52	79	97	304	1,040	346	1,260	3,960	760	560	80	54
4	52	91	114	304	3,860	417	1,420	4,060	658	*471	*80	54
5	66	107	106	232	1,590	494	1,590	*3,610	725	382	80	54
6	69	99	97	202	872	750	1,260	3,140	690	328	80	54
7	66	116	97	202	634	780	*1,180	2,840	592	*302	80	54
8	63	104	90	176	494	840	1,110	3,540	725	276	80	*54
9	63	104	90	176	442	578	1,110	3,340	*778	276	80	54
10	61	94	106	154	392	2,670	1,110	3,240	830	253	76	54
11	61	97	189	144	392	1,860	1,110	2,740	795	210	*74	54
12	66	82	202	150	346	1,260	1,110	3,040	830	230	71	54
13	76	144	304	150	285	970	1,110	3,540	725	230	71	54
14	69	285	189	154	304	840	1,110	3,970	830	*301	66	54
15	69	266	144	154	266	810	1,040	3,340	865	172	62	*50
16	63	165	144	165	266	750	1,420	3,340	7,060	154	62	46
17	63	154	133	154	266	840	2,040	3,440	3,440	124	62	46
18	63	114	114	154	266	840	2,130	3,240	3,040	124	*62	46
19	57	124	114	189	232	810	2,130	*2,940	1,910	124	62	46
20	57	114	114	232	232	780	2,130	2,640	1,460	124	62	46
21	57	114	114	202	232	840	1,770	2,640	1,290	133	62	46
22	57	114	114	176	232	2,040	1,590	2,640	1,290	100	62	*46
23	57	114	114	176	266	1,770	1,500	2,450	*1,210	100	62	46
24	57	124	114	176	325	1,180	1,590	2,450	1,130	112	62	46
25	57	114	468	154	304	1,040	1,950	2,090	1,050	112	*62	46
26	57	97	522	176	304	905	1,950	*1,550	935	100	62	46
27	57	97	392	154	232	970	2,310	1,010	830	100	62	46
28	57	97	606	176	232	1,260	*2,310	900	795	*100	62	46
29	57	97	578	154	-----	1,500	2,310	865	830	100	62	46
30	61	97	369	176	-----	1,420	2,760	900	690	90	62	46
31	63	-----	325	217	-----	*1,260	-----	900	-----	90	62	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	76	52	60.5	3,720
November	285	63	113	7,020
December	606	90	205	12,600
January	304	144	197	11,600
February	3,860	282	548	36,400
March	2,670	232	1,010	63,100
April	2,760	1,040	1,590	64,600
May	4,060	865	2,740	168,000
June	7,060	592	1,290	76,200
July	560	90	217	13,300
August	80	62	68.8	4,280
September	58	46	50.0	2,380
The year	7,060	46	673	487,000

* Estimated.

SOUTH FORK OF AMERICAN RIVER NEAR KYBURZ, CALIF.

LOCATION.—Water-stage recorder in S. $\frac{1}{2}$ 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. Perrin Creek enters just above gage.

RECORDS AVAILABLE.—August to December, 1907; October, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,700 second-feet June 16 (gage height, 6.16 feet); minimum, 0.3 second-foot November 9–11.
1922–1929: Maximum discharge, 5,020 second-feet March 25, 1928 (gage height, 7.60 feet); minimum, that of November 9–11, 1929.

REMARKS.—Records fair prior to February 13 and good thereafter. El Dorado Canal diverts water around station. Storage, regulation, and other diversions above station.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	0.5	0.5	0.5	0.5	1.3	79	510	218	41	1.3	1.2
2	1.4	.5	.5	.7	.6	1.4	98	630	190	22	1.3	.9
3	1.4	.8	.5	.5	.6	1.3	130	725	166	8	1.3	.8
4	1.0	.4	.5	.5	.7	2.7	140	800	180	1.8	1.3	.7
5	.9	.4	.5	.5	.5	5	76	737	150	1.3	1.3	.9
6	.8	.4	.5	.5	.7	1.3	51	647	122	1.3	1.2	1.0
7	.7	.4	.4	.5	.5	1.2	25	647	140	1.4	1.2	1.0
8	.7	.4	.5	.5	11	1.2	21	768	162	1.3	1.2	1.0
9	.6	.3	.5	.5	32	1.4	13	807	253	1.3	1.3	1.0
10	.7	.3	.5	.5	42	64	14	820	247	1.3	1.2	.9
11	.6	.3	.4	.5	42	7.5	11	862	229	1.2	1.3	.8
12	.6	.4	.5	.5	25	1.7	30	942	200	1.2	1.3	.7
13	.6	.7	.7	.5	18	1.5	46	1,040	185	1.2	1.2	.7
14	.6	1.8	1.3	.5	1.8	1.5	25	1,000	205	2.6	1.1	.6
15	.5	.5	2.0	.5	1.3	1.3	86	965	435	4.5	1.1	.7
16	.5	.4	1.5	.5	1.4	1.9	215	1,080	1,530	2.4	1.1	.7
17	.5	.4	1.0	.5	1.7	1.5	308	1,120	950	22	1.1	.7
18	.5	.6	1.0	.5	1.3	1.2	412	1,040	898	3.5	1.1	.7
19	1.5	.6	1.0	.5	1.5	1.2	277	985	580	1.9	1.0	2.2
20	.7	.4	1.0	.5	1.4	1.2	175	920	332	1.5	1.1	1.2
21	.6	.4	1.0	.6	1.3	1.5	182	965	294	1.3	1.2	.8
22	.5	.4	1.0	1.5	1.6	115	156	998	287	1.6	2.7	.9
23	.5	.4	1.0	.9	1.3	45	241	883	256	2.3	13	1.0
24	.5	.4	1.8	.5	1.2	11	326	794	210	1.5	1.9	*1.0
25	.5	.4	8	.5	1.2	6.5	350	663	178	1.4	1.3	*1.0
26	.7	.5	13	.8	1.3	3.3	246	480	150	1.4	1.1	*10
27	2.0	.4	1.2	.5	1.9	17	343	340	132	1.5	1.0	*14
28	.5	.4	1.5	.4	1.2	95	382	262	116	1.5	1.2	*14
29	.5	.5	.8	.5	5	132	874	250	88	1.3	1.1	*2
30	.5	.4	.5	.5	5	114	448	265	62	1.3	1.0	1.2
31	.5		.5	.8		79		256		1.4	1.2	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2.0	0.5	0.77	47.3
November	1.8	.3	.49	29.2
December	13	.4	1.47	90.4
January	1.5	.4	.57	35.0
February	42	.5	6.98	388
March	132	1.2	23.2	1,430
April	448	11	179	10,700
May	1,120	250	743	45,700
June	1,530	62	305	18,100
July	41	1.2	4.49	276
August	13	1.0	1.64	101
September	14	.6	2.14	127
The year	1,530	.3	106	77,000

* Estimated.

Daily and monthly discharge, in second-feet, of South Fork of American River and El Dorado Canal near Kyburz, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	151	136	58	40	42	42	202	629	358	187	145	144
2.....	149	136	58	43	45	50	222	750	332	167	146	141
3.....	149	143	54	86	50	87	254	846	810	155	146	138
4.....	149	83	46	30	58	77	264	886	824	145	144	130
5.....	148	78	40	28	50	104	200	742	293	142	144	142
6.....	147	92	44	30	46	115	175	709	265	136	144	140
7.....	145	74	48	26	40	94	154	768	284	146	143	139
8.....	142	50	54	26	31	77	144	889	305	144	145	142
9.....	143	41	54	26	38	79	133	930	397	139	146	139
10.....	144	43	54	24	42	168	133	946	391	143	143	140
11.....	144	43	53	24	42	114	133	991	373	136	146	136
12.....	145	43	66	26	36	96	153	1,070	344	128	145	128
13.....	145	48	81	26	42	82	170	1,170	829	133	139	122
14.....	143	49	83	28	40	78	148	1,130	349	149	139	116
15.....	142	48	84	26	36	81	211	1,100	577	152	143	112
16.....	142	42	84	24	36	88	339	1,210	1,670	146	139	108
17.....	146	42	83	28	39	104	432	1,250	1,090	171	141	104
18.....	146	42	83	28	40	98	456	1,170	1,030	160	142	109
19.....	150	46	83	28	40	93	365	1,070	717	144	136	149
20.....	104	43	83	50	39	98	297	1,050	470	140	139	109
21.....	28	44	83	61	39	116	305	1,100	433	140	143	83
22.....	20	43	83	74	42	243	278	1,030	428	149	151	75
23.....	16	43	83	66	45	166	281	1,020	396	150	158	79
24.....	16	40	84	60	43	131	330	926	352	146	144	71
25.....	16	39	96	40	41	118	354	786	321	143	144	54
26.....	107	42	112	36	41	113	392	612	294	146	142	90
27.....	131	38	95	30	41	141	460	472	276	148	142	18
28.....	140	38	86	28	39	219	499	396	260	144	144	16
29.....	138	44	61	30	-----	256	410	387	234	143	143	26
30.....	142	55	42	44	-----	237	510	402	208	146	142	25
31.....	138	-----	40	48	-----	202	-----	395	-----	148	145	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	151	16	121	7,440
November.....	143	38	58.3	3,470
December.....	112	40	69.6	4,280
January.....	74	24	35.9	2,210
February.....	58	31	41.5	2,300
March.....	256	42	121	7,440
April.....	510	133	280	16,760
May.....	1,250	387	864	53,100
June.....	1,670	208	447	26,600
July.....	187	128	147	9,040
August.....	158	136	144	8,350
September.....	144	16	102	6,070
The year.....	1,670	16	204	148,000

SOUTH FORK OF AMERICAN RIVER NEAR CAMINO, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 25, T. 11 N., R. 11 E., 1 mile below intake of Western States Gas & Electric Co.'s flume, 300 feet above mouth of Iowa Canyon Creek, and 3 miles northwest of Camino.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,300 second-feet June 16 (gage height, 13.18 feet); minimum, 2.1 second-feet November 12.

1922-1929: Maximum discharge, 31,500 second-feet March 25, 1928 (gage height, 24.4 feet); minimum, that of November 12, 1929.

REMARKS.—Records excellent. Storage, regulation, and diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	65	62	11	61	68	78	544	1,600	595	231	46	18
2.	72	70	20	62	284	118	561	1,860	520	206	38	15
3.	66	79	25	112	282	96	652	2,020	480	176	42	24
4.	74	44	22	62	553	158	801	2,180	525	140	28	28
5.	78	39	18	56	318	253	750	1,780	465	146	20	17
6.	88	58	5.5	52	205	334	575	1,700	425	124	57	18
7.	54	52	5	30	134	290	475	1,750	415	97	37	14
8.	78	26	6	26	77	218	520	1,980	520	122	26	10
9.	74	12	11	20	67	222	440	2,150	612	106	44	12
10.	76	6	54	12	84	726	440	1,810	795	94	52	20
11.	74	4.1	54	15	156	519	435	2,040	568	99	22	18
12.	68	8.5	80	14	119	414	445	2,140	528	86	21	24
13.	72	38	45	18	78	285	525	2,350	485	73	32	14
14.	56	64	65	20	77	284	500	2,440	518	54	22	16
15.	78	52	59	22	63	304	560	2,200	1,060	89	24	6.8
16.	90	22	36	23	62	335	835	2,430	4,330	78	35	6
17.	84	15	50	15	56	372	1,090	2,500	2,160	68	22	8
18.	78	13	48	14	43	294	1,260	2,300	1,930	83	15	6
19.	76	16	48	44	36	272	1,180	1,950	1,830	72	13	7.5
20.	51	16	50	115	34	288	1,080	1,860	912	76	24	16
21.	27	14	58	122	33	326	1,020	2,080	775	28	34	12
22.	3.8	19	60	98	38	618	970	1,960	715	62	18	7
23.	2.9	20	69	86	53	637	805	1,850	572	72	47	3.3
24.	2.5	20	73	25	72	388	940	1,750	552	58	28	2.8
25.	2.3	17	248	32	66	875	1,060	1,460	460	57	19	5
26.	2.6	11	250	30	62	357	1,160	1,020	405	58	15	4.0
27.	47	12	201	17	58	421	1,260	800	372	51	22	8.2
28.	35	12	264	18	70	565	1,290	670	340	24	30	2.0
29.	68	4.6	197	18	-----	712	1,180	605	295	22	30	8.0
30.	76	5	99	32	-----	686	1,370	585	227	32	26	3.1
31.	77	-----	74	68	-----	519	-----	670	-----	52	21	-----
Month					Maximum		Minimum		Mean		Run-off in acre-feet	
October.....					90		2.3		57.9		3,560	
November.....					79		4.1		27.7		1,650	
December.....					264		5		72.6		4,460	
January.....					122		12		43.0		2,640	
February.....					553		33		116		6,440	
March.....					726		78		370		22,800	
April.....					1,370		435		824		49,000	
May.....					2,500		585		1,760		108,000	
June.....					4,330		227		798		47,500	
July.....					231		22		88.3		5,430	
August.....					57		13		29.4		1,810	
September.....					28		3.0		11.5		684	
The year.....					4,330		2.3		351		254,000	

Daily and monthly discharge, in second-feet, of South Fork of American River and Western States Gas & Electric Co.'s flume near Camino, Calif., 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	171	160	112	171	171	183	650	1,710	700	336	147	114
2	179	169	118	172	338	224	668	1,970	625	312	133	106
3	173	181	130	222	385	202	759	2,180	586	262	139	99
4	180	150	124	172	657	265	907	2,290	631	245	132	112
5	186	139	120	166	420	359	856	1,880	571	252	106	104
6	198	159	100	162	308	439	681	1,800	531	230	152	105
7	161	151	93	140	236	394	581	1,860	521	202	185	98
8	182	128	96	133	179	323	626	2,090	626	228	119	89
9	182	110	108	128	169	327	543	2,260	718	209	148	91
10	183	93	159	119	186	352	545	1,920	902	196	164	106
11	182	89	164	125	258	625	541	2,150	673	206	109	101
12	176	82	140	124	218	521	550	2,250	633	191	118	113
13	180	149	155	129	178	390	631	2,460	591	177	126	92
14	164	176	177	132	178	389	606	2,550	624	153	113	97
15	187	163	170	133	165	409	666	2,310	1,160	194	120	70
16	198	130	140	134	164	440	942	2,540	4,440	180	128	72
17	189	117	160	125	158	477	1,200	2,610	2,260	167	109	73
18	180	113	158	124	145	399	1,370	2,410	2,100	187	102	60
19	181	116	158	135	138	377	1,290	2,060	1,440	173	93	76
20	153	118	160	115	136	394	1,180	1,960	1,020	179	111	97
21	129	113	163	122	135	431	1,130	2,190	880	124	125	82
22	78	121	170	126	141	724	1,080	2,060	820	166	102	61
23	69	124	179	188	158	742	911	1,960	677	166	147	49
24	66	122	183	119	179	493	1,050	1,860	659	160	123	50
25	64	119	359	184	172	481	1,170	1,560	566	160	103	53
26	77	107	361	132	167	462	1,270	1,130	511	158	99	51
27	150	112	312	115	163	527	1,370	906	479	153	111	50
28	136	109	377	118	175	671	1,400	776	447	124	122	50
29	175	88	308	117		818	1,290	711	401	127	123	50
30	180	92	209	134		791	1,450	691	332	135	117	50
31	184		184	171		624		776		158	111	
Month	Maximum						Minimum		Mean		Run-off in acre-feet	
October	198						64		158		9,720	
November	181						82		127		7,560	
December	377						93		179		11,000	
January	223						115		141		8,670	
February	667						135		219		12,200	
March	832						183		475		29,200	
April	1,480						541		931		55,400	
May	2,610						691		1,870		115,000	
June	4,440						332		904		53,800	
July	336						124		191		11,700	
August	154						93		122		7,560	
September	114						49		80.7		4,860	
The year	4,440						49		451		327,000	

ECHO LAKE FLUME NEAR VADE, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 6, T. 11 N., R. 18 E., half a mile below intake and 5 miles northeast of Phillips, Vade post office. Altitude, about 7,500 feet. Prior to July, 1929, staff gage 400 feet below intake was used.

RECORDS AVAILABLE.—August, 1923, to September, 1929.

EXTREMES.—1923-1929: Maximum mean daily discharge, 22 second-feet several days in September, 1929.

REMARKS.—Records good. Flow completely regulated at Echo Lake Dam. No available storage in Echo Lake on September 30, 1928; about 100 acre-feet on September 30, 1929. This flume diverts water from Echo Lake in Truckee River Basin into South Fork of American River Basin.

Daily discharge, in second-feet, 1928-29

Date	Discharge	Date	Discharge	Date	Discharge
Sept. 3.....	22	Sept. 11.....	19	Sept. 18.....	22
Sept. 4.....	22	Sept. 12.....	21	Sept. 19.....	22
Sept. 5.....	22	Sept. 13.....	21	Sept. 20.....	12
Sept. 6.....	21	Sept. 14.....	22	Sept. 21.....	8.5
Sept. 7.....	22	Sept. 15.....	21	Sept. 22.....	17
Sept. 8.....	22	Sept. 16.....	21	Sept. 23.....	8.5
Sept. 9.....	22	Sept. 17.....	21	Sept. 24.....	4.0
Sept. 10.....	21				

NOTE.—No flow during year except Sept. 3-24. Total run-off for year, 820 acre-feet.

MEDLEY LAKES OUTLET NEAR VADE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ 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.

RECORDS AVAILABLE.—September, 1922, to September, 1929; summer record only.

EXTREMES.—Maximum discharge during year, 202 second-feet June 15 and 16 (gauge height, 3.42 feet); minimum, 0.1 second-foot at times.

1922-1929: Maximum discharge, that of June 15 and 16, 1929; no flow later part of September to October 27, 1924, and September 1 to October 10, 1926.

REMARKS.—Records good. Daily observations discontinued November 15 to April 15 and September 7-30. No diversions. Flow partly regulated by gates at Medley Lakes Dam. No available storage in Medley Lakes on September 30, 1928, or on September 30, 1929.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1		4.8	3.0	34	82	0.9
2	.2	.1		6.5	2.6	32	80	.8
3	.2	.1		9.5	4.4	32	78	.8
4	.2	.1		8	5	31	78	.7
5	.2	.1		5	3.7	29	77	.7
6	.2	.8		5.5	3.0	26	75	.7
7	.2	.5		6.5	3.7	24	74	
8	.2	.8	1.2	9.5	3.4	22	72	
9	.1	1.3		8.5	4.8	20	70	
10	.1	1.7		6.5	4.2	17	67	
11	.1	1.9		7	4.6	33	66	
12	.1	2.1		9	7	67	62	
13	.1	3.1		12	8.5	65	52	
14	.1	5		10	8.5	64	49	
15	.1			10	54	64	45	
16	.1		1.7	12	142	78	41	
17	.1		1.9	13	72	95	35	
18	.1		1.8	11	45	94	28	
19	.1		1.6	9.5	38	94	15	
20	.1		1.3	11	38	93	10	
21	.1		1.2	14	41	92	6.5	
22	.1		1.2	13	41	91	4.8	
23	.1		1.1	14	44	90	3.7	
24	.1		1.3	13	48	90	3.1	
25	.1		1.4	9	49	89	2.5	
26	.1		1.5	4.4	47	88	2.2	
27	.1		2.2	3.1	49	86	1.9	
28	.1		2.3	4.2	47	86	1.6	
29	.1		1.8	5.5	42	85	1.4	
30	.1		2.5	7	38	84	1.3	
31	.1			5		82	1.1	
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
October	0.2		0.1		0.13		8.0	
November 1-14	5		.1		1.26		34.0	
April	2.5				1.43		85.1	
May	14		3.1		8.61		829	
June	142		2.6		30.0		1,790	
July	95		17		63.8		3,920	
August	82		1.1		38.3		2,360	
September	.9				.4		23.8	

* Estimated.

SILVER LAKE OUTLET NEAR KIRKWOOD, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 32, T. 10 N., R. 17 E., 1,000 feet below Silver Lake Dam and 4 miles southwest of Kirkwood. Altitude, about 7,200 feet.

RECORDS AVAILABLE.—September, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 323 second-feet June 16 (gage height, 4.00 feet); minimum, 0.1 second-foot at times when Silver Lake outlet gate was closed.

1922-1929: Maximum discharge, that of June 16, 1929; minimum, 0.1 second-foot part of each year.

REMARKS.—Records good. Observations discontinued January 1 to March 31. No available storage in Silver Lake on September 30, 1928, or on September 30, 1929; all storage released during summer.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Apr.	May	June	July	Aug.	Sept.
1	1.2	0.1	0.1	3.0	2.8	16	5.5	1.8	80
2	1.0	.1	.1	3.0	3.3	11	5.5	1.8	78
3	.8	.2	.2	2.8	3.6	8	5.5	1.8	75
4	.6	.2	.2	2.8	3.3	8	8.5	1.8	72
5	.6	.1	.2	2.6	3.6	8	16	1.8	69
6	.4	.2	.1	3.3	3.6	8	26	1.8	66
7	.4	.1	.1	3.9	5	15	37	1.8	63
8	.3	.1	.1	4.5	26	20	40	1.8	61
9	.2	.1	.1	9	81	25	48	1.8	57
10	.2	.1	.1	4.5	175	60	56	1.8	52
11	.3	.1	.1	2.8	209	94	38	1.8	48
12	.2	.1	.1	2.8	194	44	9	1.8	42
13	.2	.1	.2	2.6	194	31	8	1.8	34
14	.2	.2	.2	2.4	200	35	2.8	1.8	29
15	.2	.1	.2	2.6	194	67	2.6	1.8	26
16	.2	.1	.2	2.8	205	202	2.2	1.8	23
17	.2	.1	.2	2.8	210	264	2.2	1.8	20
18	.2	.1	.2	2.6	205	237	2.2	1.8	18
19	.2	.1	.2	2.6	194	108	2.2	1.8	16
20	.1	.2	.2	2.6	183	12	2.0	1.8	14
21	.1	.2	.2	2.4	152	30	2.0	6	12
22	.1	.2	.2	2.6	151	48	2.0	60	11
23	.1	.2	.2	2.6	156	17	2.0	100	9.5
24	.1	.2	.2	2.2	125	9.5	2.0	98	3.8
25	.1	.2	.2	2.6	111	7.5	1.8	97	.1
26	.1	.2	.2	2.6	102	5.5	1.8	94	.1
27	.1	.2	.2	2.6	38	5.5	1.8	92	.1
28	.1	.2	.2	2.4	12	5.5	1.8	90	.1
29	.1	.1	.2	2.4	13	5.5	1.8	88	.1
30	.1	.2	.2	2.6	14	5.5	1.8	86	.1
31	.1		.2		15		1.8	83	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.2	0.1	0.28	17.2
November	.2	.1	.15	8.9
December	.2	.1	.17	10.5
January			.15	9.2
February			.15	8.3
March			.50	30.7
April	9	2.4	3.08	188
May	210	2.8	102	6,270
June	264	5.5	47.1	2,800
July	56	1.8	11.0	676
August	100	1.8	30.0	1,840
September	80	.1	32.7	1,950
The year	264	.1	19.1	13,800

• Estimated.

SILVER FORK OF SOUTH FORK OF AMERICAN RIVER NEAR KYBURZ, CALIF.

LOCATION.—Water-stage recorder in sec. 34, T. 11 N., R. 15 E., 2 miles above mouth and 2 miles southeast of Kyburz. Altitude, about 5,000 feet.

RECORDS AVAILABLE.—August, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,320 second-feet June 16 (gage height, 4.52 feet); minimum, 3.9 second-feet September 29.

1924-1929: Maximum discharge, 3,620 second-feet March 25, 1928 (gage height, 6.54 feet); minimum, that of September 29, 1929.

REMARKS.—Records good except those for October 1-5, December 6 to January 31, February 8, 9, February 18 to March 8, and March 15-29, which were estimated. No diversions. Flow regulated by storage at Twin and Silver Lakes.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.
1	144	132	54	16	12	15	112	339	139	66	62	142
2	143	132	46	30	12	18	124	372	134	61	67	139
3	142	129	40	22	15	22	142	420	113	57	68	136
4	140	74	31	16	18	32	146	385	112	53	67	124
5	139	71	26	12	14	46	108	343	107	57	71	123
6	139	74	30	16	12	50	92	332	102	62	71	121
7	139	45	36	12	12	40	81	354	108	78	71	120
8	137	32	40	10	12	38	72	406	123	82	76	121
9	139	27	40	7	13	37	63	424	174	82	78	120
10	139	28	40	9	14	91	68	474	170	94	78	120
11	139	29	42	10	12	57	71	512	188	91	82	116
12	139	30	54	12	11	46	81	531	151	42	84	112
13	139	32	72	12	11	38	91	568	129	43	84	106
14	139	30	76	12	12	32	80	537	137	66	91	100
15	139	25	76	11	12	36	120	531	350	68	98	95
16	139	20	76	10	12	38	188	562	677	67	96	92
17	139	20	76	8	13	44	232	537	543	45	106	88
18	140	25	76	8	13	40	229	496	485	27	112	94
19	146	26	76	10	13	38	184	469	300	23	116	134
20	88	23	76	36	13	40	156	453	174	22	129	89
21	15	23	76	44	13	48	160	424	162	34	137	68
22	8	23	76	56	15	98	144	393	176	50	151	64
23	6	23	76	43	16	78	134	389	147	52	147	62
24	5	24	76	42	15	58	170	339	123	49	142	61
25	8.5	26	76	20	14	54	192	292	113	47	142	40
26	112	25	86	12	14	50	218	251	102	54	142	25
27	129	24	68	10	14	62	254	192	96	56	142	8.5
28	136	27	43	9	13	98	267	147	88	56	142	5.5
29	134	38	34	8		118	229	140	78	56	142	8
30	136	50	16	14		118	297	140	72	61	140	19
31	134		12	18		108		137		62	142	
Month						Maximum		Minimum		Mean		Run-off in acre-feet
October						146		5		115		7,070
November						132		20		42.9		2,550
December						86		12		55.7		3,420
January						56		7		18.1		1,110
February						18		11		13.2		738
March						118		15		54.5		3,350
April						297		63		150		8,930
May						568		137		384		23,000
June						677		72		186		11,100
July						94		22		56.9		3,500
August						151		62		106		6,520
September						142		5.5		88.4		5,260
The year						677		5		106		77,100

TWIN LAKES OUTLET NEAR KIRKWOOD, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 18, T. 10 N., R. 18 E., 500 feet below main dam and outlet gate of Twin Lakes and 2 miles east of Kirkwood. Altitude, about 7,900 feet.

RECORDS AVAILABLE.—September, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 134 second-foot October 1 (gage height, 1.70 feet); minimum, 0.2 second-foot September 26 and 27.

1922-1929: Maximum discharge, 176 second-feet May 25-28, 1928 (gage height, 1.95 feet); minimum, 0.2 second-foot during part of each winter from 1922 to 1925, and September 26 and 27, 1929.

REMARKS.—Records excellent. No diversions. Flow regulated at Twin Lakes Dam. There was 11,500 acre-feet of water in Twin Lakes on September 30, 1928, and 6,200 acre-feet on September 30, 1929.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	119	36	22	0.7	0.7	0.3	1.2	0.3	0.3	45	48
2	131	120	33	16	.7	.7	.3	1.1	.3	.3	48	48
3	131	90	26	1.1	.7	.6	.8	.8	.3	.3	48	43
4	130	60	19	6	.7	.4	.3	.6	.3	.3	50	34
5	128	59	23	7.5	.7	.3	.3	.6	.3	.3	53	39
6	128	45	30	.4	.7	.3	.3	1.1	.3	.3	53	39
7	126	24	34	.6	.7	.3	.3	1.2	.3	.3	54	44
8	125	19	34	.8	.7	.3	.8	1.0	.3	.3	60	45
9	126	21	34	2.7	.7	.3	.3	1.0	.3	.3	60	49
10	126	23	37	5	.7	.3	.3	.6	.3	.3	63	50
11	126	23	49	4.9	.7	.3	.3	.6	.3	.3	65	50
12	125	23	66	4.9	.7	.3	.3	.6	.3	.7	65	50
13	125	21	70	5	.7	.3	.3	.7	.3	29	68	50
14	124	16	70	3.9	.7	.3	.3	.6	.3	36	74	50
15	122	10	70	.8	.7	.3	.3	.6	.7	39	76	50
16	120	12	70	.7	.7	.3	.3	.6	.8		78	50
17	124	15	70	2.9	.7	.3	.3	.6	.6	2.3	86	49
18	125	15	70	9.5	.7	.3	.4	.5	.5	1.5	91	86
19	131	15	70	29	.7	.3	.4	.5	.4	3.3	98	81
20	1.6	15	70	38	.7	.3	.4	.5	.3	14	106	45
21	.4	15	70	50	.7	.3	.4	.4	.3	29	113	40
22	.4	15	70	40	.7	.3	.4	.4	.3	35	68	41
23	.4	15	70	35	.7	.3	.4	.4	.3	30	23	41
24	10	15	70	12	.7	.3	.4	.4	.3	29	26	36
25	65	15	67	.8	.7	.3	.4	.3	.3	34	28	15
26	106	15	57	.7	.7	.3	.5	.3	.3	37	31	.2
27	120	17	40	.7	.7	.3	.8	.3	.3	37	37	.2
28	122	23	15	.7	.7	.3	.7	.3	.3	37	38	13
29	122	28	.5	29	-----	.3	.8	.3	.3	39	40	12
30	120	36	1.1	.8	-----	.3	1.2	.3	.3	43	44	.4
31	119	-----	12	.7	-----	.3	-----	.3	-----	43	48	-----
Month						Maximum	Minimum	Mean		Run-off in acre-feet		
October						132	0.4	103		6,330		
November						120	10	31.3		1,860		
December						70	.5	46.9		2,880		
January						50	.4	10.7		658		
February						.7	.7	.70		38.9		
March						.7	.3	.34		20.9		
April						1.2	.3	.41		24.4		
May						1.2	.3	.60		36.9		
June						.8	.3	.35		20.8		
July						43	.3	18.0		1,110		
August						113	23	59.3		3,650		
September						86	.2	40.0		2,380		
The year						132	.2	26.3		19,000		

TWIN LAKES SPILLWAY NEAR KIRKWOOD, CALIF.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ 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.

RECORDS AVAILABLE.—June, 1925, to September, 1929.

EXTREMES.—No flow during year.

1926-1929: Maximum discharge, 172 second-feet May 14, 1928 (gage height, 2.50 feet); no flow most of each year.

EL DORADO CANAL NEAR KYBURZ, CALIF.

LOCATION.—Water-stage recorder in sec. 29, T. 11 N., R. 15 E., 400 feet below intake and 2 miles west of Kyburz.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—1922-1929: Maximum mean daily discharge, 157 second-feet June 16 and July 2, 1926; canal dry at times.

REMARKS.—Records excellent except those for periods affected by ice. December 6-21, January 2-27, and February 6-11, which are fair. Canal diverts from left bank of South Fork of American River 2 miles below Kyburz; water used for power and irrigation.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	149	136	57	40	41	41	123	119	140	146	144	143
2	148	136	58	42	44	49	124	120	142	145	145	140
3	148	142	53	36	49	56	124	121	144	147	146	137
4	148	83	45	30	57	74	124	36	144	143	143	129
5	147	78	39	28	49	99	124	4.5	143	141	143	141
6	146	92	44	30	45	114	124	62	143	135	143	139
7	144	74	48	25	40	93	126	121	144	145	142	138
8	141	50	54	25	20	76	123	121	143	143	144	141
9	142	41	54	25	5.5	78	120	123	144	138	145	138
10	143	43	54	24	0	104	119	126	144	142	142	139
11	143	43	53	24	0	106	122	129	144	135	145	135
12	144	43	65	26	11	94	123	129	144	127	144	137
13	144	47	80	26	24	81	124	131	144	132	138	121
14	142	47	82	27	38	76	123	130	144	146	138	115
15	142	47	82	25	35	80	125	132	142	147	142	111
16	141	42	82	24	35	86	124	132	136	144	138	107
17	145	41	82	27	37	102	124	132	136	149	140	162
18	146	41	82	28	39	97	44	130	135	147	141	108
19	149	45	82	27	38	92	88	132	137	142	135	147
20	103	43	82	50	38	97	122	132	138	138	138	108
21	27	44	82	60	38	115	123	132	139	139	142	82
22	19	43	82	72	40	128	122	132	141	147	148	74
23	16	43	82	65	44	121	40	133	140	148	145	78
24	15	40	82	60	42	120	4.5	132	142	144	142	70
25	15	39	88	40	40	112	4.5	133	143	142	143	53
26	106	41	99	35	40	110	46	132	144	145	141	20
27	129	38	94	30	39	124	117	132	144	146	141	3.6
28	139	38	84	28	38	124	117	134	144	143	143	2.5
29	138	43	60	29	-----	124	36	137	146	142	142	26
30	141	55	41	44	-----	123	62	137	146	145	141	24
31	138	-----	39	47	-----	123	-----	139	-----	147	144	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	149	15	121	7,440
November	142	38	57.9	3,450
December	99	39	68.1	4,190
January	72	24	35.5	2,380
February	57	0	34.5	1,920
March	128	41	97.4	5,990
April	126	4.5	101	6,010
May	139	4.5	120	7,380
June	146	135	142	8,450
July	149	127	143	8,790
August	148	135	142	8,730
September	147	2.5	100	5,950
This year	149	0	97.3	70,500

ALDER CREEK NEAR WHITEHALL, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 36, T. 11 N., R. 14 E., three-fourths mile above mouth and 2 miles southeast of Whitehall.

DRAINAGE AREA.—22.8 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 108 second-feet May 3 (gage height, 2.13 feet); minimum, 0.2 second-foot October 1-29 and September 2-30.

1922-1929: Maximum discharge, about 2,060 second-feet March 25, 1928 (gage height, 7.1 feet); minimum, 0.1 second-foot August 28 to September 2, 1924, and September 10-14, 1926.

REMARKS.—Records excellent except those for October to January, which were mostly estimated, and are fair. No diversions.

Daily and monthly discharge, in second-feet, 1922-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.2	0.4	1.1	4.0	3.0	10	35	81	14	7.5	1.3	0.3
2.	.2	.3	1.1	3.5	5	11	35	87	14	7	1.2	.2
3.	.2	.6	1.1	3.4	8	13	37	92	12	6.5	1.1	.2
4.	.2	.7	1.1	3.1	12	16	44	92	11	6	1.0	.2
5.	.2	.7	1.1	2.8	11	18	41	87	10	5.5	.7	.2
6.	.2	.9	1.1	2.6	10	18	34	81	10	5	.7	.2
7.	.2	.8	1.1	2.4	12	17	25	80	11	4.8	.6	.2
8.	.2	.7	1.1	2.2	18	16	24	78	11	4.4	.6	.2
9.	.2	.6	1.1	2.0	25	17	23	76	15	4.0	.6	.2
10.	.2	.6	1.1	2.0	28	45	21	73	15	3.8	.5	.2
11.	.2	.6	1.1	2.0	22	33	22	68	12	3.5	.5	.2
12.	.2	.6	1.1	1.8	21	25	25	64	11	3.3	.5	.2
13.	.2	.6	1.1	1.8	17	21	29	64	10	3.3	.5	.2
14.	.2	1.8	1.1	1.8	12	18	29	64	9	3.1	.4	.2
15.	.2	1.8	1.1	1.8	9.5	19	40	61	12	3.1	.4	.2
16.	.2	1.7	1.1	1.8	9	21	58	60	68	2.8	.4	.2
17.	.2	1.6	1.1	1.8	9	24	71	56	58	2.8	.4	.2
18.	.2	1.6	1.1	1.8	7.5	23	73	50	42	2.4	.4	.2
19.	.2	1.5	1.1	1.8	7	23	80	45	35	2.2	.4	.2
20.	.2	1.4	1.1	1.8	7	23	76	42	27	2.2	.4	.2
21.	.2	1.3	1.1	2.0	7.5	24	73	37	24	2.2	.4	.2
22.	.2	1.3	1.2	2.5	8	34	66	35	21	1.9	.4	.2
23.	.2	1.3	1.2	2.5	9	30	61	30	18	1.7	.3	.2
24.	.2	1.3	1.5	2.5	9	26	64	27	16	1.6	.3	.2
25.	.2	1.3	11	2.5	9	22	66	24	15	1.5	.3	.2
26.	.2	1.2	10	2.5	8.5	21	66	21	13	1.5	.3	.2
27.	.2	1.2	7	2.5	8	25	71	20	12	1.4	.3	.2
28.	.2	1.2	9	2.0	8.5	36	73	18	10	1.5	.3	.2
29.	.2	1.2	7	2.0	7	41	71	16	9.5	1.4	.3	.2
30.	.3	1.2	5.5	2.0	-----	42	74	14	8.5	1.4	.3	.2
31.	.4	-----	5.5	2.0	-----	37	-----	13	-----	1.3	.3	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.4	0.2	0.21	12.9
November	1.8	.3	1.07	63.7
December	11	1.1	2.65	163
January	4.0	1.8	2.30	141
February	28	3.0	11.4	633
March	45	10	24.1	1,480
April	80	21	50.2	2,950
May	92	13	53.4	3,280
June	63	8.5	18.1	1,090
July	7.5	1.3	3.25	200
August	1.3	.8	.52	32.0
September	.3	.2	.20	11.9
The year	92	.2	13.9	10,100

PLUM CREEK NEAR RIVERTON, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 33, T. 11 N., R. 14 E., $1\frac{1}{2}$ miles above mouth and 4 miles southeast of Riverton. Altitude, about 4,100 feet.

DRAINAGE AREA.—7.0 square miles.

RECORDS AVAILABLE.—November, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 37 second-feet April 19 (gage height, 1.34 feet); minimum, 0.2 second-foot October 1 to November 2 and August 15 to September 30.

1922-1929: Maximum discharge, 635 second-feet March 25, 1928 (gage height, 4.10 feet); minimum, 0.1 second-foot July 3 to August 14, 1924, September 11, 13, and 14, 1925, July 28 to August 5 and August 24 and 25, 1926.

REMARKS.—Records good except those for estimated periods, which are fair. Daily discharge not determined for September. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Month	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	*0.2	0.2	0.6	2.2	1.5	1.7	7.5	9.5	1.4	0.6	0.3
2	*.2	.2	.6	1.5	12	1.7	7	9	1.4	.5	.3
3	*.2	.3	*.6	*1.5	17	2.0	6	9	1.3	.5	.3
4	*.2	.3	*.6	*1.5	26	2.4	9	8	1.3	.5	.3
5	*.2	.3	*.6	*1.5	14	3.2	16	7.5	1.2	.4	.3
6	*.2	.5	*.6	*1.4	8	3.4	12	7	1.2	.4	.3
7	*.2	.3	*.6	1.4	5	3.4	10	6	1.2	.4	.3
8	*.2	.3	*.6	1.3	4.3	3.4	10	5.5	1.4	.4	.3
9	*.2	.3	*.6	1.2	*4.0	3.2	9.5	5.5	2.0	.4	.3
10	*.2	.3	1.3	.9	*3.8	14	11	4.9	1.4	.4	.3
11	*.2	.3	1.5	.6	*3.5	8.5	16	4.3	1.3	.4	.3
12	*.2	.4	1.0	.6	*3.3	7	20	4.1	1.2	.4	.3
13	*.2	1.1	1.3	.5	*3.0	6	19	3.6	.9	.4	.3
14	*.2	1.3	1.2	.5	*2.8	5.5	18	3.4	.8	.4	.3
15	*.2	1.2	1.0	.5	*2.5	7	20	3.2	3.0	.4	.2
16	*.2	1.1	1.0	.4	*2.2	9	21	3.2	7.5	.4	.2
17	*.2	1.0	.9	.4	2.0	9.5	20	3.0	7	.4	.2
18	.2	.9	.8	.4	2.0	9	19	2.6	4.1	.4	.3
19	.2	.8	.8	.5	2.0	9.5	28	2.4	3.2	.4	.2
20	.2	.8	.7	.5	1.8	9	30	2.2	2.6	.4	*.2
21	.2	.9	.7	.4	1.8	8	26	2.0	2.0	.4	*.2
22	.2	.9	*.7	.4	1.7	9.5	26	2.0	1.7	.4	*.2
23	.2	.9	*.7	.4	1.8	9	24	1.8	1.6	.3	*.2
24	.2	.8	*.7	.4	1.8	7.5	24	1.7	1.3	.3	*.2
25	.2	.7	11	.4	1.8	7	20	1.5	1.2	.3	*.2
26	.2	.7	4.6	.4	1.8	7	17	1.5	1.2	.3	*.2
27	.2	.7	3.0	.4	1.7	9.5	16	1.5	1.0	.3	*.2
28	.2	.7	7.5	.4	1.7	13	14	1.4	1.0	.3	.2
29	.2	.6	3.6	.4	-----	12	12	1.4	.8	.3	.2
30	.2	.6	3.0	.5	-----	11	10	1.3	.6	.3	.2
31	.2	-----	2.6	.6	-----	9	-----	1.4	-----	.3	.2

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	0.2	0.2	0.20	12.3
November	1.3	.2	.65	38.7
December	11	.6	1.77	109
January	2.2	.4	.77	47.3
February	26	1.5	4.81	267
March	14	1.7	7.13	438
April	30	6	16.6	988
May	9.5	1.3	3.92	241
June	7.5	.6	1.92	114
July	.6	.3	.39	24.0
August	.3	.2	.25	15.4
September	.2	.2	*.20	11.9
The year	30	.2	3.19	2,310

* Estimated.

SILVER CREEK AT UNION VALLEY, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ 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 4,600 feet.

RECORDS AVAILABLE.—October, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, about 3,790 second-feet June 15 (gage height, 8.8 feet); minimum not known, probably occurred during period of no record.

1924-1929: Maximum discharge, about 9,600 second-feet March 25, 1928 (gage height, 14.7 feet); minimum, 2.5 second-feet August 24-26 and September 9-16, 1926.

REMARKS.—Records fair. Daily discharge not determined for several periods. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Apr.	May	June	July	Aug.
1		8	16			575		59	8.5
2		7.5	17			625		54	8.5
3		13	19					51	8
4		15	18					46	7.5
5		12	17					43	7.5
6		24	16		* 200			40	7.5
7		20	15					37	
8		14	14					33	
9		11	14					31	
10		11	23					30	
11		10	22					28	
12	* 5	12	20		147			25	
13		16	19		149			24	
14		17		27	139			23	
15		16			184			20	
16		16			294			17	
17		20			368			16	
18		19			368			16	
19		20			306			15	
20		23			247			14	
21		25			270			14	
22		27	* 16		225			13	
23		25			204			12	
24	5.5	23			282			12	
25	6	22			318			11	
26		21			381			11	
27	6.5	20			446			10	
28	6.5	17			433			9	
29	7	16			368			8.5	
30	8.5	16			502		66	8.5	
31	8.5							8.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	8.5		5.47	336
November	27	7.5	17.2	1,020
December			16.7	1,080
January			* 25.0	1,540
February			* 40.0	2,226
March			* 100	6,150
April	502		261	15,500
May			* 480	29,500
June			* 200	11,900
July	59	8.5	23.9	1,470
August			* 8.0	492
September			* 5.0	298
The year			98.8	71,500

* Estimated.

SILVER CREEK NEAR PLACERVILLE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 13, T. 11 N., R. 12 E., one-fourth mile above mouth and 12 miles northeast of Placerville.

RECORDS AVAILABLE.—December, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,660 second-feet June 16 (gage height, 9.60 feet); minimum, 16 second-feet September 15.

1921-1929: Maximum discharge, about 16,900 second-feet March 25, 1928 (gage height, 18.0 feet); minimum, 10 second-feet September 9, 1924.

REMARKS.—Records excellent. Discharge estimated October 2-4, 12, 13, and June 19-22. No diversions.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	33	54	93	89	121	397	960	335	162	31	19
2	25	32	57	54	176	136	408	1,080	326	149	31	19
3	26	35	68	98	152	161	409	1,160	291	135	30	18
4	27	50	65	81	274	200	508	1,120	308	128	29	18
5	27	43	59	85	190	257	469	960	291	118	28	18
6	27	62	53	80	150	300	386	920	266	110	28	19
7	26	61	52	68	113	257	317	960	257	103	27	19
8	26	54	51	71	87	230	335	1,060	326	96	26	18
9	27	44	54	68	91	236	308	1,080	354	89	26	18
10	27	40	74	66	91	566	291	940	469	81	26	18
11	28	38	74	68	93	364	291	920	335	77	25	18
12	29	40	66	68	90	300	308	1,020	291	73	24	17
13	30	62	68	69	87	249	326	1,080	291	69	24	17
14	32	70	62	72	86	228	308	1,120	308	66	23	17
15	31	62	60	74	84	235	354	1,000	317	62	22	17
16	32	53	62	72	87	249	482	1,080	2,190	60	22	17
17	31	49	60	68	88	274	641	1,100	960	55	22	17
18	31	50	57	72	93	274	686	1,020	798	53	22	17
19	30	56	59	74	91	266	686	902	550	49	22	18
20	31	53	57	71	91	274	611	832	420	48	21	18
21	31	59	55	63	92	308	596	920	380	47	21	19
22	31	61	54	68	101	469	536	885	340	44	20	20
23	30	63	54	71	111	420	469	815	326	42	20	20
24	28	60	60	59	114	326	551	780	300	40	20	20
25	29	58	185	68	109	300	596	701	274	39	20	19
26	30	63	189	63	103	282	656	508	249	38	20	20
27	29	57	160	63	101	317	764	886	235	36	20	20
28	29	54	207	63	109	397	815	344	219	35	20	20
29	29	52	148	65	-----	482	656	326	204	34	20	20
30	32	54	124	74	-----	469	815	344	181	32	20	20
31	34	-----	99	80	-----	408	-----	354	-----	32	19	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	34	23	29.0	1,780
November	70	32	52.4	3,120
December	207	51	82.2	5,050
January	98	59	72.2	4,440
February	274	84	113	6,280
March	566	121	302	18,000
April	815	291	501	29,800
May	1,160	326	861	52,900
June	2,190	181	413	24,600
July	162	32	71.0	4,370
August	31	19	23.5	1,440
September	20	17	18.5	1,100
The year	2,190	17	212	153,000

SOUTH FORK OF SILVER CREEK AT ICE HOUSE, CALIF.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 1, T. 11 N., R. 14 E., 1 mile north of Ice House and 8 miles northeast of Riverton. Altitude, about 5,300 feet.

RECORDS AVAILABLE.—July to October, 1922; October, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 775 second-feet June 15 (gage height, 3.83 feet); minimum, 0.6 second-foot September 14–20.

1924–1929: Maximum discharge, 1,620 second-feet March 26, 1928 (gage height, 5.35 feet); minimum, 0.5 second-foot several days in August and September, 1926.

REMARKS.—Records good except those for estimated period, which are fair. Daily discharge not determined December 4 to March 14 because of ice. No diversions.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.	0.8	1.0	4.8	-----	* 10	46	182	95	50	2.7	0.9
2. ....	.8	1.0	4.2	-----		53	216	83	45	2.7	.9
3. ....	.8	1.1	4.2	-----		61	252	78	40	2.4	.9
4. ....	.8	1.5	-----	-----		56	252	82	38	1.8	.8
5. ....	.8	1.5	-----	-----		40	216	74	36	1.5	.8
6. ....	.8	4.2	-----	-----		38	216	67	32	1.5	.8
7. ....	.8	7.5	-----	-----		35	235	71	30	1.4	.8
8. ....	.8	4.2	-----	-----		25	271	79	27	1.3	.8
9. ....	.8	2.7	-----	-----		19	274	104	22	1.3	.8
10. ....	.8	2.1	-----	-----		22	252	100	21	1.2	.8
11. ....	.8	2.4	-----	-----	* 6.5	21	259	80	18	1.2	.7
12. ....	.8	2.1	-----	-----		28	292	76	17	1.1	.7
13. ....	.8	2.1	-----	-----		29	323	82	15	1.1	.7
14. ....	.8	3.6	-----	-----		28	323	92	13	1.0	.6
15. ....	.8	4.8	-----	-----		34	323	278	12	1.0	.6
16. ....	.8	5	-----	-----		20	52	347	443	1.0	.6
17. ....	.8	7.5	-----	-----		20	76	350	256	1.0	.6
18. ....	.8	6	-----	-----		22	90	314	207	1.0	.6
19. ....	.8	6	-----	-----		22	77	287	148	1.0	.6
20. ....	.8	5.5	-----	-----		22	61	287	121	1.0	.6
21. ....	.8	6	-----	-----	26	60	306	110	7	.9	.9
22. ....	.8	6.5	-----	-----	40	53	292	98	6	.9	.8
23. ....	.8	7.5	-----	-----	41	47	271	91	5	.9	.8
24. ....	.8	7.5	-----	-----	40	55	244	86	4.5	.9	.8
25. ....	.8	6.5	-----	-----	34	64	209	83	4.2	.9	.8
26. ....	.8	6.5	-----	-----	32	81	152	77	3.9	.9	.8
27. ....	.8	6	-----	-----	29	105	108	72	3.6	1.0	.8
28. ....	.8	6	-----	-----	37	111	96	68	3.3	1.0	.8
29. ....	.8	5.5	-----	-----	51	96	91	62	3.0	1.0	.8
30. ....	.9	5	-----	-----	53	139	96	56	3.0	.9	.7
31.	1.0	-----	-----	-----	46	-----	97	-----	2.7	.9	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1.0	0.8	.81	49.8
November	7.5	1.0	4.49	267
December	-----	-----	* 4.0	246
January	-----	-----	* 6.0	369
February	-----	-----	* 8.0	444
March	53	-----	22.4	1,380
April	139	19	56.7	3,370
May	350	91	240	14,800
June	443	56	114	6,780
July	50	2.7	16.4	1,010
August	2.7	.9	1.24	76.2
September .....	.9	.6	.75	44.6
The year	443	.6	39.8	28,800

* Estimated.

† Result of discharge measurement.

FINNON RESERVOIR OUTLET NEAR PLACERVILLE, CALIF.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 16, T. 11 N., R. 11 E., at weir 400 feet below Finnon Reservoir, 10 miles northeast of Placerville.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 30 second-feet several days in August and September (gage height, 1.00 foot); no flow for several months.

1922-1929: Maximum discharge, 106 second-feet March 21, 1925 (gage height, 2.60 feet); water is usually turned out of canal part of each day.

REMARKS.—Records excellent. Water is diverted into Finnon Reservoir from One Eye and Slab Creeks. Outlet flow completely regulated by gates in dam. Water used for power development.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	May	Aug.	Sept.
1.....	0	0	0	12	0	12	0	0
2.....	0	0	0	12	0	11	0	0
3.....	16	0	0	0	0	0	0	0
4.....	16	0	0	12	0	0	0	0
5.....	16	0	0	15	0	0	0	13
6.....	16	0	0	12	0	0	0	30
7.....	16	0	0	12	0	0	0	12
8.....	16	0	0	12	0	0	0	0
9.....	16	0	0	0	0	0	0	0
10.....	16	0	0	0	0	0	0	0
11.....	16	0	0	0	0	0	0	16
12.....	16	0	0	0	6	0	0	30
13.....	16	0	0	0	6	0	0	30
14.....	16	0	0	0	0	0	5.5	30
15.....	16	0	0	0	11	0	10	0
16.....	16	0	0	0	12	0	10	0
17.....	16	0	0	0	11	0	0	0
18.....	5.5	0	0	0	12	0	0	19
19.....	0	0	0	0	0	0	0	30
20.....	0	0	0	0	11	0	0	15
21.....	0	.1	0	0	0	0	0	0
22.....	0	.2	0	0	11	0	30	0
23.....	0	0	0	0	0	0	14	0
24.....	0	0	0	0	0	0	0	0
25.....	0	0	0	0	0	0	0	0
26.....	0	0	0	0	0	0	0	0
27.....	0	0	12	0	0	0	0	0
28.....	0	0	12	0	0	0	0	0
29.....	0	0	-----	0	12	0	0	0
30.....	0	0	-----	0	11	0	0	0
31.....	0	0	-----	0	-----	0	0	-----
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
December.....	16		0		7.92		487	
January.....	2		0		.01		.6	
February.....	12		0		.86		47.8	
March.....	15		0		2.81		173	
April.....	12		0		3.43		204	
May.....	12		0		.74		45.5	
August.....	30		0		2.24		138	
September.....	30		0		7.50		446	
The year.....	30		0		2.13		1,540	

NOTE.—No flow during months for which no discharge is given.

WESTERN STATES GAS & ELECTRIC CO.'S FLUME NEAR CAMINO, CALIF.

LOCATION.—Float gage in SW. $\frac{1}{4}$ sec. 25, T. 11 N., R. 11 E., 1 mile below diversion dam and 3 miles northwest of Camino.

RECORDS AVAILABLE.—November, 1922, to September, 1929.

EXTREMES.—1922-1929: Maximum mean daily discharge, 118 second-feet July 5-7, 10, 11, 13-15, and 17, 1925.

REMARKS.—Records good. This flume diverts from South Fork of American River in SE. $\frac{1}{4}$ sec. 24, T. 11 N., R. 11 E. and is used to develop power in SW. $\frac{1}{4}$ sec. 20, T. 11 N., R. 11 E., just above mouth of Rock Creek where it is returned to river.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	106	98	101	110	103	105	106	106	105	105	101	96
2.....	107	99	98	110	104	106	107	106	105	106	100	91
3.....	107	102	104	111	103	106	107	106	106	106	97	75
4.....	106	106	102	110	104	107	106	106	106	105	104	84
5.....	108	100	102	110	102	106	106	105	106	106	86	87
6.....	110	101	94	110	103	105	106	105	106	106	95	87
7.....	107	99	88	110	102	104	106	106	106	105	98	84
8.....	104	102	90	107	102	105	106	106	106	105	93	79
9.....	108	98	92	108	102	105	103	106	106	103	104	79
10.....	107	87	105	107	102	106	105	106	107	102	102	86
11.....	108	85	110	110	102	106	106	106	105	107	87	83
12.....	108	73	110	110	99	107	105	106	105	105	92	89
13.....	108	111	110	111	100	105	106	107	106	104	94	78
14.....	108	112	112	112	101	105	106	106	106	99	91	81
15.....	109	111	111	111	102	105	106	106	105	105	96	63
16.....	108	108	104	111	102	105	107	106	106	102	93	66
17.....	105	102	110	110	102	105	107	106	103	99	87	65
18.....	102	100	110	110	102	105	107	106	105	104	87	54
19.....	105	100	110	111	102	105	106	105	105	101	80	69
20.....	102	102	110	0	102	106	106	105	105	103	87	81
21.....	102	99	110	0	102	105	106	106	105	96	91	70
22.....	74	102	110	33	103	106	106	105	105	104	84	54
23.....	66	104	110	102	105	105	106	106	105	94	100	46
24.....	63	102	110	94	107	105	106	106	107	102	95	46
25.....	62	102	111	102	106	106	107	105	106	103	84	48
26.....	74	96	111	102	105	105	107	106	106	100	84	47
27.....	103	100	111	98	105	106	107	106	107	102	89	47
28.....	101	97	113	100	105	106	107	106	107	100	92	47
29.....	107	83	111	99	-----	106	106	106	106	105	92	47
30.....	104	87	110	102	-----	105	106	106	105	103	91	47
31.....	107	-----	110	103	-----	105	-----	106	-----	106	90	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	110	62	99.9	6,140
November.....	112	73	98.9	5,880
December.....	113	88	106	6,520
January.....	112	0	97.5	6,000
February.....	107	99	103	5,720
March.....	107	104	105	6,460
April.....	107	103	106	6,310
May.....	107	105	106	6,520
June.....	107	103	106	6,310
July.....	107	94	103	6,330
August.....	104	80	92.5	5,690
September.....	96	46	69.2	4,120
The year.....	113	0	99.4	72,000

CACHE CREEK BASIN

CLEAR LAKE AT LAKEPORT, CALIF.

LOCATION.—Staff gage at municipal wharf on north side of Third Street at Lakeport, Lake County.

RECORDS AVAILABLE.—February, 1913, to September, 1929.

EXTREMES.—Maximum gage height during year, 3.30 feet many days in March and April; minimum, 0.20 foot September 29 and 30.

1913-1929: Maximum gage height, 11.12 feet January 28, 1914; minimum, —3.50 feet September 24-27, 1920.

REMARKS.—Gage-height record furnished by Yolo Water & Power Co.

Daily gage height, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.05	1.70	1.80	2.15	2.45	3.10	3.30	3.25	2.55	2.15	1.40	0.68
2	2.05	1.75	1.85	2.20	2.50	3.10	3.30	3.22	2.55	2.10	1.38	.62
3	2.00	1.75	1.90	2.20	2.60	3.10	3.30	3.22	2.52	2.05	1.35	.60
4	1.98	1.75	1.90	2.20	2.90	3.15	3.28	3.20	2.50	2.02	1.32	.68
5	1.98	1.75	1.90	2.20	2.95	3.15	3.30	3.20	2.50	2.00	1.30	.55
6	1.98	1.75	1.90	2.20	3.00	3.12	3.30	3.20	2.48	1.98	1.28	.55
7	1.98	1.75	1.90	2.20	3.02	3.10	3.28	3.20	2.45	1.98	1.25	.55
8	1.98	1.75	1.90	2.20	3.05	3.10	3.25	3.18	2.45	1.95	1.22	.52
9	1.95	1.75	1.90	2.22	3.08	3.10	3.25	3.15	2.40	1.92	1.20	.50
10	1.95	1.75	1.90	2.22	3.10	3.12	3.25	3.12	2.40	1.90	1.18	.50
11	1.95	1.75	1.90	2.25	3.12	3.12	3.25	3.10	2.40	1.88	1.15	.50
12	1.90	1.75	1.90	2.25	3.12	3.15	3.25	3.12	2.38	1.85	1.12	.50
13	1.85	1.80	1.85	2.25	3.12	3.30	3.25	3.05	2.35	1.82	1.10	.50
14	1.85	1.85	2.00	2.25	3.12	3.30	3.25	3.00	2.35	1.80	1.10	.48
15	1.85	1.90	2.00	2.25	3.12	3.30	3.25	2.98	2.35	1.78	1.08	.45
16	1.85	1.90	2.00	2.25	3.12	3.30	3.25	2.95	2.40	1.75	1.05	.42
17	1.85	1.90	2.00	2.25	3.12	3.30	3.25	2.92	2.40	1.72	1.05	.40
18	1.85	1.85	2.00	2.25	3.15	3.30	3.25	2.95	2.40	1.70	1.02	.38
19	1.85	1.88	2.00	2.25	3.12	3.30	3.28	2.92	2.38	1.68	1.02	.35
20	1.82	1.90	2.00	2.28	3.12	3.30	3.25	2.90	2.35	1.65	1.00	.32
21	1.82	1.90	2.00	2.30	3.12	3.30	3.25	2.85	2.32	1.62	1.00	.32
22	1.80	1.90	2.00	2.30	3.15	3.30	3.25	2.80	2.30	1.60	1.00	.32
23	1.75	1.90	2.00	2.30	3.00	3.30	3.25	2.78	2.28	1.58	.98	.30
24	1.72	1.90	2.00	2.30	3.10	3.30	3.28	2.75	2.25	1.55	.95	.28
25	1.70	1.90	2.00	2.30	3.10	3.30	3.30	2.70	2.25	1.55	.92	.28
26	1.70	1.90	2.05	2.30	3.10	3.30	3.30	2.68	2.22	1.52	.88	.25
27	1.70	1.88	2.15	2.30	3.10	3.30	3.30	2.68	2.22	1.50	.85	.25
28	1.70	1.85	2.15	2.30	3.10	3.30	3.30	2.70	2.20	1.50	.80	.22
29	1.70	1.80	2.15	2.30	-----	3.30	3.28	2.65	2.20	1.48	.75	.20
30	1.70	1.80	2.15	2.35	-----	3.30	3.25	2.60	2.18	1.45	.72	.20
31	1.70	-----	2.15	2.40	-----	3.30	-----	2.60	-----	1.42	.70	-----

CACHE CREEK AT YOLO, CALIF.

LOCATION.—Staff gage 800 feet above highway bridge, 1,000 feet above Southern Pacific Co.'s railroad bridge, and half a mile south of Yolo, Yolo County.

DRAINAGE AREA.—1,230 square miles.

RECORDS AVAILABLE.—January, 1903, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,050 second-feet February 4 (gage height, 4.5 feet); no flow for several months.

1903-1929: Maximum discharge, 21,100 second-feet February 2, 1915 (gage height, 27.8 feet); no flow for periods in nearly every year.

REMARKS.—Records good. Discharge estimated December 23, 24, April 1 and 2. Numerous irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Dec.	Jan.	Feb.	Mar.	Apr.	Day	Dec.	Jan.	Feb.	Mar.	Apr.
1.....	0	55	26	33	7	16.....	53	17	90	60	0
2.....	0	55	75	30	3	17.....	40	17	88	56	0
3.....	0	52	725	28	0	18.....	38	19	84	52	0
4.....	0	46	1,980	26	0	19.....	29	21	76	48	0
5.....	0	38	1,000	25	0	20.....	16	22	60	44	0
6.....	0	38	555	25	0	21.....	12	21	58	44	0
7.....	0	37	395	25	0	22.....	7	19	50	40	0
8.....	0	33	290	25	0	23.....	3	19	44	40	0
9.....	0	32	230	25	0	24.....	4	19	40	40	0
10.....	0	29	183	42	0	25.....	9	17	40	38	0
11.....	0	24	152	64	0	26.....	7.5	15	38	38	0
12.....	0	23	128	84	0	27.....	75	14	36	35	0
13.....	0	19	125	96	0	28.....	75	14	35	25	0
14.....	0	19	108	78	0	29.....	65	14	-----	16	0
15.....	34	17	96	66	0	30.....	55	14	-----	14	0
						31.....	55	15	-----	10	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
December.....	75	0	18.6	1,140
January.....	55	14	25.6	1,570
February.....	1,980	26	243	18,500
March.....	96	10	41.0	2,520
April.....	7	0	.38	19.6
The year.....	1,980	0	25.9	18,700

NOTE.—No flow during months for which no discharge is given.

PUTAH CREEK BASIN

PUTAH CREEK AT WINTERS, CALIF.

LOCATION.—Staff gage just below Southern Pacific Co.'s railroad bridge at Winters, Yolo County, in Rio de los Putos grant.

DRAINAGE AREA.—654 square miles.

RECORDS AVAILABLE.—September, 1905, to September, 1929.

EXTREMES.—Maximum discharge during year, 7,860 second-feet February 4 (gage height, 14.8 feet); no flow October 1 to November 14 and July 1 to September 30.

1905-1929: Maximum discharge, about 60,000 second-feet December 31, 1913 (gage height, 39.0 feet); no flow during parts of 1913, 1914, and 1918 to 1929.

REMARKS.—Records good. Several small irrigation diversions above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1.....	0	5.5	204	204	95	76	52	1.8
2.....	0	6.5	160	160	85	76	52	1.8
3.....	0	25	151	3,420	85	76	52	3.0
4.....	0	21	142	4,950	85	76	52	3.0
5.....	0	48	142	2,000	76	67	52	7
6.....	0	53	125	860	76	67	46	7
7.....	0	53	117	550	67	67	39	7
8.....	0	48	109	475	67	67	39	7
9.....	0	58	102	370	85	67	34	7
10.....	0	58	95	162	310	67	34	9.5
11.....	0	515	88	280	725	67	34	7
12.....	0	285	82	252	475	60	28	7
13.....	0	1,350	76	224	310	60	28	7
14.....	0	665	69	211	252	60	24	7
15.....	204	270	64	198	224	60	24	9.5
16.....	125	204	58	173	198	60	20	9.5
17.....	69	192	64	173	186	60	20	7
18.....	38	134	69	162	173	60	20	7
19.....	29	117	69	150	150	60	16	1.8
20.....	21	109	64	127	150	52	16	1.8
21.....	14	95	69	127	116	60	12	.5
22.....	8	88	64	116	105	67	12	.5
23.....	8	82	64	105	95	76	9.5	.5
24.....	8	95	58	105	95	76	9.5	.5
25.....	5.5	315	53	105	95	76	9.5	.5
26.....	5.5	345	53	105	95	67	9.5	.4
27.....	5.5	204	53	95	95	67	7	.4
28.....	5.5	192	58	95	85	67	7	.4
29.....	5.5	300	58	-----	85	60	7	.4
30.....	5.5	255	58	-----	85	60	1.8	.4
31.....	-----	228	58	-----	76	-----	1.8	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November.....	204	0	18.6	1,110
December.....	1,350	5.5	207	12,700
January.....	204	53	87.0	5,350
February.....	4,950	95	570	31,700
March.....	725	67	158	9,720
April.....	76	52	66.0	3,980
May.....	52	1.8	24.8	1,520
June.....	9.5	.4	4.11	245
The year.....	4,950	0	91.5	66,300

NOTE.—No flow during months for which no discharge is given.

EEL RIVER BASIN

SOUTH EEL RIVER AT HULLVILLE, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 22, T. 18 N., R. 10 W., half a mile downstream from Scott Dam and half a mile west of Hullville.

RECORDS AVAILABLE.—November, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 381 second-feet October 2 (gauge height, 1.96 feet); minimum, 32 second-feet for a short time on August 29, 1922–1929: Maximum discharge, 32,600 second-feet March 26, 1928 (gauge height, 18.0 feet); minimum, 0.1 second-foot at 5 a. m. September 9, 1924.

REMARKS.—Records good. No diversions. Flow completely regulated by Lake Pillsbury and gates in Scott Dam. There was 29,500 acre-feet of water in Lake Pillsbury on September 30, 1928, and 18,400 acre-feet on September 30, 1929.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	336	176	145	145	71	159	159	107	200	169	162	152
2	354	180	142	145	57	159	159	134	192	173	167	166
3	381	180	157	147	46	157	159	130	171	173	169	166
4	364	178	171	148	44	157	159	68	171	173	169	166
5	255	178	169	148	43	157	159	144	162	169	167	166
6	232	166	178	148	43	162	157	107	159	167	166	173
7	220	160	176	132	49	166	149	78	159	164	166	176
8	220	139	175	138	110	166	116	97	159	159	166	176
9	228	159	173	190	124	166	106	140	167	157	166	176
10	238	159	168	198	85	142	98	92	175	157	166	157
11	245	167	133	166	114	114	93	126	175	157	167	140
12	220	180	134	159	114	117	96	104	171	157	176	121
13	190	171	136	164	109	133	116	88	167	157	163	109
14	159	45	134	133	114	150	156	113	160	166	176	99
15	171	88	154	132	114	162	65	122	150	162	176	99
16	190	161	173	140	114	162	97	83	133	166	175	99
17	200	180	145	159	93	149	144	64	159	169	175	99
18	200	107	160	169	139	151	95	98	160	169	173	99
19	200	178	173	167	164	164	72	127	160	169	169	99
20	194	178	176	167	169	150	69	127	159	169	166	99
21	186	166	175	166	169	152	72	124	159	169	166	99
22	180	152	173	159	157	169	62	109	159	169	166	99
23	180	169	150	152	145	169	51	173	162	166	164	98
24	180	180	167	152	145	169	52	184	166	164	164	98
25	180	178	98	152	145	169	65	132	166	162	164	98
26	178	178	119	152	154	169	82	164	166	162	162	97
27	178	176	198	152	159	169	76	142	166	162	162	97
28	176	175	220	152	159	169	146	144	166	162	162	58
29	176	164	207	128	-----	159	69	164	128	162	193	136
30	175	152	171	56	-----	159	144	164	164	162	160	300
31	173	-----	145	97	-----	159	-----	200	-----	162	160	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	381	159	218	13,400
November	180	45	161	9,580
December	220	98	161	9,900
January	198	56	149	9,160
February	169	43	112	6,220
March	166	114	154	9,470
April	159	51	108	6,430
May	200	64	126	7,750
June	200	128	164	9,760
July	173	157	165	10,100
August	193	160	168	10,300
September	300	58	131	7,800
The year	381	43	152	110,000

SOUTH EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.—Staff gage in SE. $\frac{1}{4}$ sec. 30, T. 18 N., R. 11 W., 500 feet below Van Arsdale Dam of Snow Mountain Water & Power Co. and 5 miles north of Potter Valley.

RECORDS AVAILABLE.—November, 1909, to September, 1929 (monthly discharge only for 1909-1922).

EXTREMES.—Maximum discharge during year, 830 second-feet February 4 (gage height, 6.85 feet); minimum, about 3.5 second-feet April 4.

1909-1929: Maximum discharge, about 40,000 second-feet March 26, 1928 (gage height, 27.0 feet); minimum discharge not known but 2 second-feet are required to be wasted through fish ladder at all times.

REMARKS.—Records fair. Discharge estimated August 4-10. Water is diverted from Van Arsdale Reservoir to power plant in Potter Valley and wasted into Russian River. Discharge tables show flow passing dam and down South Eel River.

Daily and monthly discharge, in second-feet, 1928-29.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	11	6.5	6.5	11	11	11	5	6.5	6.5	6.5	6.5
2	17	11	6.5	11	182	11	9	5	6.5	6.5	6.5	6.5
3	17	11	6.5	34	204	11	6.5	5	6.5	6.5	6.5	6.5
4	17	11	11	11	555	11	3.5	6	6.5	6.5	6.5	6.5
5	17	11	11	9	110	11	6.5	5	6.5	6.5	6.5	6.5
6	14	11	17	9	42	11	6.5	5	6.5	6.5	6.5	6.5
7	11	11	17	9	14	11	11	6	6.5	6.5	6	6.5
8	11	11	11	9	11	14	6.5	6	6.5	6.5	6	6.5
9	9	11	11	11	6.5	14	6.5	6	6.5	6.5	6	6.5
10	9	11	25	11	21	17	6.5	5	6.5	6.5	6	6.5
11	9	11	25	11	11	11	9	5	6.5	6.5	6	6.5
12	9	11	11	9	11	11	6.5	6	6.5	6.5	6	6.5
13	6.5	11	11	6.5	11	11	9	5	6.5	6.5	6	6.5
14	6.5	44	11	6.5	11	11	11	5	6.5	6.5	6.5	6.5
15	7.5	11	11	6.5	11	11	21	5	6.5	6.5	6.5	6.5
16	6.5	11	11	6.5	6.5	11	6.5	6	6.5	6.5	6.5	6.5
17	6.5	11	11	9	11	11	6.5	5	6.5	6	6.5	6.5
18	6.5	11	11	9	11	14	6.5	5	6.5	6	6.5	6.5
19	6.5	11	11	6.5	17	14	6	5	6.5	6	6.5	6.5
20	6.5	11	11	9	17	17	6.5	5	6.5	6	6.5	6.5
21	6.5	11	11	11	17	14	6.5	5	6.5	6.5	6.5	6.5
22	6.5	11	11	21	17	11	6.5	6	6.5	6.5	6.5	6.5
23	9	9	11	11	17	11	6.5	6	6.5	6.5	6.5	6.5
24	7.5	9	11	11	11	17	6.5	6.5	6.5	6.5	6.5	6.5
25	11	6.5	162	11	11	17	6	6.5	6.5	6.5	6.5	6.5
26	11	6.5	11	11	11	17	6.5	6.5	6.5	6.5	6.5	6.5
27	11	6	11	11	11	17	6.5	6.5	6.5	6.5	6.5	6.5
28	11	6	162	11	11	11	6.5	6.5	6.5	6.5	6.5	6.5
29	11	6	215	60		11	6.5	6.5	6.5	6.5	6.5	123
30	11	6	87	23		9	5	6.5	6.5	6.5	6	6.5
31	11		16	11		9		6.5		6.5	6.5	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	39	6.5	10.9	670
November	44	6	11.0	655
December	215	6.5	30.8	1,890
January	60	6.5	12.6	775
February	555	6.5	49.3	2,749
March	17	9	12.5	769
April	21	3.5	7.50	446
May	6.5	5	5.65	347
June	6.5	6.5	6.50	387
July	6.5	6	6.44	396
August	6.5	6	6.37	392
September	123	6.5	10.4	619
The year	555	3.5	13.9	10,100

EEL RIVER AT SCOTIA, CALIF.

LOCATION.—Staff gage in sec. 18, T. 1 N., R. 1 E., at Wildwood Bridge, half a mile northeast of Scotia.

RECORDS AVAILABLE.—December, 1910, to February, 1915; October, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 41,000 second-feet February 4 (gage height, 21.3 feet); minimum, 42 second-feet September 23–26.

1910–1929: Maximum discharge, about 290,000 second-feet February 2, 1915 (gage height, 55.5 feet); minimum, 10 second-feet August 12–14, 1924.

REMARKS.—Records good. Flow partly regulated by storage in Lake Pillsbury Reservoir. Diversions for power and irrigation near Potter Valley, above station.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	56	129	420	8,060	10,000	1,980	2,180	3,310	830	492	112	60
2.....	54	152	455	6,560	21,100	1,980	2,180	3,100	830	468	112	60
3.....	54	476	455	8,700	21,100	1,900	2,180	3,100	830	432	112	60
4.....	64	870	490	11,400	37,100	1,820	2,070	3,100	830	397	112	56
5.....	90	660	476	8,060	24,800	1,900	2,340	2,900	710	376	109	56
6.....	129	660	455	6,270	15,800	2,070	2,340	2,900	710	348	106	54
7.....	226	554	455	5,150	12,400	2,160	2,520	2,710	780	308	106	56
8.....	190	506	455	4,370	9,800	2,160	2,340	2,520	830	284	100	56
9.....	163	476	490	3,620	7,720	2,340	3,100	2,520	890	272	95	52
10.....	135	554	2,190	2,940	6,040	3,760	3,310	2,340	830	260	93	51
11.....	117	930	9,020	2,740	5,230	7,720	3,100	2,160	710	250	93	49
12.....	117	930	8,060	2,550	4,720	6,310	2,900	2,160	710	240	86	45
13.....	111	2,020	8,060	2,360	4,476	4,976	2,900	2,070	736	230	86	49
14.....	100	11,400	5,980	2,190	3,990	4,470	3,100	1,820	710	220	86	47
15.....	98	13,500	4,120	2,100	3,760	3,990	4,970	2,070	710	201	81	47
16.....	90	5,420	2,940	2,190	3,310	3,760	6,310	1,960	1,360	192	81	49
17.....	90	3,160	2,360	2,020	3,100	3,530	5,230	1,960	2,520	192	76	49
18.....	85	2,190	2,020	2,280	3,100	3,530	4,720	1,820	2,710	188	76	52
19.....	85	1,700	1,730	2,550	2,900	3,310	3,990	1,820	2,160	174	76	52
20.....	80	1,390	1,540	2,740	2,710	3,100	8,900	1,660	1,660	174	78	52
21.....	85	1,110	1,460	2,740	2,710	3,100	9,800	1,660	1,360	165	76	49
22.....	82	990	1,390	2,550	2,520	3,100	8,900	1,510	1,010	165	76	45
23.....	82	870	1,250	2,460	2,340	3,990	8,010	1,360	950	158	74	42
24.....	82	815	1,390	2,190	2,340	3,530	6,870	1,360	830	144	72	42
25.....	80	710	14,200	2,190	2,160	3,100	6,040	1,210	730	137	72	43
26.....	85	660	14,200	2,020	2,070	2,900	5,500	1,210	650	134	70	42
27.....	80	570	8,380	2,020	1,980	2,900	4,720	1,070	612	130	68	45
28.....	85	506	17,500	2,360	2,070	2,710	4,230	950	540	130	64	45
29.....	92	476	20,200	2,640	-----	2,710	3,990	950	540	130	64	45
30.....	100	490	18,400	3,620	-----	2,520	3,760	830	500	124	66	45
31.....	117	-----	11,700	7,160	-----	2,340	-----	780	-----	115	64	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	226	54	100	6,150
November.....	13,500	129	1,830	190,000
December.....	20,200	420	5,240	322,000
January.....	11,400	2,020	3,900	240,000
February.....	37,100	1,960	7,900	439,000
March.....	7,720	1,820	3,210	197,000
April.....	9,800	2,070	4,410	262,000
May.....	3,310	780	1,970	121,000
June.....	2,710	500	992	60,000
July.....	492	115	233	14,300
August.....	112	64	85.2	5,240
September.....	60	42	49.8	2,960
The year.....	37,100	42	2,460	1,780,000

SNOW MOUNTAIN WATER & POWER CO.'S TAILRACE NEAR POTTER VALLEY, CALIF.

LOCATION.—Water-stage recorder in NW. $\frac{1}{4}$ sec. 6, T. 17 N., R. 11 W., at power house of Snow Mountain Water & Power Co., 3 miles northwest of Potter Valley.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 292 second-feet October 9.

1922–1929: Maximum mean daily discharge, 317 second-feet October 10–13 1922, and January 14, 1925.

REMARKS.—Records good except those for January 30, 31, April 20, 21, and September 9, which were estimated. This water is diverted from South Eel River above Van Arsdale Dam. After passing through the power plant a part is used for irrigation in Potter Valley and the remainder flows into Russian River. Irrigation water diverted from tailrace above gage is included in tables of discharge.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	228	198	198	267	286	198	204	134	210	192	192	167
2.....	257	198	198	224	276	198	198	146	193	198	193	192
3.....	232	210	198	267	228	204	204	118	192	192	193	186
4.....	274	204	188	270	270	198	204	108	192	186	193	186
5.....	271	198	191	277	268	198	204	186	192	192	193	186
6.....	274	204	198	214	266	198	204	115	192	181	193	186
7.....	262	204	198	198	242	198	204	120	192	181	191	186
8.....	277	204	198	216	200	198	204	133	192	186	186	180
9.....	292	174	204	222	220	198	140	132	192	186	193	180
10.....	283	198	258	216	163	254	146	126	192	192	191	186
11.....	280	198	202	223	192	198	140	120	198	186	186	173
12.....	277	198	221	206	192	204	142	126	192	192	191	141
13.....	221	210	198	196	186	198	144	134	192	192	167	140
14.....	196	252	198	198	185	204	247	120	192	204	190	132
15.....	209	254	198	198	192	204	156	112	198	192	191	121
16.....	204	208	198	198	198	198	128	128	204	192	189	130
17.....	198	202	198	186	150	178	198	133	204	186	188	140
18.....	204	96	198	198	192	198	200	125	204	186	193	111
19.....	204	198	198	198	192	196	204	136	204	186	190	116
20.....	204	198	198	198	192	217	130	136	204	186	190	108
21.....	198	187	198	198	192	204	200	136	204	186	190	110
22.....	198	170	198	198	214	204	170	146	204	181	191	98
23.....	198	204	204	192	198	204	164	198	204	181	192	110
24.....	198	204	216	198	198	204	150	198	204	181	187	109
25.....	198	198	259	198	198	204	123	198	204	181	200	103
26.....	204	198	238	198	198	204	150	198	204	181	194	100
27.....	204	198	272	198	198	204	134	192	198	181	190	106
28.....	204	198	272	256	198	192	198	198	192	181	196	179
29.....	198	198	260	270	-----	204	140	198	154	181	163	198
30.....	198	198	256	270	-----	204	139	198	192	192	186	82
31.....	198	-----	281	270	-----	198	-----	198	-----	192	192	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	292	196	227	14, 000
November.....	254	96	199	11, 800
December.....	281	188	216	13, 300
January.....	277	186	220	13, 500
February.....	236	150	210	11, 700
March.....	254	178	202	12, 400
April.....	247	123	172	10, 200
May.....	198	108	150	9, 220
June.....	210	154	196	11, 700
July.....	204	181	187	11, 500
August.....	200	163	189	11, 600
September.....	192	82	145	8, 630
The year.....	292	82	193	140, 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, 1929.

EXTREMES.—Maximum discharge during year, 1,290 second-feet March 25 (gauge height, 3.41 feet); minimum, 401 second-feet September 5 (gauge height, 2.28 feet).

1917-1929: Maximum discharge, about 7,000 second-feet April 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 October 14, 1921.

REMARKS.—Records fair. Daily discharge not determined for June. Diversion for irrigation above station. Manipulation of gates at dams above causes considerable fluctuation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.
1	562	642	649	688	604	778	958	867	• 520	554	564
2	568	642	586	694	604	863	940	875		532	650
3	592	649	574	682	623	949	924	883		515	600
4	616	668	580	668	649	994	899	891		515	559
5	623	662	623	668	708	1,050	867	915		510	471
6	623	649	630	649	879	1,090	867	891	• 520	515	466
7	630	688	642	630	931	1,040	851	800		515	466
8	630	675	636	616	847	1,020	883	932		498	488
9	630	668	636	598	• 807	1,000	867	924		493	466
10	636	668	642	592	• 768	1,020	851	867		498	504
11	630	675	636	610	• 728	976	843	859	476	440	498
12	616	662	630	610	688	1,010	828	859	482	526	526
13	616	656	720	610	662	1,080	821	875	476	594	537
14	616	656	727	616	675	1,060	821	883	482	582	537
15	610	649	642	616	682	985	821	867	471	554	532
16	616	649	586	616	682	895	807	835	476	482	526
17	616	649	568	616	688	855	793	843	476	455	526
18	623	649	568	623	701	847	843	883	476	482	526
19	623	649	592	610	694	855	907	786	466	510	526
20	598	656	598	556	701	940	940	537	504	488	588
21	586	649	586	598	720	1,080	958	779	570	504	576
22	604	656	586	610	734	1,150	949	800	559	515	537
23	610	656	592	604	778	1,190	940	814	554	520	532
24	636	642	610	604	808	1,230	940	859	542	526	526
25	636	642	623	616	839	1,260	1,010	828	542	515	526
26	649	642	623	604	831	1,170	1,030	779	559	510	526
27	642	649	642	604	792	1,100	1,020	737	532	515	526
28	636	636	656	598	778	1,040	974	737	542	526	526
29	649	636	675	610	-----	992	915	-----	600	532	526
30	649	642	688	574	-----	974	867	-----	606	537	532
31	642	-----	694	610	-----	968	-----	-----	588	532	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	649	562	620	38,100
November	688	636	654	38,900
December	727	568	627	38,000
January	694	556	619	38,100
February	931	604	736	40,900
March	1,260	778	1,010	62,100
April	1,030	793	888	53,400
May	932	537	837	51,500
June	-----	-----	• 780	46,400
July	606	471	529	32,000
August	590	430	514	31,600
September	564	466	532	31,700
The year	1,260	430	695	503,000

• Estimated.

UPPER KLAMATH LAKE NEAR KLAMATH FALLS, OREG.

LOCATION.—Water-stage recorder in SW. $\frac{1}{4}$ sec. 19, T. 38 S., R. 9 E., 1 mile above outlet of Upper Klamath Lake and 3 miles northwest of Klamath Falls. Zero of gage is 4,135.93 feet above mean sea level, United States Bureau of Reclamation datum.

RECORDS AVAILABLE.—May, 1904, to September, 1929.

EXTREMES.—Maximum elevation during year, 4,141.33 feet May 8; minimum (estimated), 4,135.93 feet November 2 (affected by wind).

1904-1929: Maximum elevation, 4,144.98 feet about April 20, 1904, determined from high-water marks; minimum, that of November 2, 1928.

REMARKS.—Gage heights are very much affected by wind. Considerable regulation caused by dam at outlet of lake. Gage-height record furnished by The California Oregon Power Co.

Daily elevation, in feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37.78	37.47	37.69	37.84	38.08	38.30	39.48	40.61	40.57	40.34	38.72	37.84
2	37.75	36.83	37.65	37.88	38.13	38.33	39.53	40.68	40.48	40.32	38.67	37.92
3	37.65	37.35	37.65	37.88	38.13	38.32	39.52	40.73	40.45	40.31	38.81	37.71
4	37.64	37.42	37.66	37.99	38.17	38.30	39.65	40.83	40.40	40.29	38.78	37.68
5	37.73	37.49	37.66	38.02	38.20	38.34	39.70	40.88	40.35	40.27	38.69	37.62
6	37.75	37.52	37.66	38.01	38.24	38.37	39.75	40.86	40.44	40.18	38.67	37.71
7	37.78	37.43	37.62	38.00	38.24	38.40	39.59	40.75	40.51	40.15	38.62	37.62
8	37.77	37.31	37.59	37.99	38.23	38.32	39.95	40.82	40.53	40.07	38.64	37.47
9	37.89	36.73	37.43	37.99	38.23	38.00	39.86	40.87	40.63	40.05	38.59	37.48
10	38.05	37.28	37.38	37.97	38.24	38.67	39.72	40.76	40.62	40.03	38.53	37.48
11	38.43	36.93	37.55	37.96	38.24	38.76	39.93	40.75	40.61	39.89	38.49	37.48
12	37.88	37.39	37.36	37.96	38.24	38.66	39.91	40.74	40.60	39.68	38.45	37.36
13	37.71	37.08	37.71	37.96	38.24	38.75	39.74	40.85	40.61	39.65	38.43	37.37
14	37.65	37.40	37.70	37.95	38.24	38.72	39.84	40.86	40.58	39.75	38.44	37.37
15	37.62	37.58	37.67	37.95	38.24	38.78	39.95	40.91	40.49	39.76	38.28	37.33
16	37.62	37.75	37.67	37.96	38.23	38.77	40.15	40.87	40.57	39.72	38.26	37.31
17	37.62	37.70	37.67	37.97	38.23	38.79	40.10	40.82	40.49	39.65	38.20	37.30
18	37.63	37.65	37.66	37.98	38.24	38.96	40.08	40.85	40.58	39.61	38.22	37.29
19	37.61	37.64	37.66	38.09	38.24	38.93	40.09	40.85	40.55	39.55	38.22	37.25
20	37.68	37.64	37.64	38.06	38.24	38.89	40.18	40.86	40.58	39.53	38.17	37.43
21	37.64	37.63	37.64	38.03	38.23	39.20	40.19	40.81	40.59	39.43	38.09	37.33
22	37.57	37.63	37.63	38.01	38.24	39.20	40.45	40.81	40.62	39.39	38.03	37.35
23	37.57	37.64	37.62	38.02	38.26	39.15	40.51	40.80	40.58	39.35	38.04	37.25
24	37.56	37.63	37.55	38.01	38.24	39.14	40.48	40.85	40.58	39.32	37.95	37.22
25	37.54	37.57	37.64	38.02	38.36	39.18	40.47	40.90	40.60	39.29	37.88	37.24
26	37.53	37.55	37.59	38.01	38.26	39.16	40.47	40.87	40.59	39.25	37.65	37.31
27	37.50	37.62	37.66	38.02	38.28	39.22	40.53	40.79	40.43	39.25	37.73	37.25
28	37.49	37.65	37.70	38.01	38.30	39.43	40.59	40.79	40.41	39.14	37.76	37.23
29	37.51	37.60	37.70	38.04	38.30	39.43	40.63	40.58	40.30	39.05	37.71	37.27
30	37.45	37.47	37.82	38.06	38.06	39.55	40.60	40.52	40.41	39.00	37.65	37.15
31	37.39	-----	37.85	38.06	-----	39.44	-----	40.57	-----	38.93	37.73	-----

NOTE.—Add 4,100 feet to reduce elevations to sea level.

Monthly elevation and contents of Upper Klamath Lake at Klamath Falls, Oreg., 1928-29

Date	Elevation in feet	Contents in acre-feet	Gain or loss during month in acre-feet	Date	Elevation in feet	Contents in acre-feet	Gain or loss during month in acre-feet
Sept. 30	4,137.74	163,000	-----	May 31	4,140.57	347,600	-4,000
Oct. 31	4,137.36	140,200	-22,800	June 30	4,140.36	331,100	-16,500
Nov. 30	4,137.62	155,800	+15,600	July 31	4,138.90	233,400	-97,700
Dec. 31	4,137.84	169,100	+13,300	Aug. 31	4,137.76	164,300	-69,100
Jan. 31	4,138.07	183,000	+13,900	Sept. 30	4,137.19	130,000	-34,300
Feb. 28	4,138.31	197,500	+14,500				
Mar. 31	4,139.49	269,700	+72,200	The year	-----	-----	-23,000
Apr. 30	4,140.62	351,600	+81,900				

NOTE.—To compensate for wind effect, elevation given for last day of month is mean of elevations for last four days of month and first three days of following month. Contents given are those above elevation 4,135.00 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 used with record of flow for Keno Canal in determining the flow at Main Street Bridge at Klamath Falls.

DRAINAGE AREA.—3,800 square miles.

RECORDS AVAILABLE.—May, 1904, to September, 1929.

EXTREMES.—Maximum combined discharge of Link River and Keno Canal, 2,110 second-feet October 9; minimum, 205 second-feet June 13.

1904-1929: Maximum discharge, 9,400 second-feet May 12, 1904 (gage height at bridge, 7.30 feet); minimum, 22 second-feet August 30, 1918.

REMARKS.—Records good. Regulation caused by storage in Upper Klamath Lake. Water diverted above station by 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.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,910	1,710	1,250	1,290	1,050	1,310	241	257	610	1,230	1,460	1,390
2	1,900	1,270	1,300	693	943	1,060	248	260	334	1,020	1,420	1,410
3	1,780	1,430	1,350	442	1,030	1,060	232	266	612	962	1,460	1,400
4	1,520	1,670	1,390	606	1,130	1,030	240	264	616	964	1,460	1,400
5	774	1,710	1,440	958	797	604	242	263	616	986	1,310	1,390
6	1,180	1,810	1,580	1,480	889	288	244	424	609	962	1,240	1,410
7	1,830	1,710	1,640	1,640	1,200	288	237	264	534	921	1,220	1,410
8	1,880	1,610	1,640	1,640	1,450	662	252	263	536	996	1,150	1,160
9	1,880	1,170	1,520	1,640	1,480	268	245	266	351	999	1,140	1,140
10	1,900	1,310	691	1,620	1,310	296	262	252	504	999	1,190	1,140
11	1,680	1,130	825	1,620	1,310	342	325	252	543	1,080	1,150	1,140
12	1,380	1,319	1,230	1,570	1,310	618	321	260	540	1,270	1,080	1,140
13	1,280	921	1,340	1,510	1,310	1,020	307	256	548	1,280	1,080	1,120
14	1,560	642	1,580	1,510	1,320	1,100	275	258	556	1,280	1,160	1,120
15	1,670	890	1,610	1,470	1,310	1,100	248	282	367	1,290	1,120	1,110
16	1,510	805	1,640	1,340	1,290	928	258	294	360	1,290	1,180	1,120
17	1,400	949	1,640	1,300	1,310	803	257	317	551	1,390	1,170	1,120
18	1,290	1,280	1,600	641	1,310	1,840	252	332	567	1,440	1,170	1,120
19	1,290	1,360	1,560	577	1,310	1,210	251	335	556	1,440	1,280	1,120
20	1,500	1,610	1,560	1,350	1,310	834	255	618	553	1,440	1,270	1,130
21	1,600	1,670	1,570	1,640	1,310	274	258	618	570	1,460	1,220	1,020
22	1,590	1,600	1,620	1,440	1,310	251	261	536	555	1,470	1,260	677
23	1,640	1,590	1,620	1,300	1,310	248	277	547	553	1,470	1,370	685
24	1,720	1,670	1,550	1,300	1,310	245	264	533	641	1,480	1,340	862
25	1,690	1,600	1,080	1,300	1,270	245	260	529	750	1,600	1,350	934
26	1,720	1,450	929	1,300	1,180	245	261	345	743	1,500	1,280	745
27	1,730	1,360	470	1,300	1,180	258	260	612	757	1,600	1,100	743
28	1,740	1,360	411	1,300	1,220	313	264	618	734	1,600	1,220	743
29	1,780	1,360	279	1,300	-----	238	258	608	876	1,600	1,350	730
30	1,700	1,280	700	1,240	-----	231	257	467	943	1,480	1,350	724
31	1,690	-----	1,030	1,300	-----	231	-----	606	-----	1,480	1,370	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,910	774	1,600	98,400
November	1,810	642	1,370	81,500
December	1,640	279	1,280	78,700
January	1,640	442	1,280	78,700
February	1,480	797	1,230	66,300
March	1,340	231	611	37,600
April	325	282	260	15,500
May	618	250	367	22,800
June	643	334	586	34,900
July	1,500	921	1,280	78,700
August	1,460	1,060	1,260	77,500
September	1,410	677	1,080	64,300
The year	1,910	231	1,020	738,000

KLAMATH RIVER AT SPENCER BRIDGE, NEAR KENO, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 31, T. 39 S., R. 7 E., at Spencer Bridge, 1 mile below Spencer Creek, 6 miles below former station at Keno, and 14 miles southwest of Klamath Falls.

DRAINAGE AREA.—4,000 square miles.

RECORDS AVAILABLE.—October, 1913, to September, 1929. Records at Keno May, 1904, to December, 1913.

EXTREMES.—Maximum discharge during year, 2,240 second-feet October 11 (gauge height, 4.80 feet); minimum, about 300 second-feet May 4–12, when stage was not recorded.

1913–1929: Maximum discharge, 5,130 second-feet April 21, 1914; minimum, that of May 4–12, 1929.

A stage of 15.3 feet (discharge, 9,250 second-feet) occurred at Keno station about May 10, 1904.

REMARKS.—Records fair. No diversions below Link River station. Practically all flow of Lost River during nonirrigating season is diverted into Klamath River below Klamath Falls by Lost River Diversion Canal (p. 277). Regulation caused by storage in Upper Klamath Lake.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,060	1,940	1,480		* 1,290	1,430	460	485	602	900	1,300	1,250
2	2,120	1,940	1,480		1,250	1,480	460	460	585	900	1,250	1,300
3	2,120	1,640	1,480		1,210	1,340	468	450	526	985	1,250	1,300
4	2,120	1,760	1,530		1,300	1,300	462		564	800	1,300	1,300
5	1,820	1,880	1,530		1,250	1,210			602	840	1,300	1,300
6	1,430	2,000	1,580	* 1,450	1,160	880			620	920	1,210	1,300
7	1,760	2,000	1,700		1,300	700			620	860	1,160	1,300
8	1,940	1,940	1,760		1,580	640		* 317	602	840	1,140	1,250
9	2,000	1,760	1,760		1,940	780			541	840	1,100	1,160
10	2,060	1,580	1,580		* 1,520	660	* 500		506	840	1,100	1,140
11	2,120	1,480	1,140		* 1,520	602			523	880	1,100	1,100
12	2,000	1,530	1,250		1,640	620			554	962	1,070	1,070
13	1,820	1,530	1,340	1,880	1,530	800		382	547	1,030	1,070	1,050
14	1,700	1,250	1,480	1,820	1,480	578		388	541	1,050	1,050	1,030
15	1,820	1,140		1,700	1,430	485	490	382	520	1,070	1,100	1,030
16	1,880	1,160		1,700	1,430	460	488	402	478	1,070	1,120	1,010
17	1,820	1,140		1,430	1,430	485	499	418	480	1,070	1,140	985
18	1,700	1,340		1,340	1,430	547	508	428	493	1,120	1,120	985
19	1,640	1,430		900	1,390	398	502	430	532	9	1,160	985
20	1,580	1,530		1,210	1,390	418	499	445	526	1,140	1,210	962
21	1,700	1,640		1,700	1,430	526	523	520	529	1,160	1,210	985
22	1,760	1,700	* 1,410	1,820	1,430	760	514	541	535	1,160	1,210	840
23	1,760	1,700		1,640	1,430	680	523	535	526	1,160	1,250	700
24	1,820	1,760		1,700	1,430	550	541	541	523	1,160	1,250	700
25	1,820	1,760		1,480	1,430	508	535	547	560	1,210	1,300	800
26	1,880	1,760		1,430	1,430	485	526	529	620	1,210	1,300	780
27	1,880	1,640		1,480	1,340	475	514	505	640	1,250	1,250	740
28	1,880	1,580		1,530	1,340	478	508	571	640	1,250	1,160	720
29	1,880	1,530		1,430		485	499	602	640	1,250	1,210	700
30	1,940	1,530		1,530		478	502	585	720	1,250	1,210	700
31	1,940			* 1,390		468		550		1,250	1,210	
Month	Maximum		Minimum		Mean		Run-off in acre-feet					
October	2,120		1,430		1,860		114,000					
November	2,000		1,140		1,620		96,400					
December	1,760				1,450		89,200					
January					1,500		92,200					
February	1,940		1,160		1,420		78,900					
March	1,480		398		700		43,000					
April	541				501		29,800					
May	602				437		26,900					
June	720		478		563		33,500					
July	1,250		800		1,050		64,600					
August	1,300		1,050		1,190		73,200					
September	1,300		700		1,020		60,700					
The year	2,120				1,110		802,000					

* Estimated.

KLAMATH RIVER BELOW FALL CREEK, NEAR COPCO, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ 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, 1929. Record above Fall Creek October, 1923, to September, 1928.

EXTREMES.—Maximum discharge during year, 3,180 second-feet November 19 (gage height, 4.50 feet); minimum, 84 second-feet November 18 (gage height, 0.99 foot).

1923-1929: Maximum discharge, 6,950 second-feet, above Fall Creek, March 26, 1928; minimum, about 10 second-feet at times when power plant was completely shut down in 1925 and 1926.

REMARKS.—Records good. Discharge estimated December 16, 17, April 12-14, and July 1. Diversions and regulation above station. Gage-height record furnished by The California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,120	2,260	2,180	295	1,740	1,960	813	918	832	1,160	1,390	374
2	2,360	2,330	743	1,580	1,030	1,430	601	915	243	1,320	1,370	270
3	2,320	1,160	2,160	1,980	550	830	599	785	958	1,400	1,250	1,710
4	2,220	380	2,560	1,260	1,460	1,480	665	560	902	424	270	1,680
5	2,180	2,090	2,000	1,560	1,640	1,560	663	268	914	1,140	1,370	1,710
6	1,790	2,180	1,940	635	1,680	1,300	718	563	1,040	1,340	1,530	1,620
7	668	2,400	2,180	1,790	2,120	1,580	248	610	1,140	509	1,560	1,520
8	2,140	2,560	1,460	1,870	2,190	1,540	646	575	660	1,610	1,520	348
9	2,160	2,240	348	1,860	1,870	1,000	643	585	275	1,420	1,550	745
10	2,220	1,280	1,580	1,880	501	276	662	560	306	1,480	1,480	1,580
11	2,160	612	1,700	1,680	1,720	1,220	640	488	384	1,480	298	1,460
12	2,200	1,820	1,930	1,810	1,840	1,520	670	276	458	1,400	1,420	1,440
13	1,820	1,780	1,830	1,400	2,060	1,790	670	520	793	1,370	1,500	1,340
14	835	2,170	1,940	2,280	2,060	1,400	270	488	590	260	1,560	1,260
15	2,160	1,620	2,160	1,700	2,010	1,340	783	508	788	1,380	1,560	386
16	2,080	2,100	400	1,600	2,080	1,380	794	450	683	1,660	1,590	1,380
17	2,120	1,450	1,850	1,840	879	249	772	482	648	1,650	1,490	1,360
18	2,070	261	2,140	1,920	2,020	1,460	859	494	680	1,600	400	1,380
19	2,230	1,830	2,500	1,850	2,350	1,680	799	236	702	1,640	1,510	1,300
20	2,300	2,650	2,320	830	2,180	1,440	726	538	808	1,350	1,620	1,270
21	722	1,830	2,260	1,780	2,020	1,290	331	662	855	263	1,710	1,240
22	1,780	2,120	2,150	2,060	710	1,300	850	655	715	1,340	1,760	377
23	2,000	1,980	881	1,990	1,540	620	1,000	675	690	1,620	1,680	1,140
24	2,200	2,260	975	1,880	241	266	865	692	1,240	1,540	1,610	985
25	2,260	618	525	2,130	1,720	1,140	920	564	1,230	1,580	343	1,060
26	2,440	2,140	1,360	1,670	1,860	812	875	246	1,220	1,500	1,440	970
27	2,200	2,380	1,730	334	2,010	850	610	825	1,210	1,420	1,610	975
28	405	2,370	1,340	1,740	1,430	800	276	718	1,130	259	1,700	645
29	2,020	305	2,060	1,380	-----	800	917	722	1,150	1,360	1,510	365
30	2,400	1,260	1,050	2,020	-----	560	872	475	285	1,660	1,610	858
31	2,610	-----	1,470	1,530	-----	242	-----	892	-----	1,460	1,710	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,610	405	1,980	122,000
November	2,560	261	1,740	104,000
December	2,660	348	1,670	103,000
January	2,280	295	1,620	99,000
February	2,350	241	1,680	90,500
March	1,960	242	1,180	69,500
April	1,000	248	692	41,200
May	918	236	579	35,600
June	1,240	243	724	46,700
July	1,660	259	1,270	78,100
August	1,760	270	1,380	84,800
September	1,710	270	1,090	64,900
The year	2,610	236	1,300	940,000

SPRAGUE RIVER AT MCCREADY RANCH, NEAR CHILOQUIN, OREG.

LOCATION.—Staff gage in sec. 30, T. 34 S., R. 9 E., 200 yards north of F. F. McCreedy's house, 2 miles below McCreedy Spring, and 13 miles above Chiloquin.

RECORDS AVAILABLE.—July, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 625 second-feet June 2 and 3 (gage height, 3.1 feet); minimum, 128 second-feet September 5 (gage height, 0.57 foot).

1920-1929: Maximum discharge, 3,920 second-feet March 29, 1928; minimum, about 50 second-feet May 26 and 27, 1926.

A discharge of 4,390 second-feet about May 15, 1904, has been derived from high-water marks at station 20 miles upstream, near Yainax.

REMARKS.—Records fair. Regulation and diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	235	265	190	305	265	365	345	445	605	• 200	213	390
2.....	235	265	198	285	285	425	345	470	625	300	213	266
3.....	245	305	205	285	305	470	345	470	625	228	204	204
4.....	245	305	265	285	365	520	345	470	585	162	204	135
5.....	245	285	265	305	495	520	345	445	545	154	213	128
6.....	265	325	265	285	610	520	345	345	545	147	213	142
7.....	265	305	285	245	545	495	345	520		147	204	150
8.....	265	305	265	235	425	495	345	545		147	158	204
9.....	265	305	245	225	345	495	345	445		147	150	158
10.....	265	325	265	265	285	520	345	470		140	150	172
11.....	265	305	265	265	285	545	305	470	• 520	132	266	204
12.....	265	285	425	265	265	565	345	470		154	305	213
13.....	245	285	365	265	285	590	345	495		154	213	213
14.....	245	285	305	245	265	520	345	495		154	158	204
15.....	245	285	265	265	265	445	325	495	500	154	142	188
16.....	265	305	225	245	265	385	345	495	460	147	135	196
17.....	265	285	265	245	265	405	385	565	480	154	165	196
18.....	245	285	245	245	285	425	425	495	460	154	188	204
19.....	215	285	245	245	285	445	425		360	220	158	345
20.....	235	285	265	235	305	470	445		420	264	165	257
21.....	235	305	245	235	305	545	470		420	264	180	222
22.....	265	285	245	245	325	565	445		400	246	188	213
23.....	265	285	245	245	385	565	470	• 450	400	246	188	204
24.....	265	285	245	265	405	565	495		380	246	180	204
25.....	265	285	245	265	385	545	545			213	172	213
26.....	265	285	265	265	365	445	565			204	172	213
27.....	265	265	265	265	345	405	545		• 250	213	196	213
28.....	265	265	285	245	345	385	470	605		305	204	213
29.....	265	265	325	245		365	445	565		285	204	230
30.....	265	285	325	245		345	425	545		257	204	230
31.....	265		325	265		345		605		230	305	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	265	215	255	15,700
November.....	325	265	290	17,300
December.....	425	190	269	16,500
January.....	305	225	259	15,900
February.....	610	265	341	18,966
March.....	590	345	474	29,100
April.....	565	305	400	23,860
May.....	605		483	29,700
June.....	625		449	26,700
July.....	305	132	199	12,200
August.....	305	135	194	11,900
September.....	390	128	211	12,600
The year.....	625	128	318	230,000

• Estimated.

LONG CREEK NEAR SILVER LAKE, OREG.

LOCATION.—Water-stage recorder in sec. 6, T. 32 S., R. 13 E., 27 miles south of Silver Lake; above point where creek begins to divide and spread over Sycan Marsh.

RECORDS AVAILABLE.—May, 1918, to November, 1923; October, 1926, to September, 1929. Incomplete.

EXTREMES.—Maximum discharge during year, 90 second-feet during period April 22 to May 8, probably May 3 (gage height, 1.60 feet); minimum, 8 second-feet August 1-31, September 1-18, and 21-30.

1918-1923, 1926-1929: Maximum discharge, 307 second-feet May 19, 1922 (gage height, 3.6 feet); minimum, 3.7 second-feet August 18, 1923.

REMARKS.—Records fair except those for estimated periods, which are poor. No diversions or regulation above station. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1923-29

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1		20			55	18		
2	15	20	25		52	18		
3		19			43	18		
4	14	19	17		47	17		
5	14	19	16	50	43	15		8
6	22	18	18		37	15	8	
7	23	18	18		33	14		
8	23	18	15	40	30	13		
9	23	18	20	36	30	12		
10	23	18	24	37	27	12		8
11	23	18	12	37	27	12		8
12	17	17	16	39	26	12		8
13	12	17	13	41	27	11	8	8
14	16	18	13	43	27	11	8	8
15	18	18	14	43	38	11	8	8
16	19	16	17	43	51	11	8	8
17	20	18	19	44	52	11	8	8
18	20	19	21	44	49		8	8
19	20	18	24	44	46		8	9
20	20		22	48	44		8	9
21	20		20	53	41		8	
22	20			59	38		8	
23	20			66	36		8	
24	20			68	33	9	8	
25	20			68	31		8	
26	20		35					8
27	20			67	28		8	
28	20			66	26		8	
29	20			64	22		8	
30	20			62	22		8	
31	20			60	19		8	
				58				
Month	Maximum		Minimum		Mean		Run-off in acre-feet	
October	23				19.1		1,170	
November 1-19	20		16		18.2		686	
April			12		23.6		1,400	
May					51.0		3,140	
June	55		19		38.0		2,140	
July	18				11.6		707	
August					8.0		492	
September					8.1		482	

NOTE.—No record Nov. 20 to Mar. 31.

WOOD RIVER AT FORT KLAMATH, OREG.

LOCATION.—Staff gage in sec. 22, T. 33 S., R. 7½ E., at highway bridge one-fourth mile east of Fort Klamath.

RECORDS AVAILABLE.—August, 1911, to September, 1929. Incomplete.

EXTREMES.—Maximum discharge during year, 380 second-feet March 21 (gage height, 2.46 feet); minimum, 132 second-feet August 19 (gage height, 0.95 foot).

1911-1929: Maximum discharge (estimated), 600 second-feet November 23-25, 1921 (gage height, 4.0 feet); minimum, 120 second-feet several days in June, July, and August, 1926.

REMARKS.—Records fair. Considerable diversion for irrigation above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	237	253	262	237	229	229	231	231	176	169	139	247
2	245	262	237	237	229	237	231	231	176	169	154	199
3	253	262	245	237	229	237	231	231	169	162	146	169
4	262	262	253	245	229	237	231	231	169	162	154	162
5	262	262	253	237	229	237	231	231	169	162	146	146
6	262	262	253	237	229	245	231	215	169	162	154	146
7	253	262	253	229	221	237	231	215	184	162	154	146
8	253	270	253	229	221	245	231	215	184	154	162	146
9	253	270	245	229	221	245	231	215	184	154	169	146
10	253	270	245	229	221	245	231	207	192	162	176	146
11	253	270	253	229	221	245	231	199	199	176	169	146
12	253	270	253	229	221	245	231	199	199	154	169	146
13	253	270	253	229	221	245	231	199	199	139	162	146
14	253	270	245	229	221	253	270	199	199	146	154	154
15	253	270	237	229	221	262	247	199	207	146	154	154
16	253	270	229	229	221	262	247	192	199	146	136	146
17	253	270	229	229	221	270	247	184	207	146	139	146
18	253	270	229	229	221	270	231	176	207	146	133	154
19	253	262	229	229	221	267	247	169	207	146	132	154
20	253	262	229	229	221	304	247	176	199	146	133	154
21	253	262	229	229	221	380	247	176	192	139	133	154
22	253	270	229	229	221	279	247	169	192	146	136	162
23	253	270	229	229	221	263	247	169	184	146	133	169
24	253	262	229	221	221	247	231	176	184	146	133	169
25	253	262	229	229	229	231	231	176	184	146	133	169
26	253	262	229	229	229	247	231	176	184	146	133	176
27	253	262	229	229	229	263	231	169	184	146	133	176
28	253	262	237	229	229	263	215	169	169	146	136	176
29	253	262	237	229	-----	247	231	169	162	146	133	162
30	262	262	237	229	-----	231	231	176	169	146	136	176
31	253	-----	237	229	-----	231	-----	176	-----	139	136	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	262	237	253	15,600
November	270	253	265	15,800
December	262	229	240	14,800
January	245	221	231	14,200
February	229	213	224	12,400
March	380	229	255	15,700
April	279	215	236	14,000
May	231	169	194	11,900
June	207	162	187	11,100
July	176	139	152	9,850
August	176	132	145	8,920
September	247	146	161	9,580
The year	380	132	212	153,000

FOURMILE LAKE RESERVOIR NEAR ODESSA, OREG.

LOCATION.—Staff gage in NW. $\frac{1}{4}$ sec. 9, T. 36 S., R. 5 E., at dam at outlet of Fourmile Lake, 15 miles northwest of Odessa. Gage readings are elevations above mean sea level.

RECORDS AVAILABLE.—June, 1923, to September, 1929, occasional readings.

EXTREMES.—Maximum elevation during year, 5,997.6 feet July 8 (contents, 11,260 acre-feet); probably a little higher early in July; minimum, 5,983.0 feet September 20 (contents, 1,632 acre-feet).

1923-1929: Maximum elevation, 6,001.40 feet May 18 and 23-25, 1928 (contents, 14,610 acre-feet); minimum contents (estimated), 450 acre-feet September 15, 1926.

REMARKS.—Water turned out of reservoir is diverted a few hundred feet below dam into Cascade Canal, which conveys it over the divide into the drainage basin of Fish Lake in the Rogue River Basin. Records furnished by State engineer of Oregon.

Monthly elevation and contents of Fourmile Lake Reservoir near Odessa, Oreg., 1928-29

Date	Gage height in feet	Contents in acre-feet	Gain or loss during month in acre-feet	Date	Gage height in feet	Contents in acre-feet	Gain or loss during month in acre-feet
Sept. 30	-----	4,270	-----	May 31	-----	9,000	+1,880
Oct. 31	-----	4,310	+40	June 30	-----	11,150	+2,150
Nov. 30	-----	4,470	+160	July 31	5,993.50	8,176	-2,974
Dec. 31	-----	4,800	+330	Aug. 31	5,986.90	3,906	-4,271
Jan. 31	-----	5,200	+400	Sept. 30	-----	1,632	-2,273
Feb. 28	-----	5,540	+340				
Mar. 31	-----	6,450	+910	The year	-----	-----	-2,638
Apr. 30	-----	7,120	+670				

NOTE.—Contents for end of month estimated from occasional readings, except July and August.

CASCADE CANAL NEAR FISH LAKE, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 30, T. 36 S., R. 5 E., at divide between Rogue River and Klamath River Basins, 3 miles above Fish Lake.

RECORDS AVAILABLE.—June, 1924, to September, 1929; irrigation seasons only.

EXTREMES.—Maximum discharge during year, 39 second-feet August 31 to September 7 (gage height, 1.62 feet); canal dry at times.

1924-1929: Maximum discharge, 42 second-feet August 6, 7, 9, and 10, 1924 (gage height, 1.72 feet).

REMARKS.—Records fair. This canal diverts water from Fourmile Creek in the Klamath River Basin and discharges into Fish Lake in the Rogue River Basin. Gaging station is 10 miles below point of diversion. Entire flow sinks into a lava bed $1\frac{1}{2}$ miles above Fish Lake, reappearing in the springs at head of Fish Lake. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1928-29

Day	June	July	Aug.	Sept.
1	0		25	39
2	0		* 26	39
3	0		27	39
4	0		* 27	* 39
5	0		* 27	* 39
6	0	* 17	* 28	39
7	0		* 28	39
8	0		28	38
9	0		30	37
10	0		30	37
11	0		30	36
12	0		30	37
13	0	17	31	37
14	0	* 18	31	
15	0	20	30	
16	0	20	22	
17	0	* 20	32	* 37
18	0	21	33	
19	0	18	33	
20	0	18	34	
21		19	34	16
22		21	34	0
23		21	36	0
24		21	36	0
25		23	36	0
26	* 15	22	37	0
27		21	37	0
28		23	37	0
29		22	38	0
30		25	38	0
31		25	39	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June		0	5.0	208
July	25		19.3	1,190
August	39	25	32.1	1,970
September	39	0	25.7	1,530
The period				4,990

* Estimated.

NOTE.—Probably some flow in canal in April and May owing to melting of snow above. Water released into canal from Fourmile Lake Reservoir June 21 to Sept. 21.

"A" CANAL AT KLAMATH FALLS, OREG.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 30, T. 38 S., R. 9 E., 300 feet below head gates of canal and 1 mile northwest of Klamath Falls.

RECORDS AVAILABLE.—Irrigation seasons, 1911-1929.

EXTREMES.—Maximum discharge during year, 941 second-feet May 24 (gage height, 10.45 feet); canal dry October 1 to April 21.

1911-1929: Maximum discharge, that of May 24, 1929; maximum gage height, 10.72 feet June 27, 1925.

REMARKS.—Records good. "A" Canal diverts water from Link River immediately below outlet of Upper Klamath Lake, in NE. $\frac{1}{4}$ sec. 30, T. 38 S., R. 9 E., for irrigating lands east of Klamath River on both sides of Lost River. Most of the return waters reach Lost River. Records furnished by United States Bureau of Reclamation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1-----	0	14	681	830	701	323	16-----	0	715	424	498	592	271
2-----	0	46	554	823	706	297	17-----	0	765	368	468	572	810
3-----	0	87	500	760	679	275	18-----	0	815	359	512	558	821
4-----	0	104	485	659	624	266	19-----	0	788	375	578	506	334
5-----	0	124	476	588	601	269	20-----	0	825	405	654	510	355
6-----	0	161	472	605	612	283	21-----	0	835	432	662	524	358
7-----	0	253	442	609	595	288	22-----	15	845	495	715	500	805
8-----	0	275	382	583	577	298	23-----	28	833	543	765	482	196
9-----	0	363	376	562	610	303	24-----	25	901	597	766	434	176
10-----	0	396	375	548	612	297	25-----	18	925	706	753	408	176
11-----	0	490	356	503	590	285	26-----	12	918	783	751	386	173
12-----	0	612	392	496	554	289	27-----	12	896	813	570	398	154
13-----	0	670	463	495	558	278	28-----	10	886	818	717	377	121
14-----	0	693	487	493	582	257	29-----	10	867	822	715	365	108
15-----	0	736	450	493	595	258	30-----	10	844	835	719	362	76
							31-----		835		722	352	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April-----	28	0	4.7	280
May-----	925	14	597	36,700
June-----	835	356	522	31,100
July-----	830	468	632	38,900
August-----	706	352	533	32,800
September-----	358	76	267	15,200
The year-----	925	0	214	155,000

NOTE.—Canal dry Oct. 1 to Apr. 21.

KENO CANAL AT KLAMATH FALLS, OREG.

LOCATION.—Staff gage in NE. $\frac{1}{4}$ sec. 31, 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, 1929.

EXTREMES.—Maximum mean daily discharge during year, 268 second-feet June 26, 27, and July 14–16; no flow March 12–15.

1923–1929: Maximum mean daily discharge, 281 second-feet June 30, 1927; no flow June 12–15, 1928, and March 12–15, 1929.

REMARKS.—Discharge determined from record of electrical output of power plant 200 feet below gage. This canal diverts water from Upper Klamath Lake at the Link River storage dam in SW. $\frac{1}{4}$ sec. 30. Water is used for developing power and returned to Link River in NE. $\frac{1}{4}$ sec. 31. Flow is controlled by gates at head of canal. Gage-height and electrical record furnished by The California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1928–29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1.....	184	174	179	227	232	239	163	194	256	265	258	226
2.....	183	148	233	231	235	237	208	193	260	265	261	237
3.....	173	169	236	232	235	235	192	196	258	266	261	231
4.....	191	173	237	231	233	236	194	194	258	265	263	230
5.....	220	177	235	232	237	237	194	193	258	265	263	224
6.....	196	182	225	226	239	240	196	193	253	266	260	231
7.....	203	182	216	224	239	240	191	190	261	265	256	227
8.....	207	184	215	224	240	228	196	189	263	265	260	226
9.....	213	164	195	224	240	222	192	189	263	261	260	228
10.....	225	187	189	224	240	226	206	189	263	261	258	231
11.....	225	179	218	223	240	94	247	189	265	263	260	224
12.....	196	196	210	223	240	0	254	187	265	266	260	225
13.....	218	190	223	223	240	0	256	189	258	265	261	222
14.....	210	207	217	224	240	0	224	191	263	268	268	223
15.....	200	212	210	223	239	0	197	201	261	268	254	221
16.....	217	213	208	225	239	87	202	209	260	268	251	221
17.....	219	212	207	226	239	227	201	232	258	266	243	223
18.....	228	211	209	231	239	237	199	254	258	265	248	224
19.....	227	212	210	237	239	261	198	254	261	263	256	221
20.....	217	210	209	231	240	258	199	254	261	263	253	226
21.....	211	207	208	225	239	226	198	254	261	263	251	218
22.....	208	208	204	231	239	211	191	254	263	261	247	231
23.....	206	212	204	231	239	210	210	254	261	260	260	231
24.....	195	206	198	231	239	199	197	254	261	260	228	230
25.....	194	206	216	233	239	210	197	253	258	261	237	228
26.....	195	208	217	232	239	210	198	260	268	263	223	235
27.....	186	212	221	232	237	212	197	254	268	261	230	233
28.....	168	212	232	231	237	157	197	260	266	260	231	233
29.....	185	211	233	232	-----	109	195	254	266	260	222	236
30.....	168	205	231	232	-----	110	194	254	266	258	217	230
31.....	168	-----	228	232	-----	110	-----	254	-----	261	220	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	228	168	201	12, 400
November.....	213	148	196	11, 700
December.....	237	179	215	13, 200
January.....	237	223	228	14, 000
February.....	240	232	238	13, 200
March.....	261	0	176	10, 800
April.....	256	163	203	12, 100
May.....	260	187	222	13, 600
June.....	268	253	261	15, 500
July.....	268	258	263	16, 200
August.....	263	217	249	15, 300
September.....	237	218	228	13, 600
The year.....	268	0	223	162, 000

LOST RIVER DIVERSION CANAL NEAR OLENE, OREG.

LOCATION.—Water-stage recorder in SE. $\frac{1}{4}$ sec. 30, T. 39 S., R. 10 E., a quarter of a mile below intake of canal at Lost River Dam and 4 miles below Olene.

RECORDS AVAILABLE.—May, 1912, to September, 1929.

EXTREMES.—Maximum mean daily discharge during year, 197 second-feet February 6; canal dry May 1 to September 30.

1912-1929: Maximum discharge, 508 second-feet February 28, 1914.

REMARKS.—Records fair. This canal diverts water from Lost River and discharges into Klamath River to assist in the reclamation of bed of Tule Lake. Records furnished by United States Bureau of Reclamation.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	153	155	117	128	122	133	115
2	162	160	115	129	132	138	114
3	167	162	114	131	150	138	115
4	169	165	114	129	169	141	119
5	166	170	112	127	189	145	121
6	168	178	113	127	197	149	122
7	173	182	113	127	195	153	123
8	179	185	113	124	186	158	126
9	183	185	113	121	172	158	127
10	187	186	113	119	164	161	129
11	192	187	111	118	141	161	131
12	187	190	111	115	129	158	132
13	187	190	110	114	122	155	132
14	176	190	110	113	119	152	133
15	174	189	110	113	118	149	135
16	172	190	110	112	116	145	137
17	172	188	110	112	114	142	142
18	171	185	110	111	115	138	144
19	170	175	111	109	114	137	145
20	167	166	114	110	117	134	150
21	159	154	114	108	118	137	152
22	149	142	113	111	122	135	155
23	140	136	111	110	126	128	156
24	130	131	110	109	128	125	158
25	122	127	110	110	134	124	162
26	117	125	107	114	132	125	165
27	114	122	111	118	134	126	152
28	114	119	115	117	133	126	148
29	121	118	118	117	-----	123	143
30	135	117	122	115	-----	121	135
31	147	-----	126	118	-----	118	-----
Month	Maximum		Minimum	Mean		Run-off in acre-feet	
October	192		114	159		9,780	
November	190		117	162		9,640	
December	126		107	113		6,950	
January	131		108	117		7,190	
February	197		114	139		7,720	
March	161		118	140		8,610	
April	165		114	137		8,150	
The year	197		0	80.2		58,000	

NOTE.—No flow May 1 to Sept. 30.

SPENCER CREEK NEAR KENO, OREG.

LOCATION.—Staff gage in SW. $\frac{1}{4}$ sec. 20, T. 39 S., R. 7 E., half a mile above mouth of creek and 5 miles northwest of Keno.

RECORDS AVAILABLE.—July to September, 1929.

EXTREMES.—Maximum discharge during period, 6.5 second-feet September 29 and 30 (gage height, 0.56 foot); minimum, 4.6 second-feet August 7–10, 15, 16, and 23–28.

REMARKS.—Records fair. Discharge estimated August 29–31. Diversions for irrigation above station.

Daily and monthly discharge, in second-feet, 1929

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1-----		5.1	5.3	11-----	5.3	4.3	5.5	21-----	5.1	4.8	6.1
2-----		5.1	5.3	12-----	5.3	4.8	5.7	22-----	5.1	4.8	6.1
3-----		5.0	5.3	13-----	5.3	4.3	5.7	23-----	5.1	4.6	6.1
4-----		5.0	5.3	14-----	5.3	4.8	5.7	24-----	5.3	4.6	6.3
5-----		4.8	5.3	15-----	5.3	4.6	5.7	25-----	5.3	4.6	6.3
6-----	5.0	4.8	5.3	16-----	5.3	4.6	5.7	26-----	5.3	4.6	6.3
7-----	5.3	4.6	5.3	17-----	5.3	4.8	5.9	27-----	5.3	4.6	6.3
8-----	5.1	4.6	5.3	18-----	5.3	4.8	5.9	28-----	5.1	4.6	6.3
9-----	5.1	4.6	5.3	19-----	5.3	4.8	5.9	29-----	5.1	4.8	6.5
10-----	5.1	4.6	5.3	20-----	5.3	4.8	6.1	30-----	5.1	5.0	6.5
								31-----	5.1	5.2	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
July 6-31-----	5.3	5.0	5.21	269
August-----	5.2	4.6	4.77	293
September-----	6.5	5.3	5.79	345
The period-----				907

FALL CREEK AT COPCO, OREGON

LOCATION.—Staff gage in NE $\frac{1}{4}$ 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, 1929.

EXTREMES.—Maximum discharge during year, 105 second-feet December 27 (gage height, 1.50 feet); minimum, 30 second-feet August 4 (gage height, 0.46 foot).

REMARKS.—Records good. No diversions or regulation. Gage-height record furnished by The California Oregon Power Co.

Daily and monthly discharge, in second-feet, 1928-29.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					27					31		31
2			36		26	27			38	31		
3	33	35	36								30	
4	33						37	33				
5				43								
6	33		36				36			32		
7				43	28							31
8			35		28	38			38			
9												
10		38						33			31	
11								35				
12			39	37								
13					34	37	36			32		
14	34											31
15	34											
16		36	39			37	35		32			31
17	33	36	39	37	36							
18	33	36									31	
19					37			33				
20	33											
21	33						37			32		
22												31
23			38			36			31			31
24		36			37	36					31	
25												
26				32				32				
27			105	37								
28	33						36			32		
29												31
30	34	36	45	37								
31						37						

Month	Mean	Run-off in acre-feet	Month	Mean	Run-off in acre-feet
October	23.3	2,050	May	32.6	2,020
November	36.1	2,150	June	33.5	1,960
December	44.8	2,750	July	31.7	1,950
January	38.0	2,340	August	30.8	1,850
February	37.0	2,050	September	31.0	1,840
March	36.9	2,270			
April	36.2	2,150	The year	35.2	25,400

NOTE.—Gage read about seven times a month. Monthly mean discharge is mean of days when gage was read.

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 elevations above mean sea level.

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

EXTREMES.—Maximum elevation during year, 5,010.05 feet May 23-27 (contents, 11,285 acre-feet); estimated minimum contents, 1,590 acre-feet September 30, 1922-1929: Maximum elevation, 5,015.70 feet May 15 and 16, 1928 (contents, 15,920 acre-feet); minimum, 4,981.90 feet August 4, 1926 (contents, 2 acre-feet).

REMARKS.—Records furnished by State engineer of Oregon.

Monthly stage and contents of Hyatt Prairie Reservoir near Ashland, Oreg., 1922-29

Date	Gage height in feet	Contents in acre-feet	Gain or loss during month in acre-feet	Date	Gage height in feet	Contents in acre-feet	Gain or loss during month in acre-feet
Sept. 30.....	5,003.00	6,450	-----	May 31.....	5,009.96	11,285	+1,435
Oct. 31.....	-----	6,670	+220	June 30.....	5,000.05	10,557	-678
Nov. 30.....	-----	6,860	+190	July 31.....	5,004.90	7,664	-2,893
Dec. 31.....	-----	7,100	+240	Aug. 31.....	4,996.70	3,097	-4,567
Jan. 31.....	-----	7,490	+390	Sept. 30.....	-----	1,590	-1,507
Feb. 28.....	-----	7,550	+60				
Mar. 31.....	-----	8,536	+986				
Apr. 30.....	-----	9,750	+1,214	The year.....	-----	-----	-4,800

NOTE.—Contents for end of month interpolated from weekly readings, October to April and September.

KEENE CREEK CANAL NEAR ASHLAND, OREG.

Location.—Water-stage recorder and staff gage in NW. $\frac{1}{4}$ sec. 20, 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, 1929.

EXTREMES.—Maximum discharge during year, 71 second-feet August 17 (gage height, 3.00 feet); canal possibly dry at times.

1923-1929: Maximum discharge, 78 second-feet August 18, 1928.

REMARKS.—Records fair. This canal diverts from Keene Creek in SE. $\frac{1}{4}$ 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. Probably some run-off October 1 to May 15 to Keene Creek below Hyatt Prairie Reservoir; stored water was released May 16 to September 30. Records furnished by State engineer of Oregon.

Daily and monthly discharge, in second-feet, 1929

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	0.1	20	28	58		16	9.4	11	29	69	7.5
2	0.1	20	28	58		17	11	11	29	69	
3	0.1	20	28	64		18	11	11	28		
4	0.1	20	27	69		19	11	11	29		
5	0.1	19	28	69		20	12	10	29		
6		19	28	69		21	14	11	51		
7		18	27	66		22	15	13	60	66	
8		14	27	66	40	23	15	14	62		6.0
9		13	27	66		24	15	19	62		
10	2.5	11	28	66		25	18	23	60		
11		11	28	64		26	20	23	60		
12		10	28	64		27	20	23	60	64	
13		11	28	64		28	20	23	60	64	
14	4.0	10	28	64		29	21	23	60	60	
15	4.7	11	29	66		30	21	24	60	50	
						31			60	50	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May	21	0.1	9.18	564
June	24	10	15.9	946
July	62	27	39.2	2,410
August	69		64.3	3,950
September			22.6	1,340
The period				9,230

* Estimated.

SHASTA RIVER NEAR MONTAGUE, CALIF.

LOCATION.—Water-stage recorder in NE. $\frac{1}{4}$ sec. 33, T. 45 N., R. 3 W., at highway bridge $\frac{1}{2}$ miles southwest of Montague. Little Shasta River enters $\frac{1}{2}$ mile above station.

RECORDS AVAILABLE.—August, 1911, to September, 1913; September, 1914, to September, 1922.

EXTREMES.—Maximum discharge during year, 449 second-foot February 5 (gauge height, 4.49 feet); minimum, 2.9 second-foot June 29.

1911-1922: Maximum discharge, 5,700 second-foot February 11, 1925 (gauge height, 14.9 feet); minimum, 1.0 second-foot July 11, 1924.

REMARKS.—Records good except those for estimated periods, which are fair. Several irrigation diversions above station.

Daily and monthly discharge, in second-foot, 1922-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	142	155	164	170	147	108	36	53	18	19	18
2	118	144	155	184	170	150	97	36	80	18	15	19
3	111	145	158	192	178	150	84	46	62	10	14	17
4	111	145	155	184	200	156	81	54	58	9	15	16
5	113	148	152	178	357	156	84	57	54	10	20	15
6	110	191	148	167	236	153	90	56	53	9	15	15
7	115	191	148	164	198	150	88	61	55	8	12	16
8	116	168	152	164	164	153	90	66	60	12	13	16
9	118	148	152	164	158	153	90	62	61	12	12	17
10	120	142	184	164	153	172	90	56	83	11	15	19
11	120	137	208	161	153	216	70	34	101	11	13	19
12	123	158	191	161	156	192	69	26	95	10	11	20
13	123	181	188	161	153	181	60	25	64	10	12	20
14	128	184	177	158	156	181	58	24	40	12	14	21
15	126	201	164	170	153	170	62	22	39	13	15	22
16	125	174	152	170	158	164	70	20	45	14	13	26
17	124	155	145	167	156	161	56	23	49	13	11	26
18	123	142	145	170	158	161	57	24	47	12	13	22
19	123	140	140	172	156	147	55	24	35	17	23	25
20	125	145	140	170	153	150	44	22	32	18	17	20
21	128	145	137	168	150	167	36	18	26	20	15	25
22	125	161	137	166	153	213	97	27	24	17	13	23
23	125	152	135	165	153	198	166	52	17	15	11	21
24	128	148	142	164	153	178	144	52	17	19	11	20
25	125	152	168	170	160	170	72	52	18	17	12	27
26	125	148	201	172	147	164	47	47	7.5	15	12	25
27	125	148	260	172	147	158	46	65	4.5	21	19	23
28	125	145	291	170	147	158	43	62	4.0	9.3	14	20
29	130	145	258	170	-----	158	40	46	11	18	13	28
30	142	148	222	164	-----	150	38	43	18	17	12	20
31	145	-----	195	167	-----	139	-----	46	-----	14	15	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	145	110	123	7,560
November	201	137	156	9,280
December	291	135	173	10,000
January	192	158	169	10,400
February	357	147	173	9,610
March	216	139	165	10,100
April	158	36	74.1	4,410
May	66	18	41.4	2,550
June	101	4.0	43.2	2,570
July	21	8	13.7	842
August	23	11	14.2	873
September	90	15	33.6	2,000
The year	357	4.0	97.8	70,800

* Estimated.

LOCATION.—Staff gage in NE $\frac{1}{4}$ sec. 19, T. 38 N., R. 8 W., at highway bridge at Lewiston.

RECORDS AVAILABLE.—August, 1911, to September, 1920.

EXTREMES.—Maximum discharge during year, 4,690 second-feet February 4 (gage height, 7.05 feet); minimum, 60 second-feet September 18.

1911-1920: Maximum discharge, about 31,900 second-feet November 28, 1926 (gage height, 18.3 feet); minimum, 28 second-feet July 30, 1924.

REMARKS.—Records good. Diversions for irrigation, power, and placer mining above station.

Daily and monthly discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	186	295	570	670	610	1,160	2,580	1,010	445	135	68
2	126	204	295	618	1,160	870	1,680	2,980	905	428	130	68
3	135	422	315	702	1,860	870	1,080	2,080	870	400	125	68
4	168	445	295	670	3,620	1,010	1,160	2,840	940	378	125	68
5	198	355	295	610	1,910	1,240	1,680	2,460	1,410	345	120	68
6	210	422	378	580	1,320	1,410	1,101	2,130	1,700	338	115	68
7	189	355	378	522	1,010	1,240	940	2,180	1,330	315	110	68
8	180	315	275	495	870	1,240	940	2,460	1,160	315	110	68
9	174	315	378	470	785	1,080	805	2,600	1,080	295	105	72
10	162	378	355	445	670	2,980	870	2,460	1,080	285	102	72
11	156	470	355	445	640	2,240	768	2,400	1,080	275	99	66
12	148	522	355	470	610	1,600	785	2,720	1,010	288	96	64
13	145	610	355	495	580	1,410	670	2,600	1,040	246	87	62
14	150	702	355	522	580	1,240	335	2,680	1,080	246	86	62
15	150	610	315	522	550	1,080	1,040	2,840	1,600	224	84	62
16	180	522	295	522	522	1,010	1,240	2,980	1,700	225	86	64
17	180	470	295	495	522	1,080	1,240	2,840	1,160	218	85	64
18	150	422	295	470	522	1,160	1,240	2,980	1,010	218	85	60
19	145	400	295	495	522	1,080	1,320	2,840	940	204	84	62
20	142	378	295	445	522	1,240	1,380	2,840	905	188	86	64
21	140	378	295	400	522	1,800	1,410	2,980	870	185	80	64
22	140	378	295	445	550	2,600	1,800	2,980	905	185	78	65
23	140	378	275	422	580	1,800	1,800	2,840	800	168	74	62
24	145	355	315	400	580	1,410	1,800	2,580	800	148	74	64
25	145	355	355	400	550	1,240	1,700	1,800	785	156	74	65
26	145	335	422	378	550	1,080	1,800	1,410	670	156	74	72
27	145	335	550	378	550	1,080	2,138	1,240	618	146	72	76
28	140	315	1,410	378	550	1,320	2,580	1,160	580	158	70	72
29	145	295	1,240	378	550	1,410	2,460	1,080	622	140	68	76
30	156	295	1,010	378	550	1,320	2,580	1,080	470	138	70	76
31	165	738	422	422	550	1,240	1,040	1,040	1,040	138	66	76

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	210	128	154	9,479
November	702	186	397	25,600
December	1,410	275	428	25,800
January	702	378	455	20,600
February	3,620	522	846	47,100
March	2,980	610	1,560	33,600
April	2,580	670	1,330	70,100
May	3,080	1,040	2,379	146,800
June	1,790	470	909	59,400
July	445	138	242	14,900
August	135	68	92.6	5,899
September	76	60	68.9	3,980
The year	3,620	60	736	528,009

MISCELLANEOUS DISCHARGE MEASUREMENTS

Measurements of stream flow in the Pacific slope basins in California at points other than gaging stations are listed in the following table:

Miscellaneous discharge measurements in Pacific slope basins in California during the year ending September 30, 1929

Streams south of San Francisco Bay

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	Sec.-ft.
Apr. 11	Tia Juana River	Pacific Ocean	Former station near Nestor, Calif.		0
Dec. 2	San Diego River	do.	El Capitan dam site near Lakeside, Calif.		2.3
6	do.	do.	do.		1.0
23	do.	do.	do.		2.0
Jan. 12	do.	do.	do.		2.4
22	do.	do.	do.		26
23	do.	do.	do.		3.2
Feb. 3	do.	do.	do.		9.1
9	do.	do.	do.		35
15	do.	do.	do.		6.8
22	do.	do.	do.		5.5
Mar. 5	do.	do.	do.		2.4
11	do.	do.	do.		140
14	do.	do.	do.		66
17	do.	do.	do.		19
27	do.	do.	do.		37
Apr. 1	do.	do.	do.		24
7	do.	do.	do.		101
10	do.	do.	do.		66
13	do.	do.	do.		40
18	do.	do.	do.		27
21	do.	do.	do.		27
26	do.	do.	do.		16
30	do.	do.	do.		11
May 7	do.	do.	do.		6.7
15	do.	do.	do.		2.6
24	do.	do.	do.		1.3
June 7	do.	do.	do.		4.8
23	do.	do.	do.		1.02
Sept. 23	do.	do.	do.		4.68
July 25	Boulder Creek	San Diego River	Diversion dam near Lakeside, Calif.	0.94	3.0
25	Cuyamaca Flume	Diverts from San Diego River.	do.	.28	2.3
25	do.	do.	South Fork of San Diego River near Alpine, Calif.	.38	1.2
25	do.	do.	Chocolate Creek near Lakeside, Calif.	.33	1.2
25	do.	do.	Los Coches near Lakeside, Calif.	2.02	10
25	do.	do.	Grossmont, Calif.	.74	6.2
Apr. 7	San Vicente Creek	San Diego River	Former gaging station at Foster, Calif.		9.5
10	do.	do.	do.		4.5
Dec. 6	Santa Ysabel Creek	San Dieguito River	1 mile below abandoned gaging station near Mesa Grande, Calif.		2.2
21	do.	do.	do.		1.25
Jan. 12	do.	do.	do.		1.5
22	do.	do.	do.		13
29	do.	do.	do.		7.1
Feb. 3	do.	do.	do.		14
9	do.	do.	do.		15
22	do.	do.	do.		11
Mar. 5	do.	do.	do.		6.7
11	do.	do.	do.		24
17	do.	do.	do.		17
27	do.	do.	do.		22
Apr. 7	do.	do.	do.		39
14	do.	do.	do.		27
26	do.	do.	do.		20
May 7	do.	do.	do.		10
19	do.	do.	do.		4.1
June 7	do.	do.	do.		5.4
23	do.	do.	do.		.8

* Dry at this point during entire season of 1928-29.

* Estimated.

Miscellaneous discharge measurements in Pacific slope basins in California during the year ending September 30, 1928—Continued

Streams south of San Francisco Bay—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	Sec.-ft.
Dec. 27	San Luis Rey River	Pacific Ocean	Abandoned gaging station near Bonsall, Calif.		0.2
Jan. 3	do.	do.	do.		0.25
10	do.	do.	do.		7
17	do.	do.	do.		16
23	do.	do.	do.		23
31	do.	do.	do.		17
Feb. 7	do.	do.	do.		34
8	do.	do.	do.		38
11	do.	do.	do.		28
18	do.	do.	do.		31
20	do.	do.	do.		28
25	do.	do.	do.		19
Mar. 4	do.	do.	do.		16
12	do.	do.	do.		88
13	do.	do.	do.		38
18	do.	do.	do.		24
26	do.	do.	do.		26
Apr. 2	do.	do.	do.		16
6	do.	do.	do.		87
12	do.	do.	do.		29
16	do.	do.	do.		23
22	do.	do.	do.		13
29	do.	do.	do.		9.1
May 6	do.	do.	do.		3.2
13	do.	do.	do.		85
21	do.	do.	do.		69
28	do.	do.	do.		48
June 1	do.	do.	do.		24
5	do.	do.	do.		1
12	do.	do.	do.		27
24	do.	do.	do.		0.02
July 9	do.	do.	do.		0.02
12	do.	do.	do.		0.02
19	do.	do.	do.		0
23	do.	do.	do.		0
Mar. 12	do.	do.	Near foot of Oceanside grade, Oceanside, Calif.		23
13	do.	do.	do.		19
18	do.	do.	do.		13
26	do.	do.	do.		17
Apr. 2	do.	do.	do.		6.5
6	do.	do.	do.		87
12	do.	do.	do.		17
22	do.	do.	do.		3.6
Mar. 18	do.	do.	1,000 feet below city pumping plant, Oceanside, Calif.		5.9
26	do.	do.	do.		14
Apr. 2	do.	do.	do.		3.1
Oct. 16	Santa Margarita River	do.	Former gaging station at Ysidora, Calif.		0.01
23	do.	do.	do.		0.02
31	do.	do.	do.		0.08
Nov. 14	do.	do.	do.		0.03
20	do.	do.	do.		0.02
Dec. 5	do.	do.	do.		75
12	do.	do.	do.		66
21	do.	do.	do.		95
27	do.	do.	do.		1.1
Jan. 3	do.	do.	do.		95
11	do.	do.	do.		1.0
18	do.	do.	do.		1.1
24	do.	do.	do.		1.6
Feb. 20	do.	do.	do.		15
25	do.	do.	do.		10
Mar. 4	do.	do.	do.		4.2
12	do.	do.	do.		6.8
18	do.	do.	do.		5.8
25	do.	do.	do.		4.5
Apr. 2	do.	do.	do.		3.5
12	do.	do.	do.		3.5
22	do.	do.	do.		2.6
29	do.	do.	do.		2.3
May 6	do.	do.	do.		1.4
16	do.	do.	do.		1.2
23	do.	do.	do.		35

* Estimated.

Miscellaneous discharge measurements in Pacific slope basins in California during the year ending September 30, 1929—Continued

Streams south of San Francisco Bay—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height Feet	Discharge Sec. 4.
June 12	Santa Margarita River	Pacific Ocean	Former gaging station at Ysidora, Calif.	1.52	0.05
24	do.	do.	do.	1.52	0.11
July 7	do.	do.	do.	1.52	0.12
Mar. 12	Pacolina Creek	Los Angeles River	Above flood control dam near San Fernando, Calif.	1.52	0.12
18	do.	do.	do.	1.52	0.12
23	do.	do.	do.	1.52	0.12
Apr. 8	do.	do.	do.	1.52	0.12
11	do.	do.	do.	1.52	0.12
16	do.	do.	do.	1.52	0.12
22	do.	do.	do.	1.52	0.12
29	do.	do.	do.	1.52	0.12
May 4	do.	do.	do.	1.52	0.12
13	do.	do.	do.	1.52	0.12
21	do.	do.	do.	1.52	0.12
27	do.	do.	do.	1.52	0.12
June 8	do.	do.	do.	1.52	0.12
10	do.	do.	do.	1.52	0.12
17	do.	do.	do.	1.52	0.12
Oct. 11	Haines Creek diversion.	Haines Creek	Upper sand box near Tujunga, Calif.	1.52	0.12
Nov. 15	do.	do.	do.	1.54	0.04
Jan. 16	do.	do.	do.	1.56	0.04
25	do.	do.	do.	1.56	0.04
Feb. 12	do.	do.	do.	1.58	0.04
Mar. 19	do.	do.	do.	1.58	0.04
Apr. 16	do.	do.	do.	1.60	0.04
June 20	do.	do.	do.	1.56	0.04
July 19	do.	do.	do.	1.54	0.04
30	do.	do.	do.	1.53	0.04
Aug. 16	do.	do.	do.	1.53	0.04
Sept. 4	do.	do.	do.	1.53	0.04
19	do.	do.	do.	1.53	0.04
25	do.	do.	do.	1.53	0.04
Oct. 11	do.	do.	Lower tunnel below gaging station on Haines Creek near Tujunga, Calif.	1.52	0.04
Nov. 15	do.	do.	do.	1.54	0.04
Jan. 16	do.	do.	do.	1.56	0.04
25	do.	do.	do.	1.56	0.04
Feb. 12	do.	do.	do.	1.58	0.04
Mar. 19	do.	do.	do.	1.60	0.04
June 20	do.	do.	do.	1.56	0.04
July 19	do.	do.	do.	1.54	0.04
30	do.	do.	do.	1.53	0.04
Aug. 16	do.	do.	do.	1.53	0.04
Sept. 4	do.	do.	do.	1.53	0.04
19	do.	do.	do.	1.53	0.04
25	do.	do.	do.	1.53	0.04

Kern River Basin

Nov. 1	Salmon Creek	Kern River	Gaging station at mouth	1.41	2.1
Dec. 5	do.	do.	do.	1.42	2.5
Jan. 9	do.	do.	do.	1.37	1.8
Feb. 6	do.	do.	do.	1.43	2.2
Mar. 4	do.	do.	do.	1.53	4.4

San Joaquin River Basin

Oct. 16	Bear Creek	San Joaquin River	100 feet below diversion dam in sec. 12, T. 7 S., R. 27 E.	1.99	2.0
Oct. 20	Pitman Creek	Big Creek	Gaging station at Big Creek	.02	2
Nov. 17	do.	do.	do.	.04	2
Dec. 26	do.	do.	do.	.04	2
Jan. 17	do.	do.	do.	.04	1.8
Feb. 19	do.	do.	do.	.04	1.1
Mar. 27	do.	do.	do.	.05	1.4
Apr. 24	do.	do.	do.	.06	2.2
May 30	do.	do.	do.	.04	1.9
June 27	do.	do.	do.	.01	.4
July 29	do.	do.	do.	.02	.3
Aug. 30	do.	do.	do.	.02	.3
Sept. 28	do.	do.	do.	.03	.5
Oct. 19	Stevenson Creek	San Joaquin River	Gaging station at Shaver	1.60	1

• Estimated.

Miscellaneous discharge measurements in Pacific slope basins in California during the year ending September 30, 1929—Continued

San Joaquin River Basin—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	Sec.-ft.
Nov. 16	Stevenson Creek	San Joaquin River	Gaging station at Shaver	1.63	0.3
Dec. 16	do	do	do	1.62	.1
Jan. 15	do	do	do	1.61	.1
Feb. 15	do	do	do	1.62	.3
Mar. 13	do	do	do	1.70	.4
Apr. 27	do	do	do	1.70	.5
May 27	do	do	do	1.63	.2
June 27	do	do	do	1.62	.2
July 19	do	do	do	1.62	.1
Aug. 29	do	do	do	1.58	.1
Sept. 30	do	do	do	1.58	.1
Feb. 15	Yosemite Creek	Merced River	Gaging station at Yosemite	2.88	4.3
May 15	do	do	do	2.89	4.4
May 11	do	do	do	4.38	243
May 22	do	do	do	4.65	297
July 30	do	do	do	2.68	1.6
Oct. 16	Cherry Creek flume	Diverts from Cherry Creek	Near Early intake	3.70	167
29	do	do	do	4.05	187
29	do	do	do	3.00	124
Nov. 10	Utica Mining Co.'s flume	Diverts from North Fork of Stanislaus River	Gaging station at intake near Avery	.62	23

Sacramento River Basin

Nov. 7	Pit River	Sacramento River	Pittville, Calif.	1.49	65
9	do	do	do	1.40	69
20	do	do	do	1.68	94
Mar. 28	do	do	do	2.22	277
Apr. 5	do	do	do	1.73	112
10	do	do	do	2.04	177
15	do	do	do	2.11	202
23	do	do	do	2.76	533
May 2	do	do	do	2.40	302
3	do	do	do	1.98	147
23	do	do	do	.48	12
Nov. 24	Horse Creek	Pit River	Gaging station site at lower end of Little Valley, Calif.		7.6
Mar. 30	Punchbowl Creek	Rock Creek	Devils Punchbowl near Valermo, Calif.		.3
Oct. 20	Mill Creek	Sacramento River	Near Big Bend camp site in sec. 29, T. 28 N., R. 4 E.		48
June 4	North Fork of Cache Creek	Cache Creek	One-fourth mile below Sweet Hollow Creek and 7 miles northeast of Lower Lake.		9.7
4	Putah Creek	Sacramento River	One-fourth mile above highway bridge at Guenoc.		7.0

Eel River Basin

Aug. 30	East ditch	Diverts from South Eel River	Diverts from Snow Mountain Water Power Co.'s tailrace near Potter Valley.		11
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Klamath River Basin

July 11	Spring Creek	Williamson River	Above canal at mouth, near Chiloquin, Oreg.		292
10	Modoc Point Canal	Diverts from Sprague River	Former gaging station at intake, in SE. ¼ sec. 8, T. 35 S., R. 7 E., Oreg.	1.56	31.1
11	Fort Creek	Wood River	Above canal near highway crossing near Fort Klamath, Oreg.		80
11	Agency Spring	Crooked Creek	Klamath Agency, Oreg.		18.3
11	Sevenmile Creek	Upper Klamath Lake	Above canal near bridge in sec. 36, T. 33 S., R. 6 E., Oreg.		40.3
Apr. 15	Spencer Creek	Klamath River	Near mouth, in sec. 20, T. 33 S., R. 7 E., Oreg.		24.5
Aug. 25	Bluff Creek	do	Half a mile above mouth in sec. 30, T. 10 N., R. 5 E., Calif.		45

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187	DR. OSCAR C. YOUNG	188	6465 UNIVERSITY BLVD	189	CHICAGO	190	IL	191	60607	192	USA
193	DR. PAMELA D. ZIMMERMAN	194	6667 UNIVERSITY AVE	195	CHICAGO	196	IL	197	60607	198	USA
199	DR. QUINN E. ADAMS	200	6869 UNIVERSITY ST	201	CHICAGO	202	IL	203	60607	204	USA

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