

UNITED STATES DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

GEOLOGICAL SURVEY

W. C. MENDENHALL, Director

Water-Supply Paper 901

SURFACE WATER SUPPLY
of the UNITED STATES

1940

PART 11

PACIFIC SLOPE BASINS IN CALIFORNIA

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In cooperation with the States

CALIFORNIA AND OREGON

and other agencies



UNITED STATES

GOVERNMENT PRINTING OFFICE

WASHINGTON : 1941

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ILLUSTRATIONS

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| Plate 1. Gaging-station structures: A, Fish Creek near Duarte, Calif.; B, San Joaquin River below Kerckhoff powerhouse, Calif.; C, North Fork of Cache Creek near Lower Lake, Calif..... | Page 2 |
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SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1940. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 8,800 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1940, 4,760 gaging stations were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made at many other points.

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

DEFINITION OF TERMS

The units in which stream-flow data are presented in this report and other terms used herein are defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

"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 draining from it in a given period were uniformly distributed on its surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

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

"Second-foot day" is the volume of water represented by a flow of 1 second-foot for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons and represents a run-off of 0.0372 inch from one square mile.

"Stage-discharge relation" is an abbreviation for the term "relation of gage height to discharge."

"Control" is a term used to designate a feature below the gage that defines the stage-discharge relation at the gage. This feature may be a natural section, a reach of the channel, or an artificial structure.

EXPLANATION OF DATA

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

measurements in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording 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. Typical structures in use at gaging stations are shown on plate 1.

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

For most of the gaging stations in the area covered by this report the data presented 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. Skeleton rating tables are published except for those stations whose daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

The description of the station gives the type of gage, its latitude and longitude determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest stage, obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum discharge represents the lowest stage, unless otherwise qualified. The peak discharge for the year with the time of its occurrence is given below the table of monthly discharge for some stations. Selected lower peaks are also given if the peak discharge exceeded the mean discharge for that day by more than 10 percent. This supplementary information is generally not given for stations having drainage areas of less than 10 square miles or more than 10,000 square miles.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For flashy floods the mean daily discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description. For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the table gives the discharge corresponding to the mean daily gage height. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources, which necessitates the use of the slope or fall in a reach of the stream as a factor in the determination of discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary



A. FISH CREEK NEAR DUARTE, CALIF.
Note broad-crested control used in southern California.



B. SAN JOAQUIN RIVER BELOW KERCKHOFF POWERHOUSE, CALIF.



C. NORTH FORK OF CACHE CREEK NEAR LOWER LAKE, CALIF.
GAGING-STATION STRUCTURES.



A. MIDDLE FORK OF AMERICAN RIVER NEAR AUBURN, CALIF.



B. PIT RIVER NEAR CANBY, CALIF.
GAGING-STATION STRUCTURES.

gage set at some distance from the base gage. The auxiliary gage, if one is used, is described under "Location." At some stations the stage-discharge relation is affected by changing stage, and for them the rate of change of stage is used as a factor in the determination of discharge.

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, which makes it impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of occasional winter discharge measurements and gage heights, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for stations in the same or nearby basins. The days included in the periods of ice effect and the days during the winter period on which discharge measurements were made are indicated in the table by symbols referring to footnotes.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures for that month given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the instantaneous discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" gives the average flow in cubic feet per second during the month.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily on (1) the permanency of the stage-discharge relation and (2) 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, in general, the daily records are accurate within 5 percent; "good," within 10 percent; "fair," within 15 percent; and "poor," within 20 or a higher percent.

Yield at some stations as indicated by monthly means may vary widely from natural yield, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations figures of "second-feet per square mile" and "run-off in inches" are not published unless storage or diversion records are included indicating the extent of the regulation or diversion or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Figures of second-feet per square mile and run-off in inches are also omitted if the drainage area includes large noncontributing areas or if the average annual rainfall over the drainage area is less than 20 inches.

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

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, and that greater degrees of refinement in computations and records may be warranted with the increase in data and the use of improved equipment.

PUBLICATIONS

The results of stream-flow measurements are now published annually in 14 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

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

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

East of the Mississippi River:

Albany, N. Y., 526 Federal Building.
 Asheville, N. C., 220 Post Office Building.
 Atlanta, Ga., 5 North Rhodes Center.
 Augusta, Maine, Statehouse.
 Boston, Mass., 945 Post Office Building.
 Charlottesville, Va., House G, Dawson Row, University of Virginia.
 Chattanooga, Tenn., 442 Post Office Building.
 College Park, Md., Engineering Building, University of Maryland.
 Columbia, S. C., 119 United States Courthouse.
 Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
 Harrisburg, Pa., 490 Education Building.
 Hartford, Conn., 225 Capitol Building, 410 Asylum Street.
 Indianapolis, Ind., 316 Federal Building.
 Louisville, Ky., 652 Federal Building.
 Madison, Wis., 686 State Office Building.
 Montgomery, Ala., 507 Post Office Building.
 Ocala, Fla., 302 Post Office Building.
 St. Paul, Minn., 808 New Post Office Building.
 South Charleston, W. Va., Armor Park School Building.
 Trenton, N. J., 228 Federal Building.
 Urbana, Ill., 14 Post Office Annex, Elm Street.

West of the Mississippi River:

Austin, Tex., 300 State Highway Building.
 Boise, Idaho, 429 Federal Building.
 Denver, Colo., 230 Customhouse.
 Fort Smith, Ark., 6 Post Office Building.
 Helena, Mont., 408 Federal Building.
 Honolulu, Hawaii, 225 Federal Building.
 Idaho Falls, Idaho, 204 Federal Building.
 Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.
 Los Angeles, Calif., G-31 United States Post Office and Courthouse.
 Portland, Oreg., 606 Post Office Building.

Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
 St. Louis, Mo., 926 New Federal Building.
 Salt Lake City, Utah, 303 Federal Building.
 San Francisco, Calif., 465 Federal Office Building.
 Santa Fe, N. Mex., 204 United States Courthouse.
 Tacoma, Wash., 1100 Washington Building.
 Topeka, Kans., 305 Federal Building.
 Tucson, Ariz., 210 Post Office Building.

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

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data in reports of the 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 |do..... | 1884 to Dec. 31, 1892. |
| 14th A, pt. 2 | Monthly discharge (long-time records, 1871-93).. | 1888 to Dec. 31, 1893. |
| B 131..... | Descriptions, measurements, gage heights, and ratings. | 1893-94. |
| 16th A, pt. 2 | Descriptive information only. | |
| B 140..... | Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years). | 1895. |
| W 11..... | Gage heights (also gage heights for earlier years). | 1896. |
| 18th A, pt. 4 | Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years). | 1895-96. |
| W 15..... | Descriptions, measurements, and gage heights of streams east of the Mississippi River and Missouri River and tributaries above Kansas River. | 1897. |
| W 16..... | Descriptions, measurements, and gage heights of streams west of the Mississippi River except Missouri River and tributaries above Kansas River. | 1897. |
| 19th A, pt. 4 | Descriptions, measurements, ratings, and monthly discharge (also some long-time records). | 1897. |
| W 27..... | Measurements, ratings, and gage heights of streams east of the Mississippi River and Missouri River and tributaries. | |
| W 28..... | Measurements, ratings, and gage heights of streams west of the Mississippi River except Missouri River and tributaries. | 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. |

Note.— Reports containing records for years after 1901 are given in table on page 6.

The table on the following page gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1940. The data for any particular station will, in general, be found in the reports covering the years during which the station was maintained. For example, the data for 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 403, 433, 453, 473, 503, which contain records for the Ohio River Basin for those years.

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, the streams and points of measurement listed appearing in the same relative order as the streams and gaging stations in the body of the report. An index of the records obtained prior to 1904 has been published in Water-Supply Paper 119.

Numbers of water-supply papers containing results of stream measurements, 1899-1940

(For basins included see p. 4)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------|---------|---------|---------|---------|-------------|--------|---------|--------|---------|---------|---------|--------|--------|--------|
| 1899 a.... | 35 | b35, 36 | 36 | 36 | c36, 37 | 37 | 37 | 37 | d37, 38 | 38, e39 | 38, f39 | 38 | 38 | 38 |
| 1900 g.... | 47, h48 | 48 | 48, 149 | 49 | 49, 150 | 50 | 50 | 50 | 50 | 50 | 51 | 51 | 51 | 51 |
| 1901..... | 65, 75 | 65, 75 | 65, 75 | 65, 75 | k65, 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 |
| 1902..... | 83 | b82, 83 | 83 | m82, 83 | k83, 84 | 84 | k85, 86 | 84 | 84 | 85 | 85 | 85 | 85 | 85 |
| 1903..... | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| 1904..... | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 |
| 1905..... | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 |
| 1906..... | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 |
| 1907-8.... | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 | 262 |
| 1909..... | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 | 281 |
| 1910..... | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 |
| 1911..... | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 321 |
| 1912..... | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 | 341 |
| 1913..... | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 |
| 1914..... | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 |
| 1915..... | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 | 401 |
| 1916..... | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 | 431 |
| 1917..... | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 | 451 |
| 1918..... | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 |
| 1919-20... | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 | 501 |
| 1921..... | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 | 521 |
| 1922..... | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 | 541 |
| 1923..... | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 |
| 1924..... | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 | 581 |
| 1925..... | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 | 601 |
| 1926..... | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 | 621 |
| 1927..... | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 | 641 |
| 1928..... | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 | 661 |
| 1929..... | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 | 681 |
| 1930..... | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 | 696 |
| 1931..... | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 | 711 |
| 1932..... | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 | 731 |
| 1933..... | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 | 751 |
| 1934..... | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 | 771 |
| 1935..... | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 | 791 |
| 1936..... | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 |
| 1937..... | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 | 821 |
| 1938..... | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 | 841 |
| 1939..... | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 |
| 1940..... | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 | 891 |

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in 21st Annual Report, part 4.

b James River only.

c Gila River only.

d Green and Gunnison Rivers and Colorado River above Gunnison River.

e Mojave River only, and south Pacific slope basins.

f 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.

g Monthly discharge for 1900 in 22d Annual Report, part 4.

h Missaickon and Schuykill Rivers to James River.

i Scioto River.

j Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.

k Tributaries of Mississippi River from east.

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

n Hudson Bay only.

o New England rivers only.

p Sacramento River to Yachin River, inclusive.

q Snake and Kansas Rivers.

r The Great Basin in California, except Truckee and Carson River Basins.

s Below mouth of Gila River.

t Rogue, Umpqua, and Siletz Rivers only.

From time to time reports have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which have been revised), as well as some records not contained in the annual series of water-supply papers. The following table gives the numbers and titles of these reports, arranged in alphabetical order by States and drainage basins.

Reports containing compilation of discharge by States and drainage basins

| Water-Supply Paper | Year ending | State or drainage basin and title |
|--------------------|-------------|--|
| STATE | | |
| 107 | 1903 | Alabama, Water powers of, with an appendix on stream measurements in Mississippi. |
| 298 | 1912 | California, Water resources of, part 1, Stream measurements in Sacramento River Basin. |
| 299 | 1912 | California, Water resources of, part 2, Stream measurements in San Joaquin River Basin. |
| 300 | 1912 | California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast river basins. |
| 447 | 1918 | California, southern, Surface water supply of Pacific slope of. |
| 597-E | 1927 | California, Surface water supply of Sacramento River Basin. |
| 636-D | 1927 | California, Surface water supply of San Joaquin River Basin. |
| 636-E | 1927 | California, southern, Surface water supply of Pacific slope basins in. |
| 637-A | 1927 | California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in. |
| 74 | 1900 | Colorado, Water resources of. |
| 197 | 1905 | Georgia, Water resources of. |
| 415 | 1915 | Massachusetts, Surface waters of. |
| 230 | 1906 | Nebraska, Surface water supply of. |
| 370 | 1910 | Oregon, Surface water supply of. |
| 850 | 1937 | Texas, Summary of records of surface waters of. |
| 424 | 1916 | Vermont, Surface waters of. |
| 492 | 1919 | Washington, Summary of hydrometric data in. |
| 870 | 1935 | Washington, Summary of records of surface waters of. |
| 469 | 1921 | Wyoming, Surface waters of, and their utilization. |
| DRAINAGE BASIN | | |
| 395 | 1914 | Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization. |
| 617 | 1927 | Colorado River, upper (Colo., Utah), and its utilization. |
| 517 | 1920 | Great Salt Lake Basin, Water powers of. |
| 618 | 1926 | Green River (Utah, Wyo.) and its utilization. |
| 198 | 1906 | Kennebec River Basin (Maine), Water resources of. |
| 491 | 1917 | Milk River. (See St. Mary and Milk Rivers.) |
| 536 | 1920 | New-Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of. |
| 279 | 1909 | Penobscot River Basin (Maine), Water resources of. |
| 192 | 1906 | Potomac River Basin (D. C., Md., W. Va.) |
| 358 | 1913 | Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913. |
| 491 | 1917 | St. Mary and Milk Rivers (Mont., Canada), Water supply of. |
| 109 | 1904 | Susquehanna River Basin (Pa., Md.), Hydrography of. |

Records of discharge have been published also in State reports. Some of these are not contained in the publications of the Geological Survey or are revisions of records previously published in its water-supply papers. The following table contains a list of these reports.

State reports containing compilation of records of discharge

| State | Year ending | Report | Issued by |
|--------------|-------------------|---|---|
| Alabama..... | 1915 | Bull. 17, Water powers of Alabama.... | Geological Survey of Alabama. |
| Arkansas.... | 1928 | Stream-gaging report 1..... | Arkansas Geological Survey. |
| Connecticut. | 1926 | Bull. 44, Water resources of Connecticut. | State Geological and Natural History Survey.. |
| Do..... | 1933 ^a | 5th biennial report..... | Connecticut State Water Commission. |
| Georgia..... | 1920 | Bull. 36, Water powers of Georgia.... | Geological Survey of Georgia. |
| Illinois.... | 1911 | Water resources of Illinois..... | Rivers and Lakes Commission. |
| Do..... | 1934 | Stream-flow data of Illinois..... | Division of Waterways. |

^a Includes records of monthly discharge in second-feet per square mile for years 1912-33.

State reports containing compilation of records of discharge--Continued

| State | Year ending | Report | Issued by |
|-----------------|-------------------|--|--|
| Indiana..... | 1927 | Pub. 72, Surface water supply of Indiana. | Department of Conservation. |
| Do..... | 1930 ^b | Pub. 112, Surface water supply of Indiana. | Do. |
| Iowa..... | 1932 | Stream-flow records of Iowa..... | Iowa State Planning Board. |
| Kansas..... | 1919 | Surface waters of Kansas..... | Kansas Water Commission. |
| Do..... | 1924 ^c |do..... | Do. |
| Do..... | 1928 ^d |do..... | Kansas State Board of Agriculture. |
| Do..... | 1935 ^e | Stream-flow data of Kansas..... | Do. |
| Do..... | 1939 ^f |do..... | Do. |
| Kentucky.... | 1920 | Surface waters of Kentucky..... | Kentucky Geological Survey. |
| Minnesota.... | 1912 | Water-resources investigation of Minnesota. | State Drainage Commission. |
| Missouri.... | 1926 | Reports of Bureau of Geology and Mines, vol. 20, 2d series, Water Resources of Missouri. | Missouri Geological Survey and Water Resources. |
| Nebraska.... | 1914 | 1st hydrographic report..... | Bureau of Water Power, Irrigation, and Drainage. |
| Do..... | 1928 ^g | 2d hydrographic report..... | Do. |
| New Jersey.. | 1928 | Bull. 33, Surface water supply of New Jersey. | Department of Conservation and Development. |
| Do..... | 1934 ^h | Special Report 5, Surface Water Supply of New Jersey. | State Water Policy Commission. |
| New Mexico.. | 1925 | Surface water supply of New Mexico.. | Office of the State Engineer. |
| North Carolina. | 1923 | Bull. 34, Discharge records of North Carolina Streams | Department of Conservation and Development. |
| Do..... | 1936 ⁱ | Bull. 39, Discharge records of North Carolina Streams. | Do. |
| Ohio..... | 1921 ^j | Bull. 73, Ohio stream flow..... | Engineering Experiment Station, Ohio State University. |
| Do..... | 1939 ^k | Bull. 200, Compilation of stream-flow records of Ohio. | Department of Agriculture, Division of Conservation and Natural Resources. |
| Oregon..... | 1914 | Bull. 4, Water resources of the State of Oregon. | Office of the State Engineer. |
| Do..... | 1924 ^l | Bull. 7, Water resources of the State of Oregon. | Do. |
| Do..... | 1930 ^m | Bull. 8, Water resources of the State of Oregon. | Do. |
| Do..... | 1936 ⁿ | Bull. 9, Water resources of the State of Oregon. | Do. |
| Pennsylvania | 1911 | Report of the Water Supply Commission of Pennsylvania. | Water Supply Commission of Pennsylvania. |
| Do..... | 1932 ^o | Stream-flow records of Pennsylvania.. | Department of Forests and Waters. |
| Tennessee... | 1924 | Bull. 34, Water resources of Tennessee. | Department of Education. |
| Do..... | 1930 ^p | Bull. 40, Surface waters of Tennessee. | Do. |
| Utah..... | 1905 | 5th biennial report, State Engineer.. | Office of the State Engineer. |
| Virginia..... | 1927 | Bull. 31, Water resources of Virginia | Conservation and Development Commission. |
| Washington.. | 1933 | Bull. 5, Monthly and yearly summaries of hydrometric data. | Department of Conservation and Development. |
| Wisconsin... | 1914 | 1st report of Railroad Commission of Wisconsin to Legislature on water powers. | Railroad Commission of Wisconsin. |
| Do..... | 1923 ^q | 2d report of Railroad Commission of Wisconsin to Legislature on water powers. | Do. |

b Includes records for years 1927-30.

c Includes records for years 1919-24.

d Includes records for years 1924-28.

e Includes records for years 1928-35.

f Includes records for years 1935-39.

g Includes records for years 1914-28.

h Includes records for years 1928-34.

i Includes records for years 1889-1936; records of daily and monthly discharge are not included.

j Includes all available records prior to 1921.

k Includes records for years 1902-39.

l Includes records for years 1914-24.

m Includes records for years 1924-30.

n Includes records for years 1930-36.

o Includes records for years 1928-32.

p Includes average weekly discharge for years 1920-30.

q Includes records for years 1914-23.

Note.- In addition to the records contained in the reports listed above, the following States have issued annual or biennial reports in which are contained records of discharge: California, Colorado, Connecticut, Idaho, Indiana, Missouri, Montana, Nebraska, New Mexico, New York (also New York City Board of Water Supply), North Dakota, Oregon, Pennsylvania, Utah, Washington, and Wyoming.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier noteworthy floods. The following list gives the numbers and titles of these reports.

| Water-Supply Paper | Title |
|-----------------------|---|
| 88 | The Passaic flood of 1902. |
| 92 | The Passaic flood of 1903. |
| 96 | Destructive floods in the United States in 1903. |
| 147 | Destructive floods in the United States in 1904. |
| 162 | Destructive floods in the United States in 1905. |
| 334 | The Ohio Valley flood of March-April 1913. |
| 426 | Southern California floods of January 1916. |
| 487 | The Arkansas River flood of June 3-5, 1921. |
| 488 | The floods in central Texas in September 1921. |
| 520-G | Some floods in the Rocky Mountain region. |
| 636-C | The New England flood of November 1927. |
| 771 | Floods in the United States, magnitude and frequency. |
| 773-E | The New York State flood of July 1935. |
| 796-B | Flood on Republican and Kansas Rivers, May and June 1935. |
| 796-C | Flood in La Canada Valley, California, January 1, 1934. |
| 798 | The floods of March 1936, Part 1, New England Rivers. |
| 799 | The floods of March 1936, Part 2, Hudson River to Susquehanna River region. |
| 800 | The floods of March 1936, Part 3, Potomac, James and upper Ohio Rivers. |
| 816 | Major Texas floods of 1936. |
| 836-A | Stages and flood discharges of the Connecticut River at Hartford, Conn. |
| 838 | Floods of Ohio and Mississippi Rivers, January-February 1937. |
| 842 | Floods in Canadian and Pecos River basins of New Mexico, May and June 1937. |
| 843 | Floods of December 1937 in northern California. |
| 847 | Maximum discharges at stream-measurement stations through September 1938. |
| 867 | Hurricane floods of September 1938. |
| 869 | Flood of August 1935 in Muskingum River Basin, Ohio. |

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the year ending September 30, 1940, by agencies other than the Geological Survey. The records for these stations are not contained in publications of the Geological Survey.

Records of daily discharge collected by agencies other than the Geological Survey

| Stream | Location | Period |
|---|---|---------------------|
| Alhambra Wash..... | Short Street, Wilmar, Calif..... | *1929-40 |
| Ballona Creek..... | Sawtelle Boulevard, near Culver City, Calif..... | †1937-40 |
| Benedict Canyon Creek..... | Westley Street, near Palms, Calif..... | *1934-40 |
| Clear Lake reservoir (elevation and discharge)..... | Sec. 8, T. 47 N., R. 8 E., in California, near Langell Valley, Oreg..... | †1910-24 1924-40 |
| Compton Creek..... | Greenleaf (formerly Cressy) Street, Compton, Calif..... | *1928-40 |
| Coyote Creek..... | Del Almo Street Bridge, near Artesia, Calif..... | *1928-40 |
| Dume (Zuma) Creek..... | Roosevelt Highway Bridge, Calif..... | *1930-40 |
| Eaton Wash..... | Sunset Avenue, near El Monte, Calif..... | *1930-40 |
| Gerber Reservoir (elevation and discharge)..... | Sec. 12, T. 39 S., R. 13 E., near Lorella, Oreg..... | †1926-40 |
| "J" canal..... | Intake near southeast corner of sec. 7, T. 41 S., R. 11 E., Oreg..... | †1925-40 |
| Little Santa Anita Creek..... | 270 feet below flood-control dam at Sierra Madre, Calif..... | *1929-40 |
| Live Oak Creek..... | Half a mile below flood-control dam near La Verne, Calif..... | *1928-40 |
| Los Angeles River..... | Dayton Avenue, above Arroyo Seco, Los Angeles, Calif..... | †1937-40 |
| Do..... | Mariposa Street, above Verdugo Wash, Los Angeles, Calif..... | †1937-40 |
| Do..... | Firestone Boulevard, above Rio Hondo, South Gate, Calif..... | †1937-40 |
| Do..... | State Street, below Compton Creek, Long Beach, Calif..... | †1938-40 |
| Do..... | Van Nuys Boulevard, near Van Nuys, Calif..... | *1928-40 |
| Do..... | Mariposa Street near Burbank, Calif..... | *1938-40 |

*Station operated by Los Angeles County Flood Control District.

†Operated jointly by Los Angeles County Flood Control District and Corps of Engineers, U. S. Army.

‡Unpublished records collected by Bureau of Reclamation.

Records of daily discharge collected by agencies other than the Geological Survey--Continued

| Stream | Location | Period |
|---------------------------------------|--|----------|
| Lost River..... | Stone bridge below diversion, near corner of secs. 7, 8, 17, 18, T. 41 S., R. 11 E., near Merrill, Oreg. | †1923-40 |
| Monrovia Creek..... | Above confluence with Sawpit Creek, near Monrovia, Calif. | *1927-40 |
| Monrovia storm drain..... | Peck Road, Monrovia, Calif..... | *1932-40 |
| Montebello storm drain..... | Mines Avenue, Montebello, Calif..... | *1932-40 |
| Pacoima Wash..... | Parthenia Street, near Van Nuys, Calif..... | *1928-40 |
| Puddingstone Creek..... | Below flood-control dam, near San Dimas, Calif..... | *1927-40 |
| Rio Hondo..... | Lower Azusa Road, 1½ miles north of El Monte, Calif. | *1932-40 |
| Rubio Wash..... | Glendon Way, near San Gabriel, Calif..... | *1928-40 |
| San Antonio Creek..... | Mouth of canyon, near Claremont, Calif..... | *1931-40 |
| San Gabriel River..... | Foothill Boulevard, near Azusa, Calif..... | *1932-40 |
| Do..... | Elliot Street, near El Monte, Calif..... | *1932-40 |
| Do..... | Florence Street, near Santa Fe Springs, Calif..... | *1934-40 |
| Santa Anita Creek..... | Foothill Boulevard, near Arcadia, Calif..... | *1938-40 |
| Sepulveda Creek..... | Charmock Road, Albright City, Calif..... | *1932-40 |
| Sycamore storm drain..... | Adams Square, Glendale, Calif..... | *1927-40 |
| Tujunga Creek..... | Below flood-control dam, near Sunland, Calif..... | *1932-40 |
| Tujunga Wash (east and west channels) | Magnolia Boulevard, North Hollywood, Calif..... | *1930-40 |
| Verdugo storm drain..... | Estelle Avenue, Glendale, Calif..... | *1936-40 |
| Verdugo Wash..... | Estelle Street, Glendale, Calif..... | *1937-40 |
| Walnut Wash..... | Covina Boulevard, at Baldwin Park, Calif..... | *1928-40 |
| West Fork of San Gabriel River. | Half a mile below flood-control dam No. 2, Calif.... | *1934-40 |

*Station operated by Los Angeles County Flood Control District.

†Operated jointly by Los Angeles County Flood Control District and Corps of Engineers, U. S. Army.

†Unpublished records collected by Bureau of Reclamation.

Note.—The Soil Conservation Service began in 1938 to make studies of run-off from five areas of less than 350 acres each in the vicinity of Santa Paula, Calif., and four areas of less than 40 acres each in the vicinity of Watsonville, Calif. The records are in the files of that organization.

COOPERATION

In California the work was done under cooperative agreements with the State Department of Public Works, Frank W. Clark, director, and Edward Hyatt, State engineer; the East Bay Municipal Utility District; Stanford University; Santa Clara Valley Water Conservation District; San Bernardino, Riverside, Orange, Los Angeles, and Ventura Counties; and the cities of San Diego, Santa Barbara, Santa Cruz, and Lodi. In Oregon the work was done under cooperative agreement with the State of Oregon, Chas. E. Stricklin, State engineer.

Funds were furnished by the Corps of Engineers, U. S. Army, for the construction and maintenance of 24 gaging stations in the Pacific slope basins in California. The Bureau of Reclamation furnished funds for the maintenance of the gaging station on Sacramento River at Keswick, Calif.

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

Assistance in collecting records was also rendered by the following organizations: In California, by the Southern California Edison Co., Ltd., Pacific Gas & Electric Co., City of Sacramento, Merced Irrigation District, Emma Rose & Hobart Estate Co., and Thermalito and Table Mountain Irrigation Districts, all permittees and licensees of the Federal Power Commission; in Oregon, by The California Oregon Power Co; in both States, by the National Park Service of the United States Department of the Interior.

DIVISION OF WORK

The data for stations in California (except Fall Creek and Klamath River near Copco) were collected and prepared for publication under the supervision of H. D. McGlashan, district engineer; for stations in Oregon (also Fall Creek and Klamath River near Copco, Calif.), under the supervision of G. H. Canfield, district engineer. The work in Oregon was done in collaboration with Charles E. Stricklin, State engineer.

TIA JUANA RIVER BASIN

Cottonwood Creek at Morena Dam, Calif.

Location.- Lat. 32°41'00", long. 116°32'55", in SW¼ sec. 14, T. 17 S., R. 4 E., at Morena Dam, 1½ miles upstream from Hauser Creek. Altitude of top of spillway gates, 3,045 feet; that of bed of stream, 2,882 feet.

Drainage area.- 120 square miles.

Records available.- January 1916, October 1936 to September 1940.

Remarks.- Records of discharge represent flow into Morena Reservoir, computed on basis of records of storage, release, leakage, spill, evaporation, and rainfall.

Cooperation.- Records furnished by city of San Diego.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-foot) | Run-off (acre-foot) |
|-------------------------|-----------------------|------------------------|
| October..... | 0 | 0 |
| November..... | 5.50 | 327 |
| December..... | 5.74 | 353 |
| Calendar year 1939..... | 18.4 | 13,310 |
| January..... | 20.0 | 1,230 |
| February..... | 55.6 | 3,200 |
| March..... | 17.1 | 1,080 |
| April..... | 22.8 | 1,360 |
| May..... | 1.92 | 118 |
| June..... | 0 | 0 |
| July..... | 6.02 | 370 |
| August..... | 0 | 0 |
| September..... | 3.36 | 200 |
| Water year 1939-40..... | 11.3 | 8,210 |

Cottonwood Creek near Dulzura, Calif.

Location.- Lat. 32°40'45", long. 116°40'20", in NW¼ sec. 22, T. 17 S., R. 3 E., at Barrett dam, 1 mile downstream from confluence with Pine Valley Creek and about 17 miles northeast of Dulzura. Altitude of top of flash gates, 1,615 feet; that of bed of stream, 1,446 feet.

Drainage area.- 250 square miles.

Records available.- January 1906 to December 1915 and October 1936 to September 1940.

Remarks.- Flow regulated by Morena Reservoir, about 9 miles upstream. Records of discharge represent flow into Barrett Reservoir (capacity, 42,796 acre-feet), computed on basis of records of storage, release, leakage, spill, evaporation, and rainfall.

Cooperation.- Records furnished by city of San Diego.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-foot) | Run-off (acre-foot) |
|-------------------------|-----------------------|------------------------|
| October..... | 0 | 0 |
| November..... | .80 | 48 |
| December..... | 3.37 | 207 |
| Calendar year 1939..... | 15.2 | 10,990 |
| January..... | 11.0 | 675 |
| February..... | 27.3 | 1,570 |
| March..... | 14.4 | 884 |
| April..... | 18.8 | 1,120 |
| May..... | 3.76 | 231 |
| June..... | 0 | 0 |
| July..... | 3.29 | 202 |
| August..... | 8.03 | 494 |
| September..... | 2.76 | 164 |
| Water year 1939-40..... | 7.71 | 5,590 |

TIA JUANA RIVER BASIN

Cottonwood Creek above Tecate Creek, near Dulzura, Calif.

Location.- Water-stage recorder, lat. 32°34'10", long. 116°45'40". in sec. 27, T. 18 S., R. 2 E., half a mile upstream from confluence with Tecate Creek and 5½ miles south of Dulzura.

Drainage area.- 316 square miles.

Records available.- October 1936 to September 1940.

Extremes.- Maximum discharge during year, 58 second-feet Apr. 1 (gage height, 3.34 feet), from rating curve extended above 10 second-feet; no flow for several months.
1936-40: Maximum discharge, 2,780 second-feet Feb. 7, 1937 (gage height, 9.65 feet), from rating curve extended above 550 second-feet on basis of velocity-mean depth and area computations; no flow during part of each year.

Remarks.- Records good. Flow regulated by Barrett and Morena Reservoirs, 10 and 18 miles, respectively, above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.5 | 0.1 | 0.4 | 1.0 | 2.4 | 5 | 31.0 | 1.0 | | | | |
| 2 | .4 | .1 | .5 | 1.0 | 5.5 | 4.5 | 20 | .8 | | | | |
| 3 | .3 | .1 | .5 | 1.0 | 6.5 | 4.1 | 9 | .8 | | | | |
| 4 | .3 | .1 | .4 | 1.2 | 20 | 3.4 | 6.5 | .7 | | | | |
| 5 | .3 | .1 | .5 | 1.5 | 11 | 3.0 | 5 | .7 | | | | |
| 6 | .3 | .2 | .6 | 2.4 | 7 | 2.8 | 4.3 | .6 | | | | |
| 7 | .6 | .2 | .6 | 3.4 | 5 | 2.7 | 3.9 | .6 | | | | |
| 8 | .8 | .3 | .6 | 2.8 | 4.1 | 2.5 | 3.6 | .6 | | | | |
| 9 | .6 | .5 | .6 | 2.8 | 3.2 | 2.4 | 3.4 | .5 | | | | |
| 10 | .5 | .3 | .6 | 2.5 | 3.0 | 2.2 | 4.3 | .4 | | | | |
| 11 | .4 | .3 | .6 | 2.2 | 2.8 | 2.0 | 3.6 | .3 | | | | |
| 12 | .3 | .2 | .6 | 2.0 | 2.7 | 1.9 | 2.5 | .2 | | | | |
| 13 | .2 | .2 | .6 | 1.9 | 2.4 | 1.6 | 1.9 | .2 | | | | |
| 14 | .2 | .2 | .6 | 1.8 | 2.4 | 1.5 | 1.5 | .2 | | | | |
| 15 | .2 | .2 | .6 | 1.5 | 2.7 | 1.4 | 1.4 | .2 | | | | |
| 16 | .2 | .2 | .6 | 1.4 | 2.5 | 1.3 | 2.2 | .2 | | | | |
| 17 | .2 | .2 | .6 | 1.4 | 2.2 | 1.4 | 1.9 | .2 | | | | |
| 18 | .2 | .2 | .6 | 1.4 | 2.0 | 1.4 | 1.4 | .2 | | | | |
| 19 | .2 | .2 | .6 | 1.4 | 2.0 | 1.5 | 1.2 | .2 | | | | |
| 20 | .2 | .2 | .6 | 1.4 | 1.8 | 1.6 | 1.1 | .2 | | | | |
| 21 | .2 | .2 | .6 | 1.4 | 1.8 | 1.6 | 1.0 | .2 | | | | |
| 22 | .2 | .2 | .7 | 1.4 | 3.0 | 1.5 | 1.0 | .1 | | | | |
| 23 | .2 | .2 | .8 | 1.5 | 4.3 | 1.4 | 1.2 | .1 | | | | |
| 24 | .2 | .2 | 1.2 | 2.4 | 3.2 | 1.4 | 1.5 | .1 | | | | |
| 25 | .2 | .2 | 1.1 | 1.8 | 3.7 | 1.3 | 1.5 | .1 | | | | |
| 26 | .2 | .2 | .9 | 1.5 | 14 | 1.3 | 1.8 | .1 | | | | |
| 27 | .2 | .2 | .9 | 1.5 | 8 | 1.6 | 2.8 | 0 | | | | |
| 28 | .1 | .6 | .9 | 1.3 | 6 | 1.9 | 2.2 | 0 | | | | |
| 29 | .1 | .5 | .9 | 1.3 | 5.5 | 1.6 | 1.5 | 0 | | | | |
| 30 | .1 | .5 | .9 | 1.2 | - | 1.5 | 1.2 | 0 | | | | |
| 31 | .1 | - | .9 | 1.4 | - | 1.9 | - | 0 | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 8.7 | 0.8 | 0.1 | 0.28 | 17 | | | |
| November..... | | | | | 7.1 | .6 | .1 | .24 | 14 | | | |
| December..... | | | | | 21.1 | 1.2 | .4 | .68 | 42 | | | |
| Calendar year 1939..... | | | | | 3,604.7 | 202 | 0 | 9.88 | 7,150 | | | |
| January..... | | | | | 52.7 | 3.4 | 1.0 | 1.70 | 105 | | | |
| February..... | | | | | 140.7 | 20 | 1.8 | 4.85 | 279 | | | |
| March..... | | | | | 65.2 | 5 | 1.3 | 2.10 | 129 | | | |
| April..... | | | | | 125.3 | 31 | 1.0 | 4.18 | 249 | | | |
| May..... | | | | | 9.5 | 1.0 | 0 | .31 | 19 | | | |
| June..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 430.3 | 31 | 0 | 1.18 | 854 | | | |

Peak discharge.- Feb. 4 (12 m.) 25 sec.-ft.; Feb. 26 (10:30 a.m.) 19 sec.-ft.; Apr. 1 (4:30 p.m.) 58 sec.-ft.

Tia Juana River near Dulzura, Calif.

Location.- Water-stage recorder, lat. 32°33'50", long. 116°46'25", in sec. 33, T. 18 S., R. 2 E., half a mile downstream from confluence of Cottonwood and Tecate Creeks and 5½ miles south of Dulzura. Altitude of gage, about 550 feet.

Drainage area.- 478 square miles, of which 62 square miles is in Mexico.

Records available.- October 1936 to September 1940.

Extremes.- Maximum discharge during year, 120 second-feet Apr. 1 (gage height, 2.84 feet); no flow during August and September.
1936-40: Maximum discharge, 4,700 second-feet Feb. 7, 1937 (gage height, 8.50 feet, present datum), from rating curve extended above 300 second-feet on basis of velocity-mean depth and area studies; no flow part of each summer.

Remarks.- Records good except those for periods of doubtful gage-height record, which are fair. Flow regulated by Morena and Barrett Reservoirs on Cottonwood Creek.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | d0.9 | 0.1 | 0.9 | 2.1 | 14 | 20 | 64 | 2.1 | 0.2 | } e0.02 | | |
| 2 | d.7 | .1 | .8 | 2.3 | 31 | 17 | 61 | 1.7 | .2 | | | |
| 3 | .6 | .2 | .8 | 2.6 | 38 | 16 | 32 | 1.4 | .2 | | | |
| 4 | .5 | .2 | .8 | 5.5 | 64 | 14 | 19 | 1.4 | .2 | | | |
| 5 | .5 | .2 | .8 | 6.5 | 41 | 13 | 15 | 1.5 | .2 | | | |
| 6 | .4 | .3 | .8 | 14 | 24 | 11 | 12 | 1.4 | .2 | | | |
| 7 | .9 | .3 | .9 | 19 | 19 | 9.5 | 10 | 1.1 | .2 | | | |
| 8 | .8 | .5 | 1.0 | 17 | 16 | 9 | 9 | 1.0 | .2 | | | |
| 9 | .6 | .8 | 1.2 | 11 | 13 | 8.5 | 9 | .8 | .2 | | | |
| 10 | .5 | .8 | 1.3 | 7.5 | 12 | 5 | 8 | .8 | .2 | | | |
| 11 | .4 | .6 | 1.5 | 5.5 | 11 | 7 | 8 | .7 | .2 | | | |
| 12 | .4 | .5 | 1.2 | 8 | 10 | 6.5 | 6 | .6 | .2 | | | |
| 13 | .3 | .5 | 1.0 | 5.5 | 9 | 5.5 | 4.8 | .5 | .2 | | | |
| 14 | .2 | .5 | 1.1 | 4.2 | 10 | 5.5 | 3.5 | .5 | .2 | | | |
| 15 | .2 | .5 | 1.0 | 3.7 | 12 | 5.5 | 4.8 | .5 | .2 | | | |
| 16 | .2 | .5 | 1.1 | 3.5 | 10 | 5.5 | 4.4 | .5 | .2 | | | |
| 17 | .2 | .5 | 1.2 | 3.5 | 9 | 5.5 | 3.5 | .4 | .2 | | | |
| 18 | .2 | .5 | 1.2 | 3.5 | 9 | 5.5 | 3.0 | .5 | .2 | | | |
| 19 | .3 | .5 | 1.1 | 3.2 | 8 | 5.5 | 2.7 | .4 | .1 | | | |
| 20 | .3 | .5 | 1.1 | 3.0 | 7 | 5.5 | 2.5 | .5 | .1 | | | |
| 21 | .3 | .5 | 1.2 | 3.2 | 7 | 5.5 | 2.7 | .3 | .1 | | | |
| 22 | .2 | .5 | 1.2 | 3.0 | 11 | 4.8 | 3.5 | .2 | .1 | | | |
| 23 | .2 | .5 | 2.6 | 4.2 | 19 | 4.4 | 3.2 | .2 | .1 | | | |
| 24 | .2 | .6 | 6 | 12 | 17 | 4.1 | 3.8 | .2 | .1 | | | |
| 25 | .3 | .6 | 3.2 | 5.5 | 19 | 3.8 | 3.8 | .3 | .1 | | | |
| 26 | .3 | .6 | 2.4 | 4.2 | 44 | 4.8 | 5 | .2 | .1 | | | |
| 27 | .3 | .7 | 2.3 | 4.0 | 29 | 7 | 6.5 | .2 | .1 | | | |
| 28 | .2 | 2.1 | 2.1 | 3.0 | 20 | 6 | 5.5 | .3 | .1 | | | |
| 29 | .2 | 1.2 | 2.0 | 2.6 | 22 | 5 | 4.8 | .3 | .1 | | | |
| 30 | .2 | 1.0 | 2.0 | 2.6 | - | 4.1 | 3.3 | .3 | .1 | | | |
| 31 | .2 | - | 2.1 | 3.7 | - | 6.5 | - | .2 | - | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 11.7 | 0.9 | 0.2 | 0.38 | 23 | | |
| November..... | | | | | | 16.9 | 2.1 | .1 | .56 | 34 | | |
| December..... | | | | | | 47.9 | 6 | .8 | 1.55 | 95 | | |
| Calendar year 1939..... | | | | | | 6,532.6 | 304 | 0 | 17.9 | 13,000 | | |
| January..... | | | | | | 179.1 | 19 | 2.1 | 5.78 | 355 | | |
| February..... | | | | | | 555 | 64 | 7 | 19.1 | 1,100 | | |
| March..... | | | | | | 239.5 | 20 | 3.8 | 7.73 | 475 | | |
| April..... | | | | | | 324.3 | 64 | 2.5 | 10.8 | 643 | | |
| May..... | | | | | | 21.0 | 2.1 | .2 | .68 | 42 | | |
| June..... | | | | | | 4.8 | .2 | .1 | .16 | 9.5 | | |
| July..... | | | | | | .62 | - | - | .02 | 1.2 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 1,400.82 | 64 | 0 | 3.83 | 2,780 | | |

Peak discharge.- Feb. 4 (4 a.m.) 75 sec.-ft.; Feb. 26 (5 a.m.) 53 sec.-ft.; Apr. 1 (3:30 p.m.) 120 sec.-ft.

d Doubtful gage-height record; discharge interpolated.

e Doubtful gage-height record; discharge computed on basis of one discharge measurement and gage heights.

TIA JUANA RIVER BASIN

Tia Juana River near Nestor, Calif.

Location.- Water-stage recorder, lat. 32°32'55", long. 117°05'15" on line between secs. 3 and 4, T. 19 S., R. 2 W., 1½ miles south of Nestor and 3 miles upstream from mouth.

Drainage area.- 1,668 square miles, of which 1,198 square miles is in Mexico.

Records available.- January to September 1915, October 1936 to September 1940.

Extremes.- Maximum discharge during year, 109 second-feet Feb. 4 (gage height, 2.79 feet); no flow for several months.

1936-40: Maximum discharge, 17,700 second-feet Feb. 7, 1937 (gage height, 8.20 feet), from rating curve extended above 2,000 second-feet on basis of velocity-depth relation and cross section after the peak; no flow during part of each year.

Remarks.- Records good except those for period of faulty recorder operation, which are fair. Flow regulated by Morena and Barrett Reservoirs, operated by city of San Diego, and Rodriguez Reservoir, operated by Government of Mexico.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | h3.2 | 0 | 2.5 | 2.8 | 7 | 36 | 9 | | | | | |
| 2 | h2.8 | 0 | 2.2 | 4.0 | 26 | 29 | 36 | | | | | |
| 3 | h2.8 | 0 | 3.2 | 4.4 | 20 | 24 | 65 | | | | | |
| 4 | h1.0 | 0 | 3.2 | 6 | 70 | 22 | 44 | | | | | |
| 5 | h1.0 | 0 | 3.6 | 6 | 72 | 18 | 34 | | | | | |
| 6 | h.5 | 0 | 4.0 | 6 | 43 | 16 | 28 | | | | | |
| 7 | 6 | 0 | 3.6 | 7.5 | 33 | 12 | 26 | | | | | |
| 8 | 6 | 0 | 3.6 | 7.5 | 26 | h10 | 24 | | | | | |
| 9 | 6 | 0 | 3.6 | 7 | 26 | h10 | 20 | | | | | |
| 10 | 3.6 | .5 | 3.6 | 6 | 24 | h9 | 18 | | | | | |
| 11 | 2.8 | 1.4 | 3.6 | 6 | 22 | h8 | 14 | | | | | |
| 12 | 1.4 | 1.6 | 3.6 | 6 | 20 | h7.5 | 5.5 | | | | | |
| 13 | .5 | 2.2 | 3.2 | 6 | 18 | h7.5 | 2.0 | | | | | |
| 14 | .3 | 2.0 | 2.5 | 4.9 | 16 | 7 | .7 | | | | | |
| 15 | .2 | 2.0 | 2.5 | 4.4 | 16 | 6 | .4 | | | | | |
| 16 | 0 | .2 | 2.5 | 4.0 | 16 | 5.5 | .1 | | | | | |
| 17 | 0 | .0 | 2.2 | 4.0 | 14 | 4.9 | 0 | | | | | |
| 18 | 0 | 0 | 2.5 | 4.0 | 12 | 4.9 | 0 | | | | | |
| 19 | 0 | 0 | 2.8 | 4.0 | 13 | 4.9 | 0 | | | | | |
| 20 | 0 | 0 | .3 | 4.0 | 9 | 5.5 | 0 | | | | | |
| 21 | 0 | 0 | 0 | 3.6 | 10 | 5.5 | 0 | | | | | |
| 22 | 0 | 0 | 0 | 4.0 | 18 | 6 | 0 | | | | | |
| 23 | 0 | 0 | 0 | 4.4 | 20 | 2.0 | 0 | | | | | |
| 24 | 0 | 0 | .3 | 4.9 | 18 | .9 | 0 | | | | | |
| 25 | 0 | 0 | .7 | 4.4 | 20 | .4 | 0 | | | | | |
| 26 | 0 | .2 | 1.2 | 4.0 | 36 | 0 | 0 | | | | | |
| 27 | 0 | .9 | 1.4 | 4.4 | 58 | .4 | 0 | | | | | |
| 28 | 0 | 4.4 | 1.6 | 4.0 | 41 | .3 | 0 | | | | | |
| 29 | 0 | 2.8 | 1.4 | 3.6 | 38 | 0 | 0 | | | | | |
| 30 | 0 | 2.5 | 1.6 | 2.8 | - | 0 | 0 | | | | | |
| 31 | 0 | - | 1.8 | 3.2 | - | .6 | - | | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 38.1 | 6 | 0 | 1.23 | 76 | | | |
| November..... | | | | | 20.7 | 4.4 | 0 | .69 | 41 | | | |
| December..... | | | | | 68.8 | 4.0 | 0 | 2.22 | 136 | | | |
| Calendar year 1939..... | | | | | 9,870.6 | 1,080 | 0 | 27.0 | 19,590 | | | |
| January..... | | | | | 147.8 | 7.5 | 2.8 | 4.77 | 293 | | | |
| February..... | | | | | 766 | 72 | 7 | 26.4 | 1,520 | | | |
| March..... | | | | | 263.8 | 36 | 0 | 8.51 | 523 | | | |
| April..... | | | | | 376.7 | 86 | 0 | 12.6 | 747 | | | |
| May..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| June..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 1,681.9 | 86 | 0 | 4.60 | 3,340 | | | |

Peak discharge.- Feb. 4 (1 to 6 p.m.) 109 sec.-ft.; Apr. 2 (9:30 a.m. to 1 p.m.) 106 sec.-ft.
h Faulty recorder operation; discharge computed from partial record and staff-gage readings.

Dulzura conduit near Dulzura, Calif.

Location.- Water-stage recorder and Cippoletti weir, lat. $32^{\circ}37'05''$, long. $116^{\circ}45'50''$, in SW $\frac{1}{4}$ sec. 10, T. 18 S., R. 2 E., about 0.1 mile south of State Highway 94 and 2.3 miles east of Dulzura. Altitude of gage, about 1,500 feet.

Records available.- January 1909 to September 1915, May to September 1940.

Extremes.- Maximum daily discharge during the period, 29 second-feet many days in August and September; no flow July 24-29 and Sept. 21-30.
1909-15, 1940: Maximum daily discharge, 65 second-feet Feb. 4, 1911; no flow for periods each year.

Remarks.- Records good.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | | | - | 16 | 25 | 27 | 29 |
| 2 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 3 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 4 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 5 | | | | | | | | - | 16 | 25 | 29 | 27 |
| 6 | | | | | | | | - | 16 | 25 | 29 | 26 |
| 7 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 8 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 9 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 10 | | | | | | | | - | 16 | 25 | 29 | 29 |
| 11 | | | | | | | | - | 16 | 24 | 29 | 29 |
| 12 | | | | | | | | - | 16 | 24 | 28 | 29 |
| 13 | | | | | | | | - | 16 | 24 | 28 | 29 |
| 14 | | | | | | | | - | 16 | 24 | 28 | 29 |
| 15 | | | | | | | | - | 16 | 14 | 29 | 29 |
| 16 | | | | | | | | - | 16 | 12 | 29 | 29 |
| 17 | | | | | | | | - | 16 | 12 | 29 | 24 |
| 18 | | | | | | | | - | 16 | 12 | 29 | 18 |
| 19 | | | | | | | | - | 16 | 12 | 29 | 15 |
| 20 | | | | | | | | - | 18 | 13 | 29 | 6 |
| 21 | | | | | | | | - | 22 | 13 | 29 | 0 |
| 22 | | | | | | | | - | 25 | 4.2 | 29 | 0 |
| 23 | | | | | | | | - | 25 | .2 | 29 | 0 |
| 24 | | | | | | | | - | 25 | 0 | 29 | 0 |
| 25 | | | | | | | | - | 25 | 0 | 29 | 0 |
| 26 | | | | | | | | - | 25 | 0 | 29 | 0 |
| 27 | | | | | | | | - | 25 | 0 | 29 | 0 |
| 28 | | | | | | | | - | 25 | 0 | 29 | 0 |
| 29 | | | | | | | | - | 16 | 25 | 0 | 0 |
| 30 | | | | | | | | - | 16 | 25 | 11 | 0 |
| 31 | | | | | | | | - | 16 | 18 | 29 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | | | | | | | | |
| November..... | | | | | | | | | | | | |
| December..... | | | | | | | | | | | | |
| Calendar year | | | | | | | | | | | | |
| January..... | | | | | - | - | - | - | | | | |
| February..... | | | | | - | - | - | - | | | | |
| March..... | | | | | - | - | - | - | | | | |
| April..... | | | | | - | - | - | - | | | | |
| May 29-31..... | | | | | 48 | 16 | 16 | 16.0 | 95 | | | |
| June..... | | | | | 569 | 25 | 16 | 19.0 | 1,130 | | | |
| July..... | | | | | 467.4 | 25 | 0 | 15.1 | 927 | | | |
| August..... | | | | | 594 | 29 | 27 | 28.8 | 1,770 | | | |
| September..... | | | | | 516.6 | 29 | 0 | 17.2 | 1,020 | | | |
| The period..... | | | | | - | - | - | - | 4,940 | | | |

TIA JUANA RIVER BASIN

Campo Creek near Campo, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 32°35'20", long. 116°31'35", in sec. 24, T. 18 S., R. 4 E., on State highway, about 3½ miles southwest of Campo.

Drainage area.- 84 square miles, of which 4 square miles is in Mexico.

Records available.- October 1936 to September 1940.

Extremes.- Maximum discharge during year, 87 second-feet Apr. 1 (gage height, 1.39 feet), from rating curve extended above 45 second-feet on basis of velocity-mean depth relation and cross-sectional area at control.
1936-40: Maximum discharge, 1,470 second-feet Feb. 6, 1937 (gage height, 3.80 feet), from rating curve extended above 45 second-feet on basis of velocity-mean depth relation and cross-sectional area at control; no flow at times during summer.

Remarks.- Records good except those for periods of no gage-height record, which are fair.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|-------|------|------|---------|------|---------|-------|-------|------|----------------------|-------|
| 1 | 0.6 | f 0.8 | 2.3 | 3.0 | 7 | 10 | 46 | 1.7 | a 0.4 | 0.2 | - | - |
| 2 | .7 | .8 | 2.3 | 3.0 | 24 | 8 | 24 | f 1.4 | a .4 | .2 | - | - |
| 3 | .8 | .8 | 2.2 | 3.0 | 16 | 7 | 10 | 2.0 | a .4 | .2 | - | 0.1 |
| 4 | .7 | .7 | 2.2 | 3.2 | 31 | 6 | 7.5 | 1.7 | a .3 | .1 | - | .1 |
| 5 | .6 | .8 | 2.2 | 4.2 | 13 | 6 | 6 | f 1.2 | f .3 | .1 | - | .1 |
| 6 | .7 | .8 | 2.2 | 5 | 9 | 5.5 | 5 | f 1.4 | .3 | - | - | - |
| 7 | 1.3 | .8 | 2.3 | 13 | 8 | 4.6 | 4.2 | f 1.3 | .4 | - | - | - |
| 8 | 2.0 | 1.2 | 2.3 | 9 | 7.5 | 4.6 | 3.8 | f 1.1 | .4 | - | - | - |
| 9 | 1.5 | 2.6 | 2.3 | 9 | 6.5 | 4.6 | 3.2 | .8 | .3 | - | - | - |
| 10 | 1.1 | 2.2 | 2.4 | 7 | 6.5 | 4.6 | 3.2 | .6 | .3 | - | - | - |
| 11 | .8 | 1.8 | 2.4 | 6 | 6.5 | 4.6 | 2.8 | .6 | .3 | - | - | - |
| 12 | .7 | 1.7 | 2.4 | 6 | 6 | 4.2 | 2.4 | .6 | .2 | - | - | .1 |
| 13 | .7 | 1.6 | 2.4 | 6 | 5 | 3.8 | 2.3 | f .5 | .2 | - | - | - |
| 14 | .7 | 1.5 | 2.4 | 4.6 | 5.5 | 3.5 | 2.3 | .8 | .2 | - | - | - |
| 15 | .7 | 1.5 | 2.4 | 4.2 | 7 | 3.5 | 2.3 | .8 | .3 | - | 0.1 | - |
| 16 | .6 | 1.5 | 2.4 | 3.8 | 6 | 3.8 | 2.8 | .8 | .3 | - | .1 | - |
| 17 | .7 | 1.6 | 2.4 | 3.5 | 4.6 | 3.8 | 2.8 | .9 | .3 | .1 | - | .1 |
| 18 | .7 | 1.7 | 2.4 | 3.8 | 5 | 3.8 | 2.4 | .9 | .3 | .1 | - | .1 |
| 19 | .8 | 1.7 | 2.3 | 3.5 | 4.6 | 3.8 | 2.3 | .9 | .3 | .1 | - | .1 |
| 20 | .8 | 1.7 | 2.3 | 3.5 | 4.2 | 3.8 | 2.2 | .9 | .2 | - | - | .1 |
| 21 | .7 | 1.7 | 2.4 | 3.5 | 4.2 | 4.2 | 2.1 | 1.0 | .2 | - | - | .1 |
| 22 | .8 | 1.4 | 2.4 | 3.5 | 7.5 | 3.8 | 2.1 | .9 | .2 | - | - | .1 |
| 23 | .8 | 1.3 | 2.8 | 3.5 | 18 | 3.5 | 2.2 | .9 | .2 | - | - | .1 |
| 24 | 1.0 | 1.7 | 6 | 5 | 10 | 3.5 | 2.2 | .8 | .2 | - | - | .1 |
| 25 | 1.2 | 2.2 | 3.8 | 4.6 | 9.5 | 3.2 | 2.2 | .6 | .2 | - | .1 | .1 |
| 26 | 1.2 | 2.3 | 3.0 | 4.2 | 20 | 3.2 | 2.1 | .5 | .2 | - | .1 | .2 |
| 27 | 1.1 | 2.4 | 3.0 | 4.2 | 11 | 3.2 | 3.8 | .5 | .2 | .1 | - | .2 |
| 28 | .8 | 2.6 | 3.0 | 3.8 | 9 | 3.8 | 3.8 | .5 | .2 | - | - | .1 |
| 29 | .7 | 2.6 | 2.8 | 3.5 | 9 | 3.5 | 3.2 | .5 | .2 | - | - | .1 |
| 30 | f .8 | 2.4 | 2.8 | 3.5 | - | 2.8 | 2.1 | a .5 | .2 | - | - | .1 |
| 31 | a .8 | - | 2.8 | 3.5 | - | 3.2 | - | a .4 | - | - | - | - |
| Month | Second-foot-days | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | 27.1 | | | | 2.0 | | 0.6 | | 0.87 | | 54 | |
| November..... | 48.4 | | | | 2.6 | | .7 | | 1.61 | | 96 | |
| December..... | 81.5 | | | | 6 | | 2.2 | | 2.62 | | 161 | |
| Calendar year 1939..... | 1,813.8 | | | | 57 | | 0 | | 4.97 | | 3,590 | |
| January..... | 147.1 | | | | 13 | | 3.0 | | 4.75 | | 292 | |
| February..... | 281.1 | | | | 31 | | 4.2 | | 9.69 | | 558 | |
| March..... | 137.4 | | | | 10 | | 2.8 | | 4.43 | | 273 | |
| April..... | 163.3 | | | | 46 | | 2.1 | | 5.44 | | 324 | |
| May..... | 27.9 | | | | 2.0 | | .4 | | .90 | | 55 | |
| June..... | 8.1 | | | | .4 | | .2 | | .27 | | 16 | |
| July..... | 2.06 | | | | .2 | | - | | .066 | | 4.1 | |
| August..... | 1.78 | | | | .1 | | - | | .057 | | 3.5 | |
| September..... | 2.72 | | | | .2 | | - | | .091 | | 5.4 | |
| Water year 1939-40..... | 928.26 | | | | 46 | | - | | 2.54 | | 1,840 | |

Peak discharge.- Feb. 4 (1:30 a.m.) 45 sec.-ft.; Feb. 26 (4 a.m.) 27 sec.-ft.; Apr. 1 (12 m.) 87 sec.-ft.

a No gage-height record; discharge interpolated.

f Discharge computed from partial gage-height record.

Note.- Discharge less than 0.1 second-foot on days for which no figures are given.

Otay River at Savage Dam, Calif.

Location.- Lat. 32°36'40", long. 116°55'40", NW¼ sec. 18, T. 18 S., R. 1 E., at Savage Dam, at Lower Otay Reservoir (altitude of top of spillway gates, 491 feet). Datum of gage is 347.20 feet above mean sea level.

Drainage area.- 98 square miles.

Records available.- October 1936 to September 1940.

• Remarks.- Records of discharge represent flow into Lower Otay Reservoir, computed on basis of records of storage, release, leakage, spill, imported water from Cottonwood Creek, evaporation, and rainfall. Original dam destroyed Jan. 27, 1916; present structure placed in operation Mar. 13, 1922.

Cooperation.- Records furnished by city of San Diego.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 0.85 | 52 |
| November..... | 1.68 | 100 |
| December..... | .68 | 42 |
| Calendar year 1939..... | 9.47 | 6,860 |
| January..... | 6.07 | 373 |
| February..... | 15.6 | 900 |
| March..... | 7.79 | 479 |
| April..... | 14.1 | 837 |
| May..... | 2.99 | 184 |
| June..... | .40 | 24 |
| July..... | .14 | 8.3 |
| August..... | 2.62 | 161 |
| September..... | 0 | 0 |
| Water year 1939-40..... | 4.35 | 3,160 |

Jamul Creek near Jamul, Calif.

Location.- Water-stage recorder and broad-crested weir control with 5-foot Venturi flume for low-water notch, lat. $32^{\circ}38'10''$, long. $116^{\circ}53'05''$, in NE $\frac{1}{4}$ sec. 4, T. 18 S., R. 1 E., 300 feet upstream from county road crossing at upper end of Lower Otay Reservoir, 1.4 miles downstream from Dulzura Creek and 5 $\frac{1}{2}$ miles south of Jamul. Altitude of gage, about 500 feet.

Drainage area.- 72 square miles.

Records available.- April to September 1940.

Extremes.- Maximum daily discharge during period, 30 second-feet Apr. 10; minimum daily, 0.2 second-foot Sept. 28-30.

Remarks.- Records good.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|-------|
| 1 | | | | | | | - | 17 | 16 | 23 | 19 | 26 |
| 2 | | | | | | | - | 16 | 17 | 23 | 24 | 26 |
| 3 | | | | | | | - | 17 | 16 | 23 | 25 | 26 |
| 4 | | | | | | | - | 16 | 16 | 23 | 26 | 26 |
| 5 | | | | | | | - | 16 | 16 | 23 | 26 | 26 |
| 6 | | | | | | | - | 16 | 16 | 23 | 26 | 27 |
| 7 | | | | | | | - | 16 | 16 | 22 | 26 | 26 |
| 8 | | | | | | | - | 16 | 16 | 22 | 26 | 27 |
| 9 | | | | | | | - | 16 | 15 | 22 | 26 | 27 |
| 10 | | | | | | | 30 | 16 | 15 | 22 | 26 | 28 |
| 11 | | | | | | | 29 | 16 | 15 | 22 | 26 | 28 |
| 12 | | | | | | | 29 | 16 | 14 | 21 | 26 | 28 |
| 13 | | | | | | | 28 | 16 | 14 | 21 | 26 | 28 |
| 14 | | | | | | | 27 | 17 | 14 | 22 | 27 | 27 |
| 15 | | | | | | | 27 | 17 | 15 | 17 | 27 | 27 |
| 16 | | | | | | | 27 | 17 | 15 | 12 | 27 | 27 |
| 17 | | | | | | | 26 | 17 | 14 | 12 | 27 | 25 |
| 18 | | | | | | | 26 | 17 | 14 | 12 | 27 | 18 |
| 19 | | | | | | | 25 | 17 | 15 | 12 | 27 | 17 |
| 20 | | | | | | | 25 | 17 | 16 | 11 | 27 | 7.5 |
| 21 | | | | | | | 11 | 18 | 19 | 11 | 27 | 3.0 |
| 22 | | | | | | | 16 | 18 | 22 | 8.5 | 27 | 1.8 |
| 23 | | | | | | | 18 | 17 | 23 | f4.0 | 27 | 1.2 |
| 24 | | | | | | | 18 | 17 | 23 | a3.0 | 27 | .9 |
| 25 | | | | | | | 18 | 17 | 24 | a2.0 | 26 | .6 |
| 26 | | | | | | | 18 | 17 | 24 | a1.4 | 26 | .4 |
| 27 | | | | | | | 19 | 17 | 24 | a1.0 | 26 | .4 |
| 28 | | | | | | | 18 | 17 | 24 | a.6 | 26 | .2 |
| 29 | | | | | | | 17 | 17 | 23 | a.5 | 26 | .2 |
| 30 | | | | | | | 17 | 17 | 23 | f.4 | 26 | .2 |
| 31 | | | | | | | - | 16 | - | 9 | 26 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | | | | | | |
| November..... | | | | | | | | | | | | |
| December..... | | | | | | | | | | | | |
| Calendar year | | | | | | | | | | | | |
| January..... | | | | | | | - | - | - | - | | |
| February..... | | | | | | | - | - | - | - | | |
| March..... | | | | | | | - | - | - | - | | |
| April 21-30..... | | | | | | | 468 | 30 | 11 | 22.3 | 928 | |
| May..... | | | | | | | 517 | 18 | 16 | 16.7 | 1,030 | |
| June..... | | | | | | | 534 | 24 | 14 | 17.8 | 1,060 | |
| July..... | | | | | | | 429.4 | 23 | .4 | 13.9 | 862 | |
| August..... | | | | | | | 807 | 27 | 19 | 26.0 | 1,600 | |
| September..... | | | | | | | 504.4 | 28 | .2 | 16.8 | 1,000 | |
| The period..... | | | | | | | - | - | - | - | 6,470 | |

a No gage-height record; discharge computed on basis of probable recession curve.

f Discharge computed from partly estimated gage heights.

Sweetwater River at Sweetwater Dam, Calif.

Location.- Lat. 32°41'20", long. 117°00'35", at Sweetwater Dam, in La Nacion grant, 6 miles east of National City, San Diego County, and about 8 miles upstream from mouth. Altitude of crest of dam, about 200 feet; that of bed of stream about 150 feet.

Drainage area.- 181 square miles.

Records available.- December 1887 to September 1940.

Remarks.- Records of discharge represent flow into Sweetwater Reservoir, computed on basis of records of storage, release, leakage, spill, evaporation, and rainfall.

Cooperation.- Records furnished by California Water & Telephone Co.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 0.39 | 24 |
| November..... | 1.55 | 92 |
| December..... | .50 | 31 |
| Calendar year 1939..... | 14.6 | 10,560 |
| January..... | 10.8 | 661 |
| February..... | 29.9 | 1,720 |
| March..... | 15.1 | 927 |
| April..... | 23.9 | 1,420 |
| May..... | 0 | 0 |
| June..... | 0 | 0 |
| July..... | 0 | 0 |
| August..... | .50 | 31 |
| September..... | 0 | 0 |
| Water year 1939-40..... | 6.76 | 4,910 |

SAN DIEGO RIVER BASIN

San Diego River at El Capitan Dam, Calif.

Location.- Lat. 32°53'00", long. 116°48'40", in NE¼ sec. 7, T. 15 S., R. 2 E., at El Capitan Dam, 1 mile downstream from Chocolate Creek and 7 miles east of Lakeside. Altitude of spillway crest, 750 feet.

Drainage area.- 190 square miles.

Records available.- October 1936 to September 1940.

Remarks.- Flow partly regulated by Cuyamaca Reservoir. Records of discharge represent flow into El Capitan Reservoir (capacity, 116,500 acre-feet), computed on basis of records of storage, release, leakage, spill, evaporation, and rainfall.

Cooperation.- Records furnished by city of San Diego.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 18.1 | 1,110 |
| November..... | 7.21 | 429 |
| December..... | 10.4 | 640 |
| Calendar year 1939..... | 35.1 | 27,610 |
| January..... | 33.3 | 2,050 |
| February..... | 76.1 | 4,320 |
| March..... | 39.5 | 2,450 |
| April..... | 70.6 | 4,200 |
| May..... | 14.3 | 878 |
| June..... | 5.01 | 298 |
| July..... | 5.56 | 342 |
| August..... | 4.08 | 251 |
| September..... | 4.05 | 241 |
| Water year 1939-40..... | 23.7 | 17,210 |

SAN DIEGO RIVER BASIN

San Diego River near Santee, Calif.

Location.- Water-stage recorder and unfinished rubble dam control, lat. 32°49'20", long. 117°03'25", in Ex Mission San Diego grant, in Mission Gorge, 6 miles west of Santee, San Diego County. Altitude of gage, about 205 feet.

Drainage area.- 380 square miles.

Records available.- May 1912 to September 1940 (prior to 1920, incomplete).

Average discharge.- 25 years (1912-15, 1917-19, 1920-40), 35.9 second-feet.

Extremes.- Maximum discharge during year, 1,170 second-feet Feb. 3 (gage height, 3.00 feet); no flow at times during summer.

1912-40: Maximum discharge, 70,200 second-feet Jan. 27, 1916 (gage height, 25.1 feet); practically no flow for several months each year except for a small amount of ground water that was forced to surface.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | | | |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|---|------|---|----|
| 1 | 0.2 | 0.1 | 0.2 | 0.2 | 1.2 | 14 | 66 | 1.5 | 0.1 | } | } | } | | | | |
| 2 | .2 | .2 | .2 | .2 | 9.5 | 12 | 77 | 1.1 | .1 | | | | | | | |
| 3 | .2 | .2 | .2 | .3 | 180 | 12 | 34 | 1.0 | .1 | | | | | | | |
| 4 | .2 | .2 | .2 | .5 | 391 | 11 | 24 | .9 | .1 | | | | | | | |
| 5 | .2 | .2 | .2 | .6 | 124 | 9.5 | 16 | .9 | .1 | | | | | | | |
| 6 | .2 | .2 | .2 | 1.0 | 63 | 8.5 | 12 | 1.0 | .1 | | | | | | | |
| 7 | .4 | .2 | .2 | 1.0 | 43 | 7.5 | 11 | .9 | .1 | | | | | | | |
| 8 | .3 | a.2 | .2 | 2.7 | 29 | 7 | 9.5 | .9 | | | | | | | | |
| 9 | .2 | a.2 | .2 | 1.5 | 19 | 7 | 8 | .8 | | | | | | | | |
| 10 | .1 | .2 | .2 | 1.0 | 16 | 7 | 7.5 | .5 | | | | | | | | |
| 11 | .1 | .2 | .2 | .9 | 14 | 6.5 | 6.5 | .5 | | | | | | | | |
| 12 | .1 | .2 | .2 | 1.0 | 12 | 5.5 | 4.9 | .4 | | | | | | | | |
| 13 | .1 | .2 | .1 | 1.2 | 10 | 4.5 | 3.7 | .4 | | | | | | | | |
| 14 | .1 | .1 | .1 | .8 | 10 | 4.5 | 3.3 | .4 | | | | | | | | |
| 15 | .1 | .1 | .1 | .5 | 11 | 4.1 | 2.7 | .4 | | | | | | | | |
| 16 | .1 | .1 | .1 | .5 | 6.5 | 3.3 | 2.7 | .2 | } | 0.03 | } | 0.02 | } | 0.03 | | |
| 17 | .1 | .2 | .1 | .4 | 7.5 | 3.0 | 2.7 | .2 | | | | | | | | |
| 18 | .1 | .2 | .1 | .4 | 7 | 3.0 | 2.2 | .3 | | | | | | | | |
| 19 | .1 | .2 | .1 | .4 | 7.5 | 3.0 | 1.9 | .4 | | | | | | | } | .1 |
| 20 | .1 | .2 | .1 | .4 | 7 | 2.7 | 1.7 | .4 | | | | | | | | |
| 21 | .2 | .1 | .1 | .4 | 7 | 2.7 | 1.7 | .5 | | | | | | | | |
| 22 | .2 | .1 | .1 | .4 | 6.5 | 2.4 | 1.7 | .6 | | | | | | | | |
| 23 | .2 | .1 | .3 | .5 | 9.5 | 2.2 | 1.9 | .4 | | | | | | | | |
| 24 | .2 | .4 | .4 | 2.7 | 8 | 1.9 | 1.9 | .2 | | | | | | | | |
| 25 | .2 | .3 | .2 | 1.2 | 6.5 | 1.7 | 1.7 | .2 | | | | | | | | |
| 26 | .2 | .2 | .2 | .8 | 32 | 1.7 | 2.4 | .1 | | | | | | | | |
| 27 | .2 | .2 | .1 | .7 | 31 | 2.2 | 3.3 | .1 | | | | | | | | |
| 28 | .1 | .5 | .2 | .6 | 18 | 1.9 | 4.1 | .1 | | | | | | | | |
| 29 | .1 | .3 | .1 | .5 | 16 | 1.5 | 3.0 | .1 | | | | | | | | |
| 30 | .1 | .2 | .2 | .5 | - | 1.5 | 2.2 | .1 | | | | | | | | |
| 31 | .1 | - | .2 | .4 | - | 2.7 | - | .1 | | | | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | | | |
| October..... | | | | | | 5.0 | 0.4 | 0.1 | 0.16 | 9.9 | | | | | | |
| November..... | | | | | | 6.0 | .5 | .1 | .20 | 12 | | | | | | |
| December..... | | | | | | 5.3 | .4 | .1 | .17 | 11 | | | | | | |
| Calendar year 1939..... | | | | | | 6,373.04 | 608 | 0 | 17.5 | 12,630 | | | | | | |
| January..... | | | | | | 24.2 | 2.7 | .2 | .75 | 48 | | | | | | |
| February..... | | | | | | 1,108.7 | 391 | 1.2 | 36.2 | 2,200 | | | | | | |
| March..... | | | | | | 159.0 | 14 | 1.5 | 5.10 | 313 | | | | | | |
| April..... | | | | | | 323.2 | 77 | 1.7 | 10.8 | 641 | | | | | | |
| May..... | | | | | | 15.6 | 1.5 | .1 | .50 | 31 | | | | | | |
| June..... | | | | | | 3.0 | - | - | .10 | 6.0 | | | | | | |
| July..... | | | | | | .93 | - | - | .03 | 1.8 | | | | | | |
| August..... | | | | | | .62 | - | - | .02 | 1.2 | | | | | | |
| September..... | | | | | | .90 | - | - | .03 | 1.8 | | | | | | |
| Water year 1939-40..... | | | | | | 1,651.45 | 391 | - | 4.51 | 3,280 | | | | | | |

Peak discharge.- Feb. 3 (9 p.m.) 1,170 sec.-ft.; Feb. 26 (3:30 p.m.) 52 sec.-ft.; Apr. 1 (8:30 p.m.) 145 sec.-ft.

a No gage-height record; discharge interpolated.

Note.- Mean monthly discharge for period of no gage-height record; June 8 to Sept. 30, computed on basis of five discharge measurements and one field estimate of flow.

Boulder Creek at Cuyamaca Reservoir, near Julian, Calif.

Location.- Lat. 32°59'15", long. 116°35'10", in NE¼ sec. 8, T. 14 S., R. 4 E., at Cuyamaca Reservoir, 7 miles south of Julian. Altitude, 4,590 feet.

Drainage area.- 12.0 square miles.

Records available.- June 1912 to September 1926 (outflow from Cuyamaca Reservoir), October 1935 to September 1940 (inflow to Cuyamaca Reservoir).

Remarks.- Discharge computed by Geological Survey based on records of rainfall, evaporation, storage, overflow, and release from Cuyamaca Reservoir. Cuyamaca Reservoir was built in 1886 and enlarged in 1894. Its present capacity is 11,600 acre-feet.

Cooperation.- Basic data furnished by La Mesa, Lemon Grove, and Spring Valley Irrigation District.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 1.20 | 74 |
| November..... | 2.69 | 160 |
| December..... | 2.28 | 140 |
| Calendar year 1939..... | 6.57 | 4,760 |
| January..... | 5.46 | 336 |
| February..... | 7.88 | 453 |
| March..... | 6.80 | 418 |
| April..... | 1.06 | 63 |
| May..... | 0 | 0 |
| June..... | 0 | 0 |
| July..... | 0 | 0 |
| August..... | 0 | 0 |
| September..... | 2.30 | 137 |
| Water year 1939-40..... | 2.45 | 1,780 |

SAN DIEGO RIVER BASIN

San Vicente Creek at Foster, Calif.

Location.- Water-stage recorder and concrete control, lat. 32°54'40", long. 116°55'35", in sec. 31, T. 14 S., R. 1 E., half a mile north of Foster. Altitude of gage, about 750 feet.

Drainage area.- 75 square miles.

Records available.- January to April 1915, October 1936 to September 1940.

Extremes.- Maximum discharge during year, 225 second-feet Feb. 4 (gage height, 2.02 feet); no flow at times in July, August, and September.
1915, 1936-40: Maximum discharge, 9,400 second-feet, Feb. 7, 1937 (gage height, 6.80 feet), from rating curve extended above 1,500 second-feet by logarithmic plotting. No flow during part of each year.

Remarks.- Records good except those for period June to September, which are fair.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|-------|-------|-------|-------|
| 1 | 0.1 | 0.1 | 0.1 | 0.1 | 5.5 | 12 | 32 | 1.3 | | | | |
| 2 | .1 | .1 | .1 | .1 | 32 | 12 | 30 | 1.0 | | | | |
| 3 | .1 | .1 | .1 | .1 | 51 | 11 | 18 | .8 | | | | |
| 4 | .1 | .1 | .1 | .1 | 95 | 10 | 15 | .8 | | | | |
| 5 | .1 | .1 | .1 | .1 | 36 | 6 | 13 | .7 | | | | |
| 6 | .1 | .1 | .1 | .2 | 21 | 5 | 10 | .7 | | | | |
| 7 | .1 | .1 | .1 | .2 | 16 | 4.7 | 8.5 | .6 | | | | |
| 8 | .1 | .1 | .1 | 1.4 | 12 | 3.8 | 7.5 | .6 | | | | |
| 9 | .1 | .1 | .1 | .3 | 9 | 3.8 | 7 | .5 | | | | |
| 10 | .1 | .1 | .1 | .5 | 7 | 3.8 | 6 | .3 | | | | |
| 11 | .1 | .1 | .1 | .8 | 6 | 3.6 | 4.7 | .3 | | | | |
| 12 | .1 | .1 | .1 | 5.2 | 4.7 | 3.1 | 3.6 | .2 | | | | |
| 13 | .1 | .1 | .1 | 5 | 4.1 | 2.6 | 3.1 | .2 | | | | |
| 14 | .1 | .1 | .1 | 2.3 | 5 | 2.4 | 2.8 | .2 | | | | |
| 15 | .1 | .1 | .1 | 1.5 | 6 | 2.3 | 3.1 | .1 | e0.06 | e0.02 | e0.01 | e0.01 |
| 16 | .1 | .1 | .1 | 1.1 | 4.1 | 2.3 | 3.6 | .1 | | | | |
| 17 | .1 | .1 | .1 | .9 | 3.8 | 2.3 | 2.9 | .1 | | | | |
| 18 | .1 | .1 | .1 | .8 | 3.6 | 2.4 | 2.6 | .1 | | | | |
| 19 | .1 | .1 | .1 | .6 | 2.9 | 2.6 | 2.0 | .1 | | | | |
| 20 | .1 | .1 | .1 | .6 | 2.6 | 2.4 | 1.9 | .1 | | | | |
| 21 | .1 | .1 | .1 | .6 | 2.8 | 2.1 | 1.7 | .1 | | | | |
| 22 | .1 | .1 | .1 | .6 | 4.1 | 2.1 | 1.7 | .1 | | | | |
| 23 | .1 | .1 | .1 | .8 | 4.4 | 1.7 | 2.0 | .1 | | | | |
| 24 | .1 | .1 | .1 | 2.8 | 3.8 | 1.6 | 2.0 | .1 | | | | |
| 25 | .1 | .1 | .1 | 1.5 | 9.5 | 1.5 | 1.9 | .1 | | | | |
| 26 | .1 | .1 | .1 | 1.0 | 33 | 1.5 | 4.4 | .1 | | | | |
| 27 | .1 | .1 | .1 | 1.0 | 20 | 1.5 | 4.1 | .1 | | | | |
| 28 | .1 | .1 | .1 | .9 | 14 | 1.6 | 2.3 | .1 | | | | |
| 29 | .1 | .1 | .1 | .8 | 13 | 1.5 | 2.0 | .1 | | | | |
| 30 | .1 | .1 | .1 | .7 | - | 1.3 | 1.6 | .1 | | | | |
| 31 | .1 | - | .1 | .7 | - | 6.5 | - | .1 | - | | | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 3.1 | 0.1 | 0.1 | 0.10 | 6.1 | | | | |
| November..... | | | | 3.0 | .1 | .1 | .10 | 6.0 | | | | |
| December..... | | | | 3.1 | .1 | .1 | .10 | 6.1 | | | | |
| Calendar year 1939..... | | | | 3,388.9 | 405 | .1 | 9.28 | 6,720 | | | | |
| January..... | | | | 31.3 | 5 | .1 | 1.01 | 62 | | | | |
| February..... | | | | 431.9 | 95 | 2.6 | 14.9 | 857 | | | | |
| March..... | | | | 121.0 | 12 | 1.3 | 3.90 | 240 | | | | |
| April..... | | | | 251.0 | 82 | 1.6 | 8.37 | 498 | | | | |
| May..... | | | | 9.9 | 1.3 | .1 | .32 | 20 | | | | |
| June..... | | | | 1.79 | - | - | .06 | 3.6 | | | | |
| July..... | | | | .62 | - | - | .02 | 1.2 | | | | |
| August..... | | | | .31 | - | - | .01 | .6 | | | | |
| September..... | | | | .30 | - | - | .01 | .6 | | | | |
| Water year 1939-40..... | | | | 857.32 | 95 | - | 2.34 | 1,700 | | | | |

Peak discharge.- Feb. 4 (1 a.m.) 225 sec.-ft.; Feb. 26 (3 to 6 a.m.) 44 sec.-ft.; Apr. 1 (10:30 a.m.) 158 sec.-ft.

e Mean monthly discharge computed on basis of gage heights and discharge measurements.

Santa Ysabel Creek near Mesa Grande, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 33°07'15", long. 116°48'30", in NE¼ sec. 20, T. 12 S., R. 2 E., half a mile upstream from confluence with Black Canyon Creek and 4½ miles southwest of Mesa Grande. Altitude of gage, about 2,000 feet.

Drainage area.- 58 square miles.

Records available.- October 1936 to September 1940. December 1912 to September 1928 at site 1 mile upstream.

Average discharge.- 19 years (1913-28, 1936-40), 34.6 second-feet.

Extremes.- Maximum discharge during year, 445 second-feet Apr. 1 (gage height, 2.38 feet); no flow at times in July, none during August and September.
1912-24, 1936-40: Maximum discharge, 21,100 second-feet Jan. 27, 1916, by slope-area method; no flow at times.

Remarks.- Records good except those for period of doubtful gage-height record, which are fair.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|------|---------|------|------|-----|----------------------|------|------|-------|
| 1 | 1.6 | 0.9 | 2.4 | 2.4 | 8.5 | 38 | 280 | 16 | 3.0 | 0.4 | | |
| 2 | 2.1 | 1.0 | 2.1 | 2.4 | 48 | 32 | 147 | 13 | 3.3 | .7 | | |
| 3 | 2.1 | 1.2 | 1.7 | 2.5 | 83 | 28 | 72 | 12 | 3.5 | .6 | | |
| 4 | 1.8 | 1.2 | 1.6 | 4.5 | 166 | 24 | 48 | 13 | 3.2 | d.5 | | |
| 5 | 1.3 | 1.3 | 1.6 | 9 | 40 | 24 | 44 | 14 | 3.5 | d.4 | | |
| 6 | 1.6 | 1.5 | 1.9 | 14 | 24 | 24 | 40 | 14 | 4.0 | d.3 | | |
| 7 | 3.6 | 1.5 | 2.0 | 21 | 21 | 21 | 38 | 14 | 3.0 | d.2 | | |
| 8 | 5.8 | 2.2 | 2.2 | 26 | 16 | 20 | 38 | 11 | 3.5 | .2 | | |
| 9 | 2.5 | 8 | 2.4 | 18 | 14 | 18 | 38 | 9 | 3.5 | .2 | | |
| 10 | 1.8 | 3.6 | 2.5 | 26 | 13 | 17 | 32 | 9 | 2.9 | .2 | | |
| 11 | 1.1 | 2.5 | 2.6 | 21 | 11 | 16 | 24 | 9 | 2.3 | .1 | | |
| 12 | 1.1 | 2.1 | 2.4 | 36 | 12 | 15 | 20 | 8.5 | 2.4 | .1 | | |
| 13 | 1.0 | 1.6 | 2.1 | 23 | 11 | 14 | 18 | 8.5 | 2.4 | 0 | | |
| 14 | 1.1 | 1.6 | 2.2 | 12 | 16 | 13 | 18 | 7.5 | 2.6 | 0 | | |
| 15 | 1.0 | 1.9 | 2.4 | 10 | 42 | 13 | 20 | 7.5 | 1.9 | 0 | | |
| 16 | 1.0 | 1.8 | 2.3 | 9 | 17 | 14 | 20 | 6 | 1.3 | 0 | | |
| 17 | 1.2 | 1.9 | 2.2 | 8 | 15 | 14 | 17 | 6.5 | 1.4 | 0 | | |
| 18 | 1.3 | 1.8 | 2.1 | 8 | 15 | 13 | 17 | 7.5 | 1.6 | 0 | | |
| 19 | 1.4 | 1.8 | 2.0 | 7.5 | 13 | 15 | 17 | 8 | 1.9 | .2 | | |
| 20 | 1.3 | 1.6 | 2.1 | 6 | 12 | 14 | 17 | 7.5 | 1.3 | .2 | | |
| 21 | 1.0 | 1.6 | 2.2 | 5.5 | 11 | 13 | 18 | 6 | 1.1 | .2 | | |
| 22 | 1.0 | 1.7 | 3.3 | 5.5 | 16 | 12 | 18 | 5 | 1.0 | .1 | | |
| 23 | .9 | 1.6 | 4.0 | 7 | 28 | 11 | 20 | 5 | 1.0 | 0 | | |
| 24 | 1.1 | 1.8 | 8 | 14 | 16 | 11 | 18 | 5.5 | 1.2 | 0 | | |
| 25 | 1.6 | 2.2 | 4.0 | 8.5 | 25 | 11 | 20 | 4.5 | .7 | 0 | | |
| 26 | 1.6 | 2.2 | 3.1 | 8 | 123 | 11 | 26 | 4.2 | .5 | 0 | | |
| 27 | 1.6 | 2.2 | 3.0 | 6.5 | 50 | 15 | 34 | 3.8 | .6 | 0 | | |
| 28 | 1.0 | 4.8 | 2.9 | 6 | 32 | 15 | 26 | 4.2 | .5 | 0 | | |
| 29 | .7 | 3.3 | 2.7 | 5.5 | 53 | 12 | 23 | 4.0 | .5 | 0 | | |
| 30 | .6 | 2.9 | 2.6 | 5 | - | 11 | 20 | 3.5 | .5 | 0 | | |
| 31 | .7 | - | 2.5 | 5.5 | - | 16 | - | 3.2 | - | 0 | | |
| Month | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | |
| October..... | 45.5 | | 3.8 | | 0.6 | | 1.47 | | 90 | | | |
| November..... | 65.3 | | 8 | | 2.13 | | 130 | | | | | |
| December..... | 81.1 | | 8 | | 1.6 | | 2.62 | | 161 | | | |
| Calendar year 1939..... | 5,117.3 | | 226 | | 0 | | 14.0 | | 10,150 | | | |
| January..... | 343.3 | | 36 | | 2.4 | | 11.1 | | 681 | | | |
| February..... | 951.5 | | 186 | | 8.5 | | 32.8 | | 1,890 | | | |
| March..... | 568 | | 38 | | 11 | | 16.9 | | 1,040 | | | |
| April..... | 1,188 | | 290 | | 17 | | 39.6 | | 2,360 | | | |
| May..... | 250.4 | | 16 | | 3.2 | | 8.08 | | 497 | | | |
| June..... | 60.1 | | 4.0 | | .5 | | 2.00 | | 119 | | | |
| July..... | 4.5 | | .7 | | 0 | | .15 | | 8.9 | | | |
| August..... | 0 | | 0 | | 0 | | 0 | | 0 | | | |
| September..... | 0 | | 0 | | 0 | | 0 | | 0 | | | |
| Water year 1939-40..... | 3,514.7 | | 280 | | 0 | | 9.60 | | 6,980 | | | |

Peak discharge.- Feb. 3 (11:30 p.m.) 438 sec.-ft.; Feb. 26 (1:30 a.m.) 262 sec.-ft.; Apr. 1 (7 p.m.) 445 sec.-ft.
d Doubtful gage-height record; discharge interpolated.

SAN DIEGUITO RIVER BASIN

San Dieguito River at Lake Hodges, Calif.

Location.- Lat. 33°02'55", long. 117°07'25", in NW¼ sec. 18, T. 13 S., R. 2 W., at Lake Hodges dam, 5½ miles southwest of Escondido. Altitude of bed of stream at dam, 200 feet.

Drainage area.- 303 square miles.

Records available.- January 1916 to September 1940.

Remarks.- Diversions for irrigation in San Pasqual Valley, above Lake Hodges. Some pumping from wells along river. Gaging station formerly maintained at dam site was discontinued in 1919, when Lake Hodges dam was completed. Records of discharge represent flow into Lake Hodges (capacity, 37,530 acre-feet), computed on basis of records of storage, release, leakage, spill, evaporation, and rainfall.

Cooperation.- Records furnished by city of San Diego.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 0.57 | 35 |
| November..... | .62 | 37 |
| December..... | 2.24 | 138 |
| Calendar year 1939..... | 48.9 | 35,380 |
| January..... | 33.8 | 2,080 |
| February..... | 114 | 6,550 |
| March..... | 41.5 | 2,550 |
| April..... | 108 | 6,400 |
| May..... | 4.57 | 281 |
| June..... | 0 | 0 |
| July..... | 0 | 0 |
| August..... | 0 | 0 |
| September..... | 0 | 0 |
| Water year 1939-40..... | 24.9 | 18,070 |

SAN LUIS REY RIVER BASIN

San Luis Rey River at Lake Henshaw, near Mesa Grande, Calif.

Location.- Lat. 33°14'15", long. 116°45'50", in NW¼ sec. 10, T. 11 S., R. 2 E., at Henshaw Dam, 5 miles north of Mesa Grande.

Drainage area.- 209 square miles.

Records available.- October 1911 to September 1940.

Average discharge.- 29 years, 44.8 second-feet.

Remarks.- No diversions above station. Lake Henshaw Reservoir (capacity, 203,000 acre-feet), was completed in 1923, and gaging station formerly maintained 1 mile below dam was abandoned.

Cooperation.- Records furnished by San Diego County Water Co.

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 6.26 | 385 |
| November..... | 5.08 | 302 |
| December..... | 14.5 | 890 |
| Calendar year 1939..... | 31.2 | 22,580 |
| January..... | 40.2 | 2,473 |
| February..... | 89.1 | 5,126 |
| March..... | 31.9 | 1,963 |
| April..... | 49.3 | 2,931 |
| May..... | 21.2 | 1,304 |
| June..... | 15.6 | 931 |
| July..... | 15.5 | 956 |
| August..... | 12.5 | 769 |
| September..... | 10.6 | 630 |
| Water year 1939-40..... | 25.7 | 18,660 |

San Luis Rey River at Monserate Narrows, near Pala, Calif.

Location.- Water-stage recorder, lat. 33°20'20", long. 117°08'20", in Monserate grant, 4 miles southwest of Pala, San Diego County.

Drainage area.- 383 square miles.

Records available.- December 1935 to September 1940 (most years, irrigation season only).

Extremes.- Maximum discharge during year, 242 second-feet Apr. 1 (gage height, 1.37 feet); minimum daily, 1.6 second-feet Aug. 23 and 27.

1933-40: Maximum discharge not determined; minimum, 0.2 second-foot Sept. 10-18, 1936.

Remarks.- Records good.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 13 | 10 | 13 | 16 | 23 | 49 | 182 | 12 | 5.5 | 3.7 | 2.0 | 2.4 |
| 2 | 13 | 10 | 14 | 16 | 45 | 43 | 162 | 12 | 5.5 | 3.7 | 2.0 | 2.7 |
| 3 | 13 | 10 | 13 | 17 | 62 | 43 | 95 | 12 | 6 | 3.5 | 2.3 | 2.4 |
| 4 | 12 | 9 | 12 | 21 | 160 | 40 | 70 | 12 | 6 | 3.5 | 2.3 | 2.4 |
| 5 | 12 | 9 | 13 | 27 | 95 | 36 | 56 | 12 | 6 | 3.1 | 1.9 | 2.8 |
| 6 | 12 | 10 | 13 | 28 | 68 | 34 | 50 | 12 | 5.5 | 2.7 | 1.8 | 2.8 |
| 7 | 12 | 10 | 13 | 35 | 57 | 35 | 44 | 9.5 | 5.5 | 2.5 | 1.7 | 2.8 |
| 8 | 12 | 12 | 13 | 49 | 50 | 34 | 40 | 9 | 6 | 2.5 | 1.8 | 2.7 |
| 9 | 12 | 12 | 14 | 66 | 49 | 30 | 40 | 9 | 6 | 2.4 | 1.8 | 2.5 |
| 10 | 12 | 11 | 13 | 61 | 44 | 31 | 30 | 7.5 | 6 | 2.2 | 1.8 | 1.9 |
| 11 | 12 | 10 | 13 | 42 | 40 | 26 | 30 | 7 | 6 | 2.3 | 2.0 | 2.2 |
| 12 | 12 | 10 | 14 | 55 | 38 | 25 | 25 | 6 | 5.5 | 2.5 | 1.8 | 2.2 |
| 13 | 11 | 10 | 13 | 62 | 36 | 29 | 27 | 6 | 5.5 | 2.5 | 1.8 | 2.2 |
| 14 | 11 | 10 | 13 | 45 | 36 | 30 | 23 | 4.9 | 5.5 | 2.0 | 1.9 | 2.3 |
| 15 | 12 | 10 | 13 | 34 | 40 | 27 | 19 | 6 | 5.5 | 2.2 | 2.0 | 2.3 |
| 16 | 12 | 9 | 12 | 29 | 31 | 26 | 18 | 5.5 | 5 | 2.0 | 2.0 | 2.2 |
| 17 | 12 | 10 | 12 | 27 | 31 | 25 | 15 | 4.9 | 5 | 2.3 | 2.0 | 2.2 |
| 18 | 12 | 11 | 12 | 28 | 29 | 22 | 15 | 4.3 | 5 | 2.3 | 1.7 | 2.0 |
| 19 | 12 | 11 | 12 | 24 | 29 | 23 | 14 | 4.9 | 5 | 2.4 | 1.7 | 1.9 |
| 20 | 12 | 11 | 13 | 23 | 30 | 21 | 13 | 7 | 5 | 2.4 | 1.7 | 2.0 |
| 21 | 11 | 11 | 12 | 22 | 27 | 22 | 14 | 6.5 | 5 | 2.7 | 1.8 | 2.5 |
| 22 | 9 | 11 | 16 | 24 | 34 | 21 | 13 | 6 | 5 | 2.7 | 1.7 | 2.3 |
| 23 | 9 | 12 | 18 | 27 | 34 | 21 | 13 | 6 | 4.9 | 1.9 | 1.6 | 2.7 |
| 24 | 9 | 12 | 19 | 32 | 31 | 20 | 14 | 5.5 | 4.7 | 1.9 | 1.9 | 2.3 |
| 25 | 10 | 12 | 18 | 26 | 33 | 18 | 18 | 5.5 | 4.3 | 2.0 | 1.8 | 1.9 |
| 26 | 10 | 12 | 17 | 22 | 100 | 18 | 20 | 6 | 4.3 | 2.0 | 1.7 | 1.9 |
| 27 | 9 | 12 | 17 | 20 | 63 | 18 | 29 | 6 | 4.3 | 2.4 | 1.6 | 2.3 |
| 28 | 9 | 17 | 16 | 23 | 47 | 18 | 22 | 6 | 4.3 | 2.2 | 1.7 | 2.3 |
| 29 | 10 | 15 | 16 | 20 | 56 | 18 | 18 | 6 | 4.3 | 2.3 | 1.9 | 2.3 |
| 30 | 10 | 14 | 17 | 18 | - | 16 | 18 | 6 | 3.9 | 2.0 | 1.9 | 2.3 |
| 31 | 9 | - | 16 | 20 | - | 27 | - | 5.5 | - | 2.0 | 2.4 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 347 | 13 | 9 | 11.2 | 698 | | |
| November..... | | | | | | 333 | 17 | 9 | 11.1 | 660 | | |
| December..... | | | | | | 440 | 19 | 12 | 14.2 | 873 | | |
| Calendar year 1939..... | | | | | | 7,409.3 | 185 | 2.0 | 20.3 | 14,700 | | |
| January..... | | | | | | 959 | 66 | 16 | 30.9 | 1,900 | | |
| February..... | | | | | | 1,418 | 160 | 23 | 48.9 | 2,810 | | |
| March..... | | | | | | 844 | 49 | 16 | 27.2 | 1,670 | | |
| April..... | | | | | | 1,147 | 182 | 13 | 39.2 | 2,280 | | |
| May..... | | | | | | 227.5 | 12 | 4.3 | 7.34 | 451 | | |
| June..... | | | | | | 156.0 | 6 | 3.9 | 5.20 | 309 | | |
| July..... | | | | | | 76.8 | 3.7 | 1.9 | 2.48 | 152 | | |
| August..... | | | | | | 58.0 | 2.4 | 1.6 | 1.87 | 115 | | |
| September..... | | | | | | 69.7 | 2.8 | 1.9 | 2.32 | 138 | | |
| Water year 1939-40..... | | | | | | 6,076 | 182 | 1.6 | 16.6 | 12,050 | | |

SAN LUIS REY RIVER BASIN

San Luis Rey River near Bonsall, Calif.

Location.- Water-stage recorder, lat. 33°15'05" long. 117°14'55", in NE¼ sec. 1, T. 11 S., R. 4 W., three-quarters of a mile downstream from bridge on Fallbrook-Escondido road and 3 miles southwest of Bonsall. Altitude of gage, about 120 feet.

Drainage area.- 514 square miles.

Records available.- October 1929 to September 1940; July 1916 to September 1918 (gage heights and discharge measurements only). April 1912 to January 1916 at site at Bonsall (records not equivalent).

Average discharge.- 11 years, (1929-40), 38.6 second-feet.

Extremes.- Maximum discharge during year, 680 second-feet Feb. 3 (gage height, 2.60 feet); no flow Oct. 1-3 and July 6 to Sept. 30.

1929-40: Maximum discharge, 18,100 second-feet Mar. 3, 1938 (gage height, 12.60 feet), from rating curve extended above 2,400 second-feet; no flow part of each year.

Remarks.- Records good except those for October, November, and December, which are fair. Storage at Lake Henshaw; several diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 0 | 2.8 | 12 | 17 | 59 | 64 | 270 | 15 | 1.5 | 0.1 | | |
| 2 | 0 | 4.1 | 12 | 17 | 113 | 52 | 230 | 12 | 1.8 | .1 | | |
| 3 | 0 | 4.6 | 11 | 17 | 241 | 46 | 121 | 11 | 1.8 | .1 | | |
| 4 | 2.9 | 4.6 | 12 | 26 | 279 | 43 | 90 | 11 | 1.5 | .1 | | |
| 5 | 6.5 | 4.6 | 11 | 31 | 147 | 41 | 78 | 12 | 1.5 | .1 | | |
| 6 | 5 | 5 | 11 | 66 | 105 | 38 | 66 | 12 | 1.5 | 0 | | |
| 7 | 9.5 | 5 | 11 | 79 | 90 | 38 | 58 | 12 | dl.5 | 0 | | |
| 8 | 10 | 7 | 12 | 109 | 79 | 40 | 52 | 9 | dl.5 | 0 | | |
| 9 | 7 | 13 | 13 | 132 | 69 | 38 | 50 | 8 | dl.5 | 0 | | |
| 10 | 5 | 10 | 13 | 107 | 64 | 36 | 46 | 6 | 1.5 | 0 | | |
| 11 | 4.1 | 9 | 14 | 83 | 58 | 32 | 40 | 5 | .9 | 0 | | |
| 12 | 4.1 | 8 | 13 | 90 | 55 | 30 | 35 | 4.6 | .9 | 0 | | |
| 13 | 3.6 | 8 | 12 | 97 | 50 | 28 | 29 | 4.6 | .7 | 0 | | |
| 14 | 3.6 | 8 | 12 | 72 | 50 | 29 | 28 | 4.1 | .7 | 0 | | |
| 15 | 3.2 | 8 | 13 | 63 | 50 | 28 | 26 | 4.1 | 1.0 | 0 | | |
| 16 | 3.6 | 8 | 14 | 53 | 44 | 23 | 26 | 3.2 | 1.3 | 0 | | |
| 17 | 4.1 | 8 | 14 | 48 | 36 | 25 | 23 | 2.8 | .9 | 0 | | |
| 18 | 4.1 | 8 | 14 | 46 | 35 | 26 | 19 | 3.2 | .5 | 0 | | |
| 19 | 4.1 | 8 | 14 | 43 | 35 | 25 | 17 | 3.2 | .3 | 0 | | |
| 20 | 5 | 8 | 14 | 37 | 32 | 23 | 17 | 4.1 | .3 | 0 | | |
| 21 | 6.5 | 8 | 14 | 35 | 30 | 22 | 15 | 4.1 | .2 | 0 | | |
| 22 | 4.1 | 7 | 15 | 32 | 36 | 22 | 13 | 3.6 | .2 | 0 | | |
| 23 | 4.6 | 8 | 18 | 48 | 44 | 23 | 15 | 3.2 | .2 | 0 | | |
| 24 | 4.6 | 8 | 25 | 108 | 40 | 24 | 15 | 3.2 | .2 | 0 | | |
| 25 | 6 | 8 | 20 | 52 | 41 | 22 | 16 | 3.6 | .1 | 0 | | |
| 26 | 5 | 8 | 18 | 41 | 98 | 23 | 28 | 3.2 | .1 | 0 | | |
| 27 | 4.1 | 9 | 17 | 36 | 84 | 25 | 35 | 3.2 | .1 | 0 | | |
| 28 | 4.1 | 12 | 17 | 35 | 61 | 29 | 31 | 2.8 | .1 | 0 | | |
| 29 | 3.6 | 13 | 17 | 32 | 64 | 26 | 25 | 2.5 | .1 | 0 | | |
| 30 | 3.6 | 12 | 17 | 31 | - | 21 | 19 | 2.1 | .1 | 0 | | |
| 31 | 3.2 | - | 17 | 31 | - | 31 | - | 2.1 | - | - | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 134.8 | 10 | 0 | 4.35 | 267 | | | | |
| November..... | | | | 234.7 | 13 | 2.8 | 7.82 | 466 | | | | |
| December..... | | | | 447 | 25 | 11 | 14.4 | 887 | | | | |
| Calendar year 1939..... | | | | 9,176.3 | 341 | 0 | 25.1 | 18,200 | | | | |
| January..... | | | | 1,714 | 132 | 17 | 55.3 | 3,400 | | | | |
| February..... | | | | 2,187 | 279 | 30 | 75.4 | 4,540 | | | | |
| March..... | | | | 973 | 64 | 21 | 31.4 | 1,030 | | | | |
| April..... | | | | 1,533 | 270 | 13 | 51.1 | 3,040 | | | | |
| May..... | | | | 180.5 | 15 | 2.1 | 5.82 | 358 | | | | |
| June..... | | | | 24.5 | 1.8 | .1 | .82 | 49 | | | | |
| July..... | | | | .5 | .1 | 0 | .02 | 1 | | | | |
| August..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| September..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Water year 1939-40..... | | | | 7,429.0 | 279 | 0 | 20.3 | 14,740 | | | | |

Peak discharge.- Feb. 3 (10 p.m.) 680 sec.-ft.; Apr. 1 (12 p.m.) 342 sec.-ft.
 d Doubtful gage-height record; discharge interpolated.

San Luis Rey River at Oceanside, Calif.

Location.- Water-stage recorder, lat. 33°12'40", long. 117°22'40", in NW¼ sec. 23, T. 11 S., R. 5 W., half a mile upstream from State highway bridge at Oceanside. Altitude of gage, about 20 feet.

Drainage area.- 557 square miles.

Records available.- April 1912 to September 1914, January 1916, and October 1929 to September 1940.

Average discharge.- 13 years (1912-14, 1929-40), 31.8 second-feet.

Extremes.- Maximum discharge during year, 745 second-feet Feb. 3 (gage height, 6.20 feet); no flow during part of year.

1912-14, 1916, 1929-40: Maximum discharge, 95,600 second-feet Jan. 12, 1916; no flow for several months of each year.

Remarks.- Records good except those for periods of doubtful gage-height record, which are fair. Storage at Lake Henshaw; several diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | 0 | 29 | 63 | 172 | 12 | | | | |
| 2 | | | | 0 | 59 | 57 | 264 | 10 | | | | |
| 3 | | | | 0 | 170 | 51 | 150 | 8.5 | | | | |
| 4 | | | | 0 | 376 | 45 | 108 | 7 | | | | |
| 5 | | | | 0 | 176 | 42 | 83 | 6.5 | | | | |
| 6 | | | | d.2 | 139 | 39 | 67 | 5.5 | | | | |
| 7 | | | | 1.4 | 117 | 36 | 55 | 4.2 | | | | |
| 8 | | | | 36 | 102 | 36 | 49 | 2.7 | | | | |
| 9 | | | | 74 | 83 | 36 | 44 | d1.9 | | | | |
| 10 | | | | 86 | 72 | 34 | 39 | d1.3 | | | | |
| 11 | | | | 65 | 65 | 33 | 34 | d.8 | | | | |
| 12 | | | | 51 | 57 | 30 | 31 | d.4 | | | | |
| 13 | | | | 61 | 53 | 30 | 27 | d.2 | | | | |
| 14 | | | | 51 | 53 | 29 | 24 | d.2 | | | | |
| 15 | | | | 42 | 57 | 26 | 22 | d.1 | | | | |
| 16 | | | | 34 | 47 | 25 | 21 | d.1 | | | | |
| 17 | | | | 31 | 40 | 25 | 17 | d.1 | | | | |
| 18 | | | | 30 | 39 | 26 | 15 | d.1 | | | | |
| 19 | | | | 27 | 36 | 25 | 13 | d.1 | | | | |
| 20 | | | | 25 | 34 | 24 | 11 | d.1 | | | | |
| 21 | | | | 24 | 34 | 22 | 12 | d.1 | | | | |
| 22 | | | | 22 | 37 | 22 | 10 | d.1 | | | | |
| 23 | | | | 24 | 42 | 21 | 10 | 0 | | | | |
| 24 | | | | 101 | 45 | 19 | 10 | 0 | | | | |
| 25 | | | | 55 | 47 | 19 | 8 | 0 | | | | |
| 26 | | | | 42 | 76 | 18 | 20 | 0 | | | | |
| 27 | | | | 37 | 94 | 20 | 27 | 0 | | | | |
| 28 | | | | 33 | 72 | 20 | 26 | 0 | | | | |
| 29 | | | | 30 | 65 | 20 | 19 | 0 | | | | |
| 30 | | | | 26 | - | 17 | 16 | 0 | | | | |
| 31 | | | | 25 | - | 24 | - | 0 | | | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| November..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| December..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Calendar year 1939..... | | | | 8,174.3 | | 264 | 0 | 22.4 | 16,210 | | | |
| January..... | | | | 1,033.6 | | 101 | 0 | 33.3 | 2,050 | | | |
| February..... | | | | 2,316 | | 376 | 29 | 79.9 | 4,590 | | | |
| March..... | | | | 934 | | 63 | 17 | 30.1 | 1,550 | | | |
| April..... | | | | 1,405 | | 64 | 9 | 46.8 | 2,790 | | | |
| May..... | | | | 62.0 | | 12 | 0 | 2.00 | 123 | | | |
| June..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| July..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| August..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| September..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | 5,750.6 | | 376 | 0 | 15.7 | 11,400 | | | |

Peak discharge.- Feb. 3 (12 p.m.) 745 sec.-ft.; Apr. 2 (5 a.m.) 300 sec.-ft.

d Doubtful gage-height record; discharge computed on basis of one discharge measurement, one field estimate, and records for station at Bonsall.

SANTA MARGARITA RIVER BASIN

Temecula Creek at Nigger Canyon, near Temecula, Calif.

Location.- Water-stage recorder, lat. 33°29'40", long. 116°59'00", in Pauba grant, at upper end of Nigger Canyon, a quarter of a mile downstream from Arroyo Seco and 10 miles east of Temecula, Riverside County. Altitude of gage, about 1,350 feet.

Drainage area.- 319 square miles.

Records available.- January 1923 to September 1940.

Average discharge.- 17 years, 15.4 second-feet.

Extremes.- Maximum discharge during year, 252 second-feet Apr. 1 (gage height, 4.73 feet); minimum daily, 1.2 second-feet Aug. 6-11.
1923-40: Maximum discharge, 17,000 second-feet (estimated) Feb. 16, 1927 (gage height, 19.5 feet); minimum, 0.6 second-foot Aug. 17, 1934.

Remarks.- Records poor. No diversions above station.

Cooperation.- Results of 98 discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 6 | 5 | 8 | 9 | 21 | 24 | 144 | 12 | 5.5 | 2.1 | 1.6 | 1.6 |
| 2 | 5.5 | 5 | 8 | 10 | 41 | 21 | 67 | 10 | 5.5 | 2.1 | 1.9 | 1.6 |
| 3 | 5.5 | 5.5 | 8 | 10 | 33 | 19 | 35 | 9.5 | 5.5 | 2.1 | 1.6 | 1.6 |
| 4 | 5 | 6 | 8.5 | 10 | 73 | 18 | 26 | 9.5 | 6 | 2.1 | 1.4 | 1.9 |
| 5 | 5 | 6 | 8.5 | 10 | 42 | 16 | 26 | 9 | 4.9 | 2.1 | 1.4 | 1.9 |
| 6 | 5 | 6 | 8.5 | 11 | 30 | 15 | 26 | 9 | 4.2 | 1.9 | 1.2 | 2.1 |
| 7 | 5.5 | 6 | 8.5 | 11 | 25 | 14 | 24 | 8.5 | 3.9 | 2.1 | 1.2 | 1.9 |
| 8 | 5 | 6.5 | 9 | 51 | 23 | 13 | 21 | 7.5 | 4.2 | 2.1 | 1.2 | 1.9 |
| 9 | 5 | 6.5 | 8.5 | 35 | 21 | 12 | 17 | 5.5 | 3.9 | 2.1 | 1.2 | 1.9 |
| 10 | 4.8 | 6.5 | 8.5 | 28 | 22 | 12 | 15 | 4.8 | 3.9 | 1.9 | 1.2 | 1.9 |
| 11 | 4.8 | 6.5 | 8.5 | 25 | 19 | 12 | 12 | 4.8 | 4.2 | 1.9 | 1.2 | 2.1 |
| 12 | 5 | 6.5 | 8.5 | 24 | 17 | 11 | 11 | 4.3 | 3.2 | 1.6 | 1.4 | 2.1 |
| 13 | 4.8 | 7 | 8.5 | 19 | 16 | 11 | 11 | 4.3 | 3.2 | 1.6 | 1.4 | 2.1 |
| 14 | 4.5 | 6.5 | 8 | 17 | 16 | 10 | 12 | 3.9 | 3.2 | 1.6 | 1.4 | 2.1 |
| 15 | 4.3 | 6 | 8 | 16 | 16 | 10 | 12 | 3.9 | 2.9 | 1.6 | 1.4 | 2.1 |
| 16 | 4.3 | 6 | 8 | 13 | 15 | 9.5 | 12 | 3.5 | 2.9 | 1.9 | 1.4 | 2.1 |
| 17 | 3.9 | 6 | 8 | 13 | 13 | 9.5 | 11 | 3.5 | 2.9 | 1.9 | 1.4 | 2.1 |
| 18 | 4.1 | 6.5 | 8.5 | 12 | 13 | 9.5 | 11 | 3.5 | 2.6 | 2.1 | 1.4 | 2.1 |
| 19 | 4.3 | 6 | 8.5 | 12 | 12 | 10 | 9.5 | 3.5 | 2.6 | 1.9 | 1.4 | 2.1 |
| 20 | 4.5 | 6.5 | 8.5 | 12 | 12 | 9.5 | 9 | 3.5 | 2.6 | 1.9 | 1.4 | 2.4 |
| 21 | 4.8 | 6.5 | 9 | 12 | 12 | 9 | 9.5 | 3.2 | 2.9 | 1.9 | 1.4 | 2.4 |
| 22 | 5 | 6.5 | 9 | 12 | 12 | 9.5 | 9 | 3.2 | 2.9 | 2.1 | 1.4 | 2.6 |
| 23 | 5 | 6.5 | 11 | 14 | 12 | 9.5 | 9 | 3.2 | 2.9 | 2.1 | 1.4 | 2.6 |
| 24 | 5.5 | 7 | 10 | 16 | 12 | 9 | 9.5 | 3.5 | 2.9 | 1.9 | 1.6 | 2.9 |
| 25 | 6.5 | 6.5 | 10 | 14 | 16 | 10 | 11 | 4.2 | 2.9 | 1.9 | 1.6 | 2.9 |
| 26 | 6 | 6.5 | 10 | 12 | 40 | 10 | 18 | 4.5 | 2.9 | 2.1 | 1.6 | 2.9 |
| 27 | 5.5 | 7 | 9.5 | 12 | 30 | 10 | 21 | 4.9 | 2.6 | 2.1 | 1.9 | 3.2 |
| 28 | 5 | 16 | 9.5 | 12 | 26 | 9.5 | 16 | 5.5 | 2.6 | 2.1 | 1.9 | 2.9 |
| 29 | 5 | 11 | 9 | 10 | 26 | 9.5 | 15 | 5.5 | 2.6 | 2.1 | 1.6 | 2.6 |
| 30 | 5 | 9 | 9 | 9.5 | - | 10 | 14 | 5.5 | 2.6 | 2.1 | 1.6 | 2.6 |
| 31 | 5 | - | 9 | 9.5 | - | 23 | - | 5.5 | - | 1.9 | 1.4 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 155.1 | 6.5 | 3.9 | 5.00 | 308 | | | |
| November..... | | | | | 205.0 | 16 | 5 | 6.83 | 407 | | | |
| December..... | | | | | 272.0 | 11 | 8 | 8.77 | 540 | | | |
| Calendar year 1939..... | | | | | 3,794.4 | 57 | 1.5 | 10.4 | 7,530 | | | |
| January..... | | | | | 481.0 | 51 | 9 | 15.5 | 954 | | | |
| February..... | | | | | 666 | 73 | 12 | 23.0 | 1,320 | | | |
| March..... | | | | | 335.0 | 24 | 9 | 12.4 | 764 | | | |
| April..... | | | | | 647.5 | 144 | 9 | 21.6 | 1,280 | | | |
| May..... | | | | | 172.7 | 12 | 3.2 | 5.57 | 343 | | | |
| June..... | | | | | 105.6 | 6 | 2.6 | 3.52 | 209 | | | |
| July..... | | | | | 60.9 | 2.1 | 1.6 | 1.96 | 121 | | | |
| August..... | | | | | 45.1 | 1.9 | 1.2 | 1.45 | 89 | | | |
| September..... | | | | | 67.2 | 3.2 | 1.6 | 2.24 | 133 | | | |
| Water year 1939-40..... | | | | | 3,263.1 | 144 | 1.2 | 8.92 | 6,470 | | | |

Peak discharge.- Jan. 8 (11:30 a.m.) 112 sec.-ft.; Feb. 4 (12:30 a.m.) 141 sec.-ft.; Feb. 26 (2:30 a.m.) 75 sec.-ft.; Apr. 1 (6 a.m.) 252 sec.-ft.

Temecula Creek at Railroad Canyon, near Temecula, Calif.

Location.- Water-stage recorder, lat. 33°28'25", long. 117°00'35", in Temecula grant, at upper end of Temecula or Railroad Canyon, an eighth of a mile downstream from confluence with Murrieta Creek, and 1½ miles south of Temecula, Riverside County. Altitude of gage about 950 feet.

Drainage area.- 592 square miles.

Records available.- January 1923 to September 1940.

Average discharge.- 17 years, 27.2 second-feet.

Extremes.- Maximum discharge during year, 7,620 second-feet Jan. 8 (gage height, 7.75 feet); minimum daily, 4.6 second-feet July 12-15, Aug. 19.
1923-40: Maximum discharge, about 27,600 second-feet Feb. 16, 1927 (gage height, 15.00 feet); minimum, 0.4 second-foot July 16, 1925.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Pumping diversions affect flow considerably during irrigation season.

Cooperation.- Gage-height record and results of discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 11 | 10 | 13 | 12 | 183 | 18 | | 12 | 9.5 | 7 | 5.5 | 5.5 |
| 2 | 11 | 11 | 13 | 13 | 319 | 17 | 127 | 12 | 9.5 | 7.5 | 5.5 | 6 |
| 3 | 11 | 10 | 11 | 13 | 359 | 16 | 40 | 11 | 9.5 | 7.5 | 5.5 | 6.5 |
| 4 | 11 | 11 | 11 | 15 | 242 | 16 | 26 | 11 | 9.5 | 7 | 5.5 | 7 |
| 5 | 11 | 11 | 11 | 13 | 61 | 16 | 19 | 11 | 9 | 6.5 | 5.5 | 6 |
| 6 | 11 | 11 | 12 | 18 | 42 | 15 | 17 | 11 | 9 | 6 | 6.5 | 7 |
| 7 | 14 | 10 | 12 | 17 | 32 | 14 | 15 | 10 | 10 | 6 | 6.5 | 5.5 |
| 8 | 11 | 11 | 11 | 1,430 | 26 | 15 | 14 | 10 | 10 | 6 | 6 | 5.5 |
| 9 | 10 | 11 | 11 | 110 | 22 | 14 | 13 | 10 | 9 | 5.5 | 6 | 5.5 |
| 10 | 9.5 | 10 | 11 | 55 | 22 | 15 | 13 | 11 | 8.5 | 5.5 | 6 | 5.5 |
| 11 | 9 | 11 | 13 | 37 | 22 | 14 | 13 | 11 | 8 | 4.9 | 6 | 5.5 |
| 12 | 9 | 10 | 12 | 29 | 22 | 14 | 11 | 11 | 8 | 4.6 | 6.5 | 6 |
| 13 | 9.5 | 9.5 | 12 | 24 | 19 | 13 | 11 | 11 | 8 | 4.6 | 6.5 | 6 |
| 14 | 9 | 10 | 11 | 21 | 20 | 13 | 11 | 9.5 | 8 | 4.6 | 6 | 6 |
| 15 | 9 | 10 | 11 | 19 | 22 | 12 | 11 | 9 | 8 | 4.6 | 6 | 6.5 |
| 16 | 9 | 10 | 11 | 17 | 20 | 13 | 12 | 10 | 8.5 | 4.9 | 6 | 6.5 |
| 17 | 9 | 10 | 12 | 16 | 19 | 14 | 11 | 10 | 8.5 | 5.5 | 5.5 | 6 |
| 18 | 10 | 9.5 | 11 | 16 | 17 | 13 | 12 | 11 | 8 | 5.5 | 4.9 | 7 |
| 19 | 9 | 9.5 | 13 | 15 | 15 | 14 | 12 | 11 | 7.5 | 5.5 | 4.6 | 8 |
| 20 | 9 | 9.5 | 12 | 15 | 15 | 13 | 11 | 11 | 7.5 | 5.5 | 4.9 | 7 |
| 21 | 9.5 | 9.5 | 12 | 14 | 15 | 14 | 11 | 10 | 7.5 | 5.5 | 6 | 7.5 |
| 22 | 9 | 10 | 11 | 14 | 20 | 12 | 12 | 9.5 | 7.5 | 5.5 | 6.5 | 7.5 |
| 23 | 9 | 10 | 15 | 15 | 21 | 12 | 11 | 9.5 | 7.5 | 5.5 | 6.5 | 7 |
| 24 | 10 | 10 | 15 | 25 | 19 | 12 | 12 | 9.5 | 7.5 | 4.9 | 6 | 7.5 |
| 25 | 10 | 12 | 13 | 19 | 27 | 12 | 12 | 10 | 7.5 | 5.5 | 6 | 7.5 |
| 26 | 10 | 12 | 12 | 17 | 36 | 11 | 22 | 9.5 | 7 | 5.5 | 5.5 | 7.5 |
| 27 | 10 | 12 | 12 | 16 | 24 | 11 | 15 | 9 | 7 | 5.5 | 5.5 | 7 |
| 28 | 9.5 | 17 | 12 | 16 | 19 | 11 | 14 | 8.5 | 6.5 | 5.5 | 5.5 | 7 |
| 29 | 9 | 13 | 12 | 16 | 20 | 9.5 | 13 | 8 | 7 | 5.5 | 5.5 | 7 |
| 30 | 9 | 13 | 12 | 15 | - | 9.5 | 12 | 9 | 7 | 5.5 | 5.5 | 6.5 |
| 31 | 9.5 | - | 12 | 16 | - | 23 | - | 9.5 | - | 5.5 | 5.5 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 306.5 | 14 | 9 | 9.89 | 609 | | | | |
| November..... | | | | 323.5 | 17 | 9.5 | 10.8 | 642 | | | | |
| December..... | | | | 372 | 15 | 11 | 12.0 | 738 | | | | |
| Calendar year 1939..... | | | | 6,857.5 | 422 | 6 | 18.8 | 13,610 | | | | |
| January..... | | | | 2,083 | 1,450 | 12 | 67.4 | 4,140 | | | | |
| February..... | | | | 1,700 | 359 | 15 | 58.6 | 3,370 | | | | |
| March..... | | | | 425.0 | 23 | 9.5 | 13.7 | 845 | | | | |
| April..... | | | | 612 | 127 | 11 | 20.4 | 1,210 | | | | |
| May..... | | | | 315.5 | 12 | 8 | 10.2 | 626 | | | | |
| June..... | | | | 245.5 | 10 | 6.5 | 8.18 | 487 | | | | |
| July..... | | | | 174.6 | 7.5 | 4.6 | 5.63 | 346 | | | | |
| August..... | | | | 179.4 | 6.5 | 4.6 | 5.79 | 356 | | | | |
| September..... | | | | 196.5 | 8 | 5.5 | 6.62 | 394 | | | | |
| Water year 1939-40..... | | | | 6,941.5 | 1,430 | 4.6 | 19.0 | 13,760 | | | | |

Peak discharge.- Jan. 8 (9:45 a.m.) 7,620 sec.-ft.; Feb. 2 (1:30 a.m.) 722 sec.-ft.; Feb. 3 (9:30 p.m.) 1,260 sec.-ft.; Apr. 1 (2:30 p.m.) 252 sec.-ft.
Note.- No gage-height record Oct. 1-6, Jan. 10-31; discharge computed on basis of discharge measurements and records for Murrieta Creek at Temecula.

Santa Margarita River near Fall Brook, Calif.

Location.- Water-stage recorder, lat. 33°24'05", long. 117°15'10", in sec. 12, T. 9 S., R. 4 W., 2 miles north of Fall Brook. Altitude of gage, about 350 feet.

Drainage area.- 645 square miles.

Records available.- November 1924 to September 1940.

Average discharge.- 15 years (1925-40), 35.9 second-feet.

Extremes.- Maximum discharge during year, 10,500 second-feet Jan. 8 (gage height, 6.80 feet); minimum daily, 3.1 second-feet July 24.
1924-40: Maximum discharge, about 33,100 second-feet Feb. 16, 1927 (gage height, 15.6 feet); minimum, 0.1 second-foot Aug. 30, 1925, Sept. 4, 1926, Sept. 6, 1928, and at times during July and August 1929.

Remarks.- Records fair. Several diversions above station.

Cooperation.- Gage-height record and results of most discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 13 | 11 | 13 | 14 | 151 | 29 | 132 | 16 | 8.5 | 7 | 4.3 | 4.1 |
| 2 | 13 | 11 | 13 | 13 | 434 | 27 | 107 | 14 | 9 | 7 | 4.6 | 4.6 |
| 3 | 12 | 11 | 12 | 14 | 395 | 25 | 55 | 14 | 8.5 | 6.5 | 4.3 | 6.5 |
| 4 | 12 | 11 | 12 | 19 | 473 | 22 | 42 | 14 | 10 | 6 | 4.3 | 7 |
| 5 | 12 | 11 | 12 | 16 | 113 | 24 | 32 | 14 | 10 | 5.5 | 4.6 | 7 |
| 6 | 14 | 12 | 12 | 21 | 71 | 22 | 24 | 13 | 9 | 4.9 | 4.6 | 7 |
| 7 | 16 | 11 | 12 | 19 | 55 | 22 | 22 | 14 | 9.5 | 3.9 | 4.6 | 6.5 |
| 8 | 15 | 13 | 13 | 1,430 | 46 | 22 | 20 | 15 | 10 | 3.9 | 4.6 | 5.5 |
| 9 | 12 | 14 | 14 | 225 | 35 | 22 | 20 | 13 | 9.5 | 3.9 | 4.3 | 4.9 |
| 10 | 11 | 13 | 15 | 82 | 31 | 23 | 20 | 11 | 9 | 3.7 | 4.1 | 4.9 |
| 11 | 10 | 12 | 15 | 51 | 31 | 22 | 19 | 11 | 8 | 3.2 | 4.1 | 5.5 |
| 12 | 9 | 12 | 16 | 44 | 29 | 20 | 16 | 11 | 8 | 3.7 | 4.6 | 7 |
| 13 | 9 | 12 | 14 | 37 | 32 | 19 | 14 | 11 | 7.5 | 4.3 | 4.9 | 6 |
| 14 | 10 | 11 | 14 | 29 | 34 | 17 | 14 | 11 | 7.5 | 4.3 | 5.5 | 6 |
| 15 | 9.5 | 11 | 14 | 23 | 38 | 16 | 12 | 11 | 7 | 3.9 | 5.5 | 5.5 |
| 16 | 9.5 | 11 | 13 | 23 | 30 | 16 | 13 | 10 | 8.5 | 4.1 | 5 | 6.5 |
| 17 | 10 | 12 | 13 | 21 | 29 | 15 | 13 | 10 | 8 | 4.3 | 5.5 | 7 |
| 18 | 10 | 12 | 13 | 23 | 27 | 15 | 14 | 11 | 7 | 4.6 | 4.9 | 8 |
| 19 | 10 | 12 | 13 | 21 | 25 | 18 | 14 | 11 | 7 | 4.9 | 4.6 | 8 |
| 20 | 11 | 12 | 12 | 21 | 22 | 16 | 15 | 11 | 7 | 3.9 | 4.1 | 8.5 |
| 21 | 10 | 12 | 12 | 20 | 22 | 16 | 14 | 11 | 7.5 | 3.7 | 4.3 | 8 |
| 22 | 9 | 11 | 12 | 19 | 25 | 17 | 14 | 11 | 7.5 | 3.3 | 4.9 | 8.5 |
| 23 | 9 | 11 | 16 | 23 | 34 | 16 | 14 | 11 | 7 | 3.3 | 5 | 8.5 |
| 24 | 10 | 11 | 16 | 35 | 26 | 14 | 12 | 11 | 7.5 | 3.1 | 5 | 8.5 |
| 25 | 11 | 12 | 14 | 26 | 38 | 14 | 15 | 10 | 7 | 3.3 | 5 | 8 |
| 26 | 11 | 13 | 14 | 23 | 62 | 16 | 28 | 10 | 7.5 | 3.7 | 5.5 | 8 |
| 27 | 10 | 13 | 14 | 21 | 46 | 17 | 33 | 10 | 7.5 | 3.9 | 4.9 | 8.5 |
| 28 | 10 | 23 | 14 | 21 | 32 | 16 | 22 | 10 | 6.5 | 4.1 | 5.5 | 7 |
| 29 | 11 | 13 | 13 | 20 | 35 | 17 | 18 | 9 | 6.5 | 4.3 | 5.5 | 7 |
| 30 | 9.5 | 13 | 14 | 19 | - | 17 | 8 | 7 | 4.3 | 5.5 | 5.5 | 8.5 |
| 31 | 9 | - | 14 | 17 | - | 33 | - | 7.5 | - | 4.3 | 5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 337.5 | 16 | 9 | 10.9 | 669 | | |
| November..... | | | | | | 367 | 23 | 11 | 12.2 | 728 | | |
| December..... | | | | | | 418 | 16 | 12 | 13.5 | 829 | | |
| Calendar year 1939..... | | | | | | 8,490.5 | 445 | 5 | 23.3 | 16,850 | | |
| January..... | | | | | | 2,392 | 1,430 | 13 | 77.2 | 4,740 | | |
| February..... | | | | | | 2,421 | 473 | 22 | 83.5 | 4,800 | | |
| March..... | | | | | | 605 | 32 | 14 | 19.5 | 1,200 | | |
| April..... | | | | | | 806 | 132 | 12 | 26.9 | 1,600 | | |
| May..... | | | | | | 354.5 | 16 | 7.5 | 11.4 | 703 | | |
| June..... | | | | | | 240.0 | 10 | 6.5 | 8.00 | 476 | | |
| July..... | | | | | | 134.8 | 7 | 3.1 | 4.35 | 267 | | |
| August..... | | | | | | 149.1 | 5.5 | 4.1 | 4.81 | 296 | | |
| September..... | | | | | | 206.5 | 8.5 | 4.1 | 6.88 | 410 | | |
| Water year 1939-40..... | | | | | | 8,451.4 | 1,430 | 3.1 | 23.0 | 16,720 | | |

Peak discharge.- Jan. 8 (11 a.m.) 10,500 sec.-ft.; Feb. 2 (3:30 a.m.) 870 sec.-ft.; Feb. 3 (9:30 p.m.) 1,680 sec.-ft.; Apr. 1 (4 p.m.) 182 sec.-ft.

Santa Margarita River at Ysidora, Calif.

Location.- Water-stage recorder, lat. 33°14'40", long. 117°22'50", in Santa Margarita Y Las Flores grant, 1 mile downstream from Ysidora, San Diego County, and about 2 miles upstream from mouth. Altitude of gage, about 15 feet.

Drainage area.- 740 square miles.

Records available.- February 1923 to September 1929 and October 1930 to September 1940.

Average discharge.- 12 years (1927-29, 1930-40), 42.6 second-feet.

Extremes.- Maximum discharge during year, 9,650 second-feet Jan. 8 (gage height, 9.10 feet), from rating curve extended above 500 second-feet; no flow during part of year. 1923-29, 1930-40: Maximum discharge, 33,600 second-feet (estimated) Feb. 16, 1927; no flow during part of most years.

Remarks.- Records fair except those for high water periods, which are poor. Considerable water diverted above station for irrigation on Pauba and Santa Margarita ranches. (See p. 33 for records of O'Neill ditch near Ysidora).

Cooperation.- Gage-height record and results of discharge measurements furnished by the Santa Margarita ranch.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 6.5 | 2.1 | 11 | 12 | 57 | 65 | 147 | 18 | | | | |
| 2 | 6.5 | 3.2 | 11 | 12 | 521 | 57 | 141 | 16 | | | | |
| 3 | 4.7 | 4.1 | 10 | 13 | 726 | 50 | 94 | 13 | | | | |
| 4 | 4.4 | 5 | 9 | 27 | 1,344 | 47 | 62 | 13 | | | | |
| 5 | 4.4 | 5.5 | 9 | 26 | 338 | 41 | 47 | 12 | | | | |
| 6 | 4.7 | 6 | 10 | 50 | 185 | 39 | 37 | 12 | | | | |
| 7 | 13 | 6 | 10 | 52 | 141 | 37 | 31 | 11 | | | | |
| 8 | 20 | 7.5 | 10 | 1,580 | 116 | 37 | 26 | 11 | | | | |
| 9 | 9 | 17 | 10 | 502 | 99 | 35 | 26 | 8.5 | | | | |
| 10 | 6 | 11 | 8.5 | 172 | 84 | 33 | 26 | 7.5 | | | | |
| 11 | 4.4 | 8 | 8.5 | 107 | 74 | 33 | 23 | 7.5 | | | | |
| 12 | 4.1 | 7.5 | 10 | 99 | 65 | 31 | 20 | 7.5 | | | | |
| 13 | 3.0 | 7 | 9 | 91 | 57 | 26 | 17 | 7 | | | | |
| 14 | 2.7 | 7 | 8.5 | 71 | 62 | 24 | 16 | 7 | | | | |
| 15 | 2.3 | 7 | 7 | 57 | 71 | 24 | 17 | 7 | | | | |
| 16 | 2.3 | 7 | 5 | 45 | 65 | 24 | 18 | 6 | | | | |
| 17 | 2.5 | 7.5 | 7.5 | 43 | 54 | 24 | 14 | 1.3 | | | | |
| 18 | 2.5 | 8 | 8.5 | 39 | 50 | 24 | 16 | 1.0 | | | | |
| 19 | 3.0 | 7 | 8 | 37 | 47 | 24 | 14 | .8 | | | | |
| 20 | 3.8 | 5 | 8 | 37 | 45 | 24 | 14 | 1.3 | | | | |
| 21 | 4.1 | 4.7 | 8.5 | 33 | 45 | 24 | 14 | 1.5 | | | | |
| 22 | 3.2 | 4.7 | 8.5 | 31 | 47 | 26 | 14 | 1.6 | | | | |
| 23 | 3.2 | 4.7 | 11 | 43 | 52 | 24 | 14 | .7 | | | | |
| 24 | 4.4 | 5.5 | 24 | 100 | 45 | 23 | 16 | 0 | | | | |
| 25 | 4.7 | 6 | 16 | 52 | 50 | 22 | 14 | 0 | | | | |
| 26 | 4.7 | 6.5 | 13 | 45 | 120 | 23 | 33 | 0 | | | | |
| 27 | 4.4 | 7.5 | 13 | 37 | 99 | 28 | 76 | 0 | | | | |
| 28 | 4.1 | 18 | 13 | 33 | 71 | 24 | 42 | 0 | | | | |
| 29 | 3.0 | 15 | 12 | 29 | 74 | 20 | 27 | 0 | | | | |
| 30 | 3.0 | 12 | 12 | 29 | - | 19 | 21 | 0 | | | | |
| 31 | 1.9 | - | 12 | 29 | - | 35 | - | 0 | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 150.5 | 20 | 1.9 | 4.85 | 299 | | |
| November..... | | | | | | 223.0 | 18 | 2.1 | 7.43 | 442 | | |
| December..... | | | | | | 321.5 | 24 | 5 | 10.4 | 538 | | |
| Calendar year 1939..... | | | | | | 9,927.4 | 686 | 0 | 27.2 | 19,690 | | |
| January..... | | | | | | 3,533 | 1,580 | 12 | 114 | 7,010 | | |
| February..... | | | | | | 4,804 | 1,344 | 45 | 166 | 9,530 | | |
| March..... | | | | | | 969 | 65 | 19 | 31.3 | 1,920 | | |
| April..... | | | | | | 1,077 | 147 | 14 | 35.9 | 2,140 | | |
| May..... | | | | | | 172.2 | 18 | 0 | 5.55 | 342 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 11,250.2 | 1,580 | 0 | 30.7 | 22,320 | | |

Peak discharge.- Jan. 8 (2:30 p.m.) 9,650 sec.-ft.; Feb. 2 (9 a.m.) 853 sec.-ft.; Feb. 4 (3 a.m.) 2,390 sec.-ft.; Apr. 2 (3 a.m.) 210 sec.-ft.

SANTA MARGARITA RIVER BASIN

Murrieta Creek at Temecula, Calif.

Location.- Upper gage: Water-stage recorder, lat. 33°29'00", long. 117°08'50", on Temecula grant, 0.6 mile upstream from Temecula Creek and half a mile south of Temecula, Riverside County. Altitude, about 1,050 feet.

Lower gage: Water-stage recorder and 24-inch weir, 100 feet upstream from Temecula Creek and 3,000 feet downstream from upper gage.

Drainage area.- 220 square miles.

Records available.- October 1930 to September 1940.

Average discharge.- 10 years, 12.1 second-feet.

Extremes.- Maximum discharge during year, 7,550 second-feet Jan. 8 (gage height, 9.23 feet); minimum daily discharge, 0.4 second-foot many days.

1930-40: Maximum discharge, 16,800 second-feet (estimated) Mar. 2, 1938 (gage height, 13.7 feet at upper gage, 18.2 feet at lower gage); minimum, 0.2 second-foot at times during 1931, 1933, 1934, and 1935.

Remarks.- Records good; collected at site of upper gage.

Cooperation.- Gage-height record and results of discharge measurements furnished by Santa Margarita ranch.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|------|------|------|-----|------|------|------|-------|
| 1 | 1.6 | 1.1 | 1.7 | 1.6 | 153 | 6.5 | 28 | 1.1 | 0.6 | 0.6 | 0.5 | 0.4 |
| 2 | 1.6 | 1.1 | 1.5 | 1.6 | 255 | 5.5 | 13 | .6 | .6 | .5 | .5 | .5 |
| 3 | 1.5 | 1.3 | 1.5 | 1.6 | 316 | 5 | 6.5 | .9 | .7 | .6 | .5 | .5 |
| 4 | 1.4 | 1.3 | 1.5 | 1.9 | 198 | 4.4 | 5 | .9 | .7 | .5 | .5 | .5 |
| 5 | 1.4 | 1.2 | 1.5 | 2.1 | 45 | 3.9 | 4.1 | .9 | .7 | .5 | .5 | .5 |
| 6 | 1.4 | 1.2 | 1.5 | 2.1 | 26 | 3.8 | 3.3 | .9 | .7 | .5 | .5 | .5 |
| 7 | 2.2 | 1.2 | 1.4 | 2.6 | 19 | 3.3 | 2.8 | .9 | .8 | .4 | .5 | .6 |
| 8 | 1.8 | 1.4 | 1.4 | 1,380 | 15 | 3.5 | 2.7 | .9 | .8 | .4 | .5 | .5 |
| 9 | 1.6 | 1.3 | 1.4 | 81 | 12 | 3.3 | 2.3 | .9 | .8 | .4 | .5 | .5 |
| 10 | 1.5 | 1.4 | 1.4 | 29 | 10 | 3.1 | 2.2 | .9 | .9 | .4 | .5 | .5 |
| 11 | 1.4 | 1.1 | 1.4 | 17 | 10 | 3.1 | 1.8 | .9 | .8 | .4 | .5 | .6 |
| 12 | 1.2 | 1.1 | 1.4 | 14 | 9 | 2.7 | 1.6 | .8 | .8 | .4 | .5 | .6 |
| 13 | 1.3 | 1.1 | 1.4 | 11 | 7.5 | 2.3 | 1.2 | .8 | .6 | .4 | .5 | .5 |
| 14 | 1.2 | 1.2 | 1.3 | 8 | 8.5 | 2.2 | 1.1 | .7 | .6 | .4 | .5 | .5 |
| 15 | 1.2 | 1.2 | 1.3 | 6.5 | 9 | 2.2 | 1.1 | .8 | .6 | .5 | .5 | .5 |
| 16 | 1.2 | 1.1 | 1.3 | 5.5 | 6.5 | 2.1 | 1.1 | .7 | .6 | .4 | .5 | .5 |
| 17 | 1.2 | 1.1 | 1.4 | 5 | 6.5 | 1.9 | 1.1 | .7 | .5 | .5 | .4 | .5 |
| 18 | 1.2 | 1.2 | 1.4 | 5 | 6 | 1.9 | 1.1 | .7 | .5 | .5 | .4 | .6 |
| 19 | 1.4 | 1.2 | 1.4 | 4.8 | 5.5 | 2.2 | 1.1 | .7 | .5 | .5 | .4 | .5 |
| 20 | 1.3 | 1.2 | 1.4 | 4.4 | 5 | 2.2 | 1.1 | .8 | .5 | .5 | .4 | .6 |
| 21 | 1.2 | 1.2 | 1.3 | 4.3 | 5 | 2.1 | 1.1 | .8 | .6 | .5 | .4 | .6 |
| 22 | 1.2 | 1.2 | 1.5 | 4.1 | 6 | 2.3 | 1.1 | .9 | .6 | .5 | .4 | .6 |
| 23 | 1.2 | 1.3 | 1.5 | 4.3 | 6.5 | 2.2 | 1.1 | .8 | .5 | .5 | .4 | .6 |
| 24 | 1.2 | 1.3 | 1.9 | 7 | 5.5 | 1.8 | 1.2 | .8 | .6 | .5 | .4 | .6 |
| 25 | 1.2 | 1.3 | 1.7 | 6.5 | 8.5 | 1.7 | 1.1 | .8 | .5 | .5 | .4 | .6 |
| 26 | 1.2 | 1.3 | 1.5 | 5 | 19 | 1.7 | 1.8 | .8 | .5 | .5 | .4 | .6 |
| 27 | 1.1 | 1.3 | 1.5 | 4.8 | 10 | 1.8 | 2.7 | .7 | .6 | .5 | .4 | .6 |
| 28 | 1.1 | 2.3 | 1.5 | 4.3 | 7.5 | 2.2 | 2.2 | .7 | .6 | .5 | .5 | .6 |
| 29 | 1.1 | 2.1 | 1.5 | 4.1 | 7 | 1.9 | 1.5 | .8 | .5 | .5 | .5 | .6 |
| 30 | 1.1 | 1.7 | 1.6 | 3.8 | - | 1.6 | 1.3 | .8 | .5 | .4 | .5 | .6 |
| 31 | 1.1 | - | 1.6 | 3.6 | - | 4.4 | - | .6 | - | .4 | .4 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 41.3 | 2.2 | 1.1 | 1.33 | 82 |
| November..... | 39.0 | 2.3 | 1.1 | 1.30 | 77 |
| December..... | 45.6 | 1.9 | 1.3 | 1.47 | 90 |
| Calendar year 1939..... | 1,924.1 | 291 | .4 | 5.27 | 3,810 |
| January..... | 1,656.5 | 1,380 | 1.6 | 52.8 | 3,250 |
| February..... | 1,195.5 | 315 | .5 | 41.2 | 2,370 |
| March..... | 89.6 | 6.5 | 1.6 | 2.66 | 176 |
| April..... | 97.3 | 28 | 1.1 | 3.24 | 193 |
| May..... | 25.4 | 1.1 | .6 | .82 | 50 |
| June..... | 18.8 | .9 | .5 | .63 | 37 |
| July..... | 14.7 | .6 | .4 | .47 | 29 |
| August..... | 14.3 | .5 | .4 | .46 | 28 |
| September..... | 16.4 | .6 | .4 | .55 | 33 |
| Water year 1939-40..... | 3,233.4 | 1,380 | .4 | 8.83 | 6,420 |

Peak discharge.- Jan. 8 (9:45 a.m.) 7,550 sec.-ft.; Feb. 2 (1:30 a.m.) 632 sec.-ft.; Feb. 3 (7:15 p.m.) 1,180 sec.-ft.; Apr. 1 (6:30 a.m.) 37 sec.-ft.

O'Neill ditch near Ysidora, Calif.

Location.- Water-stage recorder, lat. 33°19'40", long. 117°19'45", 100 feet upstream from point of discharge into O'Neill Reservoir and 6 miles northeast of Ysidora.

Records available.- October 1930 to September 1940.

Average discharge.- 10 years, 3.16 second-feet.

Extremes.- Maximum daily discharge during year, 10 second-feet May 21; no flow for several months.
1930-40: Maximum daily discharge, 35 second-feet May 24, 1937; no flow during parts of each year.

Remarks.- Ditch diverts water from Santa Margarita River.

Cooperation.- Records furnished by Santa Margarita ranch.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|
| 1 | | | | | | | | 0 | 5.5 | 4.4 | 2.2 | 3.0 |
| 2 | | | | | | | | 0 | 5.5 | 4.7 | 2.4 | 3.6 |
| 3 | | | | | | | | 0 | 6 | 4.6 | 2.8 | 4.1 |
| 4 | | | | | | | | 0 | 6 | 4.3 | 2.5 | 4.1 |
| 5 | | | | | | | | 0 | 6 | 3.7 | 2.3 | 4.0 |
| 6 | | | | | | | | 0 | 6.5 | 3.0 | 2.5 | 3.8 |
| 7 | | | | | | | | 0 | 7 | 2.5 | 2.5 | 4.1 |
| 8 | | | | | | | | 0 | 8.5 | 2.2 | 2.3 | 3.3 |
| 9 | | | | | | | | 0 | 7.5 | 1.7 | 2.5 | 2.8 |
| 10 | | | | | | | | 0 | 6.5 | 1.4 | 3.2 | 2.5 |
| 11 | | | | | | | | 0 | 5.5 | .8 | 2.6 | 3.1 |
| 12 | | | | | | | | 0 | 5.5 | .8 | 2.7 | 3.9 |
| 13 | | | | | | | | 0 | 4.6 | .9 | 3.1 | 3.8 |
| 14 | | | | | | | | 0 | 4.9 | 1.3 | 3.3 | 3.7 |
| 15 | | | | | | | | 0 | 5 | 1.5 | 3.0 | 3.7 |
| 16 | | | | | | | | 3.5 | 5.5 | 1.5 | 2.9 | 4.1 |
| 17 | | | | | | | | 8 | 5 | 2.0 | 3.2 | 4.3 |
| 18 | | | | | | | | 9 | 4.5 | 2.3 | 2.5 | 4.4 |
| 19 | | | | | | | | 9 | 4.1 | 2.1 | 2.0 | 4.4 |
| 20 | | | | | | | | 9.5 | 3.6 | 2.5 | 2.3 | 4.8 |
| 21 | | | | | | | | 10 | 3.6 | 2.0 | 2.2 | 4.3 |
| 22 | | | | | | | | 9.5 | 4.4 | 1.6 | 2.5 | 4.9 |
| 23 | | | | | | | | 8.5 | 4.2 | 1.3 | 2.9 | 4.8 |
| 24 | | | | | | | | 8 | 4.0 | .9 | 3.4 | 4.8 |
| 25 | | | | | | | | 7.5 | 3.9 | .9 | 3.5 | 4.7 |
| 26 | | | | | | | | 7.5 | 3.7 | 1.0 | 3.2 | 4.4 |
| 27 | | | | | | | | 7 | 4.2 | 1.9 | 2.9 | 4.1 |
| 28 | | | | | | | | 7.5 | 3.6 | 2.0 | 2.7 | 4.0 |
| 29 | | | | | | | | 7 | 3.9 | 2.1 | 2.7 | 3.9 |
| 30 | | | | | | | | 6 | 4.3 | 2.2 | 2.7 | 4.1 |
| 31 | | | | | | | | 5.5 | - | 2.1 | 2.4 | - |
| Month | | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| October..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| November..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| December..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| Calendar year 1939..... | | | | | | | | 730.9 | 17.8 | 0 | 2.00 | 1,450 |
| January..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| February..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| March..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| April..... | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| May..... | | | | | | | | 123.0 | 10 | 0 | 3.97 | 244 |
| June..... | | | | | | | | 153.2 | 8.5 | 3.6 | 5.11 | 304 |
| July..... | | | | | | | | 66.2 | 4.7 | .8 | 2.14 | 131 |
| August..... | | | | | | | | 63.9 | 3.6 | 2.0 | 2.71 | 166 |
| September..... | | | | | | | | 120.0 | 4.9 | 2.6 | 4.00 | 268 |
| Water year 1939-40..... | | | | | | | | 546.3 | 10 | 0 | 1.49 | 1,080 |

SAN JUAN CREEK BASIN

San Juan Creek near San Juan Capistrano, Calif.

Location.- Water-stage recorder, lat. 33°30'50", long. 117°37'40", in Mission Viejo grant, at Ortega State highway bridge, 2½ miles east of San Juan Capistrano, Orange County. Altitude of gage, about 150 feet.

Drainage area.- 110 square miles.

Records available.- October 1928 to September 1940

Average discharge.- 12 years, 13.9 second-feet.

Extremes.- Maximum discharge during year, 790 second-feet Feb. 3 (gage height, 3.18 feet); minimum daily, 0.5 second-foot at times in September.
1929-40: Maximum discharge, 13,000 second-feet Mar. 2, 1938, by slope-area method, determined by Corps of Engineers, U. S. Army; no flow at times during most summers.

Remarks.- Records good except those for periods of no gage-height record, which are fair.

Cooperation.- Results of most discharge measurements furnished by Santa Margarita ranch and by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | | |
|-------------------------|------|------|------|------|------|------------------|------|---------|------|---------|------|-------|--|----------------------|--|
| 1 | 5 | 1.6 | 1.8 | 2.3 | 76 | 32 | 138 | 12 | 2.1 | 1.7 | 1.0 | 0.6 | | | |
| 2 | 4.6 | 1.6 | 1.8 | 2.3 | 122 | 30 | 69 | 11 | 1.8 | 1.6 | .9 | .7 | | | |
| 3 | 4.6 | 1.6 | 2.0 | 2.1 | 255 | 27 | 45 | 10 | 1.7 | 1.6 | .8 | .7 | | | |
| 4 | 4.6 | 1.6 | 2.0 | 3.1 | 216 | 24 | 37 | 10 | 1.8 | 1.4 | .8 | .7 | | | |
| 5 | 4.6 | 1.5 | 2.1 | 2.3 | f88 | 23 | 32 | 10 | 1.8 | 1.2 | .8 | .7 | | | |
| 6 | 4.6 | 1.6 | 2.1 | 3.0 | f55 | f22 | 29 | 9.5 | 2.0 | 1.2 | .8 | .6 | | | |
| 7 | 4.6 | 1.6 | 2.1 | 4.4 | 41 | f20 | 27 | 9.5 | 2.0 | 1.1 | .7 | .6 | | | |
| 8 | 4.4 | 1.7 | 2.5 | 114 | 32 | 18 | 23 | 9.5 | 2.1 | 1.1 | .7 | .6 | | | |
| 9 | 3.9 | 1.7 | 2.5 | 21 | 28 | 17 | 20 | 9 | 2.1 | 1.2 | .8 | .5 | | | |
| 10 | 3.3 | 1.7 | 2.5 | 11 | 26 | 16 | 20 | 8 | 2.0 | 1.1 | .9 | .6 | | | |
| 11 | 3.0 | 1.7 | 2.5 | 9.5 | 23 | 15 | 19 | 7.5 | 1.7 | .9 | .8 | .5 | | | |
| 12 | 2.9 | 1.7 | 2.5 | 44 | 19 | 14 | 17 | 7 | 1.7 | .9 | .9 | .5 | | | |
| 13 | 2.8 | 1.7 | 2.0 | 25 | 17 | 14 | 16 | 6.5 | 1.7 | .8 | .8 | .5 | | | |
| 14 | 2.8 | 1.7 | 2.0 | 9.5 | 24 | 14 | a14 | 5 | 1.7 | .9 | .7 | .5 | | | |
| 15 | 2.9 | 1.8 | 2.0 | 8 | 30 | 13 | a13 | 4.4 | 1.7 | .9 | .8 | .5 | | | |
| 16 | 2.9 | 2.0 | 2.0 | 6.5 | 22 | 13 | a12 | 3.4 | 1.7 | .9 | .7 | .6 | | | |
| 17 | 2.6 | 2.0 | 2.0 | 5.5 | 20 | 12 | a12 | 3.2 | 1.7 | .7 | .7 | .6 | | | |
| 18 | 2.6 | 2.0 | 2.0 | 5.5 | 19 | 12 | a12 | 3.2 | 1.7 | .7 | .8 | .5 | | | |
| 19 | 2.6 | 2.0 | 2.0 | 5 | 18 | 13 | a12 | 3.4 | 1.7 | .8 | .8 | .5 | | | |
| 20 | 2.6 | 2.0 | 2.0 | 5 | 17 | 12 | a12 | 3.9 | 1.7 | .8 | .9 | .5 | | | |
| 21 | 2.1 | 2.0 | 1.8 | 4.9 | 15 | 12 | a12 | 4.1 | 1.7 | 1.0 | .7 | .5 | | | |
| 22 | 2.0 | 2.0 | 1.7 | 5 | 19 | 12 | a12 | 4.1 | 1.8 | 1.3 | .6 | .6 | | | |
| 23 | 2.0 | 1.7 | 2.1 | 9.5 | 18 | 11 | f12 | 3.9 | 1.8 | 2.3 | .7 | .6 | | | |
| 24 | 2.1 | 1.6 | 2.5 | 14 | 16 | 11 | 12 | 3.6 | 1.8 | 2.6 | .7 | .6 | | | |
| 25 | 2.1 | 1.6 | 2.3 | 7 | 22 | 10 | 12 | 3.4 | 1.8 | 1.8 | .7 | .6 | | | |
| 26 | 2.1 | 1.5 | 2.3 | 6 | 66 | 11 | 18 | 3.4 | 2.0 | 1.0 | .8 | .5 | | | |
| 27 | 2.3 | 1.6 | 2.3 | 5 | 44 | 11 | 19 | 3.2 | 2.0 | .9 | .8 | .5 | | | |
| 28 | 2.0 | 2.1 | 2.3 | 4.6 | 38 | 12 | 18 | 3.0 | 1.8 | .9 | .7 | .5 | | | |
| 29 | 2.1 | 1.8 | 2.1 | 4.9 | 37 | 10 | 14 | 2.3 | 1.8 | .8 | .7 | .6 | | | |
| 30 | 2.0 | 1.8 | 2.1 | 4.6 | - | 9.5 | 13 | 2.6 | 1.7 | .8 | .6 | .6 | | | |
| 31 | 1.6 | - | 2.3 | 5.5 | - | 39 | - | 2.5 | - | .9 | .6 | - | | | |
| Month | | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 94 | | 5 | | 1.6 | | 3.03 | | 186 | |
| November..... | | | | | | 52.5 | | 2.1 | | 1.5 | | 1.75 | | 104 | |
| December..... | | | | | | 66.3 | | 2.6 | | 1.7 | | 2.14 | | 132 | |
| Calendar year 1939..... | | | | | | 2,419.3 | | 130 | | .5 | | 6.63 | | 4,800 | |
| January..... | | | | | | 360 | | 114 | | 2.1 | | 11.5 | | 714 | |
| February..... | | | | | | 1,423 | | 255 | | 15 | | 49.1 | | 2,620 | |
| March..... | | | | | | 509.5 | | 39 | | 9.5 | | 16.4 | | 1,010 | |
| April..... | | | | | | 721 | | 138 | | 12 | | 24.0 | | 1,430 | |
| May..... | | | | | | 182.6 | | 12 | | 2.5 | | 5.89 | | 362 | |
| June..... | | | | | | 54.6 | | 2.1 | | 1.7 | | 1.82 | | 108 | |
| July..... | | | | | | 35.8 | | 2.6 | | .7 | | 1.15 | | 71 | |
| August..... | | | | | | 23.5 | | 1.0 | | .6 | | .76 | | 47 | |
| September..... | | | | | | 17.1 | | .7 | | .5 | | .57 | | 34 | |
| Water year 1939-40..... | | | | | | 3,540 | | 255 | | .5 | | 9.67 | | 7,020 | |

Peak discharge.- Jan. 8 (12:30 p.m.) 373 sec.-ft.; Feb. 2 (6 p.m.) 164 sec.-ft.; Feb. 3 (6:30 p.m.) 790 sec.-ft.; Apr. 1 (12 m.) 200 sec.-ft.

a No gage-height record; discharge computed on basis of four discharge measurements.

f Discharge computed from fragmentary gage-height record.

Trabuco Creek near San Juan Capistrano, Calif.

Location.- Water-stage recorder, lat. 33°31'30", long. 117°40'15", in SW¼ sec. 25, T. 7 S., R. 8 W., on State highway bridge, 1½ miles north of San Juan Capistrano.

Drainage area.- 36.5 square miles.

Records available.- October 1930 to September 1940.

Average discharge.- 10 years, 6.36 second-feet.

Extremes.- Maximum discharge during year, 358 second-feet Feb. 3 (gage height, 4.15 feet); no flow during part of year.

1930-40: Maximum discharge, 9,240 second-feet Feb. 6, 1937; no flow during part of each year.

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

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | 0 | 0.1 | 0 | 39 | 9 | 43 | 1.3 | .016 | | | |
| 2 | | 0 | 0 | 0 | 29 | 7.5 | 19 | 1.8 | | | | |
| 3 | | 0 | 0 | 0 | 79 | 6 | 11 | 1.8 | | | | |
| 4 | | 0 | 0 | 0 | 76 | 5.5 | 9 | 1.6 | | | | |
| 5 | | 0 | 0 | 0 | 37 | 5 | 7.5 | 1.6 | | | | |
| 6 | | 0 | 0 | 0 | 24 | 4.1 | 6.5 | 1.5 | | | | |
| 7 | | 0 | 0 | .5 | 15 | 3.8 | 6 | 1.4 | | | | |
| 8 | | 0 | 0 | 45 | 12 | 3.8 | 5.5 | 1.3 | | | | |
| 9 | | 0 | 0 | .8 | 8.5 | 3.6 | 4.6 | 1.1 | | | | |
| 10 | | 0 | 0 | 0 | 6 | 3.3 | 3.9 | .9 | | | | |
| 11 | | 0 | 0 | 0 | 4.9 | 3.0 | 3.6 | .8 | | | | |
| 12 | | .8 | 0 | 20 | 3.2 | 2.9 | 3.0 | .7 | | | | |
| 13 | | 0 | 0 | 13 | 2.6 | 2.8 | 2.7 | .6 | | | | |
| 14 | | 0 | 0 | 6 | 4.9 | 2.7 | 2.4 | .6 | | | | |
| 15 | | .5 | 0 | 3.6 | 6 | 2.7 | 2.3 | .6 | | | | |
| 16 | | .7 | 0 | .1 | 4.0 | 2.6 | 2.2 | .5 | | | | |
| 17 | | .6 | 0 | 0 | 2.6 | 2.5 | 2.1 | .5 | | | | |
| 18 | | .4 | 0 | 0 | 1.8 | 2.4 | 2.0 | .4 | | | | |
| 19 | | .3 | 0 | 0 | 1.5 | 2.1 | 1.9 | .4 | | | | |
| 20 | | .2 | 0 | 0 | 1.8 | 1.8 | 1.8 | .3 | | | | |
| 21 | | .2 | 0 | 0 | 1.4 | 1.6 | 1.7 | .2 | | | | |
| 22 | | .1 | 0 | 0 | 2.0 | 1.4 | 1.6 | .2 | | | | |
| 23 | | 0 | 0 | 1.6 | 1.6 | 1.2 | 1.5 | .2 | | | | |
| 24 | | 0 | 0 | 4.4 | 1.4 | 1.0 | 1.4 | .2 | | | | |
| 25 | | 0 | 0 | 2.0 | 5.5 | .9 | 1.3 | .1 | | | | |
| 26 | | 0 | 0 | 1.3 | 24 | .9 | 3.8 | .1 | | | | |
| 27 | | 0 | 0 | .8 | 15 | .9 | 4.5 | .1 | | | | |
| 28 | | 1.0 | 0 | .2 | 14 | .9 | 3.2 | .1 | | | | |
| 29 | | .6 | 0 | 0 | 13 | .8 | 2.8 | .1 | | | | |
| 30 | | .2 | 0 | 0 | - | .8 | 2.0 | .1 | | | | |
| 31 | | - | 0 | .1 | - | 15 | - | .1 | | - | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | | 5.6 | 1.0 | 0 | .19 | 11 | | | |
| December..... | | | | | .1 | .1 | 0 | .003 | .2 | | | |
| Calendar year 1939..... | | | | | 611.45 | 82 | 0 | 1.68 | 1,210 | | | |
| January..... | | | | | 99.4 | 45 | 0 | 3.21 | 197 | | | |
| February..... | | | | | 436.7 | 79 | 1.4 | 15.1 | 866 | | | |
| March..... | | | | | 102.5 | 15 | .8 | 3.31 | 203 | | | |
| April..... | | | | | 163.8 | 43 | 1.3 | 5.46 | 325 | | | |
| May..... | | | | | 21.7 | 1.8 | .1 | .70 | 43 | | | |
| June..... | | | | | .49 | - | - | .016 | 1.0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 830.29 | 79 | 0 | 2.27 | 1,650 | | | |

e Discharge estimated.

ALISO CREEK BASIN

Aliso Creek at El Toro, Calif.

Location.- Water-stage recorder, lat. 33°37'15", long. 117°41'20", in Canada de Los Alisos grant, on Second Street Bridge, at El Toro, Orange County. Altitude of gage, about 440 feet.

Drainage area.- 8.5 square miles.

Records available.- October 1930 to September 1940.

Average discharge.- 10 years, 0.89 second-foot.

Extremes.- Maximum discharge during year, 528 second-feet Feb. 3; no flow for several months.

1930-40: Maximum discharge, 1,950 second-feet Feb. 6, 1937; no flow during most of each year.

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

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | 0 | | 0 | 18 | 0 | 7 | | | | | |
| 2 | | 0 | | 0 | 7 | 0 | 0 | | | | | |
| 3 | | 0 | | 0 | 34 | 0 | 0 | | | | | |
| 4 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 5 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 6 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 7 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 8 | | 0 | | 14 | 0 | 0 | 0 | | | | | |
| 9 | | 0 | | .8 | 0 | 0 | 0 | | | | | |
| 10 | | 0 | | .1 | 0 | 0 | 0 | | | | | |
| 11 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 12 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 13 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 14 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 15 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 16 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 17 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 18 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 19 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 20 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 21 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 22 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 23 | | 0 | | 8.5 | 0 | 0 | 0 | | | | | |
| 24 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 25 | | 0 | | 0 | 7 | 0 | 0 | | | | | |
| 26 | | 0 | | 0 | 0 | 0 | 1.1 | | | | | |
| 27 | | 14 | | 0 | 0 | 0 | 2.0 | | | | | |
| 28 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 29 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 30 | | 0 | | 0 | 0 | 0 | 0 | | | | | |
| 31 | | - | | 0 | - | 11 | - | | | | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| November..... | | | | 14 | | 14 | 0 | .5 | 28 | | | |
| December..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Calendar year 1939..... | | | | 127.4 | | 37 | 0 | .35 | 253 | | | |
| January..... | | | | 23.4 | | 14 | 0 | .75 | 46 | | | |
| February..... | | | | 66 | | 34 | 0 | 2.3 | 131 | | | |
| March..... | | | | 11 | | 11 | 0 | .4 | 22 | | | |
| April..... | | | | 10.1 | | 7 | 0 | .34 | 20 | | | |
| May..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| June..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| July..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| August..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| September..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | 124.5 | | 34 | 0 | .34 | 247 | | | |

Santa Ana River near Mentone, Calif.

Location.- Water-stage recorder, lat. 34°06'40", long. 117°06'00", in SW¼ sec. 4, T 1 S., R. 2 W., near mouth of canyon, 0.4 mile upstream from Southern California Edison Co.'s Mentone power plant and 3½ miles northeast of Mentone. Altitude of gage, about 1,900 feet. Auxiliary water-stage recorder at Greenspot Bridge, about 1 mile downstream.

Drainage area.- 189 square miles.

Records available.- July 1896 to September 1940.

Average discharge.- 42 years (1896-1909, 1910-15, 1916-40), 40.4 second-feet. Average combined discharge of Santa Ana River and canals, 39 years (1896-98, 1902-15, 1916-40), 92.7 second-feet.

Extremes (river only).- Maximum discharge during year, 1,390 second-feet Jan. 8, from rating curve extended above 650 second-feet by logarithmic plotting and checked by velocity-depth studies; no flow at times in August and September.
1896-40: Maximum discharge, 52,300 second-feet Mar. 2, 1938, by slope-area method; no flow at times in several years.

Remarks.- Records fair. Storage at Bear Valley Reservoir and diversions above station. Sum of discharge of river, Southern California Edison Co.'s canal and Greenspot pipe line near Mentone, is given in table on next page.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0.8 | 2.1 | 1.7 | 0.6 | 24 | 17 | 126 | 6.5 | 1.0 | 0.3 | 0.3 | 0.1 |
| 2 | 1.5 | 1.9 | 1.1 | .6 | 27 | 14 | 50 | 6 | 1.0 | .3 | .3 | .1 |
| 3 | 4.2 | 2.3 | .9 | .6 | 43 | 12 | 32 | 6 | 1.0 | .3 | .3 | .1 |
| 4 | 3.0 | 1.6 | .8 | 8 | 39 | 10 | 23 | 5.5 | .9 | .3 | .3 | .1 |
| 5 | 4.8 | 1.7 | .7 | 6.5 | 23 | 8.5 | 15 | 5 | .9 | .3 | .3 | |
| 6 | 3.7 | 1.4 | .6 | 3.5 | 22 | 8 | 11 | 5 | .8 | .2 | .3 | |
| 7 | 6.5 | 1.0 | .6 | 16 | 17 | 7 | 9 | 5 | .7 | .2 | .3 | |
| 8 | 3.7 | 1.6 | .5 | d512 | 13 | 7 | 8 | 4.2 | .7 | .2 | .3 | |
| 9 | 5.5 | 2.1 | .6 | a90 | 15 | 6 | 7 | 3.6 | .6 | .2 | .3 | |
| 10 | 4.2 | 1.4 | .5 | 44 | 12 | 8 | 10 | 2.9 | .6 | .2 | .3 | |
| 11 | 1.2 | 1.2 | 2.4 | 39 | 12 | 8 | 8 | 2.0 | .6 | .2 | .3 | |
| 12 | 2.0 | 1.1 | .8 | 46 | 11 | 7 | 7 | 1.7 | .6 | .3 | .3 | |
| 13 | .4 | 1.0 | .8 | 29 | 10 | 5.5 | 6 | 1.7 | .6 | .3 | .3 | |
| 14 | 4.8 | 3.9 | .7 | a16 | 14 | 5 | 6 | 1.4 | .6 | .3 | .3 | |
| 15 | 3.1 | 1.7 | .7 | a12 | 13 | 4.8 | 19 | a1.4 | .6 | .3 | .3 | |
| 16 | 3.4 | 1.3 | .6 | a9 | 7 | 4.5 | 19 | a1.3 | .6 | .3 | .3 | |
| 17 | 1.9 | 1.1 | .6 | a7 | 6 | 4.2 | 9 | a1.3 | .6 | .3 | .3 | |
| 18 | .5 | 1.0 | .6 | a5 | 6 | 6.5 | 6 | a1.2 | .6 | .3 | .3 | .04 |
| 19 | 3.8 | .8 | .5 | a5.5 | 5.5 | 8.5 | 6 | a1.2 | .6 | .3 | .3 | |
| 20 | 1.7 | .9 | .4 | 6 | 5.5 | 5.5 | 6 | a1.2 | .6 | .3 | .2 | |
| 21 | 1.2 | .8 | .4 | 9 | 5 | 5.5 | 6 | 1.1 | .6 | .3 | .2 | |
| 22 | 2.5 | .7 | .3 | 5 | 7.5 | 4.9 | 5.5 | 1.1 | .6 | .3 | .2 | |
| 23 | 7 | .6 | 6.5 | 5.5 | 12 | 4.8 | 5.5 | 1.2 | .6 | .3 | .2 | |
| 24 | 5.5 | .6 | 4.6 | 13 | 8 | 4.9 | 5 | 1.2 | .6 | .3 | .2 | |
| 25 | 3.0 | .6 | 1.4 | 7 | d102 | 5 | 5.5 | 1.2 | .5 | .3 | .2 | |
| 26 | 1.0 | .6 | 1.3 | 7.5 | d364 | 5.5 | 31 | 1.2 | .5 | .3 | .2 | |
| 27 | 1.6 | 1.2 | .9 | 8 | 99 | 7.5 | 14 | 1.2 | .4 | .3 | .2 | |
| 28 | .5 | 14 | .5 | 7 | 21 | 6.5 | 9.5 | 1.2 | .4 | .3 | .2 | |
| 29 | 1.1 | 4.0 | .6 | 7 | 23 | 4.5 | 8.5 | 1.1 | .4 | .3 | .1 | |
| 30 | .3 | 4.9 | .6 | 6 | - | 4.2 | 7 | 1.1 | .4 | .3 | .1 | |
| 31 | 4.2 | - | .6 | 5.5 | - | 79 | - | 1.1 | - | .3 | .1 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 88.6 | 7 | 0.3 | 2.86 | 176 | | |
| November..... | | | | | | 59.1 | 14 | .6 | 1.97 | 117 | | |
| December..... | | | | | | 33.8 | 6.5 | .3 | 1.09 | 67 | | |
| Calendar year 1939..... | | | | | | 3,248.6 | 248 | .3 | 8.90 | 6,440 | | |
| January..... | | | | | | 936.8 | 512 | .6 | 3.02 | 1,860 | | |
| February..... | | | | | | 966.5 | 364 | 5 | 32.6 | 1,920 | | |
| March..... | | | | | | 289.1 | 79 | 4.2 | 9.33 | 573 | | |
| April..... | | | | | | 480.5 | 126 | 5 | 16.0 | 953 | | |
| May..... | | | | | | 76.8 | 6.5 | 1.1 | 2.48 | 152 | | |
| June..... | | | | | | 19.2 | 1.0 | .4 | .64 | 38 | | |
| July..... | | | | | | 8.7 | .3 | .2 | .28 | 17 | | |
| August..... | | | | | | 7.8 | .3 | .1 | .25 | 15 | | |
| September..... | | | | | | 1.44 | .1 | - | .048 | 2.9 | | |
| Water year 1939-40..... | | | | | | 2,968.34 | 512 | - | 8.11 | 5,890 | | |

Peak discharge.- Jan. 8 (9 a.m.) 1,390 sec.-ft.; Feb. 26 (1:30 a.m.) 830 sec.-ft.; Mar. 31 (11 p.m.) 239 sec.-ft.

No gage-height record; discharge computed on basis of probable shape of recession curve, rainfall records, and records for City Creek near Highland, or interpolated.

Doubtful gage-height record; discharge computed from records for auxiliary recorder.

Note.- Discharge less than 0.1 second-foot Sept. 5-30, no figures of daily discharge given.

SANTA ANA RIVER BASIN

Combined discharge, in second-feet, of Santa Ana River and canals near Mentone, Calif., water year
October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 50 | 75 | 55 | 43 | 76 | 99 | 191 | 70 | 69 | 68 | 68 | 76 |
| 2 | 48 | 78 | 51 | 43 | 83 | 91 | 136 | 66 | 66 | 73 | 76 | 78 |
| 3 | 48 | 78 | 51 | 45 | 99 | 84 | 116 | 66 | 70 | 70 | 78 | 76 |
| 4 | 48 | 78 | 46 | 65 | 115 | 79 | 104 | 68 | 68 | 70 | 73 | 73 |
| 5 | 54 | 70 | 46 | 54 | 89 | 78 | 97 | 63 | 70 | 73 | 70 | 73 |
| 6 | 50 | 71 | 46 | 52 | 86 | 72 | 91 | 63 | 65 | 73 | 70 | 65 |
| 7 | 52 | 71 | 43 | 64 | 79 | 71 | 89 | 63 | 65 | 70 | 73 | 65 |
| 8 | 53 | 75 | 42 | 524 | 74 | 71 | 82 | 64 | 62 | 73 | 70 | 68 |
| 9 | 46 | 75 | 43 | 139 | 71 | 70 | 81 | 72 | 62 | 70 | 73 | 73 |
| 10 | 46 | 66 | 48 | 117 | 68 | 66 | 79 | 74 | 65 | 78 | 76 | 73 |
| 11 | 57 | 66 | 48 | 105 | 65 | 66 | 77 | 78 | 65 | 76 | 78 | 81 |
| 12 | 66 | 61 | 49 | 134 | 64 | 63 | 76 | 81 | 70 | 81 | 78 | 78 |
| 13 | 68 | 63 | 49 | 91 | 60 | 58 | 72 | 85 | 78 | 76 | 76 | 81 |
| 14 | 75 | 64 | 49 | 77 | 67 | 58 | 72 | 87 | 73 | 76 | 84 | 78 |
| 15 | 79 | 70 | 49 | 66 | 58 | 58 | 91 | 87 | 73 | 81 | 84 | 81 |
| 16 | 79 | 66 | 49 | 55 | 55 | 58 | 91 | 87 | 73 | 81 | 81 | 76 |
| 17 | 76 | 69 | 49 | 57 | 54 | 52 | 82 | 82 | 73 | 81 | 81 | 76 |
| 18 | 76 | 69 | 49 | 54 | 54 | 72 | 82 | 68 | 81 | 76 | 70 | 70 |
| 19 | 77 | 69 | 50 | 52 | 54 | 58 | 72 | 69 | 60 | 68 | 68 | 73 |
| 20 | 85 | 71 | 53 | 50 | 50 | 56 | 70 | 65 | 62 | 65 | 68 | 68 |
| 21 | 82 | 74 | 58 | 49 | 50 | 56 | 70 | 70 | 60 | 68 | 65 | 65 |
| 22 | 84 | 77 | 58 | 50 | 55 | 55 | 70 | 66 | 60 | 62 | 68 | 65 |
| 23 | 95 | 74 | 72 | 50 | 62 | 58 | 70 | 71 | 61 | 65 | 65 | 60 |
| 24 | 98 | 71 | 54 | 55 | 57 | 53 | 69 | 71 | 69 | 73 | 73 | 68 |
| 25 | 89 | 74 | 46 | 49 | 155 | 53 | 66 | 71 | 68 | 73 | 70 | 60 |
| 26 | 86 | 70 | 43 | 50 | 364 | 58 | 110 | 74 | 70 | 73 | 73 | 68 |
| 27 | 84 | 63 | 43 | 48 | 187 | 64 | 85 | 74 | 70 | 73 | 73 | 73 |
| 28 | 82 | 84 | 46 | 45 | 108 | 60 | 78 | 74 | 70 | 73 | 73 | 70 |
| 29 | 81 | 61 | 46 | 49 | 108 | 60 | 74 | 69 | 65 | 68 | 73 | 70 |
| 30 | 76 | 49 | 49 | 43 | - | 58 | 73 | 66 | 65 | 68 | 70 | 73 |
| 31 | 66 | - | 45 | 46 | - | 115 | - | 69 | - | 68 | 73 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 2,156 | 98 | 46 | 60.5 | 4,280 | | | |
| November..... | | | | | 2,102 | 84 | 49 | 70.1 | 4,170 | | | |
| December..... | | | | | 1,525 | 72 | 42 | 49.2 | 3,020 | | | |
| Calendar year 1939..... | | | | | 29,182 | 337 | 42 | 79.9 | 57,890 | | | |
| January..... | | | | | 2,421 | 524 | 43 | 78.1 | 4,800 | | | |
| February..... | | | | | 2,538 | 564 | 50 | 87.5 | 5,030 | | | |
| March..... | | | | | 2,052 | 115 | 52 | 66.2 | 4,070 | | | |
| April..... | | | | | 2,597 | 191 | 66 | 86.6 | 5,150 | | | |
| May..... | | | | | 2,247 | 87 | 63 | 72.5 | 4,460 | | | |
| June..... | | | | | 2,015 | 78 | 60 | 67.2 | 4,000 | | | |
| July..... | | | | | 2,248 | 81 | 62 | 72.5 | 4,460 | | | |
| August..... | | | | | 2,277 | 84 | 65 | 73.5 | 4,520 | | | |
| September..... | | | | | 2,154 | 81 | 60 | 71.8 | 4,270 | | | |
| Water year 1939-40..... | | | | | 26,332 | 524 | 42 | 71.9 | 52,230 | | | |

Santa Ana River at E Street Bridge, near San Bernardino, Calif.

Location.— Water-stage recorder, lat. 34°04'00", long. 117°17'45", in San Bernardino grant, at E Street Bridge, about half a mile downstream from San Timoteo Creek, 1 mile upstream from Warm Creek, and 3 miles south of San Bernardino, San Bernardino County. Altitude of gage, about 970 feet.

Records available.— March 1939 to September 1940.

Extremes.— Maximum discharge during the year, 2,960 second-feet Jan. 8 (gage height, 4.90 feet), from rating curve extended above 1,000 second-feet by logarithmic plotting; no flow on many days.

1939-40: Maximum discharge, that of Jan. 8, 1940; no flow on many days in 1940.

Remarks.— Records fair. Practically entire flow during the period July 2 to Sept. 9 was pumped water turned into channel above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|------|---------|------|------|-----|----------------------|------|------|-------|
| 1 | 0.5 | 1.0 | 5.5 | 2.5 | 58 | 22 | 21 | 3.0 | 3.3 | 0 | 9.5 | 4.7 |
| 2 | .4 | 1.0 | 5 | 2.5 | a15 | 17 | 8 | 3.0 | 3.5 | a5.5 | 9.5 | 4.0 |
| 3 | .4 | 1.2 | 5 | a2.5 | 52 | 12 | 3.5 | 2.8 | 3.0 | a12 | 9.5 | 3.4 |
| 4 | .4 | 1.2 | 4.5 | 7.5 | a34 | 12 | 3.3 | 2.8 | 2.4 | a12 | 9 | 3.1 |
| 5 | .4 | 1.2 | 3.4 | a6.5 | 12 | 12 | 3.5 | 3.0 | 2.0 | a12 | 9 | 2.5 |
| 6 | .3 | 1.0 | 2.5 | 5.5 | 13 | 11 | 2.8 | 3.0 | 1.8 | a12 | 9 | 2.1 |
| 7 | .6 | 1.2 | 2.5 | 22 | 14 | 11 | 2.4 | 2.8 | 2.4 | a12 | 9.5 | 1.4 |
| 8 | .5 | 1.8 | 2.5 | 596 | 19 | 11 | 2.2 | 2.8 | 1.5 | a12 | 9.5 | .7 |
| 9 | .5 | 1.0 | 2.2 | 117 | 19 | 9.5 | 2.0 | 2.8 | a.5 | 12 | 9.5 | .4 |
| 10 | .4 | 1.0 | 3.4 | a35 | 19 | 8 | 1.7 | 2.8 | a.3 | 11 | 9 | 0 |
| 11 | .3 | 1.0 | 3.4 | 19 | 18 | 8 | 1.7 | 2.6 | a.1 | 11 | 8.5 | 0 |
| 12 | .4 | 1.0 | 2.5 | 16 | 21 | 7 | 1.4 | 2.8 | a.1 | 11 | 8.5 | 0 |
| 13 | .3 | 1.2 | a2.6 | 11 | 19 | 6 | 1.3 | 2.4 | a.1 | 11 | 8 | 0 |
| 14 | .4 | 1.0 | a2.8 | 11 | 24 | 5.5 | 1.3 | 2.6 | a.1 | 10 | 8 | 0 |
| 15 | .5 | .8 | 3.0 | 9 | 18 | 5.5 | 1.7 | 2.8 | a.1 | 10 | 8 | 0 |
| 16 | .4 | .8 | 3.0 | 7.5 | 16 | 5.5 | 1.7 | 2.8 | a.1 | 10 | 8 | 0 |
| 17 | .5 | 1.2 | 3.0 | 5.5 | 13 | 4.7 | 1.7 | 3.0 | a.1 | 10 | a8 | 0 |
| 18 | .4 | 1.5 | 3.4 | 5.5 | 11 | 4.1 | 1.4 | 3.5 | a.1 | 10 | a8 | 0 |
| 19 | .5 | 1.5 | 2.5 | 5 | 10 | 3.8 | 1.3 | 3.5 | 0 | 10 | a8 | 0 |
| 20 | .5 | 1.2 | 3.0 | 4.0 | 9 | 3.5 | 1.4 | 3.3 | 0 | 10 | a7.5 | 0 |
| 21 | .5 | 1.2 | 3.4 | 5 | 8 | 3.5 | 1.4 | 2.8 | 0 | 10 | 7.5 | 0 |
| 22 | .6 | 1.5 | 3.0 | 5 | 10 | 3.3 | 1.6 | 2.2 | 0 | 10 | 7.5 | 0 |
| 23 | .8 | 1.5 | 5.5 | 27 | 9 | 3.3 | 1.4 | 2.4 | 0 | 10 | 7.5 | 0 |
| 24 | .8 | 1.5 | 4.5 | 24 | 9 | 3.0 | 1.6 | 2.6 | 0 | 10 | 7.5 | 0 |
| 25 | 1.0 | 1.2 | 3.0 | 19 | 32 | 2.8 | 2.6 | 2.6 | a.2 | 9.5 | 8 | 0 |
| 26 | 1.2 | 1.2 | 3.4 | 16 | 179 | 2.8 | 8 | 2.8 | a.3 | 8.5 | 8 | 0 |
| 27 | 1.2 | 2.9 | 3.0 | a14 | 42 | 2.8 | 3.8 | 3.3 | a.2 | 8.5 | 8.5 | 0 |
| 28 | 1.0 | 28 | 2.2 | 13 | 30 | 2.8 | 3.5 | 3.0 | a.1 | 9 | 9 | 0 |
| 29 | 1.0 | 8 | 2.5 | a12 | 25 | 2.8 | 3.3 | 3.0 | 0 | 9 | 9.5 | 0 |
| 30 | 1.0 | 5.5 | 2.5 | a11 | - | 2.6 | 3.3 | 2.8 | 0 | 9 | 8 | 0 |
| 31 | .8 | - | 2.5 | a10 | - | 16 | - | 2.8 | - | 9 | 5 | - |
| Month | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | |
| October..... | 18.5 | | 1.2 | | 0.3 | | 0.60 | | 37 | | | |
| November..... | 72.3 | | 25 | | .8 | | 2.41 | | 143 | | | |
| December..... | 101.2 | | 5.5 | | 2.2 | | 3.26 | | 201 | | | |
| Calendar year | - | | - | | - | | - | | - | | | |
| January..... | 1,046.5 | | 596 | | 2.5 | | 33.8 | | 2,080 | | | |
| February..... | 758 | | 179 | | 8 | | 26.1 | | 1,500 | | | |
| March..... | 224.8 | | 22 | | 2.6 | | 7.25 | | 446 | | | |
| April..... | 95.8 | | 21 | | 1.3 | | 5.19 | | 190 | | | |
| May..... | 88.4 | | 3.5 | | 2.2 | | 2.85 | | 175 | | | |
| June..... | 22.3 | | 3.5 | | 0 | | .74 | | 44 | | | |
| July..... | 306.0 | | 12 | | 0 | | 9.87 | | 607 | | | |
| August..... | 259.5 | | 9.5 | | 5 | | 6.37 | | 515 | | | |
| September..... | 22.3 | | 4.7 | | 0 | | .74 | | 44 | | | |
| Water year 1939-40..... | 3,015.6 | | 596 | | 0 | | 8.24 | | 5,990 | | | |

Peak discharge.— Jan. 8 (9 a.m.) 2,960 sec.-ft.; Feb. 1 (5 p.m.) 290 sec.-ft.; Feb. 3 (4:30 p.m.) 230 sec.-ft.; Feb. 26 (5 a.m.) 380 sec.-ft.; Mar. 31 (11 p.m.) 106 sec.-ft.

a No gage-height record; discharge for Dec. 13, 14, Jan. 3, 5, 27, June 11-18, July 2-8, Aug. 17-20 interpolated or extrapolated; that for Jan. 10, 29-31, Feb. 2, 4, June 9, 10 computed from the probable shape of recession curve and records for Santa Ana River near Mentone and Warm Creek near Colton; and those for June 25-28 computed on basis of one field estimate of flow and ground-water fluctuations in recorder well.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

SANTA ANA RIVER BASIN

Santa Ana River at Riverside Narrows, near Arlington, Calif.

Location.- Water-stage recorder, lat. 33°58'00", long. 117°26'30", in Jurupa grant, half a mile downstream from Union Pacific Railroad bridge and 3 miles north of Arlington, Riverside County. Altitude of gage, 690 feet.

Records available.- January 1929 to September 1940.

Average discharge.- 10 years (1929-37, 1939-40), 46.4 second-feet.

Extremes.- Maximum discharge during year, 3,000 second-feet Jan. 8, computed on basis of records for Chino Creek and Santa Ana River stations near Prado; minimum daily, 22 second-feet June 29.

1929-40: Maximum discharge, 100,000 second-feet Mar. 2, 1938, by slope-area method; minimum, 20 second-feet Aug. 3, 1937.

Remarks.- Records fair. Several diversions above station.

Cooperation.- Results of one discharge measurement furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | a46 | 28 | 35 | 35 | 146 | 48 | 237 | d40 | 32 | 23 | 29 | 30 |
| 2 | a49 | 29 | 35 | 35 | 82 | d46 | 81 | d39 | 34 | 24 | 29 | 30 |
| 3 | a45 | 30 | 35 | 37 | 188 | d44 | 48 | d37 | 31 | 26 | 29 | 30 |
| 4 | 41 | 30 | 35 | 37 | 97 | 42 | 42 | d56 | 30 | 25 | 29 | 30 |
| 5 | 37 | 30 | d35 | 35 | 61 | d42 | 41 | 35 | 31 | d25 | 28 | 30 |
| 6 | 37 | 30 | d35 | 38 | 56 | d42 | 42 | 35 | 30 | 26 | 29 | d30 |
| 7 | 35 | 31 | d35 | 37 | 53 | d41 | 41 | 37 | 30 | 23 | 28 | d29 |
| 8 | 31 | 30 | d36 | e758 | 47 | d41 | 41 | 34 | 31 | 24 | 28 | d28 |
| 9 | 31 | 31 | d56 | e110 | 45 | 41 | 40 | 34 | 29 | 25 | 28 | 28 |
| 10 | 30 | 32 | d36 | e56 | d44 | 41 | d41 | 31 | 31 | 24 | 28 | 28 |
| 11 | 30 | 32 | 36 | d56 | d42 | 41 | 42 | 31 | 34 | 25 | 28 | 28 |
| 12 | 30 | 32 | d36 | d55 | 41 | 41 | d41 | 31 | 31 | 25 | 28 | 28 |
| 13 | 30 | 32 | d36 | d55 | 40 | d40 | d40 | 28 | 32 | 25 | 29 | 28 |
| 14 | 30 | 31 | 36 | d54 | 40 | d40 | d39 | d29 | 30 | 25 | 29 | d28 |
| 15 | 30 | d31 | 37 | 54 | 42 | d39 | 38 | d30 | 29 | 25 | 29 | d28 |
| 16 | 31 | d31 | 37 | 54 | d41 | d39 | 41 | d30 | 30 | 26 | 28 | 28 |
| 17 | 31 | d32 | 37 | 55 | 40 | d38 | 37 | 30 | 30 | 26 | 26 | 28 |
| 18 | 30 | d32 | 37 | 56 | 38 | 38 | 38 | 31 | 29 | 26 | 28 | 28 |
| 19 | 29 | d32 | 36 | 53 | 38 | 38 | 36 | 32 | 28 | 27 | 29 | 27 |
| 20 | 29 | 32 | 37 | 50 | d39 | d39 | 36 | 30 | 28 | 27 | 29 | 28 |
| 21 | 29 | 34 | 37 | 48 | d39 | d41 | d35 | 31 | 28 | 28 | 30 | 28 |
| 22 | 29 | 36 | 35 | 48 | d40 | 42 | 35 | 31 | 27 | 29 | 30 | 28 |
| 23 | 28 | 37 | 38 | 63 | d40 | 42 | 35 | 29 | 26 | 27 | 31 | 27 |
| 24 | 28 | 37 | 35 | 58 | 41 | 44 | d36 | 30 | 25 | 28 | 30 | 28 |
| 25 | 30 | 38 | 35 | 54 | 47 | d44 | 36 | d30 | 24 | 29 | 31 | 28 |
| 26 | 34 | 36 | 36 | d50 | 214 | d44 | 48 | d30 | 24 | 29 | 34 | 29 |
| 27 | 30 | 39 | d36 | d47 | 58 | d44 | 48 | 30 | 23 | 29 | 29 | 30 |
| 28 | 29 | 41 | d36 | d44 | 53 | 44 | 31 | 23 | 29 | 29 | 30 | 30 |
| 29 | 28 | 38 | d36 | 41 | 51 | 47 | 42 | 30 | 22 | 30 | 29 | 31 |
| 30 | 30 | 36 | d35 | d42 | - | 48 | 41 | 29 | 24 | 30 | 30 | 32 |
| 31 | 28 | - | d35 | 44 | - | 60 | - | 31 | - | 29 | 31 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,004 | 49 | 28 | 32.4 | 1,990 |
| November..... | 989 | 41 | 28 | 33.0 | 1,960 |
| December..... | 1,112 | 38 | 35 | 35.9 | 2,210 |
| Calendar year 1939..... | 13,956 | 211 | 24 | 38.2 | 27,680 |
| January..... | 2,259 | 758 | 35 | 72.9 | 4,480 |
| February..... | 1,785 | 214 | 38 | 61.5 | 3,540 |
| March..... | 1,321 | 60 | 38 | 42.6 | 2,620 |
| April..... | 1,442 | 237 | 35 | 48.1 | 2,860 |
| May..... | 992 | 40 | 28 | 32.0 | 1,970 |
| June..... | 856 | 34 | 22 | 28.5 | 1,700 |
| July..... | 819 | 30 | 23 | 26.4 | 1,620 |
| August..... | 902 | 34 | 26 | 29.1 | 1,790 |
| September..... | 863 | 32 | 27 | 28.8 | 1,710 |
| Water year 1939-40..... | 14,342 | 758 | 22 | 39.2 | 28,450 |

Peak discharge.- Jan. 8 (9:30 a.m.) 3,000 sec.-ft.; Feb. 3 (8 p.m.) 562 sec.-ft.; Feb. 26 (8 a.m.) 510 sec.-ft.; Apr. 1 (3 a.m.) 492 sec.-ft.

a No gage-height record; discharge computed on basis of one measurement and records for station at Hammer Avenue near Corona.

d Doubtful or no gage-height record; discharge interpolated.

e Doubtful gage-height record; discharge computed on basis of records for Chino Creek and Santa Ana River near Prado.

Santa Ana River at Hamner Avenue, near Corona, Calif.

Location.- Water-stage recorder, lat. 33°56'50", long. 117°33'00", in Jurupa grant, 1 mile upstream from Hamner Avenue and 5 miles north of Corona, Riverside County.

Records available.- May 1930 to November 1940 (irrigation seasons only).

Remarks.- Records fair. See list of miscellaneous measurements at end of this report for measurements made between irrigation seasons.

Cooperation.- Results of 29 discharge measurements furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1939-40

| Day | Oct. | Nov. | May | June | July | Aug. | Sept. | Oct. | Nov. | | | |
|-----------------|------|------|-----|------|------|------------------|-------|---------|---------|------|----------------------|--|
| 1 | 42 | 33 | 38 | 28 | 22 | 18 | 20 | 25 | 33 | | | |
| 2 | 53 | 33 | 36 | 27 | 23 | 18 | 22 | 25 | 32 | | | |
| 3 | 45 | 32 | 36 | 26 | 23 | 18 | 21 | 27 | 33 | | | |
| 4 | 40 | 36 | 38 | 28 | 22 | 18 | 19 | 28 | 33 | | | |
| 5 | 38 | 40 | 37 | 27 | 23 | 18 | 22 | 28 | 32 | | | |
| 6 | 35 | 42 | 36 | 26 | 21 | 21 | 22 | 28 | 32 | | | |
| 7 | 36 | 42 | 35 | 26 | 20 | 21 | 22 | 26 | 32 | | | |
| 8 | 36 | 46 | 32 | 25 | 18 | 21 | 21 | 28 | 33 | | | |
| 9 | 37 | 43 | 31 | 22 | 17 | 21 | 22 | 27 | 32 | | | |
| 10 | 34 | 39 | 26 | 26 | 18 | 21 | 21 | 27 | 32 | | | |
| 11 | 31 | 39 | 28 | 28 | 17 | 18 | 20 | 24 | 32 | | | |
| 12 | 28 | 37 | 29 | 28 | 18 | 20 | 18 | 25 | 36 | | | |
| 13 | 26 | 39 | 29 | 26 | 18 | 22 | 18 | 27 | 41 | | | |
| 14 | 31 | 40 | 26 | 25 | 21 | 23 | 20 | 27 | 48 | | | |
| 15 | 27 | 39 | 26 | 26 | 20 | 22 | 22 | 28 | 41 | | | |
| 16 | 27 | 37 | 27 | 25 | 19 | 21 | 22 | 25 | 40 | | | |
| 17 | 28 | 40 | 28 | 24 | 21 | 23 | 24 | 25 | 46 | | | |
| 18 | 26 | 40 | 30 | 23 | 23 | 22 | 22 | 22 | 56 | | | |
| 19 | 26 | 39 | 31 | 20 | 22 | 22 | 22 | 22 | 53 | | | |
| 20 | 27 | 40 | 29 | 18 | 21 | 20 | 22 | 21 | 58 | | | |
| 21 | 23 | 39 | 28 | 20 | 21 | 21 | 24 | 24 | 58 | | | |
| 22 | 24 | 39 | 28 | 19 | 18 | 22 | 25 | 24 | 50 | | | |
| 23 | 27 | 42 | 27 | 19 | 18 | 22 | 27 | 23 | 41 | | | |
| 24 | 34 | 40 | 29 | 18 | 22 | 21 | 24 | 22 | 38 | | | |
| 25 | 36 | 42 | 30 | 18 | 20 | 20 | 25 | 31 | 41 | | | |
| 26 | 37 | 39 | 28 | 19 | 22 | 21 | 23 | 43 | 41 | | | |
| 27 | 37 | 37 | 28 | 21 | 20 | 21 | 23 | 36 | 37 | | | |
| 28 | 32 | 37 | 29 | 20 | 23 | 21 | 22 | 34 | 38 | | | |
| 29 | 30 | 40 | 29 | 21 | 20 | 19 | 24 | 33 | 41 | | | |
| 30 | 34 | 40 | 27 | 21 | 20 | 19 | 23 | 33 | 41 | | | |
| 31 | 33 | - | 27 | - | 21 | 19 | - | 33 | - | | | |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| 1939 | | | | | | | | | | | | |
| October..... | | | | | | 1,020 | | 53 | 23 | 32.9 | 2,020 | |
| November..... | | | | | | 1,171 | | 46 | 32 | 39.0 | 2,320 | |
| 1940 | | | | | | | | | | | | |
| May..... | | | | | | 938 | | 38 | 26 | 30.3 | 1,860 | |
| June..... | | | | | | 700 | | 28 | 18 | 23.3 | 1,390 | |
| July..... | | | | | | 632 | | 23 | 17 | 20.4 | 1,280 | |
| August..... | | | | | | 634 | | 23 | 18 | 20.5 | 1,280 | |
| September..... | | | | | | 662 | | 27 | 18 | 22.1 | 1,310 | |
| October..... | | | | | | 851 | | 43 | 21 | 27.5 | 1,690 | |
| November..... | | | | | | 1,201 | | 58 | 32 | 40.0 | 2,380 | |
| The period..... | | | | | | - | | - | - | - | 11,140 | |

SANTA ANA RIVER BASIN

Santa Ana River at Auburndale Bridge, near Corona, Calif.

Location.- Water-stage recorder, lat. 33°55'30", long. 117°35'40", in Jurupa grant, at Auburndale Bridge, 4 miles northwest of Corona, Riverside County.

Records available.- May 1930 to November 1940 (irrigation seasons only).

Remarks.- Records fair. See list of miscellaneous measurements at end of this report for measurements made between irrigation seasons.

Cooperation.- Results of 27 discharge measurements furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, 1939-40

| Day | Oct. | Nov. | May | June | July | Aug. | Sept. | Oct. | Nov. | | | |
|-----------------|------|------|-----|------------------|------|---------|---------|------|----------------------|--|--|--|
| 1 | 55 | 49 | a63 | 41 | 33 | 32 | 30 | 36 | 48 | | | |
| 2 | 63 | 49 | 61 | 41 | 36 | 32 | 32 | 36 | 48 | | | |
| 3 | 60 | 51 | 61 | 41 | a58 | 31 | 30 | 38 | 49 | | | |
| 4 | 54 | 51 | a60 | 42 | a58 | 30 | 30 | 39 | 48 | | | |
| 5 | 55 | 58 | a58 | 44 | a56 | 29 | 30 | 38 | 49 | | | |
| 6 | 58 | 56 | 57 | 45 | 30 | 29 | 30 | 39 | 49 | | | |
| 7 | 55 | 56 | 54 | 46 | 29 | 28 | 30 | 39 | 50 | | | |
| 8 | 56 | 61 | 54 | 48 | 30 | 30 | 30 | 41 | 51 | | | |
| 9 | 54 | 58 | 52 | 47 | a50 | 30 | 30 | 43 | 51 | | | |
| 10 | 53 | 63 | 49 | 46 | a29 | 30 | 30 | 41 | 51 | | | |
| 11 | 54 | 64 | 48 | 47 | a29 | 27 | 30 | 40 | 50 | | | |
| 12 | 53 | 63 | 49 | a46 | a28 | 29 | 30 | 41 | 52 | | | |
| 13 | 54 | 61 | 48 | a46 | 28 | 30 | 30 | 42 | 65 | | | |
| 14 | 51 | 60 | 48 | a45 | 29 | 30 | 30 | 43 | 70 | | | |
| 15 | 49 | 60 | 48 | 44 | 29 | 30 | 30 | 44 | 58 | | | |
| 16 | 48 | 60 | 48 | 48 | a30 | 31 | 33 | 42 | 62 | | | |
| 17 | 48 | 59 | 52 | 45 | a31 | 32 | 32 | 43 | 76 | | | |
| 18 | 47 | 58 | 53 | a43 | a32 | 31 | 31 | 37 | 54 | | | |
| 19 | 47 | 58 | 53 | a41 | a32 | 30 | 34 | 39 | 70 | | | |
| 20 | 50 | 56 | 49 | a39 | 33 | 30 | 35 | 39 | 77 | | | |
| 21 | 46 | 58 | a49 | a37 | 35 | 28 | 34 | 41 | 76 | | | |
| 22 | 46 | 58 | a49 | 36 | 31 | 27 | 35 | 42 | 70 | | | |
| 23 | 46 | 58 | a45 | 36 | 29 | 28 | 36 | 42 | 62 | | | |
| 24 | 51 | 58 | a45 | 35 | 30 | 29 | 34 | 41 | 62 | | | |
| 25 | 51 | 60 | 48 | 32 | 30 | 30 | 33 | 52 | 65 | | | |
| 26 | 49 | 61 | 47 | a53 | 30 | 30 | 31 | 70 | 66 | | | |
| 27 | 53 | 64 | 45 | a33 | 31 | 30 | 31 | 55 | 60 | | | |
| 28 | 47 | 63 | 45 | 34 | 32 | 29 | 30 | 50 | 64 | | | |
| 29 | 48 | 63 | 45 | 36 | 30 | 28 | 35 | 49 | 70 | | | |
| 30 | 46 | 67 | 43 | 34 | 32 | 28 | 36 | 48 | 70 | | | |
| 31 | 47 | - | 45 | - | 32 | 28 | - | 47 | - | | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| 1939 | | | | | | | | | | | | |
| October..... | | | | 1,594 | | 63 | 46 | 51.4 | 3,160 | | | |
| November..... | | | | 1,761 | | 67 | 49 | 58.7 | 3,490 | | | |
| 1940 | | | | | | | | | | | | |
| May..... | | | | 1,577 | | 63 | 43 | 50.9 | 3,130 | | | |
| June..... | | | | 1,231 | | 48 | 32 | 41.0 | 2,440 | | | |
| July..... | | | | 968 | | 36 | 28 | 31.2 | 1,920 | | | |
| August..... | | | | 916 | | 32 | 27 | 29.5 | 1,820 | | | |
| September..... | | | | 952 | | 36 | 30 | 31.7 | 1,890 | | | |
| October..... | | | | 1,337 | | 70 | 36 | 43.1 | 2,650 | | | |
| November..... | | | | 1,823 | | 84 | 48 | 60.8 | 3,620 | | | |
| The period..... | | | | - | | - | - | - | 17,470 | | | |

a Doubtful or no gage-height record; discharge computed from records for station below Prado dam.

Santa Ana River below Prado Dam, near Prado, Calif.

Location.- Water-stage recorder, lat. 33°53'00", long. 117°38'30", in La Sierra grant, half a mile downstream from Prado Dam and 1 mile southwest of Prado, Riverside County. Altitude of gage, about 450 feet.

Records available.- March to September 1940. May 1930 to November 1939 (irrigation seasons only), at site half a mile downstream, published as Santa Ana River at Atchinson, Topeka & Santa Fe Railway bridge, near Prado.

Extremes.- Maximum discharge during period, 986 second-feet Apr. 1 (gage height, 2.07 feet); minimum daily, 38 second-feet July 24-26 and Aug. 7, 8, 11, 12.

Remarks.- Records good. During August and September 107 and 145 acre-feet, respectively, were pumped from the spillway excavation at Prado Dam and released down the old river channel, which enters the present channel between this station and that near Prado. Diversions and regulation above station.

Cooperation.- Results of 30 discharge measurements furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------------------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | - | 432 | 86 | 60 | 49 | 44 | 44 |
| 2 | | | | | | - | 170 | 82 | 58 | 49 | 46 | 46 |
| 3 | | | | | | - | 130 | 78 | 58 | 49 | 46 | 46 |
| 4 | | | | | | - | 118 | 78 | 63 | 51 | 42 | 44 |
| 5 | | | | | | - | 112 | 78 | 60 | 49 | 40 | 44 |
| 6 | | | | | | - | 112 | 78 | 60 | 44 | 40 | 44 |
| 7 | | | | | | - | 107 | 82 | 66 | 42 | 38 | 44 |
| 8 | | | | | | - | 102 | 75 | 69 | 44 | 38 | 44 |
| 9 | | | | | | - | 102 | 72 | 72 | 42 | 40 | 44 |
| 10 | | | | | | - | 94 | 69 | 69 | 42 | 40 | 42 |
| 11 | | | | | | - | 90 | 66 | 66 | 42 | 38 | 42 |
| 12 | | | | | | - | 94 | 72 | 66 | 42 | 38 | 44 |
| 13 | | | | | | - | 90 | 69 | 63 | 42 | 40 | 44 |
| 14 | | | | | | - | 90 | 69 | 63 | 44 | 40 | 44 |
| 15 | | | | | | - | 94 | 69 | 60 | 44 | 42 | 44 |
| 16 | | | | | | - | 90 | 69 | 63 | 44 | 44 | 46 |
| 17 | | | | | | - | 82 | 72 | 61 | 44 | 42 | 46 |
| 18 | | | | | | - | 78 | 72 | 59 | 44 | 42 | 44 |
| 19 | | | | | | 94 | 75 | 72 | 58 | 44 | 44 | 46 |
| 20 | | | | | | 102 | 75 | 66 | 53 | 46 | 44 | 49 |
| 21 | | | | | | 98 | 82 | 69 | 51 | 46 | 40 | 46 |
| 22 | | | | | | 98 | 82 | 66 | 51 | 44 | 40 | 49 |
| 23 | | | | | | 98 | 82 | 63 | 49 | 40 | 42 | 53 |
| 24 | | | | | | 98 | 82 | 63 | 51 | 38 | 42 | 51 |
| 25 | | | | | | 102 | 86 | 63 | 49 | 38 | 42 | 51 |
| 26 | | | | | | | 107 | 107 | 60 | 46 | 42 | 49 |
| 27 | | | | | | | 107 | 102 | 63 | 46 | 42 | 49 |
| 28 | | | | | | | 98 | 95 | 63 | 46 | 42 | 44 |
| 29 | | | | | | | 94 | 94 | 60 | 49 | 42 | 49 |
| 30 | | | | | | | 90 | 90 | 58 | 51 | 46 | 51 |
| 31 | | | | | | 146 | - | 60 | - | 46 | 42 | - |
| Month | Second-foot-days | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | | | | | | | | |
| November..... | | | | | | | | | | | | |
| December..... | | | | | | | | | | | | |
| Calendar year | | | | | | | | | | | | |
| January..... | | | | | | - | - | - | | | | |
| February..... | | | | | | - | - | - | | | | |
| March 19-31..... | | | | | | 1,332 | 146 | 90 | 102 | | | |
| April..... | | | | | | 3,242 | 432 | 75 | 108 | | | |
| May..... | | | | | | 2,162 | 86 | 58 | 69.7 | | | |
| June..... | | | | | | 1,735 | 72 | 46 | 57.8 | | | |
| July..... | | | | | | 1,359 | 51 | 38 | 43.8 | | | |
| August..... | | | | | | 1,290 | 46 | 39 | 41.6 | | | |
| September..... | | | | | | 1,383 | 53 | 42 | 46.1 | | | |
| The period..... | | | | | | - | - | - | - | | | |

SANTA ANA RIVER BASIN

Santa Ana River near Prado, Calif.

Location.- Water-stage recorder, lat. 33°52'05", long. 117°40'20", in Lomas de Santiago Grant, at Riverside-Orange County line, in lower Santa Ana canyon, 3 miles downstream from Prado dam and 3 miles southwest of Prado, Riverside County. Altitude of gage, about 400 feet.

Records available.- January 1919 to September 1940.

Average discharge.- 21 years, 145 second-feet.

Extremes.- Maximum discharge during year, 4,060 second-feet Jan. 8 (gage height, 4.55 feet); minimum daily, 36 second-feet July 13.
1919-40: Maximum discharge, 100,000 second-feet (estimated) Mar. 3, 1938 (gage height, 17.32 feet, from floodmarks in gage well); minimum, 25 second-feet Aug. 18, 1929, Aug. 24, 1936.

Remarks.- Records fair. Diversions and regulation above station.

Cooperation.- Results of 60 discharge measurements furnished by Orange County Flood Control District, through M. N. Thompson, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|------|------|------|-----|------|------|------|-------|
| 1 | 85 | 67 | 80 | 87 | 240 | 115 | 421 | 90 | 61 | 50 | 43 | 42 |
| 2 | 92 | 67 | 83 | 90 | 340 | 107 | 174 | 85 | 61 | 48 | 42 | 43 |
| 3 | 87 | 69 | 83 | 104 | 319 | 97 | 126 | 85 | 57 | 48 | 42 | 44 |
| 4 | 80 | 78 | 80 | 120 | 356 | 97 | 115 | 85 | 63 | 48 | 40 | 44 |
| 5 | 74 | 85 | 80 | 107 | 195 | 102 | 112 | 85 | 63 | 46 | 38 | 46 |
| 6 | 74 | 85 | 83 | 107 | a165 | 104 | 110 | 78 | 63 | 43 | 38 | 48 |
| 7 | 78 | 87 | 78 | 110 | a145 | 97 | 100 | 78 | 69 | 46 | 40 | 44 |
| 8 | 78 | 90 | 76 | 1,250 | a130 | 97 | 97 | 76 | 74 | 43 | 42 | 44 |
| 9 | 72 | 90 | 80 | 389 | 121 | 94 | 97 | 76 | 74 | 44 | 43 | 43 |
| 10 | 67 | 83 | 85 | 230 | 125 | 94 | 92 | 72 | 69 | 44 | 42 | 43 |
| 11 | 59 | 85 | 92 | 181 | 125 | 94 | 85 | 65 | 67 | 42 | 42 | 43 |
| 12 | 61 | 83 | 94 | 155 | 121 | 90 | 92 | 65 | 65 | 40 | 40 | 46 |
| 13 | 63 | 80 | 94 | 133 | 112 | 90 | 92 | 67 | 63 | 36 | 38 | 46 |
| 14 | 63 | 80 | 90 | 118 | 118 | 90 | 80 | 65 | 61 | 40 | 43 | 44 |
| 15 | 59 | 78 | 90 | 118 | 116 | 92 | 85 | 63 | 63 | 40 | 42 | 44 |
| 16 | 59 | 76 | 94 | 118 | 114 | 92 | 85 | 61 | 61 | 38 | 42 | 46 |
| 17 | 61 | 80 | 92 | 116 | 110 | 94 | 85 | 63 | 57 | 38 | 40 | 48 |
| 18 | 61 | 80 | 92 | 116 | 110 | 92 | 74 | 61 | 61 | 38 | 40 | 48 |
| 19 | 61 | 85 | 90 | 118 | 101 | 100 | 76 | 67 | 57 | 40 | 42 | 48 |
| 20 | 65 | 83 | 90 | 114 | 98 | 97 | 78 | 67 | 50 | 40 | 38 | 48 |
| 21 | 59 | 85 | 90 | 114 | 98 | 92 | 78 | 63 | 50 | 43 | 40 | 48 |
| 22 | 59 | 78 | 83 | 112 | 105 | 90 | 76 | 65 | 52 | 42 | 38 | 52 |
| 23 | 63 | 80 | 92 | 112 | 105 | 94 | 74 | 59 | 52 | 40 | 38 | 52 |
| 24 | 67 | 76 | 94 | 133 | 105 | 90 | 76 | 61 | 48 | 40 | 38 | 48 |
| 25 | 67 | 78 | 92 | 114 | 128 | 92 | 80 | 63 | 50 | 40 | 40 | 48 |
| 26 | 69 | 76 | 92 | 114 | 336 | 100 | 97 | 63 | 50 | 38 | 42 | 46 |
| 27 | 69 | 78 | 94 | 110 | 193 | 100 | 100 | 63 | 50 | 40 | 40 | 46 |
| 28 | 69 | 74 | 90 | 110 | 128 | 97 | 97 | 61 | 50 | 44 | 42 | 44 |
| 29 | 67 | 74 | 85 | 114 | 118 | 87 | 97 | 63 | a50 | 43 | 42 | 46 |
| 30 | 61 | 78 | 87 | 116 | - | 90 | 94 | 61 | a50 | 43 | 40 | 46 |
| 31 | 63 | - | 83 | 121 | - | 134 | - | 61 | - | 43 | 40 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 2,112 | 92 | 59 | 68.1 | 4,190 |
| November..... | 2,536 | 90 | 67 | 79.5 | 4,730 |
| December..... | 2,708 | 94 | 76 | 87.4 | 5,370 |
| Calendar year 1939..... | 29,843 | 449 | 41 | 81.8 | 59,200 |
| January..... | 5,151 | 1,250 | 87 | 166 | 10,220 |
| February..... | 4,577 | 356 | 98 | 158 | 9,080 |
| March..... | 3,001 | 134 | 87 | 96.8 | 5,950 |
| April..... | 3,143 | 421 | 74 | 105 | 6,230 |
| May..... | 2,131 | 90 | 59 | 65.7 | 4,230 |
| June..... | 1,761 | 74 | 48 | 58.7 | 3,490 |
| July..... | 1,308 | 50 | 36 | 42.2 | 2,590 |
| August..... | 1,257 | 43 | 38 | 40.5 | 2,490 |
| September..... | 1,378 | 52 | 42 | 45.9 | 2,730 |
| Water year 1939-40..... | 30,913 | 1,250 | 36 | 84.5 | 61,300 |

Peak discharge.- Jan. 8 (2:30 p.m.) 4,060 sec.-ft.; Feb. 3 (12 p.m.) 660 sec.-ft.; Feb. 26 (11:30 a.m.) 540 sec.-ft.; Apr. 1 (9:30 a.m.) 908 sec.-ft.
a No gage-height record; discharge computed from probable shape of recession curve; June 29, 30, discharge interpolated.

Santa Ana River at Santa Ana, Calif.

Location.- Water-stage recorder, lat. 33°45'00", long. 117°54'20", in Las Bolsas grant, an eighth of a mile upstream from Fifth Street Bridge in Santa Ana, Orange County, and 2 miles downstream from Santiago Creek. Altitude of gage, about 80 feet. Auxiliary water-stage recorder on opposite bank.

Records available.- January 1923 to September 1940.

Average discharge.- 17 years, 23.4 second-feet.

Extremes.- Maximum discharge during year, 3,510 second-feet Jan. 8 (gage height, 1.80 feet); from rating curve extended above 350 second-feet by logarithmic plotting; no flow for several months.

1923-40: Maximum discharge, 46,300 second-feet Mar. 3, 1938 (gage height, 10.20 feet), by slope-area method; no flow for several months each year.

Remarks.- Records fair except those for periods of fragmentary or no gage-height record, which are poor. During irrigation season canal of Anaheim Union Water Co. and canal of Santa Ana Valley Irrigation Co. divert entire flow of river at points near Olive, about 22 and 26 miles, respectively, above station. Flow also regulated by storage and other diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | 0 | f21 | 0 | 41 | | | | | |
| 2 | | | | 0 | f93 | 0 | a20 | | | | | |
| 3 | | | | 0 | f136 | 0 | a4.0 | | | | | |
| 4 | | | | 0 | f196 | 0 | al.0 | | | | | |
| 5 | | | | 0 | a8 | 0 | 0 | | | | | |
| 6 | | | | 0 | a2.0 | 0 | 0 | | | | | |
| 7 | | | | 0 | al.0 | 0 | 0 | | | | | |
| 8 | | | | 698 | a.4 | 0 | 0 | | | | | |
| 9 | | | | f205 | a.4 | 0 | 0 | | | | | |
| 10 | | | | f11 | a.4 | 0 | 0 | | | | | |
| 11 | | | | a4.0 | a.4 | 0 | 0 | | | | | |
| 12 | | | | a3.5 | a.4 | 0 | 0 | | | | | |
| 13 | | | | a3.0 | a.4 | 0 | 0 | | | | | |
| 14 | | | | f8 | al.8 | 0 | 0 | | | | | |
| 15 | | | | f13 | a.4 | 0 | 0 | | | | | |
| 16 | | | | a3.0 | a3.0 | 0 | 0 | | | | | |
| 17 | | | | a2.5 | al.0 | 0 | 0 | | | | | |
| 18 | | | | a2.0 | a.2 | 0 | 0 | | | | | |
| 19 | | | | al.6 | 0 | 0 | 0 | | | | | |
| 20 | | | | al.2 | 0 | 0 | 0 | | | | | |
| 21 | | | | a.8 | 0 | 0 | 0 | | | | | |
| 22 | | | | a.6 | 0 | 0 | 0 | | | | | |
| 23 | | | | f30 | 0 | 0 | 0 | | | | | |
| 24 | | | | f16 | 0 | 0 | 0 | | | | | |
| 25 | | | | a.8 | al2 | 0 | 0 | | | | | |
| 26 | | | | a.5 | al0 | 0 | al.3 | | | | | |
| 27 | | | | a.4 | a8 | 0 | a.4 | | | | | |
| 28 | | | | a.4 | a2.0 | 0 | 0 | | | | | |
| 29 | | | | a.2 | a.2 | 0 | 0 | | | | | |
| 30 | | | | a.2 | - | 0 | 0 | | | | | |
| 31 | | | | a.2 | - | 18 | - | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 811.1 | 244 | 0 | 2.22 | 1,610 | | |
| January..... | | | | | | 1,006.9 | 698 | 0 | 32.5 | 2,000 | | |
| February..... | | | | | | 498.0 | 196 | 0 | 17.2 | 988 | | |
| March..... | | | | | | 18 | 18 | 0 | 0.6 | 36 | | |
| April..... | | | | | | 67.7 | 41 | 0 | 2.26 | 134 | | |
| May..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 1,590.6 | 698 | 0 | 4.35 | 3,160 | | |

Peak discharge.- Jan. 8 (7:30 p.m.) 3,510 sec.-ft.; Feb. 3 (6:30 p.m.) 620 sec.-ft.

a No gage-height record; discharge computed on basis of occasional measurements, partial gage-height records, and field estimates. records for Santiago Creek at Santa Ana, and probable shape of recession curves.

f Fragmentary gage-height record; discharge computed on basis of partial gage-height records and records for Santiago Creek at Santa Ana.

SANTA ANA RIVER BASIN

Southern California Edison Co.'s canal and Greenspot pipe line near Mentone, Calif.

Location.- At Southern California Edison Co.'s power plant at mouth of canyon, lat. 34° 06'20", long. 117°05'55", in SW¼ sec. 4, T. 1 S., R. 2 W., 3 miles northeast of Mentone.

Records available.- 1896 to September 1940.

Average discharge.- Southern California Edison Co.'s canal, 38 years (1896-98, 1904-40), 50.9 second-feet. Greenspot pipe line, 29 years (1911-40), 5.72 second-feet.

Extremes.- 1896-1940: Maximum daily canal discharge, 97 second-feet Mar. 16, 1905; no flow during short periods in nearly every year.

Remarks.- Intake of canal is in sec. 34, T. 1 N., R. 2 W., at Southern California Edison Co.'s power plant 2, which is 2½ miles above the Mentone plant. Water is diverted from forebay of Mentone plant by Greenspot pipe line. Records for canal represent flow below forebay as computed from record of kilowatt output of power plant. Records for pipe line represent diversion from forebay as computed from weir record at forebay. The sum of the records as given in the following tables represents total flow of canal above forebay.

Cooperation.- Records furnished by Southern California Edison Co.

Discharge, in second-feet, of Southern California Edison Co.'s canal near Mentone, Calif.,
water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 40 | 64 | 48 | 37 | 47 | 77 | 60 | 56 | 59 | 59 | 59 | 67 |
| 2 | 37 | 67 | 45 | 37 | 51 | 72 | 81 | 53 | 56 | 64 | 67 | 69 |
| 3 | 35 | 67 | 46 | 39 | 51 | 67 | 79 | 53 | 61 | 61 | 69 | 67 |
| 4 | 36 | 67 | 40 | 52 | 71 | 64 | 76 | 56 | 59 | 61 | 64 | 64 |
| 5 | 40 | 59 | 40 | 43 | 61 | 64 | 77 | 51 | 61 | 64 | 61 | 64 |
| 6 | 37 | 61 | 40 | 44 | 59 | 59 | 75 | 51 | 56 | 64 | 61 | 56 |
| 7 | 36 | 61 | 37 | 43 | 57 | 59 | 75 | 51 | 56 | 61 | 64 | 56 |
| 8 | 40 | 64 | 37 | 7 | 56 | 59 | 69 | 53 | 53 | 64 | 61 | 59 |
| 9 | 32 | 64 | 37 | 44 | 51 | 59 | 69 | 61 | 53 | 61 | 64 | 64 |
| 10 | 33 | 56 | 43 | 68 | 51 | 53 | 64 | 64 | 56 | 69 | 67 | 64 |
| 11 | 47 | 56 | 41 | 61 | 48 | 53 | 64 | 69 | 56 | 67 | 69 | 72 |
| 12 | 55 | 51 | 43 | 83 | 48 | 51 | 64 | 72 | 61 | 72 | 69 | 69 |
| 13 | 59 | 53 | 43 | 57 | 45 | 48 | 61 | 75 | 69 | 67 | 67 | 72 |
| 14 | 61 | 51 | 43 | 56 | 48 | 48 | 61 | 77 | 64 | 67 | 75 | 69 |
| 15 | 67 | 59 | 43 | 49 | 40 | 48 | 67 | 77 | 64 | 72 | 75 | 72 |
| 16 | 67 | 56 | 43 | 41 | 43 | 48 | 67 | 77 | 64 | 72 | 72 | 67 |
| 17 | 65 | 59 | 43 | 45 | 43 | 43 | 59 | 72 | 64 | 72 | 72 | 67 |
| 18 | 67 | 59 | 43 | 44 | 43 | 43 | 61 | 72 | 59 | 72 | 67 | 61 |
| 19 | 64 | 59 | 45 | 41 | 43 | 44 | 61 | 59 | 51 | 59 | 59 | 64 |
| 20 | 74 | 61 | 48 | 39 | 40 | 45 | 59 | 55 | 53 | 56 | 59 | 59 |
| 21 | 72 | 64 | 53 | 35 | 40 | 45 | 59 | 60 | 51 | 59 | 56 | 56 |
| 22 | 72 | 67 | 53 | 40 | 43 | 45 | 59 | 56 | 51 | 53 | 59 | 56 |
| 23 | 79 | 64 | 60 | 40 | 45 | 48 | 59 | 61 | 51 | 56 | 56 | 51 |
| 24 | 83 | 61 | 44 | 37 | 44 | 43 | 59 | 61 | 59 | 64 | 64 | 59 |
| 25 | 77 | 64 | 40 | 37 | 48 | 43 | 55 | 61 | 59 | 64 | 61 | 51 |
| 26 | 76 | 60 | 37 | 37 | 0 | 48 | 72 | 64 | 61 | 64 | 64 | 59 |
| 27 | 73 | 53 | 37 | 35 | 55 | 51 | 64 | 64 | 61 | 64 | 64 | 64 |
| 28 | 73 | 61 | 40 | 33 | 82 | 48 | 61 | 64 | 61 | 64 | 64 | 61 |
| 29 | 71 | 48 | 40 | 37 | 80 | 51 | 59 | 59 | 56 | 59 | 64 | 61 |
| 30 | 67 | 39 | 43 | 32 | - | 49 | 59 | 56 | 56 | 59 | 61 | 64 |
| 31 | 53 | - | 39 | 36 | - | 31 | - | 59 | - | 59 | 64 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,788 | 83 | 32 | 57.7 | 3,550 |
| November..... | 1,775 | 67 | 39 | 59.2 | 3,520 |
| December..... | 1,533 | 60 | 37 | 43.0 | 2,640 |
| Calendar year 1939..... | 23,197 | 83 | 0 | 63.6 | 46,020 |
| January..... | 1,329 | 83 | 7 | 42.9 | 2,640 |
| February..... | 1,433 | 82 | 0 | 49.4 | 2,840 |
| March..... | 1,606 | 77 | 31 | 51.8 | 3,190 |
| April..... | 1,955 | 81 | 55 | 66.2 | 3,880 |
| May..... | 1,919 | 77 | 51 | 61.9 | 3,510 |
| June..... | 1,741 | 69 | 51 | 58.0 | 3,450 |
| July..... | 1,989 | 72 | 53 | 63.5 | 3,910 |
| August..... | 1,998 | 75 | 56 | 64.5 | 3,960 |
| September..... | 1,884 | 72 | 51 | 62.8 | 3,740 |
| Water year 1939-40..... | 20,730 | 83 | 0 | 56.6 | 41,130 |

SANTA ANA RIVER BASIN

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Discharge, in second-feet, of Greenspot pipe line near Mentone, Calif., water year
October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 9 | 9 | 9 | 9 |
| 2 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 9 | 9 | 9 | 9 |
| 3 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8.5 | 9 | 9 | 9 |
| 4 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 5 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 6 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 7 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 8 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 9 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 10 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 11 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 12 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 8 | 9 | 9 | 9 |
| 13 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 8 | 8 | 9 | 9 | 9 |
| 14 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 15 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 16 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 17 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 18 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 19 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 20 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 21 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 22 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 8 | 9 | 9 | 9 |
| 23 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 9 | 9 | 9 | 9 |
| 24 | 9 | 9 | 5 | 5 | 5 | 5 | 5 | 9 | 9 | 9 | 9 | 9 |
| 25 | 9 | 9 | 5 | 5 | 5 | 5 | 6 | 9 | 9 | 9 | 9 | 9 |
| 26 | 9 | 9 | 5 | 5 | 0 | 5 | 7 | 9 | 9 | 9 | 9 | 9 |
| 27 | 9 | 9 | 5 | 5 | 3.0 | 5 | 7 | 9 | 9 | 9 | 9 | 9 |
| 28 | 9 | 9 | 5 | 5 | 5 | 5 | 7 | 9 | 9 | 9 | 9 | 9 |
| 29 | 9 | 9 | 5 | 5 | 5 | 5 | 7 | 9 | 9 | 9 | 9 | 9 |
| 30 | 9 | 5 | 5 | 5 | 5 | 5 | 7 | 9 | 9 | 9 | 9 | 9 |
| 31 | 9 | - | 5 | 5 | - | 5 | - | 9 | - | 9 | 9 | - |
| Month | Second-foot-days | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | 279 | | | | | 9 | 9 | 9.00 | 553 | | | |
| November..... | 266 | | | | | 9 | 5 | 8.87 | 528 | | | |
| December..... | 155 | | | | | 5 | 5 | 5.00 | 307 | | | |
| Calendar year 1939..... | 2,729 | | | | | 9 | 0 | 7.48 | 5,410 | | | |
| January..... | 155 | | | | | 5 | 5 | 5.00 | 307 | | | |
| February..... | 138.0 | | | | | 5 | 0 | 4.76 | 274 | | | |
| March..... | 155 | | | | | 5 | 5 | 5.00 | 307 | | | |
| April..... | 161 | | | | | 7 | 5 | 5.37 | 319 | | | |
| May..... | 254 | | | | | 9 | 7 | 8.19 | 504 | | | |
| June..... | 250.5 | | | | | 9 | 8 | 8.35 | 497 | | | |
| July..... | 279 | | | | | 9 | 9 | 9.00 | 553 | | | |
| August..... | 279 | | | | | 9 | 9 | 9.00 | 553 | | | |
| September..... | 270 | | | | | 9 | 9 | 9.00 | 536 | | | |
| Water year 1939-40..... | 2,641.5 | | | | | 9 | 0 | 7.22 | 5,240 | | | |

SANTA ANA RIVER BASIN

Mill Creek near Mentone, Calif.

Location.- Water-stage recorder and concrete broad-crested weir control, lat. 34°05'10", long. 117°06'55", in SE¼ sec. 17, T. 1 S., R. 2 W., at Bear Valley pipe line crossing, a quarter of a mile upstream from Santa Ana River, 1½ miles northeast of Mentone, and 5 miles southeast of East Highlands. Altitude of gage, about 1,780 feet.

Records available.- February 1939 to September 1940.

Extremes.- 1939-40: Maximum discharge during period of record, 900 second-feet (estimated) Sept. 25, 1939; no flow during several periods.

Remarks.- Records fair. Mill Creek power canals 1, 2, and 3 divert above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|----------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 7.5 | 0.2 | 0 | 0 | 29 | 18 | 30 | 0.2 | - | - | - | - |
| 2 | 9 | .1 | 0 | 0 | 22 | 4.7 | 14 | .2 | - | - | - | - |
| 3 | 7 | .2 | 0 | 0 | 39 | 3.5 | 4.6 | .1 | - | - | - | - |
| 4 | 3.4 | .1 | 0 | .2 | 34 | 4.0 | 3.7 | 6.5 | - | - | 0.1 | - |
| 5 | .4 | 0 | 0 | .2 | 26 | 1.1 | 10 | 12 | - | - | .1 | - |
| 6 | .2 | 0 | 0 | .1 | 20 | .7 | 1.0 | .3 | - | - | - | - |
| 7 | .1 | .1 | 0 | 5.5 | 16 | 0 | 0 | .2 | - | 0.1 | - | - |
| 8 | .2 | .2 | 0 | e140 | 2.2 | .4 | 0 | .2 | - | - | .1 | - |
| 9 | .1 | .3 | 0 | 26 | .3 | 12 | 0 | .2 | - | - | - | 0.1 |
| 10 | 0 | .2 | 0 | 17 | .2 | 8.5 | 0 | .1 | - | - | - | .1 |
| 11 | 0 | .1 | 0 | 36 | .2 | 7.5 | 0 | .2 | - | - | .1 | - |
| 12 | 0 | .1 | 0 | 48 | .2 | 3.1 | 0 | .1 | - | .1 | .1 | - |
| 13 | 0 | .2 | 0 | 27 | f.3 | 0 | 0 | .1 | - | .1 | - | .2 |
| 14 | 0 | .1 | 0 | 33 | 27 | 0 | 0 | - | - | - | - | .2 |
| 15 | 0 | .1 | 0 | 29 | 16 | 0 | 20 | .1 | - | .1 | - | 16 |
| 16 | 0 | .4 | 0 | 22 | 9 | 0 | 31 | .1 | - | .1 | - | - |
| 17 | 0 | .2 | 0 | 23 | 2.1 | 0 | 10 | - | - | - | - | .2 |
| 18 | 0 | .8 | 0 | f12 | .2 | 0 | .6 | - | - | - | - | .2 |
| 19 | 0 | .4 | 0 | a.6 | .2 | .1 | .2 | - | - | .2 | - | .1 |
| 20 | 0 | .5 | 0 | 0 | .1 | .1 | .2 | - | - | .1 | - | .2 |
| 21 | 0 | .2 | 0 | 0 | .1 | .1 | .1 | .1 | - | - | - | .1 |
| 22 | 0 | .6 | .2 | 0 | .2 | .7 | 1.3 | - | - | - | - | - |
| 23 | .2 | .2 | .2 | .5 | .1 | 1.1 | 32 | - | - | - | - | - |
| 24 | .5 | .4 | 1.7 | .5 | 0 | .1 | 21 | .1 | - | .1 | .1 | .2 |
| 25 | .2 | .1 | .1 | 0 | e11 | .1 | 3.2 | - | 0.1 | .1 | - | .1 |
| 26 | .1 | .3 | .1 | 0 | e118 | .1 | 6 | - | .1 | - | 0 | - |
| 27 | .2 | 2.7 | .1 | 0 | 43 | .1 | .6 | - | - | - | 0 | - |
| 28 | .2 | 33 | .1 | 0 | 36 | 0 | .2 | - | - | - | .2 | - |
| 29 | .3 | 0 | .1 | 0 | 36 | 0 | .2 | - | - | - | - | .1 |
| 30 | .1 | 0 | 0 | 1.0 | - | 0 | .5 | - | - | - | - | - |
| 31 | .1 | - | 0 | 2.1 | - | 29 | - | - | - | - | - | - |
| Month | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| October..... | 29.8 | | | | | | | | | | | |
| November..... | 41.8 | | | | | | | | | | | |
| December..... | 2.6 | | | | | | | | | | | |
| Calendar year | - | | | | | | | | | | | |
| January..... | 423.7 | | | | | | | | | | | |
| February..... | 490.4 | | | | | | | | | | | |
| March..... | 95.0 | | | | | | | | | | | |
| April..... | 190.4 | | | | | | | | | | | |
| May..... | 21.69 | | | | | | | | | | | |
| June..... | 1.82 | | | | | | | | | | | |
| July..... | 2.14 | | | | | | | | | | | |
| August..... | 1.93 | | | | | | | | | | | |
| September..... | 2.89 | | | | | | | | | | | |
| Water year 1939-40..... | 1,304.17 | | | | | | | | | | | |

a No gage-height record; discharge computed on basis of measurement.

e Includes flow around control: Jan. 8, 9 second-feet; Feb. 25, 1 second-foot; Feb. 26, 10 second-feet.

f Discharge computed from partly estimated gage heights.

Note.- Discharge less than 0.1 second-foot on days for which no figures are given.

Mill Creek power canals 2 and 3 near Craftonville, Calif.

Location.- Weir in tailrace of Southern California Edison Co.'s power plant, lat. $34^{\circ}03'10''$, long. $117^{\circ}02'25''$, in NE $\frac{1}{4}$ sec. 13, T. 1 S., R. 2 W., near Redlands-Bear Valley highway, 5 miles northeast of Craftonville.

Records available.- January 1919 to September 1940.

Average discharge.- 21 years, 21.0 second-feet.

Extremes.- 1919-40: Maximum daily discharge, 36 second-feet Nov. 19, 1923, and June 7, 1924; no flow May 27, 1923, Feb. 14, 1937, Mar. 3 to June 23, 1938, Aug. 6-7, 1938, Sept. 26, 1939, Jan. 8, 1940.

Remarks.- Discharge computed from weir records at tailrace of power plant. Mill Creek power canal 2 diverts from Mill Creek in sec. 8, T. 1 S., R. 1 W.; power canal 3 diverts in sec. 13, T. 1 S., R. 1 W., about 3 miles above intake for canal 2. The canals serve power plants 2 and 3, which discharge into a common tailrace. At times entire flow of tailrace is distributed for irrigation and domestic supply.

Cooperation.- Records furnished by Southern California Edison Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|------|---------|---------|------|----------------------|-------|
| 1 | 16 | 20 | 16 | 14 | 22 | 27 | 22 | 29 | 31 | 26 | 22 | 20 |
| 2 | 16 | 20 | 16 | 14 | 17 | 27 | 22 | 30 | 31 | 25 | 22 | 19 |
| 3 | 15 | 21 | 16 | 14 | 18 | 26 | 25 | 30 | 31 | 25 | 22 | 19 |
| 4 | 13 | 21 | 16 | 18 | 18 | 27 | 30 | 29 | 31 | 24 | 22 | 19 |
| 5 | 13 | 21 | 16 | 13 | 20 | 29 | 29 | 30 | 31 | 24 | 22 | 19 |
| 6 | 13 | 21 | 16 | 14 | 28 | 30 | 29 | 29 | 31 | 24 | 22 | 19 |
| 7 | 16 | 21 | 16 | 16 | 27 | 30 | 31 | 31 | 31 | 24 | 21 | 19 |
| 8 | 14 | 22 | 16 | 0 | 26 | 30 | 30 | 30 | 31 | 20 | 21 | 19 |
| 9 | 14 | 22 | 16 | 12 | 26 | 31 | 28 | 30 | 31 | 20 | 21 | 18 |
| 10 | 14 | 21 | 15 | 10 | 25 | 30 | 28 | 31 | 31 | 24 | 21 | 18 |
| 11 | 14 | 21 | 15 | 11 | 24 | 30 | 28 | 32 | 31 | 24 | 20 | 18 |
| 12 | 14 | 21 | 15 | 4 | 24 | 31 | 28 | 32 | 31 | 24 | 21 | 18 |
| 13 | 14 | 21 | 15 | 14 | 24 | 30 | 27 | 31 | 30 | 24 | 21 | 18 |
| 14 | 15 | 21 | 15 | 17 | 24 | 30 | 26 | 32 | 30 | 24 | 20 | 18 |
| 15 | 15 | 21 | 15 | 19 | 25 | 30 | 24 | 32 | 29 | 25 | 20 | 18 |
| 16 | 18 | 21 | 15 | 19 | 25 | 30 | 25 | 32 | 29 | 25 | 20 | 18 |
| 17 | 20 | 21 | 15 | 19 | 25 | 30 | 28 | 32 | 29 | 24 | 20 | 18 |
| 18 | 20 | 21 | 15 | 19 | 24 | 30 | 27 | 32 | 28 | 24 | 20 | 18 |
| 19 | 20 | 21 | 15 | 19 | 24 | 30 | 27 | 31 | 28 | 23 | 20 | 18 |
| 20 | 21 | 21 | 15 | 18 | 24 | 30 | 28 | 31 | 27 | 25 | 19 | 18 |
| 21 | 21 | 21 | 15 | 18 | 24 | 29 | 28 | 31 | 27 | 25 | 20 | 18 |
| 22 | 20 | 21 | 15 | 19 | 26 | 29 | 15 | 31 | 28 | 23 | 20 | 17 |
| 23 | 20 | 20 | 15 | 21 | 24 | 29 | 14 | 31 | 27 | 23 | 20 | 18 |
| 24 | 21 | 21 | 14 | 20 | 24 | 29 | 27 | 32 | 27 | 23 | 20 | 18 |
| 25 | 22 | 21 | 15 | 19 | 21 | 29 | 27 | 31 | 26 | 23 | 20 | 17 |
| 26 | 22 | 20 | 14 | 20 | 11 | 30 | 25 | 31 | 26 | 23 | 20 | 17 |
| 27 | 22 | 19 | 14 | 20 | 21 | 31 | 25 | 31 | 26 | 23 | 20 | 17 |
| 28 | 22 | 15 | 14 | 21 | 23 | 30 | 28 | 31 | 26 | 23 | 20 | 17 |
| 29 | 22 | 17 | 14 | 21 | 23 | 30 | 28 | 31 | 26 | 23 | 19 | 17 |
| 30 | 21 | 17 | 15 | 21 | - | 30 | 30 | 32 | 27 | 23 | 19 | 17 |
| 31 | 21 | - | 15 | 21 | - | 25 | - | 31 | - | 23 | 19 | - |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | 549 | | 22 | 13 | 17.7 | 1,090 | |
| November..... | | | | | | 612 | | 22 | 15 | 20.4 | 1,210 | |
| December..... | | | | | | 469 | | 16 | 14 | 15.1 | 930 | |
| Calendar year 1939..... | | | | | | 8,287.5 | | 31 | 0 | 22.7 | 16,440 | |
| January..... | | | | | | 505 | | 21 | 0 | 16.3 | 1,000 | |
| February..... | | | | | | 667 | | 28 | 11 | 23.0 | 1,320 | |
| March..... | | | | | | 909 | | 31 | 25 | 29.3 | 1,800 | |
| April..... | | | | | | 792 | | 31 | 14 | 26.4 | 1,570 | |
| May..... | | | | | | 959 | | 32 | 29 | 30.9 | 1,900 | |
| June..... | | | | | | 968 | | 31 | 26 | 28.9 | 1,720 | |
| July..... | | | | | | 735 | | 26 | 20 | 23.6 | 1,450 | |
| August..... | | | | | | 634 | | 22 | 19 | 20.5 | 1,260 | |
| September..... | | | | | | 542 | | 20 | 17 | 18.1 | 1,080 | |
| Water year 1939-40..... | | | | | | 8,239 | | 32 | 0 | 22.5 | 16,330 | |

SANTA ANA RIVER BASIN

Mill Creek power canal 1 near Craftonville, Calif.

Location.— Water-stage recorder and weir control, lat. 34°05'10", long. 117°02'25" in NE¼ sec. 13, T. 1 S., R. 2 W., a quarter of a mile downstream from point of diversion from Mill Creek and 5 miles northeast of Craftonville.

Records available.— January 1919 to September 1940.

Average discharge.— 21 years, 2.93 second-feet.

Extremes.— 1919-40: Maximum daily discharge, 29 second-feet Apr. 21, 22, 1932; no flow for several days most years.

Remarks.— Records good. Discharge determined by weir formula. This canal diverts from Mill Creek in NE¼ sec. 13, T. 1 S., R. 2 W., above station on Mill Creek, near Mentone. After passing through Mill Creek powerhouse 1, entire flow is at times distributed for irrigation and domestic supply.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 9 | 3.4 | 0.6 | 2.2 | 0.9 | 0 | 0 | 0 | 3.3 | 3.8 | 2.5 | 2.3 |
| 2 | 9 | 3.4 | 1.4 | 2.2 | 0 | 0 | 0 | 0 | 4.5 | 3.6 | 2.3 | 2.3 |
| 3 | 9.5 | 3.0 | 1.4 | 2.2 | 0 | 0 | 0 | 0 | 4.5 | 3.6 | 2.3 | 2.5 |
| 4 | 6 | 3.0 | 1.4 | 2.8 | 0 | 0 | 0 | 0 | 4.0 | 3.4 | 2.2 | 2.5 |
| 5 | 3.3 | 3.0 | 1.4 | 5.5 | 0 | .6 | 0 | 0 | 5.5 | 3.4 | 2.2 | 2.3 |
| 6 | 4.0 | 3.0 | 1.4 | 3.6 | 2.1 | 2.2 | .3 | 0 | 7 | 5 | 2.2 | 2.5 |
| 7 | 5 | 2.8 | 1.5 | 3.3 | 3.4 | 3.0 | 0 | 6.5 | 6.5 | 2.2 | 2.2 | 2.5 |
| 8 | 4.0 | 3.4 | 1.5 | 0 | 3.3 | 3.3 | 2.0 | 0 | 6 | 8 | 2.3 | 2.2 |
| 9 | 2.6 | 3.3 | 1.7 | 0 | 3.6 | 3.1 | 3.0 | 1.1 | 5.5 | 7 | 2.3 | 2.2 |
| 10 | 2.6 | 2.4 | 1.8 | 0 | 4.1 | 3.1 | 2.6 | 3.2 | 5.5 | 6 | 2.3 | 2.2 |
| 11 | 2.8 | 3.0 | 1.8 | 0 | 4.0 | 3.1 | 1.3 | 4.1 | 5 | 5.5 | 2.5 | 2.3 |
| 12 | 3.0 | 2.8 | 1.8 | 0 | 3.8 | 3.1 | .1 | 3.7 | 5 | 5.5 | 2.5 | 2.2 |
| 13 | 2.8 | 1.8 | 1.9 | 0 | 3.8 | 3.1 | 0 | 3.0 | 4.9 | 4.9 | 2.5 | 2.5 |
| 14 | 2.6 | .9 | 2.1 | 0 | 4.3 | 3.1 | 0 | 3.3 | 4.9 | 4.1 | 2.3 | 2.5 |
| 15 | 1.2 | 3.0 | 2.2 | 0 | 3.8 | 3.1 | 0 | 3.8 | 4.9 | 4.0 | 2.5 | 2.5 |
| 16 | 3.3 | 1.1 | 1.1 | 0 | 3.8 | 3.0 | 0 | 4.5 | 4.9 | 4.1 | 2.3 | 2.6 |
| 17 | 3.3 | 1.0 | 1.2 | 0 | 3.4 | 3.0 | 0 | 6 | 4.7 | 4.0 | 2.5 | 3.1 |
| 18 | 1.4 | 3.0 | 2.2 | 0 | 3.3 | 3.1 | 0 | 4.5 | 4.3 | 4.0 | 2.5 | 2.8 |
| 19 | 0 | 3.0 | 2.3 | 0 | 3.4 | 3.1 | 0 | 4.0 | 4.1 | 3.8 | 2.5 | 2.6 |
| 20 | 0 | 3.0 | 2.3 | 0 | 3.4 | 3.0 | 0 | 2.8 | 4.1 | 3.8 | 2.3 | 2.6 |
| 21 | 2.7 | 2.8 | 2.3 | 0 | 3.6 | 2.8 | 0 | 2.3 | 4.3 | 3.6 | 2.5 | 2.5 |
| 22 | 4.3 | 2.8 | 2.5 | 0 | 3.8 | 2.8 | 0 | 2.6 | 4.0 | 3.3 | 2.5 | 2.5 |
| 23 | 3.8 | 2.8 | 2.3 | 0 | 3.4 | 2.6 | 0 | 3.3 | 4.0 | 2.8 | 2.5 | 2.5 |
| 24 | 3.4 | 3.0 | 1.8 | 2.6 | 3.3 | 2.6 | 0 | 2.8 | 4.0 | 3.0 | 2.6 | 2.6 |
| 25 | 2.5 | 3.0 | 2.7 | 3.6 | 2.2 | 2.8 | 0 | 3.1 | 4.0 | 3.0 | 2.6 | 2.5 |
| 26 | 3.0 | 3.0 | 3.8 | 2.5 | 0 | 3.3 | 0 | 4.0 | 4.0 | 3.0 | 2.5 | 2.5 |
| 27 | 2.8 | 2.5 | 3.8 | 2.3 | 0 | 4.5 | 0 | 4.3 | 3.8 | 2.8 | 2.5 | 2.6 |
| 28 | 2.8 | 0 | 3.4 | 1.5 | 0 | 4.1 | 0 | 4.0 | 3.8 | 2.6 | 2.5 | 2.6 |
| 29 | 2.8 | 0 | 2.5 | 1.9 | 0 | 4.1 | 0 | 3.4 | 4.3 | 2.6 | 2.5 | 2.6 |
| 30 | 2.1 | 0 | 1.4 | 2.3 | - | 4.0 | 0 | 3.0 | 4.0 | 2.6 | 2.3 | 2.5 |
| 31 | 2.8 | - | 1.5 | 2.6 | - | 2.2 | - | 3.0 | - | 2.6 | 2.3 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 108.4 | 9.5 | 0 | 3.50 | 215 | | |
| November..... | | | | | | 73.2 | 3.4 | 0 | 2.44 | 145 | | |
| December..... | | | | | | 61.0 | 3.8 | .6 | 1.97 | 121 | | |
| Calendar year 1939..... | | | | | | 1,295.1 | 9.8 | 0 | 3.55 | 2,570 | | |
| January..... | | | | | | 41.1 | 5.5 | 0 | 1.33 | 82 | | |
| February..... | | | | | | 71.3 | 4.3 | 0 | 2.46 | 141 | | |
| March..... | | | | | | 82.2 | 4.5 | 0 | 2.65 | 163 | | |
| April..... | | | | | | 12.3 | 3.0 | 0 | .41 | 24 | | |
| May..... | | | | | | 79.8 | 4.5 | 0 | 2.57 | 158 | | |
| June..... | | | | | | 139.3 | 7 | 3.3 | 4.64 | 276 | | |
| July..... | | | | | | 125.9 | 5 | 2.6 | 4.06 | 250 | | |
| August..... | | | | | | 74.5 | 2.6 | 2.2 | 2.40 | 148 | | |
| September..... | | | | | | 74.3 | 3.1 | 2.2 | 2.48 | 147 | | |
| Water year 1939-40..... | | | | | | 943.3 | 9.5 | 0 | 2.68 | 1,870 | | |

Plunge Creek near East Highlands, Calif.

Location.- Water-stage recorder and concrete broad-crested weir control, lat. $34^{\circ}07'10''$, long. $117^{\circ}08'30''$, in NE $\frac{1}{4}$ 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. Altitude of gage, about 1,625 feet.

Drainage area.- 16.9 square miles.

Records available.- January 1919 to September 1940.

Average discharge.- 21 years, 6.70 second-feet.

Extremes.- Maximum discharge during year not determined; no flow for several months. 1919-1940: Maximum discharge, 5,340 second-feet Mar. 2, 1938, by slope-area method; no flow for several months each year.

Remarks.- Records fair. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|-------|------|------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 1.3 | | 0.1 | 0.1 | 22 | 18 | 101 | 7.5 | | | | |
| 2 | 1.3 | | .1 | .1 | 30 | 14 | 45 | 6 | | | | |
| 3 | 1.4 | | .1 | .1 | 45 | 13 | 33 | 4.7 | | | | |
| 4 | 1.2 | | .1 | 3.1 | 59 | 11 | 28 | 2.7 | | | | |
| 5 | al.0 | | .1 | 2.0 | 28 | 11 | 22 | 1.8 | | | | |
| 6 | a.8 | | .1 | 1.3 | 20 | 10 | 18 | al.3 | | | | |
| 7 | a2.0 | | .1 | 5 | 18 | 9.5 | 16 | al.0 | | | | |
| 8 | al.0 | | .1 | 136 | 12 | 9 | 14 | a.8 | | | | |
| 9 | a.5 | | .1 | 33 | 9.5 | 9 | 14 | a.6 | | | | |
| 10 | a.3 | | .1 | 24 | 9.5 | 8.5 | 12 | a.4 | | | | |
| 11 | a.2 | | .1 | 23 | 9.5 | 8 | 11 | a.3 | | | | |
| 12 | a.1 | | .1 | 33 | 9 | 7.5 | 9 | a.2 | | | | |
| 13 | | e0.02 | | 18 | 8 | 7.5 | 9 | a.1 | e0.02 | | | |
| 14 | | | | 10 | 9 | 7 | 8.5 | | | | | |
| 15 | | | | 9 | 10 | 4.3 | 20 | | | | | |
| 16 | | | e.03 | 8.5 | 8.5 | 2.7 | 14 | | | | | |
| 17 | | | | 8 | 7.5 | 3.4 | 12 | | | | | |
| 18 | | | | 7.5 | 7 | 2.7 | 8.5 | | | | | |
| 19 | | | | 7 | 6.5 | 3.4 | 6.5 | | | | | |
| 20 | | | | 6 | 6 | 2.6 | 6 | | | | | |
| 21 | | e.02 | | 5.5 | 5 | 1.6 | 6 | | e.03 | | | |
| 22 | | | .1 | 5.5 | 5.5 | 1.2 | 6 | | | | | |
| 23 | | | .8 | 5.5 | 6 | 1.1 | 6 | | | | | |
| 24 | | | 1.1 | 7.5 | 5 | 1.0 | 6 | | | | | |
| 25 | | | .4 | 6 | 32 | .9 | 6 | | 0 | | | |
| 26 | | | .2 | 5.5 | 99 | .8 | 22 | | 0 | | | |
| 27 | .1 | | .1 | 5 | 50 | 2.6 | 12 | | 0 | | | |
| 28 | 6.5 | | .1 | 4.7 | 30 | 5 | 11 | | 0 | | | |
| 29 | 1.6 | | .1 | 4.5 | 26 | 5 | 11 | | 0 | | | |
| 30 | .3 | | .1 | 4.5 | - | 3.9 | 9 | | 0 | | | |
| 31 | - | | .1 | 5.5 | - | 44 | - | | - | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 11.48 | 2.0 | - | 0.370 | 23 | | | |
| November..... | | | | | 9.02 | 6.5 | - | .301 | 18 | | | |
| December..... | | | | | 4.57 | 1.1 | - | .147 | 9.1 | | | |
| Calendar year 1939..... | | | | | 1,327.07 | 88 | 0 | 3.64 | 2,630 | | | |
| January..... | | | | | 394.4 | 136 | .1 | 12.7 | 782 | | | |
| February..... | | | | | 592.5 | 99 | 5 | 20.4 | 1,180 | | | |
| March..... | | | | | 229.2 | 44 | .8 | 7.39 | 455 | | | |
| April..... | | | | | 500.5 | 101 | 6 | 16.7 | 993 | | | |
| May..... | | | | | 27.84 | 7.5 | - | .901 | 55 | | | |
| June..... | | | | | .46 | - | 0 | .015 | .9 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 1,770.07 | 136 | 0 | 4.84 | 3,520 | | | |

a No gage-height record; discharge computed on basis of records for City Creek near Highland.
e Average for period; daily flow less than 0.1 second-foot.

San Timoteo Creek near Redlands, Calif.

Location.- Water-stage recorder and concrete control, lat. $34^{\circ}01'55''$, long. $117^{\circ}12'30''$, in NW $\frac{1}{4}$ sec. 4, T. 2 S., R. 3 W., 2 miles southeast of Redlands. Altitude of gage, about 1,260 feet.

Drainage area.- 118 square miles.

Records available.- October 1926 to September 1940.

Average discharge.- 14 years, 2.14 second-feet.

Extremes.- Maximum discharge during year, 2,620 second-feet Jan. 8 (gage height, 4.0 feet), from rating curve extended above 170 second-feet by logarithmic plotting; no flow during several months.
1926-40: Maximum discharge, 7,460 second-feet Mar. 2, 1938, by slope-area method; no flow during several months each year.

Remarks.- Records poor. Entire flow diverted above station except during high water.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 0 | 0 | 0 | 0 | 50 | 0 | 14 | | | | | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3.1 | | | | | |
| 3 | 0 | 0 | 0 | 0 | 72 | 0 | 0 | | | | | |
| 4 | 0 | 0 | 0 | .1 | f.8 | 0 | 0 | | | | | |
| 5 | 0 | 0 | 0 | f.1 | 0 | 0 | 0 | | | | | |
| 6 | 0 | 0 | 0 | f.1 | 0 | 0 | 0 | | | | | |
| 7 | .1 | 0 | 0 | 1.3 | 0 | 0 | 0 | | | | | |
| 8 | 0 | 0 | 0 | 188 | 0 | 0 | 0 | | | | | |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 14 | 0 | 0 | 0 | 0 | .7 | 0 | 0 | | | | | |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 19 | 0 | 0 | f.1 | 0 | 0 | 0 | 0 | | | | | |
| 20 | 0 | 0 | f.1 | 0 | 0 | 0 | 0 | | | | | |
| 21 | 0 | 0 | f.1 | 0 | 0 | 0 | 0 | | | | | |
| 22 | 0 | 0 | .1 | 0 | 0 | 0 | 0 | | | | | |
| 23 | 0 | 0 | .1 | 0 | 0 | 0 | 0 | | | | | |
| 24 | 0 | 0 | .1 | .1 | 0 | 0 | 0 | | | | | |
| 25 | 0 | 0 | .1 | .1 | 1.1 | 0 | 0 | | | | | |
| 26 | 0 | 0 | 0 | .1 | 2.6 | 0 | 0 | | | | | |
| 27 | 0 | 0 | 0 | .1 | 0 | 0 | 0 | | | | | |
| 28 | 0 | .1 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 30 | 0 | 0 | 0 | 0 | - | 0 | 0 | | | | | |
| 31 | 0 | - | 0 | 0 | - | 3.6 | - | | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0.1 | 0.1 | 0 | 0.003 | 0.2 | | | |
| November..... | | | | | .1 | .1 | 0 | .003 | .2 | | | |
| December..... | | | | | .7 | .1 | 0 | .02 | 1.4 | | | |
| Calendar year 1939..... | | | | | 57.5 | 13 | 0 | .16 | 114 | | | |
| January..... | | | | | 190.0 | 188 | 0 | 6.13 | 377 | | | |
| February..... | | | | | 127.2 | 72 | 0 | 4.39 | 252 | | | |
| March..... | | | | | 3.6 | 3.6 | 0 | .12 | 7.1 | | | |
| April..... | | | | | 17.1 | 14 | 0 | .57 | 34 | | | |
| May..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| June..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 338.5 | 188 | 0 | .93 | 672 | | | |

Peak discharge.- Jan. 8 (7:30 a.m.) 2,620 sec.-ft.; Feb. 1 (3 p.m.) 316 sec.-ft.; Feb. 3 (6:30 p.m.) 631 sec.-ft.; Apr. 1 (1 a.m.) 106 sec.-ft.

f Fragmentary gage-height record; discharge computed from partly estimated gage heights and one field estimate of discharge.

Warm Creek near Colton, Calif.

Location.- Water-stage recorder, lat. 34°04'00", long. 117°18'30", in San Bernardino grant, at Colton Avenue Bridge, 1½ miles east of Colton, San Bernardino County. Altitude of gage, about 970 feet.

Records available.- August 1920 to September 1940.

Average discharge.- 20 years, 49.3 second-feet. Average combined discharge of Warm Creek and Meeks & Daley canal, 20 years, 59.9 second-feet.

Extremes.- Maximum discharge during year, 1,440 second-feet Jan. 8 (gage height, 8.75 feet), from rating curve extended above 60 second-feet on basis of velocity-depth relation; minimum daily, 16 second-feet Sept. 27.
1920-40: Maximum discharge, 27,500 second-feet Mar. 2, 1938, from rating curve extended above 1,250 second-feet; minimum, 2.0 second-feet Sept. 8, 1936.

Remarks.- Records fair except those for days of high water, Jan. 8, Mar. 31, Apr. 1, and for periods of doubtful or no gage-height record, which are poor. See p. 67 for records of Meeks & Daley canal near Colton, which diverts above station, and p. 54 for records of combined flow of canal and Warm Creek. City of San Bernardino sewage-disposal plant discharged 3,480 acre-feet into Warm Creek above station during year.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 33 | 22 | 44 | 34 | 124 | 64 | 183 | a44 | 33 | 26 | 22 | 18 |
| 2 | 32 | 24 | 43 | 36 | 91 | 64 | 80 | d44 | 33 | 26 | 22 | 18 |
| 3 | 32 | 27 | 43 | 38 | 142 | 58 | 64 | d42 | 33 | 27 | 22 | 19 |
| 4 | 31 | 24 | 43 | 65 | 86 | 60 | 63 | d42 | 32 | 26 | 20 | 21 |
| 5 | 30 | 21 | a58 | 63 | 64 | 60 | 61 | d40 | 32 | 27 | 23 | 19 |
| 6 | 31 | 21 | a30 | 58 | 61 | 63 | 61 | d40 | 31 | 26 | 23 | 18 |
| 7 | 37 | 22 | 29 | 92 | 63 | 65 | 58 | d40 | 31 | 23 | 25 | 18 |
| 8 | 30 | 25 | 33 | 405 | 56 | 64 | 57 | d40 | 31 | 24 | 23 | 19 |
| 9 | 27 | 24 | 33 | 73 | 58 | 65 | 55 | d39 | 31 | 24 | 23 | 19 |
| 10 | 31 | 21 | 27 | 64 | 58 | 64 | 53 | 39 | 31 | 23 | 24 | 19 |
| 11 | 30 | 21 | 29 | 64 | 60 | 64 | 51 | 38 | 31 | 23 | 23 | 21 |
| 12 | 26 | 20 | 28 | 57 | 58 | 61 | 49 | 37 | 32 | 22 | 23 | a20 |
| 13 | 24 | 20 | 27 | 51 | 58 | 60 | 48 | 36 | 31 | 22 | 22 | a20 |
| 14 | 23 | 24 | 28 | 51 | 79 | 58 | 44 | 35 | 30 | 21 | 23 | a20 |
| 15 | 23 | 34 | 28 | 52 | 61 | 56 | 42 | 35 | 29 | 20 | 22 | a20 |
| 16 | 26 | 34 | 28 | 52 | 55 | 55 | 36 | 33 | 29 | 20 | 22 | a20 |
| 17 | 30 | 28 | 27 | 53 | 57 | 55 | 36 | 35 | 30 | 24 | 23 | 20 |
| 18 | 29 | 26 | 29 | 55 | 58 | 49 | 40 | 35 | 30 | 25 | 22 | 21 |
| 19 | 31 | 24 | 33 | 53 | 57 | 40 | 41 | 35 | 31 | 24 | 24 | 20 |
| 20 | 32 | 36 | 33 | 53 | 60 | 40 | 42 | 36 | 28 | 24 | 23 | 20 |
| 21 | 34 | 38 | 30 | 52 | 65 | 40 | 43 | 36 | 27 | 23 | 24 | 22 |
| 22 | 37 | 35 | 29 | 51 | 68 | 33 | 45 | 37 | 27 | 23 | 23 | 22 |
| 23 | 38 | 34 | 44 | 77 | 70 | 38 | 47 | 36 | 27 | 23 | 22 | 23 |
| 24 | 39 | 36 | 36 | 74 | 68 | 31 | 49 | 36 | 28 | 26 | 23 | 22 |
| 25 | 36 | 36 | 32 | 58 | 107 | 40 | 49 | 36 | 27 | 24 | 21 | 23 |
| 26 | 38 | 35 | 33 | 52 | 107 | 39 | a50 | 35 | 27 | 24 | 20 | 19 |
| 27 | 33 | 36 | 33 | d52 | d75 | 51 | a55 | 35 | 26 | 24 | 19 | 16 |
| 28 | 30 | 65 | 33 | d52 | d65 | 37 | a48 | 36 | 26 | 23 | 20 | 20 |
| 29 | 25 | 49 | 32 | d50 | 70 | 36 | a46 | 36 | 26 | 24 | 19 | 19 |
| 30 | 22 | 47 | 35 | d50 | - | 38 | a44 | 36 | 27 | 25 | 18 | 19 |
| 31 | 23 | - | 34 | d50 | - | 184 | - | 34 | - | 25 | 19 | - |
| Month | Second-foot-days | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | 945 | | | | | 39 | 22 | 30.5 | 1,870 | | | |
| November..... | 911 | | | | | 65 | 20 | 30.4 | 1,810 | | | |
| December..... | 1,022 | | | | | 44 | 27 | 33.0 | 2,030 | | | |
| Calendar year 1939..... | 15,718 | | | | | 383 | 20 | 43.1 | 31,190 | | | |
| January..... | 2,097 | | | | | 405 | 34 | 67.3 | 4,140 | | | |
| February..... | 2,101 | | | | | 142 | 55 | 72.4 | 4,170 | | | |
| March..... | 1,732 | | | | | 184 | 31 | 55.9 | 3,440 | | | |
| April..... | 1,670 | | | | | 153 | 36 | 55.7 | 3,310 | | | |
| May..... | 1,158 | | | | | 44 | 35 | 37.4 | 2,300 | | | |
| June..... | 837 | | | | | 33 | 26 | 29.6 | 1,760 | | | |
| July..... | 738 | | | | | 27 | 20 | 23.8 | 1,480 | | | |
| August..... | 682 | | | | | 25 | 18 | 22.0 | 1,350 | | | |
| September..... | 595 | | | | | 23 | 16 | 19.8 | 1,180 | | | |
| Water year 1939-40..... | 14,528 | | | | | 184 | 16 | 39.7 | 28,820 | | | |

Peak discharge.- Jan. 8 (5:30 a.m.) 1,440 sec.-ft.; Feb. 1 (11:30 a.m.) 402 sec.-ft.; Feb. 3 (5:30 p.m.) 499 sec.-ft.; Mar. 31 (11 p.m.) 798 sec.-ft.

a No gage-height record; discharge Dec. 5, 6, computed from interpolated combined record of Warm Creek and Meeks & Daley canal; that for Apr. 26 to May 1 computed on basis of peak of Apr. 26 and probable shape of storm hydrograph; that for Sept. 12-16, computed on basis of preceding and following days.

d Doubtful gage-height record; discharge computed on basis of combined discharge of City Creek and City Creek Water Co.'s canal near Highland.

SANTA ANA RIVER BASIN

Combined discharge, in second-feet, of Warm Creek and Meeks & Daley canal near Colton, Calif..
water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | e33 | 41 | 47 | 54 | e124 | 64 | 183 | 63 | 52 | 45 | 42 | 38 |
| 2 | e32 | 43 | 47 | 56 | 91 | 64 | 80 | 62 | 52 | 45 | 42 | 38 |
| 3 | e32 | 46 | 48 | 58 | e142 | 58 | 64 | 61 | 51 | 46 | 42 | 39 |
| 4 | 32 | 43 | 48 | 76 | 86 | 60 | 63 | 61 | 50 | 45 | 40 | 40 |
| 5 | 31 | 40 | a48 | 64 | 64 | 60 | 61 | 59 | 50 | 44 | 43 | 38 |
| 6 | 32 | 40 | a49 | 59 | 61 | 63 | 61 | 59 | 51 | 45 | 43 | 37 |
| 7 | 38 | 40 | 49 | 93 | 63 | 65 | 58 | 60 | 50 | 42 | 44 | 38 |
| 8 | 32 | 45 | 53 | e406 | 56 | 64 | 57 | 60 | 50 | 42 | 43 | 38 |
| 9 | 28 | 44 | 52 | 73 | 58 | 65 | 57 | 58 | 50 | 43 | 42 | 38 |
| 10 | 32 | 41 | 46 | 64 | 58 | 64 | 56 | 58 | 50 | 42 | 43 | 39 |
| 11 | 35 | 41 | 48 | 64 | 60 | 64 | 54 | 58 | 50 | 41 | 42 | 40 |
| 12 | 43 | 40 | 47 | 57 | 58 | 61 | 52 | 56 | 48 | 40 | 43 | 40 |
| 13 | 44 | 40 | 46 | 51 | 58 | 61 | 53 | 56 | 50 | 41 | 42 | 39 |
| 14 | 43 | 44 | 47 | 51 | 79 | 60 | 52 | 54 | 49 | 40 | 42 | 40 |
| 15 | 43 | 54 | 47 | 52 | 61 | 58 | 57 | 53 | 48 | 40 | 42 | 39 |
| 16 | 46 | 54 | 48 | 52 | 55 | 58 | 55 | 53 | 48 | 39 | 42 | 39 |
| 17 | 50 | 48 | 46 | 53 | 57 | 59 | 55 | 55 | 49 | 41 | 43 | 39 |
| 18 | 49 | 48 | 49 | 55 | 58 | 61 | 59 | 55 | 49 | 42 | 42 | 39 |
| 19 | 49 | 44 | 53 | 53 | 57 | 59 | 60 | 55 | 49 | 43 | 43 | 39 |
| 20 | 51 | 56 | 53 | 53 | 60 | 59 | 61 | 56 | 47 | 43 | 43 | 39 |
| 21 | 53 | 58 | 50 | 52 | 65 | 59 | 62 | 56 | 46 | 43 | 43 | 41 |
| 22 | 56 | 53 | 49 | 51 | 68 | 51 | 64 | 55 | 47 | 42 | 43 | 41 |
| 23 | 58 | 54 | 64 | 77 | 70 | 56 | 66 | 54 | 47 | 43 | 42 | 42 |
| 24 | 58 | 56 | 56 | 74 | 68 | 50 | 67 | 54 | 47 | 43 | 43 | 41 |
| 25 | 56 | 56 | 52 | 58 | e107 | 49 | 68 | 54 | 46 | 43 | 41 | 41 |
| 26 | 56 | 55 | 53 | 52 | 107 | 58 | 99 | 53 | 45 | 44 | 39 | 38 |
| 27 | 56 | 56 | 53 | 52 | 78 | 69 | 74 | 53 | 45 | 44 | 38 | 36 |
| 28 | 49 | 69 | 53 | 52 | 68 | 56 | 67 | 54 | 45 | 43 | 37 | 40 |
| 29 | 44 | 50 | 52 | 50 | 70 | 55 | 65 | 54 | 45 | 44 | 39 | 38 |
| 30 | 41 | 49 | 53 | 50 | - | 57 | 63 | 54 | 46 | 45 | 38 | 39 |
| 31 | 42 | - | 54 | 50 | - | 193 | - | 53 | - | 44 | 39 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,340 | 58 | 28 | 43.2 | 2,660 |
| November..... | 1,448 | 69 | 40 | 48.3 | 2,870 |
| December..... | 1,560 | 64 | 46 | 50.3 | 3,090 |
| Calendar year 1939..... | 20,248 | 390 | 28 | 55.5 | 40,150 |
| January..... | 2,162 | 406 | 50 | 69.7 | 4,290 |
| February..... | 2,101 | 142 | 55 | 72.4 | 4,170 |
| March..... | 1,979 | 193 | 49 | 63.8 | 3,930 |
| April..... | 1,993 | 183 | 52 | 66.4 | 3,960 |
| May..... | 1,746 | 63 | 53 | 56.3 | 3,460 |
| June..... | 1,452 | 52 | 45 | 48.4 | 2,880 |
| July..... | 1,327 | 46 | 39 | 42.8 | 2,630 |
| August..... | 1,290 | 44 | 37 | 41.6 | 2,560 |
| September..... | 1,172 | 42 | 35 | 39.1 | 2,320 |
| Water year 1939-40..... | 19,570 | 406 | 28 | 53.6 | 38,810 |

a No gage-height record; discharge interpolated.

e Canal flow estimated.

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

9-232 February 1936

U. S. GOVERNMENT PRINTING OFFICE 1935-O-34866

Strawberry Creek near Arrowhead Springs, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°10'45", long. 117°15'55", in SE¼ sec. 11, T. 1 N., R. 4 W., upstream from Del Rosa Water Co.'s lower diversion dam, half a mile south of Arrowhead Springs. Altitude of gage, about 1,650 feet.

Drainage area.- 8.6 square miles.

Records available.- December 1919 to September 1940.

Average discharge.- 20 years (1920-40), 4.56 second-feet.

Extremes.- Maximum discharge during year, 292 second-feet Jan. 8 (gage height, 3.70 feet), from rating curve extended above 50 second-feet on basis of control formula; minimum, 0.2 second-foot Sept. 9-10, 13, 28, 30.
1919-40: Maximum discharge, 3,360 second-feet Mar. 2, 1938, by rainfall-run-off studies; practically no flow at times during 1929 and 1931-35.

Remarks.- Records fair. During the year Del Rosa Water Co. diverted about 91 acre-feet above station. There is another small diversion for domestic supply above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 3.5 | 1.6 | 2.7 | 2.5 | 16 | 6.5 | 32 | 5 | 3.1 | 1.6 | 1.1 | 0.8 |
| 2 | 3.5 | 1.9 | 2.5 | 2.5 | 16 | 8 | 16 | 5 | 3.1 | 1.5 | 1.0 | .8 |
| 3 | 6.5 | 1.8 | 2.4 | 2.5 | 20 | 7.5 | 10 | 5 | 3.2 | 1.2 | 1.0 | .8 |
| 4 | 3.8 | 1.8 | 2.4 | 8 | 16 | 7 | 10 | 5 | 3.3 | 1.2 | 1.2 | .8 |
| 5 | 2.7 | 2.0 | 2.3 | 5 | 10 | 7 | 9.5 | 5.5 | 3.2 | 1.0 | 1.0 | .8 |
| 6 | 8 | 2.2 | 2.2 | 4.1 | 7.5 | 6 | 8 | 5.5 | 3.1 | .9 | .9 | .7 |
| 7 | 7.5 | 2.0 | 2.2 | 18 | 6 | 6 | 7.5 | 5 | 2.9 | 1.0 | .9 | .8 |
| 8 | a5.5 | 2.3 | 2.4 | 58 | 5.5 | 6.5 | 7 | 4.3 | 3.1 | .8 | .9 | .8 |
| 9 | a4.5 | 2.5 | 2.7 | 20 | 5.5 | 6.5 | 7.5 | 4.0 | 3.1 | .8 | .9 | .6 |
| 10 | a3.8 | 2.3 | 2.7 | 18 | 5.5 | 7 | 7 | 4.0 | 2.4 | .8 | .9 | .6 |
| 11 | a3.2 | 2.3 | 2.5 | 17 | 5.5 | 6.5 | 6 | 4.0 | 2.3 | .8 | 1.0 | .7 |
| 12 | a2.8 | 2.3 | 2.4 | 15 | 5 | 6 | 6 | 4.0 | 2.3 | .8 | .7 | .6 |
| 13 | a2.6 | 2.2 | 2.4 | 11 | 4.8 | 5.5 | 6 | 3.6 | 2.4 | .9 | .9 | .6 |
| 14 | f2.4 | 1.8 | 2.3 | 8 | 5.5 | 5 | 5 | 3.8 | 2.5 | 1.0 | .8 | .6 |
| 15 | 2.0 | 1.9 | 2.2 | 8 | 4.7 | 5 | 14 | 3.8 | 2.9 | .8 | 1.1 | .8 |
| 16 | 1.8 | 1.9 | 2.4 | 6.5 | 4.6 | 5 | 5.5 | 3.8 | 3.3 | 1.0 | 1.1 | .6 |
| 17 | 1.6 | 2.2 | 2.3 | 6 | 4.8 | 5.5 | 4.6 | 3.8 | 2.8 | 1.2 | .9 | .6 |
| 18 | 1.7 | 2.2 | 2.3 | 5.5 | 4.4 | 5 | 5 | 4.3 | 2.7 | 1.2 | 1.0 | .6 |
| 19 | 1.5 | 2.0 | 2.0 | 5 | 4.1 | 5.5 | 5 | 4.0 | 2.0 | 1.2 | .7 | .7 |
| 20 | 1.4 | 1.8 | 2.0 | 4.8 | 3.8 | 5 | 4.8 | 3.8 | 1.9 | 1.1 | .7 | .7 |
| 21 | 1.3 | 1.8 | 2.2 | 4.4 | 4.1 | 4.8 | 4.4 | 3.6 | 1.8 | 1.2 | .6 | .7 |
| 22 | 1.5 | 1.7 | 2.2 | 4.3 | 5 | 4.8 | 3.8 | 3.6 | 1.8 | .9 | .7 | .7 |
| 23 | 1.5 | 2.0 | 7.5 | 6 | 4.4 | 4.8 | 3.8 | 3.5 | 2.0 | .9 | .7 | .7 |
| 24 | 1.9 | 2.2 | 4.0 | 5.5 | 4.3 | 4.6 | 3.8 | 3.3 | 1.7 | .9 | .7 | .7 |
| 25 | 2.2 | 2.3 | 2.9 | 4.1 | 21 | 5 | 3.8 | 3.5 | 1.7 | .9 | 1.1 | .5 |
| 26 | 1.9 | 2.4 | 2.8 | 3.8 | 37 | 6 | 23 | 3.6 | 1.6 | 1.2 | .8 | .5 |
| 27 | 1.6 | 4.0 | 3.1 | 3.5 | 11 | 8.5 | 8.5 | 4.0 | 1.6 | 1.2 | .7 | .5 |
| 28 | 1.6 | 7 | 2.8 | 3.2 | 8.5 | 5.5 | 7 | 4.0 | 1.5 | 1.4 | .9 | .5 |
| 29 | 1.8 | 3.3 | 2.7 | 3.1 | 14 | 4.6 | 6.5 | 3.8 | 1.7 | 1.2 | .7 | .6 |
| 30 | 1.4 | 3.1 | 2.9 | 2.8 | - | 4.3 | 6 | 3.5 | 1.8 | 1.2 | .7 | .4 |
| 31 | 1.6 | - | 2.7 | 3.2 | - | 42 | - | 3.3 | - | 1.0 | .7 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 88.6 | 8 | 1.3 | 2.86 | 176 |
| November..... | 71.0 | 7 | 1.6 | 2.37 | 141 |
| December..... | 83.1 | 7.5 | 2.0 | 2.68 | 185 |
| Calendar year 1939..... | 1,721.3 | 53 | .3 | 4.72 | 3,420 |
| January..... | 269.3 | 58 | 2.5 | 8.69 | 534 |
| February..... | 263.3 | 37 | 3.0 | 9.08 | 522 |
| March..... | 218.9 | 42 | 4.3 | 7.06 | 434 |
| April..... | 247.0 | 32 | 3.8 | 8.23 | 490 |
| May..... | 126.9 | 5.5 | 3.3 | 4.09 | 252 |
| June..... | 72.8 | 3.3 | 1.5 | 2.43 | 144 |
| July..... | 32.8 | 1.6 | .8 | 1.08 | 65 |
| August..... | 27.0 | 1.2 | .6 | .87 | 54 |
| September..... | 19.8 | .8 | .4 | .66 | 39 |
| Water year 1939-40..... | 1,520.5 | 58 | .4 | 4.15 | 3,020 |

Peak discharge.- Jan. 8 (4 a.m.) 292 sec.-ft.; Feb. 26 (1:45 a.m.) 125 sec.-ft.; Mar. 31 (9 p.m.) 107 sec.-ft.; Apr. 26 (4:30 a.m.) 161 sec.-ft.
a No gage-height record; discharge computed on basis of records for City Creek near Highland and partial record for Waterman Canyon Creek near Arrowhead Springs.
f Discharge computed from partial gage-height record.

SANTA ANA RIVER BASIN

Waterman Canyon Creek near Arrowhead Springs, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°11'35", long. 117°16'35", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 1 N., R. 4 W., 1 mile northwest of Arrowhead Springs. Altitude of gage, about 2,125 feet.

Drainage area.- 4.55 square miles.

Records available.- November 1911 to October 1914, December 1919 to September 1940.

Average discharge.- 22 years (1912-14, 1920-40), 2.86 second-feet.

Extremes.- Maximum discharge during year, 122 second-feet Jan. 7 (gage height, 2.80 feet); minimum, 0.2 second-foot Aug. 20-22.

1920-40: Maximum discharge, 2,350 second-feet Mar. 2, 1938, based on rainfall-run-off studies; no flow at times during summers of 1924-26, 1928, 1929, 1931, and 1934.

Remarks.- Records good except those for days of no gage heights, which are fair. One small diversion for domestic use above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | a1.3 | 0.8 | 0.9 | 0.9 | 8 | 4.4 | 10 | 2.6 | 1.5 | 0.9 | 0.7 | 0.5 |
| 2 | a1.2 | .8 | .8 | .9 | 7 | 4.2 | 6 | 2.5 | 1.6 | .9 | .6 | .6 |
| 3 | 2.4 | .7 | .8 | .8 | 8.5 | 3.7 | 4.6 | 2.5 | 1.6 | .9 | .6 | .6 |
| 4 | 1.6 | .7 | .8 | 4.7 | 8 | 3.6 | 4.6 | 2.5 | 1.7 | .9 | .5 | .6 |
| 5 | a1.4 | .8 | .8 | 1.9 | 5.5 | 3.4 | 4.4 | 2.5 | 1.7 | .9 | .6 | .6 |
| 6 | f2.6 | .9 | .8 | 1.5 | 5 | 3.3 | 4.2 | 2.5 | 1.6 | .8 | .5 | .5 |
| 7 | 2.4 | .8 | .9 | 10 | 4.6 | 3.1 | 4.0 | 2.4 | 1.6 | .8 | .5 | .5 |
| 8 | 1.8 | 1.1 | 1.1 | 22 | 4.2 | 3.1 | 4.0 | 2.1 | 1.6 | .8 | .5 | .4 |
| 9 | 1.6 | 1.2 | 1.1 | 8.5 | 3.6 | 3.1 | 3.9 | 1.9 | 1.5 | .7 | .4 | .6 |
| 10 | 1.6 | 1.0 | 1.0 | 8 | 3.4 | 3.3 | 3.9 | 1.9 | 1.4 | .7 | .4 | .5 |
| 11 | 1.4 | .9 | 1.1 | 6.5 | 3.1 | 3.3 | 3.4 | 1.9 | 1.4 | .7 | .4 | .6 |
| 12 | a1.3 | .9 | 1.1 | 7 | 3.0 | 3.1 | 3.1 | 1.9 | 1.3 | .7 | .4 | .6 |
| 13 | a1.2 | .9 | 1.2 | 4.4 | 2.7 | 3.0 | 2.9 | 1.8 | 1.2 | .7 | .4 | .6 |
| 14 | f1.1 | .8 | 1.2 | 3.6 | 3.6 | 3.0 | 2.9 | 1.8 | 1.3 | .6 | .4 | .5 |
| 15 | 1.1 | .8 | 1.2 | 3.1 | 3.0 | 3.0 | 5.5 | 1.8 | 1.4 | .6 | .6 | .5 |
| 16 | .8 | .8 | 1.0 | 2.9 | 2.7 | 2.9 | 3.4 | 1.9 | 1.4 | .7 | .6 | .5 |
| 17 | .8 | .8 | .9 | 2.7 | 2.7 | 2.7 | 2.9 | 2.0 | 1.2 | .8 | .5 | .6 |
| 18 | .8 | .7 | .9 | 2.7 | 2.6 | 2.7 | 2.5 | 2.1 | 1.2 | .8 | .5 | .6 |
| 19 | .9 | .7 | .9 | 2.5 | 2.6 | 2.9 | 2.4 | 1.9 | 1.2 | .8 | .5 | .6 |
| 20 | .8 | .8 | 1.0 | 2.2 | 2.5 | 2.7 | 2.4 | 1.9 | 1.2 | .7 | .4 | .6 |
| 21 | .6 | .8 | 1.2 | 2.1 | 2.4 | 2.5 | 2.2 | 1.9 | 1.2 | .7 | .4 | .6 |
| 22 | .7 | .8 | 1.2 | 2.0 | 2.9 | 2.4 | 2.4 | 1.9 | 1.2 | .6 | .4 | .6 |
| 23 | .9 | .9 | 2.3 | 3.2 | 2.7 | 2.2 | 2.4 | 1.8 | 1.2 | .6 | .5 | .5 |
| 24 | 1.2 | .9 | 1.5 | 2.7 | 2.5 | 2.2 | 2.4 | 1.6 | 1.2 | .6 | .5 | .6 |
| 25 | 1.2 | .9 | 1.3 | 2.5 | 10 | 2.2 | 2.4 | 1.6 | 1.0 | .6 | .5 | .4 |
| 26 | .9 | 1.0 | 1.2 | 2.2 | 11 | 2.7 | 7.5 | 1.6 | 1.0 | .6 | .5 | .4 |
| 27 | .9 | 1.2 | 1.1 | 2.1 | 5 | 3.6 | 4.2 | 1.9 | 1.1 | .7 | .5 | .4 |
| 28 | .8 | 2.7 | 1.1 | 1.8 | 4.0 | 2.6 | 3.4 | 1.9 | .9 | .8 | .5 | .5 |
| 29 | .7 | 1.2 | 1.1 | 1.8 | 7 | 2.5 | 3.1 | 1.8 | 1.0 | .8 | .4 | .5 |
| 30 | .8 | 1.2 | 1.0 | 1.8 | - | 2.2 | 2.9 | 1.6 | .9 | .7 | .4 | .5 |
| 31 | .8 | - | 1.0 | 2.0 | - | 13 | - | 1.5 | - | .7 | .4 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 37.5 | 2.6 | 0.6 | 1.21 | 74 | | | | |
| November..... | | | | 28.5 | 2.7 | .7 | .96 | 57 | | | | |
| December..... | | | | 33.5 | 2.3 | .8 | 1.08 | 66 | | | | |
| Calendar year 1939..... | | | | 814.4 | 35 | .4 | 2.23 | 1,610 | | | | |
| January..... | | | | 121.0 | 22 | .8 | 3.90 | 240 | | | | |
| February..... | | | | 133.8 | 11 | 2.4 | 4.61 | 265 | | | | |
| March..... | | | | 102.6 | 13 | 2.2 | 3.31 | 204 | | | | |
| April..... | | | | 113.9 | 10 | 2.2 | 3.80 | 226 | | | | |
| May..... | | | | 61.5 | 2.6 | 1.5 | 1.98 | 122 | | | | |
| June..... | | | | 39.3 | 1.7 | .9 | 1.31 | 78 | | | | |
| July..... | | | | 22.7 | .9 | .6 | .73 | 45 | | | | |
| August..... | | | | 16.0 | .7 | .4 | .48 | 30 | | | | |
| September..... | | | | 15.4 | .6 | .4 | .51 | 31 | | | | |
| Water year 1939-40..... | | | | 724.7 | 22 | .4 | 1.98 | 1,440 | | | | |

Peak discharge.- Jan. 7 (11:30 p.m.) 122 sec.-ft.; Feb. 1 (10 a.m.) 38 sec.-ft.; Feb. 25 (5:30 p.m.) 43 sec.-ft.; Mar. 31 (11 a.m.) 37 sec.-ft.

a No gage-height record; discharge computed on basis of probable shape of recession curve.

f Discharge computed from partly estimated gage-height record.

City Creek near Highland, Calif.

Location.- Water-stage recorder, lat. 34°08'35", long. 117°11'25", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 1 N., R. 3 W., 1 $\frac{1}{2}$ miles northeast of Highland. Altitude of gage, about 1,550 feet.

Drainage area.- 19.8 square miles.

Records available.- October 1919 to September 1940.

Average discharge.- 21 years, 8.97 second-feet.

Extremes.- Maximum discharge during year, 378 second-feet Jan. 8 (gage height, 3.00 feet); minimum, less than 0.1 second-foot for several periods.

1919-40: Maximum discharge, 6,900 second-feet Mar. 2, 1938, by slope-area method; no flow for several months most years.

Remarks.- Records good except those for periods of missing or fragmentary gage heights and of extreme low flow, which are fair. For records of combined flow with City Creek Water Co.'s canal, which diverts above station, see following page.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | 1.5 | 0.1 | 1.8 | 0.1 | 26 | 20 | 90 | 12 | 0.2 | | | |
| 2 | 1.9 | .1 | .1 | .1 | 39 | 17 | 47 | 12 | .2 | | | |
| 3 | 2.9 | .1 | .1 | .1 | 47 | 16 | 36 | 12 | .2 | | | |
| 4 | 1.9 | .1 | .1 | 7 | 42 | 16 | 30 | 12 | .1 | | | |
| 5 | 1.4 | .1 | .1 | 7.5 | 24 | 14 | 26 | 12 | .1 | | | |
| 6 | .8 | .1 | .1 | 6.5 | 18 | 12 | 22 | 12 | .1 | | | |
| 7 | 10 | .1 | .1 | 13 | 11 | 20 | 11 | 11 | .1 | | | |
| 8 | 3.1 | .1 | .1 | 140 | 11 | 10 | 17 | a6.5 | | | | |
| 9 | 1.4 | .1 | .1 | 42 | 9.5 | 9.5 | 12 | a4.2 | | | | |
| 10 | 1.2 | .1 | .1 | 41 | 8.5 | 8.5 | 10 | a5.7 | | | | |
| 11 | 1.1 | .1 | .1 | 36 | 7.5 | 8.5 | 9 | a3.3 | | | | |
| 12 | 1.0 | .1 | .1 | 44 | 7 | 7.5 | 8 | a5.0 | | | | |
| 13 | .9 | .1 | .1 | 30 | 7 | 7.5 | 7 | a2.2 | | | | |
| 14 | .8 | .1 | .1 | 23 | 8.5 | 6 | 6.5 | f1.3 | | | | |
| 15 | .7 | .1 | .1 | 18 | 7 | 6.5 | 17 | 1.2 | | | | |
| 16 | .5 | .1 | .1 | 16 | 6 | 5 | 16 | 1.2 | | | | |
| 17 | .3 | .1 | .1 | 12 | 4.6 | 4.8 | 14 | 1.2 | | | | |
| 18 | .3 | .1 | .1 | 10 | 3.8 | 4.8 | 13 | 1.3 | | | | |
| 19 | .2 | .1 | .1 | 9 | 3.2 | 6 | 12 | 1.2 | .06 | | | |
| 20 | .2 | .1 | .1 | 7.5 | 2.9 | 4.8 | 12 | 1.2 | | | | |
| 21 | .2 | .1 | .1 | 7.5 | 3.0 | 4.6 | 12 | 1.2 | | | | |
| 22 | .2 | .1 | .1 | 7 | 3.6 | 4.2 | 12 | 1.2 | | | | |
| 23 | .2 | .1 | 1.8 | 8.5 | 4.4 | 6 | 12 | .9 | | | | |
| 24 | .2 | .1 | .7 | 9.5 | 4.6 | 8 | 12 | .5 | | | | |
| 25 | .2 | .1 | .1 | 6.5 | 30 | 8 | 12 | .4 | | | | |
| 26 | .2 | .1 | .1 | 4.8 | 104 | 8.5 | 34 | .4 | | | | |
| 27 | .1 | .2 | .1 | 3.8 | 37 | 10 | 18 | a.3 | | | | |
| 28 | .1 | 15 | .1 | 4.4 | 26 | 9 | 12 | a.3 | | | | |
| 29 | .1 | 5.5 | .1 | 3.6 | 28 | 8.5 | 11 | 2.2 | | | | |
| 30 | .1 | 4.6 | .1 | 3.4 | - | 8.5 | 12 | a.2 | | | | |
| 31 | .1 | - | .1 | 3.4 | - | 80 | - | .2 | - | | | |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 33.6 | 10 | 0.1 | 1.08 | 87 |
| November..... | 27.9 | 15 | .1 | .93 | 56 |
| December..... | 7.1 | 1.8 | .1 | .23 | 14 |
| Calendar year 1939..... | 1,673.1 | 71 | .1 | 4.58 | 3,320 |
| January..... | 525.2 | 140 | .1 | 18.9 | 1,040 |
| February..... | 535.1 | 104 | 2.9 | 18.5 | 1,060 |
| March..... | 347.7 | 80 | 4.2 | 11.2 | 890 |
| April..... | 570.5 | 90 | 6.5 | 19.0 | 1,130 |
| May..... | 122.3 | 12 | .2 | 3.95 | 243 |
| June..... | 2.15 | .2 | - | .072 | 4.3 |
| July..... | .62 | - | - | .020 | 1.2 |
| August..... | .62 | - | - | .020 | 1.2 |
| September..... | .60 | - | - | .020 | 1.2 |
| Water year 1939-40..... | 2,173.39 | 140 | - | 5.94 | 4,310 |

a No gage-height record; discharge computed on basis of changes in flow as shown by City Creek canal or interpolated.

f Fragmentary gage-height record; discharge computed from partly estimated gage height.

Note.- Discharge less than 0.1 second-foot on days for which no figures are given.

SANTA ANA RIVER BASIN

Combined discharge, in second-feet, of City Creek and canal near Highland, Calif., water year
October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|------|---------|---------|------|----------------------|------|-------|
| 1 | 3.7 | 3.2 | 4.7 | 4.5 | 27 | 23 | 90 | 12 | 5.5 | 2.4 | 1.2 | 0.8 |
| 2 | 4.5 | 3.4 | 4.1 | 4.5 | 39 | 21 | 47 | 12 | 5.5 | 2.4 | 1.1 | 1.0 |
| 3 | 6 | 3.5 | 4.2 | 4.6 | 47 | 19 | 36 | 12 | 5.5 | 2.3 | 1.1 | 1.3 |
| 4 | 4.5 | 3.4 | 4.2 | 9 | 42 | 19 | 30 | 12 | 5.5 | 2.0 | 1.0 | 1.5 |
| 5 | 3.8 | 3.5 | 4.2 | 7.5 | 27 | 18 | 25 | 12 | 5.5 | 1.9 | 1.0 | 1.5 |
| 6 | 3.4 | 3.6 | 4.2 | 6.5 | 22 | 15 | 22 | 12 | 5 | 1.7 | 1.0 | 1.3 |
| 7 | 12 | 3.5 | 4.3 | 13 | 17 | 15 | 20 | 11 | 5 | 1.7 | 1.0 | 1.6 |
| 8 | 6 | 4.0 | 4.3 | 140 | 15 | 14 | 20 | 11 | 5 | 1.7 | .9 | 1.3 |
| 9 | 5 | 4.4 | 4.4 | 42 | 13 | 13 | 18 | 11 | 4.8 | 1.7 | .9 | 1.2 |
| 10 | 4.4 | 4.2 | 4.4 | 41 | 11 | 12 | 16 | 10 | 4.6 | 1.6 | .8 | 1.0 |
| 11 | 3.9 | 4.2 | 4.4 | 36 | 10 | 12 | 15 | 9.5 | 4.4 | 1.4 | .8 | 1.0 |
| 12 | 3.7 | 4.0 | 4.3 | 44 | 9.5 | 11 | 14 | 8.5 | 4.2 | 1.4 | .8 | 1.2 |
| 13 | 3.5 | 3.8 | 4.4 | 30 | 9.5 | 11 | 13 | 8 | 4.0 | 1.4 | .9 | 1.2 |
| 14 | 3.5 | 3.7 | 4.1 | 23 | 10 | 10 | 12 | 7.5 | 3.8 | 1.3 | 1.0 | 1.2 |
| 15 | 3.4 | 3.6 | 4.2 | 18 | 9 | 10 | 21 | 7 | 3.8 | 1.3 | 1.2 | 1.2 |
| 16 | 3.5 | 3.6 | 4.1 | 16 | 8.5 | 9.5 | 16 | 6.5 | 3.8 | 1.4 | 1.3 | 1.3 |
| 17 | 3.5 | 3.6 | 4.0 | 13 | 7.5 | 9.5 | 14 | 7 | 3.4 | 1.7 | 1.2 | 1.3 |
| 18 | 3.6 | 3.4 | 4.0 | 12 | 7.5 | 9.5 | 13 | 7.5 | 3.0 | 1.9 | 1.0 | 1.4 |
| 19 | 3.4 | 3.3 | 4.1 | 11 | 7 | 11 | 12 | 6.5 | 3.0 | 1.6 | .9 | 1.6 |
| 20 | 3.4 | 3.3 | 4.1 | 9 | 7 | 9.5 | 12 | 6.5 | 3.0 | 1.5 | .8 | 1.7 |
| 21 | 3.1 | 3.4 | 4.1 | 8 | 7 | 9.5 | 12 | 6.5 | 3.0 | 1.4 | .7 | 1.3 |
| 22 | 2.9 | 3.4 | 4.1 | 7.5 | 8 | 9 | 12 | 6.5 | 3.0 | 1.3 | .8 | 1.3 |
| 23 | 3.1 | 3.4 | 7 | 8.5 | 8.5 | 8.5 | 12 | 6 | 2.8 | 1.2 | .8 | 1.3 |
| 24 | 3.4 | 3.6 | 6.5 | 10 | 7.5 | 8 | 12 | 6 | 2.6 | 1.2 | .9 | 1.2 |
| 25 | 4.0 | 3.8 | 5 | 8 | 32 | 8 | 12 | 6 | 2.4 | 1.2 | .9 | 1.1 |
| 26 | 3.6 | 3.8 | 4.8 | 7.5 | 104 | 8.5 | 34 | 6 | 2.4 | 1.1 | 1.0 | 1.0 |
| 27 | 3.4 | 4.4 | 4.6 | 8.5 | 40 | 10 | 20 | 6.5 | 2.4 | 1.3 | 1.0 | 1.0 |
| 28 | 3.0 | 15 | 4.6 | 6.5 | 29 | 9 | 16 | 6.5 | 2.4 | 1.5 | .9 | 1.0 |
| 29 | 2.9 | 5.5 | 4.6 | 6 | 31 | 8.5 | 15 | 6 | 2.8 | 1.5 | .9 | 1.0 |
| 30 | 3.0 | 4.6 | 4.6 | 6.5 | - | 8.5 | 13 | 5.5 | 2.8 | 1.3 | .8 | 1.0 |
| 31 | 3.0 | - | 4.5 | 6.5 | - | 80 | - | 5.5 | - | 1.2 | .7 | - |
| Month | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | 124.1 | | 12 | 2.9 | 4.00 | 246 | | |
| November..... | | | | | 124.1 | | 15 | 3.2 | 4.14 | 246 | | |
| December..... | | | | | 139.1 | | 7 | 4.0 | 4.49 | 276 | | |
| Calendar year 1939..... | | | | | 2,627.8 | | 74 | .7 | 7.20 | 5,210 | | |
| January..... | | | | | 566.1 | | 140 | 4.5 | 18.3 | 1,120 | | |
| February..... | | | | | 612.5 | | 104 | 7 | 21.1 | 1,210 | | |
| March..... | | | | | 439.5 | | 80 | 8 | 14.2 | 872 | | |
| April..... | | | | | 624 | | 90 | 12 | 20.8 | 1,240 | | |
| May..... | | | | | 256.5 | | 12 | 5.5 | 8.27 | 509 | | |
| June..... | | | | | 114.9 | | 5.5 | 2.4 | 3.83 | 228 | | |
| July..... | | | | | 48.5 | | 2.4 | 1.1 | 1.56 | 96 | | |
| August..... | | | | | 29.3 | | 1.3 | .7 | .95 | 58 | | |
| September..... | | | | | 36.8 | | 1.7 | .8 | 1.23 | 73 | | |
| Water year 1939-40..... | | | | | 3,115.4 | | 140 | .7 | 8.51 | 6,170 | | |

City Creek Water Co.'s canal near Highland, Calif.

Location.- Water-stage recorder, lat. 34°08'35", long. 117°11'25", in NW¼ sec. 27, T. 1 N., R. 3 W., 1½ miles northeast of Highland.

Records available.- May 1924 to September 1940.

Average discharge.- 16 years, 2.12 second-feet.

Extremes.- Maximum daily discharge during year, 6.5 second-feet May 9, 10; no flow at times.

1924-40: Maximum discharge, 10 second-feet May 30, 1927; no flow at times.

Remarks.- Records good. This canal diverts from City Creek a quarter of a mile above gage on that stream (see p. 58 for records of combined flow of City Creek and canal).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 2.4 | 3.1 | 2.9 | 4.4 | 1.4 | 2.9 | 0 | 0 | 5.5 | 2.4 | 1.2 | 0.8 |
| 2 | 2.6 | 3.3 | 4.0 | 4.4 | 0 | 4.4 | 0 | 0 | 5.5 | 2.4 | 1.1 | 1.0 |
| 3 | 2.9 | 3.4 | 4.1 | 4.5 | 0 | 4.0 | 0 | 0 | 5.5 | 2.3 | 1.1 | 1.3 |
| 4 | 2.6 | 3.3 | 4.1 | 2.2 | 0 | 3.7 | 0 | 0 | 5.5 | 2.0 | 1.0 | 1.5 |
| 5 | 2.4 | 3.4 | 4.1 | 0 | 2.9 | 3.6 | 0 | 0 | 5.5 | 1.9 | 1.0 | 1.5 |
| 6 | 2.6 | 3.5 | 4.1 | 0 | 4.2 | 3.4 | 0 | 0 | 5 | 1.7 | 1.0 | 1.3 |
| 7 | 1.7 | 3.4 | 4.2 | 0 | 4.0 | 3.6 | 0 | 0 | 5 | 1.7 | 1.0 | 1.3 |
| 8 | 3.0 | 3.9 | 4.2 | .1 | 3.7 | 4.0 | 2.8 | 4.3 | 5 | 1.7 | .9 | 1.3 |
| 9 | 3.7 | 4.3 | 4.3 | 0 | 3.2 | 3.8 | 5.5 | 6.5 | 4.8 | 1.7 | .9 | 1.2 |
| 10 | 3.2 | 4.1 | 4.3 | 0 | 2.9 | 3.8 | 6 | 6.5 | 4.5 | 1.6 | .8 | 1.0 |
| 11 | 2.8 | 4.1 | 4.3 | 0 | 2.5 | 3.7 | 6 | 6 | 4.4 | 1.4 | .8 | 1.0 |
| 12 | 2.7 | 3.9 | 4.2 | 0 | 2.4 | 3.5 | 6 | 5.5 | 4.1 | 1.4 | .8 | 1.2 |
| 13 | 2.6 | 3.7 | 4.3 | 0 | 2.3 | 3.5 | 6 | 6 | 3.9 | 1.4 | .9 | 1.2 |
| 14 | 2.7 | 3.6 | 4.0 | 0 | 1.9 | 4.3 | 6 | 6 | 3.8 | 1.3 | 1.0 | 1.2 |
| 15 | 2.7 | 3.5 | 4.1 | 0 | 1.9 | 4.7 | 4.2 | 6 | 3.7 | 1.3 | 1.2 | 1.2 |
| 16 | 3.0 | 3.5 | 4.0 | 0 | 2.7 | 4.6 | .1 | 5.5 | 3.7 | 1.4 | 1.3 | 1.3 |
| 17 | 3.2 | 3.5 | 3.9 | .9 | 3.1 | 4.6 | 0 | 6 | 3.4 | 1.7 | 1.2 | 1.3 |
| 18 | 3.3 | 3.5 | 3.9 | 1.6 | 3.9 | 4.7 | 0 | 6 | 3.0 | 1.9 | 1.0 | 1.4 |
| 19 | 3.2 | 3.2 | 4.0 | 1.6 | 4.0 | 5 | 0 | 5.5 | 3.0 | 1.6 | .9 | 1.3 |
| 20 | 3.2 | 3.2 | 4.0 | 1.5 | 4.2 | 4.9 | 0 | 5.5 | 2.9 | 1.5 | .8 | 1.7 |
| 21 | 2.9 | 3.3 | 4.0 | .4 | 4.1 | 4.8 | 0 | 5.5 | 2.9 | 1.4 | .7 | 1.3 |
| 22 | 2.7 | 3.3 | 4.0 | .3 | 4.4 | 4.7 | 0 | 5.5 | 2.9 | 1.3 | .8 | 1.3 |
| 23 | 2.9 | 3.3 | 5 | .2 | 3.9 | 2.4 | .3 | 5 | 2.8 | 1.2 | .8 | 1.3 |
| 24 | 3.2 | 3.5 | 6 | .5 | 2.9 | 0 | .5 | 5.5 | 2.6 | 1.2 | .9 | 1.2 |
| 25 | 3.5 | 3.7 | 4.9 | 1.3 | 2.3 | 0 | .5 | 5.5 | 2.4 | 1.2 | .9 | 1.1 |
| 26 | 3.4 | 3.7 | 4.7 | 2.5 | 0 | 0 | .1 | 5.5 | 2.4 | 1.1 | 1.0 | 1.0 |
| 27 | 3.3 | 4.2 | 4.5 | 2.9 | 2.6 | 0 | 2.1 | 6 | 2.4 | 1.3 | 1.0 | 1.0 |
| 28 | 2.9 | 0 | 4.5 | 2.0 | 3.6 | 0 | 4.2 | 6 | 2.4 | 1.5 | .9 | 1.0 |
| 29 | 2.8 | 0 | 4.5 | 2.6 | 2.8 | 0 | 4.1 | 4.0 | 2.7 | 1.5 | .9 | 1.0 |
| 30 | 2.9 | 0 | 4.5 | 3.0 | - | 0 | 1.4 | 5.5 | 2.7 | 1.3 | .8 | 1.0 |
| 31 | 2.9 | - | 4.4 | 3.2 | - | .1 | - | 5.5 | - | 1.2 | .7 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 90.2 | 3.8 | 1.7 | 2.91 | 179 | | |
| November..... | | | | | | 96.2 | 4.3 | 0 | 3.21 | 191 | | |
| December..... | | | | | | 132.0 | 6 | 2.9 | 4.26 | 262 | | |
| Calendar year 1939..... | | | | | | 965.0 | 7.5 | 0 | 2.64 | 1,910 | | |
| January..... | | | | | | 40.1 | 4.5 | 0 | 1.29 | 80 | | |
| February..... | | | | | | 77.8 | 4.4 | 0 | 2.68 | 154 | | |
| March..... | | | | | | 92.7 | 5 | 0 | 2.99 | 184 | | |
| April..... | | | | | | 55.8 | 6 | 0 | 1.86 | 111 | | |
| May..... | | | | | | 134.8 | 6.5 | 0 | 4.35 | 267 | | |
| June..... | | | | | | 113.9 | 5.5 | 2.4 | 3.80 | 226 | | |
| July..... | | | | | | 45.5 | 2.4 | 1.1 | 1.56 | 96 | | |
| August..... | | | | | | 29.3 | 1.3 | .7 | .95 | 58 | | |
| September..... | | | | | | 36.8 | 1.7 | .8 | 1.23 | 73 | | |
| Water year 1939-40..... | | | | | | 948.1 | 6.5 | 0 | 2.59 | 1,880 | | |

a Interpolated.

f Computed from partly estimated gage height.

Devil Canyon Creek near San Bernardino, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. $34^{\circ}12'05''$, long. $117^{\circ}20'10''$, in Muscupiabe grant, 7.3 miles northwest of San Bernardino, San Bernardino County. Altitude of gage, about 1,800 feet.

Drainage area.- 6.16 square miles.

Records available.- November 1911 to September 1912, October 1913 to September 1914, and December 1919 to September 1940.

Average discharge.- 21 years (1913-14, 1920-40), 2.21 second-feet.

Extremes.- Maximum discharge during year, 40 second-feet Jan. 8 (gage height, 2.55 feet); no flow for several months.

1913-14, 1919-40: Maximum discharge, 3,320 second-feet Mar. 2, 1938, based on rainfall-run-off studies; no flow for several months during summers of 1924-37, 1939, and 1940.

Remarks.- Records good. City of San Bernardino diverted 1,247 acre-feet above station during year for municipal supply and to spread over canyon floor for ground-water recharge.

Cooperation.- Results of several discharge measurements furnished by city of San Bernardino.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 0.2 | 0 | } | } | 1.8 | 2.0 | 6.5 | 0.1 | } | } | | |
| 2 | .1 | 0 | | | 5 | .8 | 3.9 | .1 | | | | |
| 3 | .1 | 0 | | | 8.5 | .5 | 3.1 | .1 | | | | |
| 4 | } | 0 | | | 6.5 | .4 | 3.0 | .1 | | | | |
| 5 | | 4.2 | | | .3 | 2.0 | .1 | | | | | |
| 6 | } | 0 | } | 3.0 | .3 | .4 | .1 | } | | | | |
| 7 | | 0 | | .6 | .9 | .2 | .4 | | .1 | | | |
| 8 | } | 0 | 13 | .4 | .2 | .3 | .1 | | | | | |
| 9 | | } | 4.7 | .2 | .1 | .3 | .1 | | | | | |
| 10 | 0 | | 5 | .2 | .1 | .2 | .1 | | | | | |
| 11 | 0 | } | } | 4.3 | .2 | .1 | .2 | .1 | } | | | |
| 12 | 0 | | | 4.6 | .2 | .1 | .2 | .1 | | | | |
| 13 | 0 | | | 3.1 | .2 | .1 | .2 | .1 | | | | |
| 14 | 0 | | | 1.4 | .2 | .1 | .2 | .1 | | | | |
| 15 | 0 | | | .1 | .2 | .1 | .2 | .1 | | | | |
| 16 | 0 | } | } | .1 | .2 | .1 | .2 | 0 | } | | | |
| 17 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 18 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 19 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 20 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 21 | 0 | } | } | .1 | .2 | .1 | .1 | 0 | } | | | |
| 22 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 23 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 24 | 0 | | | .1 | .2 | .1 | .1 | 0 | | | | |
| 25 | 0 | | | .1 | 2.8 | .1 | .1 | 0 | | | | |
| 26 | 0 | } | } | .1 | 7 | .1 | 1.7 | 0 | } | | | |
| 27 | 0 | | | .1 | 3.3 | .1 | 1.8 | 0 | | | | |
| 28 | 0 | | | .1 | 2.9 | .1 | 1.3 | 0 | | | | |
| 29 | 0 | | | .1 | 3.1 | .1 | .1 | 0 | | | | |
| 30 | 0 | | | .1 | - | .1 | .1 | 0 | | | | |
| 31 | 0 | - | | .1 | - | 4.2 | - | - | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0.64 | 0.2 | - | 0.021 | 1.3 | | | |
| November..... | | | | | .22 | - | 0 | .007 | .4 | | | |
| December..... | | | | | .62 | - | - | .020 | 1.2 | | | |
| Calendar year 1939..... | | | | | 99.28 | 8.5 | 0 | .272 | 197 | | | |
| January..... | | | | | 38.52 | 13 | - | 1.24 | 76 | | | |
| February..... | | | | | 52.6 | 8.5 | .2 | 1.81 | 104 | | | |
| March..... | | | | | 11.1 | 4.2 | .1 | .36 | 22 | | | |
| April..... | | | | | 27.2 | 6.5 | .1 | .91 | 54 | | | |
| May..... | | | | | 2.48 | .1 | - | .079 | 4.9 | | | |
| June..... | | | | | .30 | - | 0 | .010 | .6 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 133.66 | 13 | 0 | .365 | 264 | | | |

Peak discharge.- Jan. 8 (1 a.m.) 40 sec.-ft.; Feb. 3 (4:30 p.m.) 17 sec.-ft.; Feb. 26 (10 p.m.) 14 sec.-ft.; Mar. 31 (12 m.) 14 sec.-ft.

Lytle Creek near Fontana, Calif.

Location.- Water-stage recorder, lat. 34°12'05", long. 117°26'50", in NW¼ sec. 6, T. 1 N., R. 5 W., unsurveyed, a quarter of a mile downstream from Lytle Creek power plant of Southern California Edison Co. and 7¼ miles north of Fontana. Altitude of gage, about 2,200 feet.

Drainage area.- 47.9 square miles.

Records available.- October 1918 to September 1921, October 1922 to September 1940.

Average discharge.- 16 years (1919-20, 1925-40), 9.37 second-feet. Average combined discharge of creek and Fontana pipe line, 19 years (1919-20, 1922-40), 36.4 second-feet.

Extremes.- Maximum discharge during year not determined; no flow during parts of year. 1918-21, 1922-40: Maximum discharge, 25,200 second-feet Mar. 2, 1938, by slope-area method; no flow during most of each year.

Remarks.- Records poor. Table on following page shows total flow of Lytle Creek and Fontana pipe line. See p. 63 for records for Fontana pipe line.

Cooperation.- Records furnished by Fontana Union Water Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 1.6 | | | 0 | 4.5 | 4.0 | 5.5 | 0 | | | | |
| 2 | 3 | | | 0 | 5 | 4.0 | 4.0 | 0 | | | | |
| 3 | 2.5 | | | 0 | 11 | 4.0 | 1.3 | 0 | | | | |
| 4 | 3.4 | | | 0 | 7 | 4.0 | .2 | 0 | | | | |
| 5 | 3.6 | | | 0 | 6.5 | 7 | .3 | 0 | | | | |
| 6 | 3.5 | | | 0 | 6 | 6.5 | 0 | 0 | | | | |
| 7 | 3.6 | | | 26 | 6 | 7.5 | 0 | 0 | | | | |
| 8 | 3.5 | | | 317 | 6.5 | 11 | 0 | 0 | | | | |
| 9 | 4.0 | | | 36 | 4.5 | 10 | 0 | 1.7 | | | | |
| 10 | 4.0 | | | 10 | 3.2 | 11 | 0 | 0 | | | | |
| 11 | 4.0 | | | 8 | .9 | 10 | .3 | 0 | | | | |
| 12 | 4.0 | | | 7.5 | 0 | 9 | 0 | 0 | | | | |
| 13 | 4.0 | | | 7 | .2 | 8.5 | 0 | 0 | | | | |
| 14 | 4.0 | | | 6.5 | 0 | 8.5 | 0 | 0 | | | | |
| 15 | 4.0 | | | 3.9 | 0 | 5.5 | 1.9 | 0 | | | | |
| 16 | 4.0 | | | 0 | 0 | 5.5 | 1.2 | 0 | | | | |
| 17 | 4.0 | | | 0 | 0 | 5.5 | 0 | 0 | | | | |
| 18 | 3.6 | | | 0 | .1 | 4.5 | 0 | 0 | | | | |
| 19 | 4.0 | | | 0 | 0 | 4.7 | 0 | 0 | | | | |
| 20 | 3.9 | | | 0 | 0 | 4.8 | 0 | 0 | | | | |
| 21 | 2.2 | | | 0 | 1.6 | 1.8 | 0 | 0 | | | | |
| 22 | 0 | | | 0 | 5 | 1.4 | 0 | 0 | | | | |
| 23 | 0 | | | 0 | 3.8 | 0 | 0 | 0 | | | | |
| 24 | 0 | | | 0 | 5.0 | .4 | 0 | 0 | | | | |
| 25 | 1.0 | | | 0 | 29 | 33 | 0 | 0 | | | | |
| 26 | 0 | | | 0 | 6.5 | 1.2 | 0 | 0 | | | | |
| 27 | 0 | | | 0 | 4.0 | .9 | .1 | 0 | | | | |
| 28 | 0 | | | 0 | 4.0 | 1.1 | 0 | .1 | | | | |
| 29 | 0 | | | 0 | 6.5 | .1 | 0 | 0 | | | | |
| 30 | 0 | | | 0 | - | 0 | 0 | 0 | | | | |
| 31 | 1.4 | | | 0 | - | 14 | - | 0 | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 76.8 | 4.0 | 0 | 2.48 | 152 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 689.6 | 546 | 0 | 1.89 | 1,370 | | |
| January..... | | | | | | 421.9 | 317 | 0 | 15.6 | 837 | | |
| February..... | | | | | | 124.8 | 29 | 0 | 4.30 | 248 | | |
| March..... | | | | | | 189.4 | 33 | 0 | 6.11 | 376 | | |
| April..... | | | | | | 14.8 | 5.5 | 0 | .49 | 29 | | |
| May..... | | | | | | 1.8 | 1.7 | 0 | .06 | 3.6 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 829.5 | 317 | 0 | 2.27 | 1,650 | | |

SANTA ANA RIVER BASIN

Combined discharge, in second-feet, of Lytle Creek and Fontana pipe line near Fontana, Calif.,
water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 28 | 33 | 30 | 25 | 48 | 48 | 50 | 36 | 35 | 32 | 26 | 27 |
| 2 | 31 | 32 | 30 | 25 | 56 | 49 | 42 | 36 | 35 | 31 | 26 | 27 |
| 3 | 32 | 33 | 30 | 25 | 61 | 49 | 41 | 36 | 35 | 31 | 26 | 27 |
| 4 | 36 | 35 | 30 | 22 | 63 | 47 | 42 | 36 | 35 | 31 | 26 | 27 |
| 5 | 40 | 36 | 30 | 26 | 56 | 50 | 41 | 36 | 35 | 31 | 26 | 27 |
| 6 | 40 | 34 | 29 | 20 | 52 | 50 | 41 | 36 | 35 | 31 | 25 | 27 |
| 7 | 40 | 34 | 29 | 53 | 50 | 52 | 40 | 36 | 34 | 30 | 25 | 27 |
| 8 | 38 | 35 | 28 | 325 | 50 | 52 | 40 | 35 | 34 | 30 | 25 | 27 |
| 9 | 38 | 34 | 29 | 44 | 48 | 51 | 41 | 36 | 34 | 29 | 25 | 27 |
| 10 | 38 | 34 | 29 | 31 | 45 | 52 | 41 | 39 | 34 | 29 | 25 | 27 |
| 11 | 38 | 33 | 28 | 30 | 45 | 51 | 40 | 38 | 34 | 29 | 27 | 27 |
| 12 | 38 | 33 | 28 | 32 | 45 | 50 | 40 | 38 | 34 | 29 | 27 | 27 |
| 13 | 37 | 31 | 28 | 30 | 45 | 48 | 43 | 38 | 34 | 29 | 28 | 27 |
| 14 | 37 | 30 | 28 | 26 | 46 | 48 | 42 | 38 | 34 | 29 | 27 | 27 |
| 15 | 36 | 30 | 28 | 31 | 45 | 46 | 43 | 37 | 34 | 29 | 27 | 27 |
| 16 | 36 | 29 | 27 | 35 | 44 | 46 | 41 | 37 | 34 | 28 | 27 | 27 |
| 17 | 36 | 29 | 27 | 35 | 45 | 46 | 40 | 37 | 34 | 28 | 27 | 27 |
| 18 | 36 | 29 | 27 | 37 | 45 | 44 | 40 | 37 | 34 | 28 | 27 | 27 |
| 19 | 36 | 28 | 26 | 39 | 44 | 45 | 39 | 36 | 34 | 27 | 27 | 27 |
| 20 | 36 | 28 | 26 | 39 | 44 | 45 | 39 | 37 | 33 | 27 | 27 | 27 |
| 21 | 36 | 30 | 27 | 38 | 44 | 42 | 39 | 36 | 33 | 27 | 27 | 26 |
| 22 | 36 | 31 | 27 | 38 | 45 | 41 | 39 | 36 | 33 | 27 | 26 | 26 |
| 23 | 36 | 30 | 29 | 42 | 44 | 40 | 38 | 36 | 33 | 27 | 26 | 26 |
| 24 | 36 | 31 | 25 | 41 | 43 | 40 | 38 | 35 | 33 | 27 | 26 | 26 |
| 25 | 36 | 30 | 23 | 38 | 74 | 42 | 38 | 35 | 33 | 27 | 27 | 26 |
| 26 | 35 | 31 | 25 | 38 | 52 | 41 | 46 | 36 | 32 | 27 | 27 | 26 |
| 27 | 35 | 30 | 26 | 38 | 46 | 43 | 40 | 36 | 32 | 27 | 27 | 26 |
| 28 | 35 | 31 | 26 | 38 | 45 | 42 | 38 | 35 | 32 | 28 | 27 | 26 |
| 29 | 35 | 31 | 26 | 37 | 52 | 40 | 38 | 35 | 32 | 27 | 27 | 26 |
| 30 | 35 | 31 | 25 | 37 | - | 40 | 37 | 35 | 32 | 26 | 27 | 26 |
| 31 | 35 | - | 26 | 37 | - | 62 | - | 35 | - | 26 | 27 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 1,119 | 40 | 28 | 35.1 | 2,220 | | | |
| November..... | | | | | 945 | 35 | 28 | 31.5 | 1,870 | | | |
| December..... | | | | | 852 | 30 | 23 | 27.5 | 1,690 | | | |
| Calendar year 1939..... | | | | | 11,825 | 568 | 15 | 32.4 | 23,440 | | | |
| January..... | | | | | 1,352 | 325 | 20 | 43.6 | 2,680 | | | |
| February..... | | | | | 1,422 | 74 | 43 | 49.0 | 2,820 | | | |
| March..... | | | | | 1,442 | 62 | 40 | 46.5 | 2,860 | | | |
| April..... | | | | | 1,218 | 50 | 37 | 40.6 | 2,420 | | | |
| May..... | | | | | 1,125 | 39 | 35 | 36.3 | 2,230 | | | |
| June..... | | | | | 1,010 | 35 | 32 | 33.7 | 2,000 | | | |
| July..... | | | | | 884 | 32 | 26 | 28.5 | 1,750 | | | |
| August..... | | | | | 820 | 28 | 25 | 26.5 | 1,630 | | | |
| September..... | | | | | 800 | 27 | 26 | 26.7 | 1,590 | | | |
| Water year 1939-40..... | | | | | 12,969 | 325 | 20 | 35.5 | 25,760 | | | |

Fontana pipe line near Fontana, Calif.

Location.- Water-stage recorders, lat. 34°12'05", long. 117°27'05", in sec. 6, T. 1 N., R. 5 W., at weirs of Fontana Union Water Co., 8 miles north of Fontana.

Records available.- October 1918 to September 1921, October 1922 to September 1940.

Average discharge.- 21 years, 28.4 second-feet.

Extremes.- 1918-21, 1922-40: Maximum daily discharge, 82 second-feet July 9, Aug. 5, 1937; no flow Apr. 8, 1935, Feb. 13, 27, 1936.

Remarks.- Pipe line diverts practically entire flow of Lytle Creek in NW¼ sec. 6, T. 1 N., R. 5 W., which flow passes through Fontana powerhouse and is then used for irrigation and domestic supply. Discharge of pipe line added to discharge of Lytle Creek near Fontana gives total discharge of creek.

Cooperation.- Records furnished by Fontana Union Water Co:

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 26 | 33 | 30 | 25 | 44 | 44 | 45 | 36 | 35 | 32 | 26 | 27 |
| 2 | 28 | 32 | 30 | 25 | 51 | 45 | 38 | 36 | 35 | 31 | 26 | 27 |
| 3 | 29 | 33 | 30 | 25 | 50 | 45 | 40 | 36 | 35 | 31 | 26 | 27 |
| 4 | 36 | 35 | 30 | 22 | 56 | 43 | 42 | 36 | 35 | 31 | 26 | 27 |
| 5 | 36 | 35 | 30 | 26 | 49 | 43 | 41 | 36 | 35 | 31 | 26 | 27 |
| 6 | 36 | 34 | 29 | 20 | 46 | 44 | 41 | 36 | 35 | 31 | 25 | 27 |
| 7 | 36 | 34 | 29 | 27 | 44 | 44 | 40 | 36 | 34 | 30 | 25 | 27 |
| 8 | 34 | 35 | 28 | 8 | 44 | 41 | 40 | 35 | 34 | 30 | 25 | 27 |
| 9 | 34 | 34 | 29 | 8.5 | 43 | 41 | 41 | 34 | 34 | 29 | 25 | 27 |
| 10 | 34 | 34 | 29 | 21 | 42 | 41 | 41 | 39 | 34 | 29 | 25 | 27 |
| 11 | 34 | 33 | 28 | 22 | 44 | 41 | 40 | 38 | 34 | 29 | 27 | 27 |
| 12 | 34 | 33 | 28 | 24 | 45 | 41 | 40 | 38 | 34 | 29 | 27 | 27 |
| 13 | 33 | 31 | 28 | 23 | 45 | 40 | 43 | 38 | 34 | 29 | 28 | 27 |
| 14 | 33 | 30 | 28 | 20 | 46 | 40 | 42 | 38 | 34 | 29 | 27 | 27 |
| 15 | 32 | 30 | 28 | 27 | 45 | 40 | 41 | 37 | 34 | 29 | 27 | 27 |
| 16 | 32 | 29 | 27 | 35 | 44 | 40 | 40 | 37 | 34 | 28 | 27 | 27 |
| 17 | 32 | 29 | 27 | 35 | 45 | 40 | 40 | 37 | 34 | 28 | 27 | 27 |
| 18 | 32 | 29 | 27 | 37 | 45 | 40 | 40 | 37 | 34 | 28 | 27 | 27 |
| 19 | 32 | 28 | 26 | 39 | 44 | 40 | 39 | 36 | 34 | 27 | 27 | 27 |
| 20 | 32 | 28 | 26 | 39 | 44 | 40 | 39 | 37 | 33 | 27 | 27 | 27 |
| 21 | 34 | 30 | 27 | 38 | 42 | 40 | 39 | 36 | 33 | 27 | 27 | 26 |
| 22 | 36 | 31 | 27 | 38 | 40 | 40 | 39 | 36 | 33 | 27 | 26 | 26 |
| 23 | 36 | 30 | 29 | 42 | 40 | 40 | 38 | 36 | 33 | 27 | 26 | 26 |
| 24 | 36 | 31 | 25 | 41 | 40 | 40 | 39 | 35 | 33 | 27 | 26 | 26 |
| 25 | 35 | 30 | 23 | 38 | 45 | 8.5 | 38 | 35 | 33 | 27 | 27 | 26 |
| 26 | 35 | 31 | 25 | 38 | 45 | 40 | 46 | 36 | 32 | 27 | 27 | 26 |
| 27 | 35 | 30 | 26 | 36 | 42 | 42 | 40 | 36 | 32 | 27 | 27 | 26 |
| 28 | 35 | 31 | 26 | 38 | 41 | 41 | 38 | 35 | 32 | 28 | 27 | 26 |
| 29 | 35 | 31 | 26 | 37 | 46 | 40 | 38 | 35 | 32 | 27 | 27 | 26 |
| 30 | 35 | 31 | 26 | 37 | - | 40 | 37 | 35 | 32 | 26 | 27 | 26 |
| 31 | 34 | - | 26 | 37 | - | 48 | - | 35 | - | 26 | 27 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 1,040 | | 36 | 26 | 33.5 | 2,060 | | | |
| November..... | | | | 945 | | 35 | 28 | 31.5 | 1,870 | | | |
| December..... | | | | 852 | | 30 | 23 | 27.5 | 1,690 | | | |
| Calendar year 1939..... | | | | 11,134.4 | | 47 | 4.4 | 30.5 | 22,080 | | | |
| January..... | | | | 930.5 | | 42 | 8 | 30.0 | 1,850 | | | |
| February..... | | | | 1,297 | | 56 | 40 | 44.7 | 2,570 | | | |
| March..... | | | | 1,252.5 | | 48 | 8.5 | 40.4 | 2,480 | | | |
| April..... | | | | 1,205 | | 46 | 37 | 40.2 | 2,390 | | | |
| May..... | | | | 1,123 | | 39 | 34 | 36.2 | 2,250 | | | |
| June..... | | | | 1,010 | | 35 | 32 | 33.7 | 2,000 | | | |
| July..... | | | | 884 | | 32 | 26 | 28.5 | 1,750 | | | |
| August..... | | | | 820 | | 28 | 25 | 26.5 | 1,630 | | | |
| September..... | | | | 800 | | 27 | 26 | 26.7 | 1,590 | | | |
| Water year 1939-40..... | | | | 12,159 | | 56 | 8 | 33.2 | 24,110 | | | |

SANTA ANA RIVER BASIN

Lytle Creek (east channel) at San Bernardino, Calif.

Location.- Water-stage recorder, lat. $34^{\circ}05'45''$, long. $117^{\circ}19'50''$, in San Bernardino grant, at Mount Vernon Avenue Bridge, San Bernardino, San Bernardino County. Altitude of gage, about 1,050 feet.

Records available.- January 1929 to September 1940.

Extremes.- Maximum discharge during year, 1,180 second-feet Jan. 8 (gage height, 3.65 feet), from rating curve extended above 190 second-feet; minimum daily, 0.1 second-foot for several periods.

1929-40: Maximum discharge, 21,500 second-feet Mar. 2, 1938, by computation of flow through contracted opening; no flow during part of most years.

Remarks.- Records poor. Water diverted above station to debris cone for ground-water recharge and by Fontana pipe line for irrigation (see p. 63).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | | 0.2 | 7.5 | 0.4 | 10 | | | | | |
| 2 | | | | .2 | 10 | .2 | 2.0 | | | | | |
| 3 | | | | .2 | 1.6 | .1 | .5 | | | | | |
| 4 | | | | .5 | 1.0 | .1 | .3 | | | | | |
| 5 | | | | .2 | .2 | .1 | .2 | | | | | |
| 6 | | | | .2 | .2 | .1 | .2 | | | | | |
| 7 | | | | .2 | .2 | .1 | .1 | | | | | |
| 8 | | | | 160 | .2 | .1 | .1 | | | | | |
| 9 | | | | .5 | .2 | .2 | .1 | | | | | |
| 10 | | | | .4 | .2 | .2 | .1 | | | | | |
| 11 | | | | .3 | .2 | .2 | .1 | | | | | |
| 12 | | | | .3 | .2 | .2 | .1 | | | | | |
| 13 | | | | .2 | .2 | .2 | .1 | | | | | |
| 14 | | | | .2 | .2 | .3 | .2 | | | | | |
| 15 | | | | .2 | .2 | .3 | .2 | | | | | |
| 16 | 0.15 | 0.20 | 0.20 | .2 | .2 | .3 | .2 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 |
| 17 | | | | .1 | .2 | .2 | .2 | | | | | |
| 18 | | | | .1 | .2 | .2 | .2 | | | | | |
| 19 | | | | .1 | .2 | .2 | .2 | | | | | |
| 20 | | | | .1 | .2 | .2 | .2 | | | | | |
| 21 | | | | .1 | .2 | .2 | .2 | | | | | |
| 22 | | | | .1 | .2 | .2 | .2 | | | | | |
| 23 | | | | 1.0 | .2 | .2 | .2 | | | | | |
| 24 | | | | 2.0 | .2 | .2 | .2 | | | | | |
| 25 | | | | .2 | 3.3 | .2 | .2 | | | | | |
| 26 | | | | .2 | 6 | .2 | 3.5 | | | | | |
| 27 | | | | .2 | .8 | .2 | .3 | | | | | |
| 28 | | | | .2 | .5 | .2 | .2 | | | | | |
| 29 | | | | .2 | 3.4 | .2 | .2 | | | | | |
| 30 | | | | .2 | - | .2 | .2 | | | | | |
| 31 | | | | .2 | - | 8 | - | | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 4.65 | - | - | 0.15 | 9.2 | | | | |
| November..... | | | | 6.0 | - | - | .20 | 12 | | | | |
| December..... | | | | 6.2 | - | - | .20 | 12 | | | | |
| Calendar year | | | | - | - | - | - | - | | | | |
| January..... | | | | 176.8 | 160 | 0.1 | 5.70 | 351 | | | | |
| February..... | | | | 52.5 | 16 | .2 | 1.81 | 104 | | | | |
| March..... | | | | 13.9 | 8 | .1 | .45 | 28 | | | | |
| April..... | | | | 20.7 | 10 | .1 | .69 | 41 | | | | |
| May..... | | | | 4.65 | - | - | .15 | 9.2 | | | | |
| June..... | | | | 6.0 | - | - | .20 | 12 | | | | |
| July..... | | | | 6.2 | - | - | .20 | 12 | | | | |
| August..... | | | | 4.66 | - | - | .15 | 9.2 | | | | |
| September..... | | | | 6.0 | - | - | .20 | 12 | | | | |
| Water year 1939-40..... | | | | 308.25 | 160 | - | .84 | 612 | | | | |

Note.- Discharge except for Jan. 7, 8, Feb. 1-3, 25, 26, 29, Mar. 31, Apr. 1, 26, computed on basis of one field estimate and records for Warm Creek near Colton.

Lytle Creek (west channel) at Colton, Calif.

Location.- Water-stage recorder, lat. 34°04'00", long. 117°19'15", in San Bernardino grant, on F Street near Colton Avenue at Colton, San Bernardino County. Altitude of gage, about 980 feet.

Records available.- January 1929 to September 1940.

Average discharge.- 11 years, 0.76 second-foot.

Extremes.- Maximum discharge during year, not determined; no flow during most of year. 1929-40: Maximum discharge, 7,900 second-feet Mar. 2, 1938, by slope-area method; no flow during most of each year.

Remarks.- Records poor. Water diverted above station to debris cone above Foothill Boulevard for ground-water recharge and by Fontana pipe line for irrigation (see p. 63).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | 0 | 0 | 0 | 0.3 | 0 | 0.4 | | | | | |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 4 | | 0 | 0 | a.1 | 0 | 0 | 0 | | | | | |
| 5 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 6 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 7 | | 0 | 0 | a.8 | 0 | 0 | 0 | | | | | |
| 8 | | 0 | 0 | a.8 | 0 | 0 | 0 | | | | | |
| 9 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 10 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 11 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 12 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 13 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 14 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 15 | | 0 | 0 | 0 | 0 | 0 | a.1 | | | | | |
| 16 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 17 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 18 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 19 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 20 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 21 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 22 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 23 | | 0 | a.1 | .1 | 0 | 0 | 0 | | | | | |
| 24 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 25 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 26 | | 0 | 0 | 0 | .2 | 0 | a.2 | | | | | |
| 27 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 28 | | a.1 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 29 | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 30 | | 0 | 0 | 0 | - | 0 | 0 | | | | | |
| 31 | | - | 0 | 0 | - | .5 | - | | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | | .1 | .1 | 0 | .003 | .2 | | | |
| December..... | | | | | .1 | .1 | 0 | .003 | .2 | | | |
| Calendar year 1939 | | | | | .2 | .1 | 0 | .001 | .4 | | | |
| January..... | | | | | 1.8 | .8 | 0 | .06 | 3.6 | | | |
| February..... | | | | | .7 | .3 | 0 | .02 | 1.4 | | | |
| March..... | | | | | .5 | .5 | 0 | .02 | 1.0 | | | |
| April..... | | | | | .7 | .4 | 0 | .02 | 1.4 | | | |
| May..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| June..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 3.9 | .8 | 0 | .01 | 7.8 | | | |

a No gage-height record; discharge computed on basis of records of rainfall and records for Warm Creek near Colton.

SANTA ANA RIVER BASIN

Cajon Creek near Keenbrook, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°16'00", long. 117°27'35", in SW¼ sec. 12, T. 2 N., R. 6 W., 1,800 feet upstream from Lone Pine Creek and 1½ miles north of Keenbrook. Altitude of gage, about 2,630 feet.

Drainage area.- 40.9 square miles.

Records available.- December 1919 to September 1940.

Average discharge.- 20 years (1920-40), 5.78 second-feet.

Extremes.- Maximum discharge during year, 2,560 second-feet Jan. 8 (gage height, 7.25 feet), from rating curve extended above 600 second-feet by logarithmic plotting; minimum, 2.3 second-feet Sept. 27, 28, 29.

1919-40: Maximum discharge, 14,500 second-feet Mar. 2, 1938, by slope-area method; minimum, 0.05 second-foot June 25, 1920.

Remarks.- Records good except those for periods of no gage-height record, which are fair. No diversions or regulation above station.

Cooperation.- Results of 18 discharge measurements furnished by city of San Bernardino.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 6 | 5 | 5.5 | 4.1 | 111 | 9 | 15 | 5.5 | 4.5 | 3.3 | 3.1 | 3.0 |
| 2 | 6.5 | 5.5 | 5.5 | 4.4 | 40 | 9 | 8.5 | 5 | 4.2 | 3.3 | 3.1 | 3.0 |
| 3 | 6.5 | 4.9 | 5 | 4.4 | 58 | 8.5 | 8 | 5 | 4.2 | 3.3 | 3.1 | 3.0 |
| 4 | 6 | 4.9 | 4.9 | 4.2 | f17 | a8 | 8 | 5.5 | 4.2 | 3.4 | 3.1 | 3.0 |
| 5 | 6.5 | 4.9 | 4.7 | 4.1 | a15 | f7 | 8 | 5.5 | 4.2 | 3.1 | 3.1 | 3.1 |
| 6 | 6.5 | 4.5 | 4.5 | 4.2 | a13 | 6.5 | 7.5 | 5.5 | 4.2 | 3.0 | 3.1 | 3.0 |
| 7 | 6.5 | 4.4 | 4.4 | 60 | f12 | 7.5 | 6.5 | 5.5 | 4.1 | 3.0 | 3.1 | 3.0 |
| 8 | 6.5 | 4.9 | 4.2 | f273 | 11 | 7 | 6.5 | 5.5 | 4.1 | 3.0 | 3.1 | 3.0 |
| 9 | 6 | 4.7 | 4.2 | a9 | 10 | 7 | 7 | 5 | 3.9 | 3.0 | 3.1 | 2.8 |
| 10 | 5.5 | 4.7 | 4.2 | a7 | 9.5 | 7 | 7 | 5 | 3.9 | 2.8 | 3.0 | 2.7 |
| 11 | 5 | 4.5 | 4.1 | f6.5 | 9.5 | 7 | 6 | 5 | 4.1 | 2.8 | 2.8 | 2.6 |
| 12 | 4.9 | 4.5 | 3.9 | 6.5 | 9 | 6.5 | 6 | 5 | 4.1 | 2.8 | 2.8 | 2.6 |
| 13 | 4.7 | 4.5 | 3.9 | 6 | 8.5 | 7 | 6 | 5 | 3.9 | 2.8 | 2.8 | 2.7 |
| 14 | 4.7 | 4.4 | 3.9 | 5.5 | 9 | 7.5 | 6 | 5 | 3.8 | 3.0 | 2.8 | 2.7 |
| 15 | 4.7 | 4.5 | 3.9 | 6 | 8.5 | 7.5 | 6 | 5 | 3.8 | 2.8 | 2.8 | 2.7 |
| 16 | 4.7 | 4.5 | 3.9 | 6 | 7.5 | 7.5 | 6 | 5 | 3.6 | 2.8 | 3.0 | 2.7 |
| 17 | 4.5 | 4.5 | 3.9 | 6.5 | a7 | 8 | 5.5 | 5 | 3.6 | 3.0 | 3.0 | 2.7 |
| 18 | 4.5 | 4.5 | 3.9 | 7 | a7 | 8.5 | 6 | 5 | 3.4 | 3.0 | 3.0 | 2.7 |
| 19 | 5 | 4.7 | 3.9 | 7 | a7 | 8.5 | 6 | 5 | 3.3 | 3.0 | 2.8 | 2.7 |
| 20 | 5 | 4.7 | 3.9 | 7 | a7 | 8 | 6 | 4.7 | 3.3 | 3.0 | 2.7 | 2.7 |
| 21 | 4.9 | 4.9 | 3.9 | 7.5 | a7 | 8 | 5.5 | 4.7 | 3.3 | 2.8 | 2.7 | 2.6 |
| 22 | 4.9 | 5 | 3.9 | 7.5 | a7 | 7.5 | 6 | 4.5 | 3.4 | 2.8 | 2.8 | 2.6 |
| 23 | 5.5 | 5 | 6.5 | 14 | a7 | 7.5 | 6 | 4.4 | 3.3 | 2.8 | 2.8 | 2.6 |
| 24 | 6 | 5 | 4.1 | 9.5 | a6.5 | 7 | 6 | 4.4 | 3.3 | 2.8 | 3.0 | 2.4 |
| 25 | 5.5 | 5 | 4.1 | f7.5 | f22 | 7.5 | 6 | 4.5 | 3.3 | 2.8 | 3.1 | 2.4 |
| 26 | 5.5 | 5 | 4.1 | f7.5 | 11 | 7 | 7.5 | 4.5 | 3.1 | 2.8 | 3.1 | 2.4 |
| 27 | 5.5 | 5.5 | 4.1 | f7 | 8 | 7 | 6 | 4.7 | 3.1 | 3.0 | 3.1 | 2.4 |
| 28 | 5.5 | 5.5 | 4.1 | f7 | 8 | 7 | 5.5 | 4.7 | 3.1 | 3.0 | 3.1 | 2.4 |
| 29 | 5.5 | 5 | 3.9 | 7 | 9.5 | 7 | 5.5 | 4.7 | 3.3 | 3.0 | 3.1 | 2.4 |
| 30 | 5 | 5 | 3.9 | 6.5 | - | 6.5 | 5.5 | 4.5 | 3.4 | 3.0 | 3.0 | 2.6 |
| 31 | 5 | - | 3.9 | 6.5 | - | 33 | - | 4.4 | - | 3.1 | 3.0 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 169.0 | 6.5 | 4.5 | 5.45 | 335 | | |
| November..... | | | | | | 144.6 | 5.5 | 4.4 | 4.82 | 287 | | |
| December..... | | | | | | 132.8 | 6 | 3.1 | 4.28 | 263 | | |
| Calendar year 1939..... | | | | | | 2,565.5 | 285 | 3.1 | 7.03 | 5,090 | | |
| January..... | | | | | | 525.9 | 273 | 4.1 | 17.0 | 1,040 | | |
| February..... | | | | | | 462.5 | 111 | 6.5 | 15.9 | 917 | | |
| March..... | | | | | | 287.5 | 33 | 6.5 | 8.31 | 511 | | |
| April..... | | | | | | 201.0 | 15 | 5.5 | 6.70 | 399 | | |
| May..... | | | | | | 152.7 | 5.5 | 4.4 | 4.93 | 303 | | |
| June..... | | | | | | 111.0 | 4.5 | 3.1 | 3.70 | 220 | | |
| July..... | | | | | | 92.1 | 5.4 | 2.8 | 2.97 | 183 | | |
| August..... | | | | | | 92.2 | 3.1 | 2.7 | 2.97 | 183 | | |
| September..... | | | | | | 81.2 | 3.1 | 2.4 | 2.71 | 161 | | |
| Water year 1939-40..... | | | | | | 2,422.5 | 273 | 2.4 | 6.62 | 4,800 | | |

Peak discharge.- Jan. 8 (3 a.m.) 2,560 sec.-ft.; Feb. 1 (11:30 a.m.) 486 sec.-ft.; Feb. 25 (6:30 a.m.) 118 sec.-ft.; Mar. 31 (10:30 a.m.) 246 sec.-ft.

a No gage-height record; discharge for Jan. 9, 10, computed on basis of two discharge measurements; that for Feb. 5, 6, Mar. 4, interpolated; that for Feb. 17-24, based on one discharge measurement and records for Waterman Canyon Creek near Arrowhead Springs.

f Discharge computed on basis of partly estimated gage-height record.

7-10474

Meeks & Daley canal near Colton, Calif.

Location.- Water-stage recorder, lat. 34°04'00", long. 117°18'40", in San Bernardino grant, on Colton Avenue, 1 mile downstream from point of diversion from Warm Creek and 1 mile east of Colton, San Bernardino County.

Records available.- September 1920 to September 1940.

Average discharge.- 20 years, 10.6 second-feet.

Extremes.- Maximum daily discharge during year, 20 second-feet on many days; no flow on many days.

1920-40: Maximum daily discharge, 25 second-feet Mar. 2, 1938; no flow at times.

Remarks.- Records fair. Canal diverts water from right bank of Warm Creek 1½ miles northeast of Colton for irrigation in vicinity of Colton, Riverside, and Corona.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | c0.2 | 19 | 2.7 | 20 | c0.2 | 0 | 0.4 | 19 | 19 | 19 | 20 | 20 |
| 2 | c.3 | 19 | 4.3 | 20 | 0 | 0 | .3 | 19 | 19 | 19 | 20 | 20 |
| 3 | c.2 | 19 | 4.5 | 20 | c.4 | 0 | .3 | 19 | 19 | 19 | 20 | 20 |
| 4 | .6 | 19 | 11 | 0 | 0 | 0 | .3 | 19 | 19 | 19 | 20 | 19 |
| 5 | .9 | 19 | 10 | .6 | 0 | 0 | .5 | 19 | 18 | 17 | 20 | 19 |
| 6 | 1.3 | 19 | 19 | .6 | 0 | 0 | .4 | 19 | 20 | 19 | 20 | 19 |
| 7 | 1.4 | 19 | 20 | .9 | 0 | 0 | .4 | 20 | 19 | 19 | 19 | 20 |
| 8 | 1.5 | 20 | 20 | 61.0 | 0 | 0 | .4 | 20 | 19 | 18 | 20 | 19 |
| 9 | 1.5 | 20 | 19 | 0 | 0 | 0 | 1.9 | 19 | 19 | 19 | 19 | 19 |
| 10 | 1.0 | 20 | 19 | 0 | 0 | 0 | 2.8 | 19 | 19 | 19 | 19 | 20 |
| 11 | 4.6 | 20 | 19 | 0 | 0 | 0 | 2.6 | 20 | 19 | 18 | 19 | 19 |
| 12 | 17 | 20 | 19 | 0 | 0 | 0 | 3.1 | 19 | 16 | 18 | 20 | 20 |
| 13 | 20 | 20 | 19 | 0 | 0 | .7 | 4.6 | 20 | 19 | 19 | 20 | 19 |
| 14 | 20 | 20 | 19 | 0 | 0 | 1.5 | 8 | 19 | 19 | 19 | 19 | 20 |
| 15 | 20 | 20 | 19 | 0 | 0 | 2.3 | 15 | 18 | 19 | 20 | 20 | 19 |
| 16 | 20 | 20 | 20 | 0 | 0 | 2.5 | 19 | 20 | 19 | 19 | 20 | 19 |
| 17 | 20 | 20 | 19 | 0 | 0 | 4.4 | 19 | 20 | 19 | 17 | 20 | 19 |
| 18 | 20 | 20 | 20 | 0 | 0 | 12 | 19 | 20 | 19 | 19 | 20 | 19 |
| 19 | 19 | 20 | 20 | 0 | 0 | 19 | 19 | 20 | 18 | 19 | 19 | 19 |
| 20 | 19 | 20 | 20 | 0 | 0 | 19 | 19 | 20 | 19 | 19 | 20 | 19 |
| 21 | 19 | 20 | 20 | 0 | 0 | 19 | 19 | 20 | 19 | 20 | 19 | 19 |
| 22 | 19 | 18 | 20 | 0 | 0 | 18 | 19 | 18 | 20 | 19 | 20 | 19 |
| 23 | 20 | 20 | 20 | 0 | 0 | 18 | 19 | 18 | 20 | 20 | 20 | 19 |
| 24 | 19 | 20 | 20 | 0 | 0 | 19 | 18 | 18 | 19 | 18 | 20 | 19 |
| 25 | 18 | 20 | 20 | 0 | c.1 | 19 | 19 | 18 | 19 | 19 | 20 | 18 |
| 26 | 18 | 20 | 20 | 0 | 0 | 19 | 19 | 19 | 19 | 20 | 19 | 19 |
| 27 | 19 | 20 | 20 | 0 | 0 | 18 | 19 | 18 | 19 | 20 | 19 | 19 |
| 28 | 19 | 4.0 | 20 | 0 | 0 | 18 | 19 | 18 | 19 | 20 | 17 | 20 |
| 29 | 19 | 1.5 | 20 | 0 | 0 | 19 | 19 | 18 | 19 | 20 | 20 | 19 |
| 30 | 19 | 1.8 | 20 | 0 | - | 19 | 19 | 18 | 19 | 20 | 20 | 20 |
| 31 | 19 | - | 20 | 0 | - | 9 | - | 19 | - | 19 | 20 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 395.5 | | 20 | 0.2 | 12.8 | 784 | | | |
| November..... | | | | 537.3 | | 20 | 1.5 | 17.9 | 1,070 | | | |
| December..... | | | | 537.5 | | 20 | 2.7 | 17.3 | 1,070 | | | |
| Calendar year 1939..... | | | | 4,535.6 | | 20 | 0 | 12.4 | 9,200 | | | |
| January..... | | | | 74.1 | | 20 | 0 | 2.39 | 147 | | | |
| February..... | | | | .7 | | .4 | 0 | .02 | 1.4 | | | |
| March..... | | | | 256.4 | | 19 | 0 | 8.27 | 509 | | | |
| April..... | | | | 328.0 | | 19 | 0 | 10.8 | 645 | | | |
| May..... | | | | 588 | | 20 | .3 | 19.0 | 1,170 | | | |
| June..... | | | | 565 | | 20 | 16 | 16.8 | 1,120 | | | |
| July..... | | | | 589 | | 20 | 17 | 19.0 | 1,170 | | | |
| August..... | | | | 608 | | 20 | 17 | 19.6 | 1,210 | | | |
| September..... | | | | 577 | | 20 | 16 | 19.2 | 1,140 | | | |
| Water year 1939-40..... | | | | 5,055.5 | | 20 | 0 | 13.6 | 10,040 | | | |

c Very low flow and backwater from debris in canal; discharge estimated.

SANTA ANA RIVER BASIN

Day Creek near Etiwanda, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°11'00", long. 117°32'25", in SW¼ sec. 8, T. 1 N., R. 6 W., a quarter of a mile downstream from confluence of two main forks and 6 miles north of Etiwanda. Altitude of gage, about 2,940 feet.

Drainage area.- 4.8 square miles.

Records available.- January 1929 to September 1940.

Average discharge.- 11 years, 4.62 second-feet.

Extremes.- Maximum discharge during year, 286 second-feet Jan. 8 (gage height, 3.25 feet), from rating curve extended above 80 second-feet; minimum, 0.7 second-foot Sept. 30, 1929-40: Maximum discharge, 4,200 second-feet Mar. 2, 1938, by rainfall-run-off studies; minimum, 0.1 second-foot Dec. 19, 20, 1933.

Remarks.- Records good except those for days of high water, Jan. 8 and Feb. 25, and those for period of no gage-height record, which are fair. Etiwanda Water Co. diverted 1,200 acre-feet above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 6 | 3.7 | 3.4 | 3.0 | a6 | 11 | 9 | 2.6 | 1.0 | 1.1 | 1.0 | 0.9 |
| 2 | 5.5 | 3.7 | 3.3 | 3.0 | a5 | 10 | 6.5 | 1.4 | .9 | 1.1 | 1.0 | .9 |
| 3 | 5.5 | 3.7 | 3.3 | 3.0 | a11 | 9 | 4.7 | 1.4 | .9 | 1.1 | 1.0 | .9 |
| 4 | 5 | 3.7 | 3.3 | 3.6 | 12 | 6.5 | 3.1 | 1.4 | .9 | 1.1 | 1.0 | .9 |
| 5 | 4.6 | 3.7 | 3.2 | 3.4 | 11 | 5.5 | 2.7 | 1.4 | .8 | 1.1 | 1.0 | .9 |
| 6 | 5 | 3.7 | 3.1 | 3.8 | 9.5 | 5 | 2.5 | 1.4 | .8 | 1.1 | 1.0 | .9 |
| 7 | 5.5 | 3.6 | 3.1 | 13 | 9.5 | 4.8 | 2.4 | 1.3 | .9 | 1.1 | 1.0 | .9 |
| 8 | 4.9 | 3.9 | 3.1 | 58 | 3.5 | 4.7 | 2.2 | 1.1 | .8 | 1.0 | 1.0 | .9 |
| 9 | 4.6 | 3.6 | 3.1 | 13 | 7.5 | 4.4 | 1.9 | 1.1 | .8 | 1.0 | 1.0 | .9 |
| 10 | 4.5 | 3.7 | 3.1 | 11 | 7 | 4.2 | 1.8 | 1.1 | .8 | 1.0 | 1.0 | .9 |
| 11 | 4.3 | 3.7 | 3.2 | 14 | 6.5 | 4.0 | 1.4 | 1.1 | .8 | 1.0 | 1.0 | .9 |
| 12 | 4.2 | 3.6 | 3.2 | 12 | 6 | 3.7 | 1.4 | 1.1 | .9 | .9 | 1.0 | .9 |
| 13 | 4.0 | 3.6 | 3.1 | 9.5 | 6 | 3.4 | 1.2 | 1.1 | .9 | .9 | 1.0 | .9 |
| 14 | 4.0 | 3.6 | 3.1 | 6 | 6 | 3.3 | 1.2 | 1.1 | 1.0 | .9 | 1.0 | .9 |
| 15 | 3.9 | 3.5 | 3.1 | 7 | 5.5 | 3.2 | 1.4 | 1.1 | .9 | .9 | 1.0 | .9 |
| 16 | 3.9 | 3.5 | 3.0 | 6 | 5.5 | 2.8 | 1.4 | 1.0 | 1.0 | .9 | 1.0 | .9 |
| 17 | 3.8 | 3.5 | 3.1 | 5.5 | 5 | 2.4 | 1.1 | 1.0 | 1.0 | .9 | 1.0 | .8 |
| 18 | 3.8 | 3.4 | 3.1 | 5 | 6 | 2.4 | 1.1 | 1.0 | 1.0 | .9 | 1.0 | .9 |
| 19 | 3.8 | 3.4 | 3.1 | 4.8 | 5 | 2.4 | 1.1 | 1.0 | 1.0 | .9 | 1.0 | .6 |
| 20 | 3.7 | 3.2 | 3.1 | 4.8 | 4.7 | 3.5 | 1.1 | 1.0 | 1.1 | .9 | 1.0 | .8 |
| 21 | 3.7 | 3.2 | 3.1 | 4.6 | 4.7 | 4.5 | 1.1 | 1.0 | 1.1 | .9 | 1.0 | .9 |
| 22 | 3.6 | 3.2 | 3.2 | 4.6 | 5.5 | 4.2 | 1.1 | 1.0 | 1.1 | .9 | 1.0 | .9 |
| 23 | 3.6 | 3.2 | 3.6 | 5.5 | 5.5 | 4.1 | 1.1 | 1.0 | 1.1 | .9 | 1.0 | .9 |
| 24 | 3.9 | 3.2 | 3.2 | 5 | 5 | 4.1 | 1.1 | 1.0 | 1.1 | .9 | 1.0 | .9 |
| 25 | 3.9 | 3.3 | 3.1 | 4.7 | 24 | 4.2 | 1.1 | 1.0 | 1.1 | .9 | 1.0 | .9 |
| 26 | 3.8 | 3.4 | 3.1 | 4.6 | 17 | 4.4 | 9.5 | 1.0 | 1.1 | .9 | 1.0 | .8 |
| 27 | 3.8 | 3.4 | 3.1 | 4.6 | 12 | 4.7 | 7.5 | 1.0 | 1.1 | .9 | .9 | .8 |
| 28 | 3.6 | 3.6 | 3.0 | 4.4 | 9 | 4.0 | 6.5 | 1.0 | 1.1 | 1.0 | .9 | .8 |
| 29 | 3.8 | 3.4 | 3.0 | 4.4 | 12 | 2.9 | 6.5 | 1.0 | 1.1 | 1.0 | .9 | .8 |
| 30 | 3.8 | 3.4 | 3.0 | 4.3 | - | 2.8 | 6 | 1.0 | 1.2 | 1.0 | .9 | .8 |
| 31 | 3.8 | - | 3.0 | 4.3 | - | 9.5 | - | 1.0 | - | 1.0 | .9 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 132.0 | 6 | 3.6 | 4.26 | 262 | | | |
| November..... | | | | | 105.5 | 3.9 | 3.2 | 3.52 | 209 | | | |
| December..... | | | | | 97.5 | 3.6 | 3.0 | 3.15 | 193 | | | |
| Calendar year 1939..... | | | | | 1,287.8 | 103 | 1.7 | 3.53 | 2,550 | | | |
| January..... | | | | | 242.4 | 58 | 3.0 | 7.82 | 481 | | | |
| February..... | | | | | 240.9 | 24 | 4.7 | 5.31 | 478 | | | |
| March..... | | | | | 145.4 | 11 | 2.4 | 4.69 | 288 | | | |
| April..... | | | | | 90.7 | 9.5 | 1.1 | 3.02 | 180 | | | |
| May..... | | | | | 35.7 | 2.6 | 1.0 | 1.15 | 71 | | | |
| June..... | | | | | 29.3 | 1.2 | .8 | .98 | 58 | | | |
| July..... | | | | | 30.1 | 1.1 | .9 | .97 | 60 | | | |
| August..... | | | | | 30.5 | 1.0 | .9 | .98 | 60 | | | |
| September..... | | | | | 26.2 | .9 | .8 | .87 | 52 | | | |
| Water year 1939-40..... | | | | | 1,206.2 | 58 | .8 | 3.30 | 2,390 | | | |

Peak discharge.- Jan. 8 (3 a.m.) 286 sec.-ft.; Feb. 25 (8 p.m.) 110 sec.-ft.

a No gage-height record; discharge computed on basis of records for Cucamonga Creek near Upland.

Cucamonga Creek near Upland, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°10'15", long. 117°37'55", in NE¼ sec. 17, T. 1 N., R. 7 W., 6 miles north of Upland. Altitude of gage, about 2,550 feet.

Drainage area.- 10.1 square miles.

Records available.- December 1928 to September 1940.

Average discharge.- 11 years (1929-40), 7.98 second-feet.

Extremes.- Maximum discharge during year, 628 second-feet Jan. 8 (gage height, 4.25 feet), from rating curve extended above 350 second-feet; minimum, 2.0 second-feet Sept. 27.

1928-40: Maximum discharge, 10,300 second-feet, Mar. 2, 1938, from rainfall-run-off study; minimum, 0.8 second-foot July 16, 17, Aug. 28 to Sept. 15, Oct. 2-6, 1934.

Remarks.- Records good except those for period of high water, Jan. 7-9 and Feb. 25-26, which are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 9 | 4.1 | 3.7 | 3.4 | 13 | 19.0 | 13 | 7 | 4.6 | 4.1 | 2.9 | 2.5 |
| 2 | 8.5 | 4.0 | 3.7 | 3.4 | 13 | 17 | 11 | 6.5 | 4.6 | 4.0 | -2.9 | 2.6 |
| 3 | 8 | 3.9 | 3.6 | 3.4 | 18 | 14 | 9.5 | 6.5 | 4.6 | 4.0 | 3.0 | 2.8 |
| 4 | 7 | 3.8 | 3.6 | 3.8 | 19 | 13 | 9 | 6.5 | 4.7 | 3.8 | 3.0 | 2.8 |
| 5 | 6 | 3.9 | 3.5 | 3.8 | 14 | 13 | 8.5 | 6.5 | 4.7 | 3.8 | 3.0 | 2.7 |
| 6 | 6.5 | 3.9 | 3.6 | 3.7 | 13 | 12 | 8.5 | 6 | 4.6 | 3.8 | 3.0 | 2.6 |
| 7 | 6.5 | 3.9 | 3.6 | 15 | 12 | 12 | 8 | 6 | 4.6 | 3.8 | 2.9 | 2.5 |
| 8 | 6 | 4.6 | 3.6 | 11.5 | 11 | 12 | 8 | 6 | 4.6 | 3.6 | 2.9 | 2.5 |
| 9 | 5.5 | 4.7 | 3.5 | 26 | 11 | 11 | 7.5 | 6 | 4.5 | 3.5 | 2.8 | 2.5 |
| 10 | 5 | 4.5 | 3.5 | 16 | 10 | 11 | 7.5 | 6 | 4.4 | 3.3 | 2.8 | 2.4 |
| 11 | 4.7 | 4.2 | 3.6 | 13 | 10 | 11 | 7 | 5.5 | 4.4 | 3.3 | 2.8 | 2.4 |
| 12 | 4.6 | 4.0 | 3.5 | 10 | 9.5 | 10 | 7 | 5.5 | 4.4 | 3.2 | 2.8 | 2.5 |
| 13 | 4.5 | 4.0 | 3.5 | 9 | 9 | 9.5 | 6.5 | 5.5 | 4.2 | 3.1 | 2.8 | 2.6 |
| 14 | 4.5 | 4.0 | 3.5 | 9 | 9 | 9.5 | 6.5 | 5.5 | 4.2 | 3.0 | 2.8 | 2.6 |
| 15 | 4.4 | 4.0 | 3.4 | 8 | 8.5 | 9 | 7 | 5.5 | 4.2 | 3.0 | 2.9 | 2.7 |
| 16 | 4.4 | 4.0 | 3.4 | 8 | 8 | 9 | 7 | 5.5 | 4.4 | 3.0 | 2.9 | 2.7 |
| 17 | 4.4 | 3.9 | 3.3 | 8 | 8 | 9 | 6.5 | 5.5 | 4.1 | 3.2 | 2.8 | 2.7 |
| 18 | 4.4 | 3.7 | 3.3 | 7.5 | 7.5 | 9 | 6.5 | 5.5 | 4.1 | 3.2 | 2.8 | 2.8 |
| 19 | 4.4 | 3.5 | 3.1 | 7 | 7 | 9 | 6.5 | 5.5 | 4.0 | 3.0 | 2.7 | 2.9 |
| 20 | 4.2 | 3.5 | 2.9 | 7 | 7 | 8.5 | 6.5 | 5.5 | 4.0 | 2.9 | 2.6 | 2.8 |
| 21 | 4.1 | 3.6 | 2.9 | 7 | 7 | 8.5 | 6.5 | 5.5 | 4.0 | 2.9 | 2.6 | 2.5 |
| 22 | 4.0 | 3.5 | 3.0 | 7 | 7 | 8 | 6.5 | 5 | 4.0 | 2.8 | 2.7 | 2.4 |
| 23 | 4.1 | 3.5 | 4.2 | 8 | 7.5 | 8 | 6.5 | 4.9 | 4.0 | 2.8 | 2.7 | 2.3 |
| 24 | 4.4 | 3.6 | 4.0 | 7 | 7 | 7.5 | 6.5 | 4.8 | 4.0 | 2.8 | 2.8 | 2.3 |
| 25 | 4.5 | 3.6 | 3.6 | 6 | 54 | 7.5 | 6.5 | 4.8 | 4.0 | 2.9 | 2.8 | 2.2 |
| 26 | 4.5 | 3.6 | 3.6 | 6 | 42 | 8 | 11 | 4.9 | 4.0 | 3.0 | 2.8 | 2.2 |
| 27 | 4.4 | 3.6 | 3.6 | 6 | 26 | 8 | 9 | 5 | 4.0 | 3.1 | 2.7 | 2.2 |
| 28 | 4.2 | 3.7 | 3.5 | 6 | 19 | 8 | 8 | 5 | 4.0 | 3.3 | 2.7 | 2.2 |
| 29 | 4.1 | 3.7 | 3.4 | 6 | 24 | 7.5 | 7.5 | 5 | 4.1 | 3.1 | 2.6 | 2.3 |
| 30 | 4.0 | 3.7 | 3.4 | 6 | - | 7.5 | 7 | 4.8 | 4.1 | 3.0 | 2.5 | 2.3 |
| 31 | 4.0 | - | 3.4 | 6 | - | 14 | - | 4.7 | - | 2.9 | 2.5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 158.8 | 9 | 4.0 | 5.12 | 315 | | |
| November..... | | | | | | 116.2 | 4.7 | 3.5 | 3.87 | 250 | | |
| December..... | | | | | | 107.8 | 4.2 | 2.9 | 3.48 | 214 | | |
| Calendar year 1939..... | | | | | | 2,105.8 | 198 | 2.0 | 5.77 | 4,170 | | |
| January..... | | | | | | 351.0 | 115 | 3.4 | 11.3 | 696 | | |
| February..... | | | | | | 411.0 | 54 | 7 | 14.2 | 915 | | |
| March..... | | | | | | 320.0 | 19 | 7.5 | 10.3 | 635 | | |
| April..... | | | | | | 232.5 | 13 | 6.5 | 7.75 | 461 | | |
| May..... | | | | | | 172.4 | 7 | 4.7 | 5.56 | 342 | | |
| June..... | | | | | | 128.1 | 4.7 | 4.0 | 4.27 | 264 | | |
| July..... | | | | | | 101.2 | 4.1 | 2.8 | 3.26 | 201 | | |
| August..... | | | | | | 86.6 | 3.0 | 2.5 | 2.79 | 172 | | |
| September..... | | | | | | 75.5 | 2.9 | 2.2 | 2.52 | 150 | | |
| Water year 1939-40..... | | | | | | 2,261.0 | 115 | 2.2 | 6.18 | 4,480 | | |

Peak discharge.- Jan. 8 (3 a.m.) 628 sec.-ft.; Feb. 25 (8 p.m.) 239 sec.-ft.

SANTA ANA RIVER BASIN

San Jacinto River near San Jacinto, Calif.

Location.- Staff gage, lat. 33°44'05", long. 116°49'45", in SE¼ sec. 13, T. 5 S., R. 1 E., at highway bridge, 8¼ miles southeast of San Jacinto. Altitude of gage, about 1,980 feet.

Drainage area.- 140 square miles.

Records available.- October 1920 to September 1940.

Average discharge.- 17 years (1921-25, 1927-40), 24.5 second-feet.

Extremes.- Maximum discharge during year, 470 second-feet Jan. 8 (gage height, 3.1 feet from floodmarks); flow less than 0.1 second-foot for several months.

1920-40: Maximum discharge, 45,000 second-feet (estimated) Feb. 16, 1927; no flow for several months of each year except 1940.

Remarks.- Records fair except those for period of doubtful gage-height record, which are poor. Gage read once daily. Several diversions above gage. Flow regulated by Lake Hemet.

Cooperation.- Gage-height record furnished by Lake Hemet Water Co. Results of 35 discharge measurements furnished by Metropolitan Water District.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 2.0 | | 0.7 | d1.0 | 11 | 52 | 96 | 4.0 | | | | |
| 2 | .1 | | .5 | 1.1 | 42 | 43 | 99 | 1.4 | | | | |
| 3 | | | .5 | 1.1 | 44 | 37 | 89 | .4 | | | | |
| 4 | | 0.03 | .4 | 1.4 | 147 | 30 | 75 | .2 | | | | |
| 5 | | | .4 | 4.9 | 76 | 26 | 70 | .2 | | | | |
| 6 | | | .4 | 1.4 | 60 | 19 | 65 | .1 | | | | |
| 7 | | | .4 | 2.7 | 51 | 10 | 64 | .1 | | | | |
| 8 | | | .5 | 336 | 45 | 7 | 59 | .1 | | | | |
| 9 | | .2 | .3 | 122 | 35 | .1 | 59 | .1 | | | | |
| 10 | | .2 | .3 | 83 | 32 | .1 | 57 | .1 | | | | |
| 11 | | .2 | .3 | 70 | 28 | .1 | 48 | | | | | |
| 12 | | .2 | .3 | 210 | 26 | .1 | 43 | | | | | |
| 13 | | .2 | .3 | 83 | 25 | .1 | 38 | | | | | |
| 14 | | .2 | .3 | 53 | 16 | .2 | 34 | | | | | |
| 15 | | .1 | .3 | 37 | 24 | .5 | 24 | | 0.05 | 0.05 | 0.04 | 0.03 |
| 16 | .03 | .1 | .2 | 35 | 19 | 14 | 33 | | | | | |
| 17 | | .1 | .2 | 28 | 16 | 14 | 33 | | | | | |
| 18 | | .1 | .2 | 23 | 16 | 14 | 29 | | | | | |
| 19 | | .1 | .2 | 18 | 14 | 13 | 20 | | | | | |
| 20 | | .1 | .3 | 15 | 13 | 16 | 16 | | | | | |
| 21 | | .1 | .5 | 12 | 9.5 | 14 | 12 | .05 | | | | |
| 22 | | .1 | .3 | 10 | 11 | 13 | 8.5 | | | | | |
| 23 | | .1 | .3 | 10 | 17 | 13 | 1.7 | | | | | |
| 24 | | .1 | .9 | 17 | 16 | 13 | .4 | | | | | |
| 25 | | .1 | .5 | 14 | 12 | 14 | .2 | | | | | |
| 26 | | .1 | .3 | 13 | 220 | 14 | 2.0 | | | | | |
| 27 | | .1 | .2 | 12 | 93 | 14 | 12 | | | | | |
| 28 | | 1.4 | .2 | 11 | 58 | 17 | 11 | | | | | |
| 29 | | 1.4 | d.4 | 10 | 51 | 12 | 11 | | | | | |
| 30 | | .8 | d.6 | 10 | - | 11 | 5.5 | | | | | |
| 31 | | - | d.8 | 10 | - | 11 | - | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 2.97 | 2.0 | - | 0.096 | 5.9 | | |
| November..... | | | | | | 6.34 | 1.4 | - | .211 | 13 | | |
| December..... | | | | | | 11.6 | .9 | 0.2 | .37 | 23 | | |
| Calendar year 1939..... | | | | | | 4,560.20 | 180 | - | 12.5 | 9,040 | | |
| January..... | | | | | | 1,255.6 | 338 | 1.0 | 40.5 | 2,490 | | |
| February..... | | | | | | 1,225.5 | 220 | 9.5 | 42.3 | 2,430 | | |
| March..... | | | | | | 441.0 | 52 | .1 | 14.2 | 575 | | |
| April..... | | | | | | 1,121.3 | 99 | .2 | 37.4 | 2,220 | | |
| May..... | | | | | | 7.75 | 4.0 | - | .250 | 15 | | |
| June..... | | | | | | 1.50 | - | - | .05 | 3.0 | | |
| July..... | | | | | | 1.55 | - | - | .05 | 3.1 | | |
| August..... | | | | | | 1.24 | - | - | .04 | 2.5 | | |
| September..... | | | | | | .90 | - | - | .03 | 1.8 | | |
| Water year 1939-40..... | | | | | | 4,077.25 | 338 | - | 11.1 | 8,080 | | |

d Doubtful gage-height record; discharge interpolated.

Note.- Discharge for Oct. 2 to Nov. 27 and May 11 to Sept. 30 based on gage heights and field estimates.

San Jacinto River near Elsinore, Calif.

Location.- Water-stage recorder, lat. 33°39'45", long. 117°17'45", near east line of sec. 9, T. 6 S., R. 4 W., 2 miles east of Elsinore and 2½ miles upstream from Elsinore Lake (low-water stage). Altitude of gage, about 1,270 feet.

Drainage area.- 717 square miles.

Records available.- January 1916 to September 1940.

Average discharge.- 24 years, 19.8 second-feet.

Extremes.- Maximum discharge during year, 38 second-feet Feb. 3 (gage height, 3.39 feet); no flow for several months.

1916-40: Maximum discharge, about 16,000 second-feet Feb. 17, 1927 (gage height, 11.8 feet); no flow for several months in most years.

Remarks.- Records fair. Storage and diversion above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|------|---------|------|------|-----|----------------------|------|------|-------|
| 1 | 0.3 | 0.3 | a0.3 | 0.3 | 2.5 | 0.2 | 0.7 | 0.2 | | | | |
| 2 | .2 | .3 | a.3 | .3 | 1.2 | .2 | .4 | .2 | | | | |
| 3 | .2 | .3 | a.3 | .3 | 17 | .2 | .2 | .2 | | | | |
| 4 | .2 | .3 | a.2 | .3 | 16 | .2 | .2 | .2 | | | | |
| 5 | .2 | .3 | a.2 | .3 | 7.5 | .2 | .2 | .2 | | | | |
| 6 | .2 | .4 | a.2 | .4 | 6 | .2 | .2 | .2 | | | | |
| 7 | .3 | .4 | a.2 | .5 | 2.4 | .2 | .2 | .2 | | | | |
| 8 | .3 | .4 | a.2 | 3.4 | .6 | .2 | .2 | .1 | | | | |
| 9 | .2 | .4 | .2 | 1.1 | .4 | .2 | .2 | .1 | | | | |
| 10 | .2 | .4 | .2 | .7 | .4 | .2 | .1 | .1 | | | | |
| 11 | .2 | .3 | .2 | .6 | .4 | .2 | .1 | .1 | | | | |
| 12 | .2 | .3 | .2 | .5 | .3 | .2 | .1 | .1 | | | | |
| 13 | a.2 | .3 | .2 | .4 | .3 | .2 | .1 | .1 | | | | |
| 14 | a.2 | .2 | .2 | .4 | .3 | .4 | .1 | .1 | | | | |
| 15 | a.2 | .2 | .2 | .3 | .3 | .4 | .1 | .1 | | | | |
| 16 | a.2 | .2 | .2 | .3 | .3 | .4 | .2 | .1 | | | | |
| 17 | .2 | .2 | .2 | .3 | .3 | .2 | .2 | .7 | | | | |
| 18 | .2 | .2 | .2 | .3 | .3 | .2 | .2 | .1 | | | | |
| 19 | .2 | .2 | .2 | .3 | .3 | .2 | .2 | .1 | | | | |
| 20 | .2 | .2 | .2 | .3 | .2 | .2 | .2 | .1 | | | | |
| 21 | .2 | .2 | .2 | .3 | .2 | .2 | .2 | .1 | | | | |
| 22 | .2 | .2 | .2 | .3 | .2 | .2 | .2 | .1 | | | | |
| 23 | .2 | .2 | .3 | .3 | .2 | .2 | .2 | .1 | | | | |
| 24 | .2 | .2 | .3 | .6 | .2 | .2 | .2 | .1 | | | | |
| 25 | .3 | .2 | .3 | .4 | .2 | .2 | .2 | 0 | | | | |
| 26 | .3 | .2 | .3 | .3 | .3 | .2 | .2 | 0 | | | | |
| 27 | .3 | .3 | .3 | .3 | .2 | .2 | .4 | 0 | | | | |
| 28 | .2 | .5 | .3 | .3 | .2 | .2 | .3 | 0 | | | | |
| 29 | .2 | f.3 | .3 | .3 | .2 | .2 | .3 | 0 | | | | |
| 30 | .2 | a.3 | .3 | .2 | - | .2 | .2 | 0 | | | | |
| 31 | .3 | - | .3 | .2 | - | .3 | - | 0 | | | | |
| Month | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | |
| October..... | 6.9 | | 0.3 | | 0.2 | | 0.22 | | 14 | | | |
| November..... | 8.4 | | .5 | | .2 | | .28 | | 17 | | | |
| December..... | 7.4 | | .3 | | .2 | | .24 | | 15 | | | |
| Calendar year 1939..... | 2,542.5 | | 129 | | 0 | | 6.97 | | 5,040 | | | |
| January..... | 14.7 | | 3.4 | | .2 | | .47 | | 29 | | | |
| February..... | 58.9 | | 17 | | .2 | | 2.03 | | 117 | | | |
| March..... | 6.9 | | .4 | | .2 | | .22 | | 14 | | | |
| April..... | 6.5 | | .7 | | .1 | | .22 | | 13 | | | |
| May..... | 3.7 | | .2 | | 0 | | .12 | | 7.3 | | | |
| June..... | 0 | | 0 | | 0 | | 0 | | 0 | | | |
| July..... | 0 | | 0 | | 0 | | 0 | | 0 | | | |
| August..... | 0 | | 0 | | 0 | | 0 | | 0 | | | |
| September..... | 0 | | 0 | | 0 | | 0 | | 0 | | | |
| Water year 1939-40..... | 113.4 | | 17 | | 0 | | .31 | | 226 | | | |

a No gage-height record; discharge interpolated.

f Discharge computed from partly estimated gage-height record.

SANTA ANA RIVER BASIN

Elsinore Lake at Elsinore, Calif.

Location.- Staff gage fastened to pier, lat. 33°40'35", long. 117°21'30", on northeast shore, in La Laguna grant, at Aloha Beach Club, Elsinore, Riverside County. Datum of gage is 1,200 feet above mean sea level.

Records available.- December 1915 to September 1940.

Remarks.- Elsinore Lake overflows only during and after years of heavy rainfall, such as that of 1916. Temescal Creek is its high-water outlet. Surface of lake has been below outlet since July 1917. History of lake is published in Water-Supply Papers 426, 429, and 441.

Capacity table (elevation, in feet, and contents, in acre-feet)*

| | | | | | |
|-------|--------|-------|--------|-------|---------|
| 1,225 | 3,500 | 1,240 | 37,000 | 1,255 | 95,000 |
| 1,230 | 11,500 | 1,245 | 54,000 | 1,260 | 123,000 |
| 1,235 | 23,000 | 1,250 | 72,000 | | |

*Harding, S. T., Report on San Jacinto River Hydrographic Investigation, State of California, Division of Water Rights, 1922, p. 80.

Elevation, in feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | - | 54.5 | - | - | - | - | - | - | - | - | - | - |
| 2 | 54.8 | - | - | - | - | - | - | - | - | - | - | - |
| 3 | - | - | - | - | - | - | 54.4 | 54.1 | - | 53.0 | - | - |
| 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| 5 | - | - | - | - | - | - | - | - | 53.5 | - | - | - |
| 6 | - | - | - | - | 54.7 | 54.6 | - | - | - | - | - | 51.5 |
| 7 | - | - | - | - | - | - | - | - | - | - | 52.2 | - |
| 8 | - | 54.4 | 54.3 | - | - | - | - | - | - | - | - | - |
| 9 | - | - | - | 54.4 | - | - | - | - | - | - | - | - |
| 10 | - | - | - | - | - | - | - | 54.1 | - | - | - | - |
| 11 | - | - | - | - | - | - | 54.4 | - | - | - | - | - |
| 12 | - | - | - | - | - | - | - | - | 53.4 | - | - | 51.4 |
| 13 | - | - | 54.3 | - | - | - | - | - | - | - | - | - |
| 14 | - | - | - | - | - | 54.5 | - | - | - | - | - | - |
| 15 | - | 54.4 | - | - | 54.6 | - | - | - | - | - | - | - |
| 16 | - | - | - | - | - | - | - | - | - | - | - | - |
| 17 | 54.7 | - | - | 54.4 | - | - | - | - | - | - | - | - |
| 18 | - | - | - | - | - | - | - | - | - | 52.6 | - | - |
| 19 | - | - | - | - | - | - | 54.2 | - | - | - | - | - |
| 20 | - | - | 54.2 | - | - | - | - | - | - | - | - | - |
| 21 | - | - | - | - | 54.6 | 54.5 | - | 53.7 | - | - | - | - |
| 22 | - | 54.3 | - | - | - | - | - | - | - | - | - | - |
| 23 | - | - | - | - | - | - | - | - | - | - | - | - |
| 24 | 54.6 | - | - | - | - | - | - | - | - | - | - | - |
| 25 | - | - | - | - | - | - | 54.4 | - | - | - | - | - |
| 26 | - | - | - | 54.4 | - | - | - | - | - | - | - | - |
| 27 | - | 54.3 | - | - | - | - | - | - | - | - | - | - |
| 28 | - | - | 54.2 | - | 54.6 | - | - | - | - | - | 51.7 | - |
| 29 | - | - | - | - | - | 54.4 | - | - | - | - | - | - |
| 30 | - | - | - | - | - | - | - | - | - | - | - | - |
| 31 | - | - | - | 54.4 | - | - | - | - | - | 52.3 | - | - |

Note.- Add 1,200 feet to obtain elevations above sea level.

Temescal Creek near Corona, Calif.

Location.- Water-stage recorder, lat. 33°50'30", long. 117°30'45", in El Sobrante de San Jacinto grant, half a mile upstream from site of old Blue Diamond Quarry and 4 miles southeast of Corona, Riverside County. Altitude of gage, 730 feet.

Records available.- January 1929 to September 1940.

Average discharge.- 11 years, 4.62 second-feet.

Extremes.- Maximum discharge during year, 46 second-feet Feb. 3 (gage height, 2.17 feet), from rating curve extended above 7 second-feet; no flow during several periods.
1929-40: Maximum discharge, 14,900 second-feet Mar. 2, 1938, by slope-area method; no flow during large part of most years.

Remarks.- Records fair. Many diversions and three reservoirs above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 2.8 | 2.5 | a2.1 | 2.3 | 1.3 | 3.7 | 2.9 | 0.9 | 0.6 | 0.5 | 0 | 0.1 |
| 2 | 2.7 | 2.2 | a2.0 | 2.5 | 9 | 3.7 | 2.2 | 1.0 | .9 | .4 | 0 | .1 |
| 3 | 2.8 | 1.9 | a1.9 | 2.0 | 17 | 3.7 | 2.3 | .8 | .9 | .2 | 0 | 0 |
| 4 | 3.1 | 1.9 | f1.8 | 2.3 | 8.5 | 3.8 | 2.3 | .9 | .7 | .1 | 0 | .1 |
| 5 | 3.0 | 2.2 | 1.7 | 2.5 | 5.5 | 3.7 | 2.4 | .9 | .6 | .2 | 0 | 0 |
| 6 | 3.2 | 2.5 | 2.1 | 2.8 | 4.7 | 3.8 | 2.5 | .9 | .5 | .1 | 0 | 0 |
| 7 | 3.4 | 2.1 | 1.6 | 3.7 | 4.4 | 3.5 | 2.6 | .6 | .5 | .1 | .2 | .1 |
| 8 | 3.6 | 2.6 | 1.5 | 1.3 | 4.2 | 3.6 | 2.6 | .6 | .5 | 0 | .2 | .2 |
| 9 | 3.3 | 2.4 | 1.7 | 6.5 | 4.2 | 3.7 | 2.6 | .6 | .3 | 0 | .2 | 0 |
| 10 | 2.7 | 2.0 | 1.5 | 6 | 4.3 | 3.7 | 2.2 | .5 | .3 | 0 | .3 | .1 |
| 11 | 2.5 | 1.9 | 1.5 | 5.5 | 4.3 | 3.7 | 2.0 | .8 | .4 | .1 | .1 | .2 |
| 12 | 2.4 | 1.6 | 1.6 | 5 | 4.3 | 3.4 | 1.6 | .8 | .3 | .1 | .1 | .1 |
| 13 | 2.1 | 1.9 | 1.5 | 4.4 | 4.2 | 3.1 | 1.6 | .7 | .2 | .1 | .3 | .1 |
| 14 | 2.0 | 2.2 | 1.2 | 4.2 | 4.3 | 3.0 | 1.6 | .6 | .2 | 0 | .2 | .1 |
| 15 | 1.8 | 2.3 | 1.4 | 3.8 | 4.1 | 3.1 | 1.6 | .5 | .2 | .1 | 0 | .1 |
| 16 | 2.0 | 1.9 | 1.5 | 3.7 | 4.0 | 3.0 | 1.7 | .6 | .2 | .1 | .1 | .1 |
| 17 | 1.8 | 1.9 | 2.0 | 3.6 | 4.0 | 2.9 | 1.8 | .6 | .1 | .1 | .2 | .1 |
| 18 | 1.6 | 1.8 | 2.0 | 3.4 | 4.1 | 2.7 | 1.7 | .6 | .2 | .1 | .1 | .1 |
| 19 | 1.3 | 1.6 | 1.9 | 3.3 | 4.1 | 2.3 | 1.9 | .5 | .2 | .1 | a.2 | .2 |
| 20 | 1.4 | a2.1 | 2.0 | 3.4 | 3.8 | 2.2 | 1.5 | .4 | .4 | 0 | a.3 | .2 |
| 21 | 1.5 | 2.2 | 2.0 | 3.4 | 3.8 | 2.2 | .8 | .6 | .2 | 0 | a.3 | .1 |
| 22 | 1.4 | 2.5 | 1.9 | 3.4 | 3.5 | 2.4 | .8 | .7 | .1 | 0 | a.4 | .1 |
| 23 | 1.4 | 2.1 | 1.8 | 4.1 | 3.7 | 2.1 | 1.1 | .8 | .1 | 0 | a.4 | .2 |
| 24 | 1.4 | 2.0 | 2.2 | 6 | 3.7 | 2.2 | 1.2 | 1.1 | .1 | 0 | a.4 | .3 |
| 25 | 1.4 | a2.0 | 2.4 | 4.2 | 4.1 | 2.2 | 1.2 | 1.1 | .1 | 0 | a.5 | .2 |
| 26 | 1.4 | a2.1 | 2.4 | 4.2 | 4.3 | 2.0 | 1.5 | 1.1 | .2 | 0 | a.5 | .2 |
| 27 | 1.6 | a2.1 | 2.4 | 4.3 | 4.1 | 1.5 | 1.2 | 1.0 | .2 | 0 | a.5 | .2 |
| 28 | 1.7 | a2.1 | 2.3 | 4.4 | 4.0 | 1.0 | 1.4 | .8 | .3 | 0 | f.6 | .3 |
| 29 | 1.7 | a2.2 | 2.1 | 4.4 | 3.8 | 1.0 | 1.4 | .6 | .4 | 0 | .2 | .2 |
| 30 | 1.9 | a2.2 | 2.3 | 4.6 | - | 1.3 | 1.1 | .4 | .3 | 0 | .1 | .1 |
| 31 | 2.0 | - | 2.5 | 4.8 | - | 2.4 | - | .4 | .3 | 0 | .1 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 66.9 | 3.6 | 1.3 | 2.16 | 133 |
| November..... | 62.9 | 2.6 | 1.6 | 2.10 | 125 |
| December..... | 58.8 | 2.5 | 1.2 | 1.90 | 117 |
| Calendar year 1939..... | 2,122.3 | 54 | 1.2 | 5.81 | 4,210 |
| January..... | 131.7 | 13 | 2.0 | 4.25 | 261 |
| February..... | 150.3 | 17 | 3.7 | 5.18 | 298 |
| March..... | 96.5 | 3.8 | 1.0 | 2.79 | 172 |
| April..... | 53.3 | 2.9 | .8 | 1.78 | 106 |
| May..... | 22.7 | 1.1 | .4 | .73 | 45 |
| June..... | 10.2 | .9 | .1 | .34 | 20 |
| July..... | 2.2 | .4 | 0 | .07 | 4.4 |
| August..... | 6.5 | .6 | 0 | .21 | 13 |
| September..... | 4.0 | .3 | 0 | .13 | 7.9 |
| Water year 1939-40..... | 656.0 | 17 | 0 | 1.79 | 1,300 |

a No gage-height record; discharge computed on basis of discharge measurements or interpolated.
f Discharge computed from partly estimated gage-height record.

SANTA ANA RIVER BASIN

Chino Creek near Prado, Calif.

Location.- Water-stage recorder, lat. 33°53'40", long. 117°38'40", in El Rincon grant, on Chino-Rincon road, 1 mile west of Prado, Riverside County. Altitude of gage, 460 feet.

Records available.- January 1929 to September 1940 (discontinued).

Average discharge.- 11 years, 9.40 second-feet.

Extremes.- Maximum discharge during year, 722 second-feet Jan. 8 (gage height, 9.12 feet), from rating curve extended above 250 second-feet by logarithmic plotting; minimum daily, 0.4 second-foot on several days in July.
1929-40: Maximum discharge, 5,200 second-feet Mar. 2, 1938, by slope-area method; minimum, 0.1 second-foot at times during 1935-37.

Remarks.- Records good except those for periods of backwater from construction, which are fair; and periods of backwater from the Santa Ana River, which are poor. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-------------------------|------|------|------|------|------------------|------|---------|------|---------|------|------|-------|----------------------|--|
| 1 | 0.5 | 2.2 | 2.9 | 5 | 28 | 11 | 74 | 5.5 | 2.6 | 0.6 | 0.5 | 0.7 | | |
| 2 | .5 | 2.3 | 3.1 | 5 | 70 | 10 | 25 | 5 | 2.5 | .6 | .5 | .7 | | |
| 3 | .5 | 2.6 | 3.0 | 5 | 77 | 10 | 11 | 5.5 | 2.6 | .6 | .5 | .7 | | |
| 4 | .5 | 4.5 | 3.0 | 5.5 | 125 | 9.5 | 10 | 5.5 | 2.6 | .7 | .5 | .6 | | |
| 5 | .5 | 5 | 3.2 | 7 | 26 | 9.5 | 10 | 5.5 | 2.6 | .6 | .5 | .6 | | |
| 6 | .5 | 4.8 | 3.7 | 6 | 17 | 9.5 | 10 | 5 | 2.6 | .6 | .5 | .6 | | |
| 7 | .6 | 4.7 | 3.9 | 7.5 | 15 | 9 | 9.5 | c5 | 2.6 | .6 | .5 | .6 | | |
| 8 | .7 | 5 | 4.1 | 330 | 13 | 9 | 8 | c4.5 | 2.7 | .5 | .6 | .6 | | |
| 9 | .7 | 5 | 6.5 | 41 | 12 | 9.5 | 7.5 | c4.5 | 2.6 | .5 | .5 | .5 | | |
| 10 | .6 | 4.8 | 6.5 | 21 | 11 | 9.5 | 7.5 | c4.0 | 2.5 | .5 | .6 | .6 | | |
| 11 | .6 | 4.4 | 6 | 16 | 11 | 9 | 7 | 3.8 | 2.3 | .4 | .5 | .5 | | |
| 12 | .6 | 4.2 | 5.5 | 16 | 11 | 9 | 6 | 4.1 | 2.3 | .4 | .5 | .5 | | |
| 13 | .6 | 4.2 | 4.8 | 12 | 10 | 6.5 | 5.5 | 3.8 | 2.2 | .4 | .5 | .5 | | |
| 14 | .6 | 4.2 | 4.2 | 10 | 11 | 8 | 5.5 | 3.7 | 2.1 | .4 | .6 | .6 | | |
| 15 | .7 | 4.2 | 3.9 | 8.5 | 12 | 9 | 6 | 3.5 | 2.0 | .4 | .6 | .6 | | |
| 16 | .6 | 4.4 | 3.6 | 8 | 11 | 7.5 | 6 | 3.3 | 1.9 | .4 | .7 | e-7 | | |
| 17 | .7 | 5 | 3.6 | 8 | 10 | 6.5 | 5.5 | 3.2 | 2.2 | .4 | .6 | .6 | | |
| 18 | .7 | 5 | 3.7 | 8.5 | 9.5 | c6.5 | 5.5 | 3.0 | 1.6 | .4 | .6 | .6 | | |
| 19 | .8 | 9 | 3.7 | 8.5 | 8.5 | c6 | 5.5 | 2.9 | 1.4 | .4 | .7 | .7 | | |
| 20 | 1.0 | 7.5 | 3.8 | 8 | 7.5 | c6 | 5 | 2.7 | 1.1 | .4 | .7 | .7 | | |
| 21 | 1.1 | 5.5 | 4.1 | 8 | 7.5 | 5.5 | 5 | 3.0 | 1.2 | .4 | .7 | .7 | | |
| 22 | 1.1 | 3.6 | 4.1 | 8 | 7.5 | 5.5 | 4.7 | 2.7 | 1.1 | .4 | .7 | .7 | | |
| 23 | 2.6 | 2.5 | 4.3 | 8.5 | 7.5 | 5.5 | 5 | 2.6 | .9 | .4 | .7 | .7 | | |
| 24 | 2.5 | 2.2 | 6.5 | 19 | 7 | 5.5 | 5 | 2.5 | .9 | .4 | .7 | .7 | | |
| 25 | 1.9 | 2.0 | 5 | 11 | 7.5 | 6 | 4.7 | 2.6 | .9 | .4 | .7 | .7 | | |
| 26 | 1.8 | 2.2 | 4.8 | 9.5 | 20 | 6.5 | 8 | 2.6 | .9 | .4 | .7 | .7 | | |
| 27 | 1.6 | 2.5 | 4.8 | 9 | 11 | 6.5 | 10 | 2.5 | .7 | .4 | .7 | .7 | | |
| 28 | 1.9 | 2.8 | 4.8 | 8.5 | 10 | 5.5 | 7 | 2.5 | .7 | .5 | .7 | .7 | | |
| 29 | 1.8 | 2.9 | 4.8 | 8 | 11 | 5 | 6.5 | 2.6 | .7 | .5 | .7 | .7 | | |
| 30 | 1.7 | 2.9 | 5 | 8 | - | 5 | 6 | 2.6 | .7 | .5 | .7 | .7 | | |
| 31 | 2.0 | - | 5 | 8.5 | - | 16 | - | 2.6 | - | .5 | .7 | - | | |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | | | | | 32.5 | | 2.6 | | 0.5 | | 1.05 | | 64 | |
| November..... | | | | | 124.1 | | 9 | | 2.0 | | 4.14 | | 246 | |
| December..... | | | | | 135.9 | | 6.5 | | 2.9 | | 4.38 | | 270 | |
| Calendar year 1939..... | | | | | 2,303.5 | | 123 | | .2 | | 6.31 | | 4,560 | |
| January..... | | | | | 642.5 | | 330 | | 5 | | 20.7 | | 1,270 | |
| February..... | | | | | 583.5 | | 125 | | 7 | | 20.1 | | 1,180 | |
| March..... | | | | | 245.0 | | 16 | | 5 | | 7.90 | | 486 | |
| April..... | | | | | 291.9 | | 74 | | 4.7 | | 9.73 | | 579 | |
| May..... | | | | | 112.8 | | 5.5 | | 2.5 | | 5.64 | | 224 | |
| June..... | | | | | 53.7 | | 2.7 | | .7 | | 1.79 | | 107 | |
| July..... | | | | | 14.6 | | .7 | | .4 | | .47 | | 29 | |
| August..... | | | | | 19.2 | | .7 | | .5 | | .62 | | 38 | |
| September..... | | | | | 21.0 | | - | | - | | .70 | | 42 | |
| Water year 1939-40..... | | | | | 2,276.7 | | 330 | | .4 | | 6.22 | | 4,580 | |

Peak discharge.- Jan. 8 (11 a.m.) 722 sec.-ft.; Feb. 3 (11:30 p.m.) 416 sec.-ft.; Apr. 1 (10 a.m.) 141 sec.-ft.

c Backwater from construction at Prado Dam; discharge interpolated.

e Backwater from Santa Ana River; discharge estimated.

San Antonio Creek near Claremont, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°12'50", long. 117°40'00", in NW¼ sec. 36, T. 2 N., R. 8 W., at highway bridge, half a mile upstream from Southern California Edison Co.'s Sierra power plant and 6 miles northeast of Claremont. Altitude of gage, about 3,400 feet.

Drainage area.- 16.9 square miles.

Records available.- March 1901 to September 1940.

Average discharge.- 23 years (1917-40), 10.0 second-feet. Average combined discharge of creek and conduit, 23 years (1917-40), 22.5 second-feet.

Extremes.- Maximum discharge during year, 102 second-feet Jan. 8 (gage height, 2.55 feet) from rating curve extended above 30 second-feet on basis of broad-crested weir control formula; minimum, 1.4 second-feet Aug. 29, 30, and 31.
1917-40: Maximum discharge, 17,800 second-feet Mar. 2, 1938, by rainfall-run-off studies; minimum, less than 0.1 second-foot for several days during October 1934.

Remarks.- Records good. Southern California Edison Co.'s conduit diverts water above station (see p. 77).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 14 | 2.4 | 2.0 | 1.8 | 18 | 21 | 13 | 7 | 2.9 | 2.2 | 1.9 | 1.6 |
| 2 | 10 | 2.5 | 2.0 | 1.8 | 13 | 23 | 11 | 6.5 | 2.8 | 2.2 | 1.9 | 1.6 |
| 3 | 9 | 2.5 | 1.9 | 1.8 | 7.5 | 26 | 9.5 | 7 | 2.7 | 2.2 | 1.9 | 1.7 |
| 4 | 8 | 2.5 | 1.7 | 2.0 | 7 | 28 | 9 | 7 | 2.7 | 2.2 | 1.9 | 1.7 |
| 5 | 7 | 2.5 | 1.9 | 1.8 | 7 | 26 | 8 | 7 | 2.6 | 2.1 | 1.8 | 1.8 |
| 6 | 9 | 2.5 | 1.9 | 1.8 | 6.5 | 26 | 8 | 6.5 | 2.5 | 2.0 | 1.8 | 1.8 |
| 7 | 7 | 2.5 | 1.9 | 5.5 | 6.5 | 24 | 8 | 6.5 | 2.5 | 2.0 | 1.8 | 1.8 |
| 8 | 6.5 | 2.5 | 1.9 | 37 | 6.5 | 22 | 7.5 | 6 | 2.5 | 2.0 | 1.9 | 1.8 |
| 9 | 6 | 2.6 | 1.9 | 15 | 5.5 | 22 | 7 | 6 | 2.5 | 1.9 | 1.9 | 1.8 |
| 10 | 4.8 | 2.6 | 1.8 | 6 | 4.5 | 21 | 7 | 6 | 2.4 | 1.9 | 1.8 | 2.0 |
| 11 | 4.2 | 2.5 | 1.8 | 5.5 | 4.7 | 20 | 7 | 5.5 | 2.3 | 1.9 | 1.8 | 2.1 |
| 12 | 2.7 | 2.5 | 2.1 | 5 | 4.9 | 19 | 7 | 5.5 | 2.3 | 1.9 | 1.7 | 2.1 |
| 13 | 2.7 | 2.4 | 1.8 | 4.4 | 5 | 18 | 7 | 5 | 2.3 | 1.8 | 1.7 | 2.1 |
| 14 | 2.7 | 2.6 | 1.8 | 3.7 | 6 | 17 | 7.5 | 5 | 2.3 | 1.8 | 1.7 | 2.1 |
| 15 | 2.7 | 2.5 | 1.8 | 3.3 | 6 | 16 | 9 | 5 | 2.3 | 1.9 | 1.8 | 2.1 |
| 16 | 2.7 | 2.7 | 1.9 | 3.2 | 5 | 16 | 9.5 | 5 | 2.3 | 2.0 | 1.8 | 2.1 |
| 17 | 2.7 | 2.7 | 1.8 | 3.2 | 4.7 | 16 | 9.5 | 5 | 2.3 | 2.0 | 1.9 | 2.0 |
| 18 | 2.7 | 2.7 | 1.8 | 3.3 | 4.5 | 15 | 8.5 | 5 | 2.2 | 2.0 | 1.8 | 2.0 |
| 19 | 2.7 | 2.7 | 1.8 | 3.1 | 4.5 | 22 | 8 | 4.7 | 2.2 | 2.0 | 1.7 | 2.0 |
| 20 | 2.7 | 2.6 | 1.8 | 3.1 | 4.3 | 14 | 7.5 | 4.4 | 2.2 | 2.0 | 1.7 | 2.0 |
| 21 | 2.6 | 2.6 | 1.9 | 3.2 | 4.0 | 14 | 7.5 | 4.3 | 2.3 | 2.0 | 1.7 | 2.0 |
| 22 | 2.6 | 2.5 | 1.9 | 3.1 | 4.4 | 13 | 7.5 | 4.0 | 2.3 | 2.0 | 1.6 | 1.9 |
| 23 | 2.7 | 2.4 | 2.4 | 4.3 | 4.3 | 12 | 7 | 4.0 | 2.2 | 1.9 | 1.6 | 1.8 |
| 24 | 2.7 | 2.4 | 2.1 | 3.6 | 3.6 | 12 | 7 | 3.7 | 2.0 | 1.9 | 1.6 | 1.8 |
| 25 | 2.7 | 2.3 | 2.0 | 3.1 | 23 | 12 | 7 | 3.6 | 2.2 | 2.0 | 1.7 | 1.7 |
| 26 | 2.6 | 2.3 | 1.8 | 2.7 | 37 | 14 | 12 | 3.7 | 2.3 | 2.0 | 1.7 | 1.7 |
| 27 | 2.6 | 2.3 | 1.9 | 2.6 | 32 | 10 | 9.5 | 3.6 | 2.3 | 2.0 | 1.6 | 1.7 |
| 28 | 2.6 | 2.2 | 1.9 | 2.5 | 14 | 9.5 | 8.5 | 3.6 | 2.3 | 2.1 | 1.6 | 1.7 |
| 29 | 2.5 | 2.2 | 2.0 | 2.4 | 20 | 9.5 | 7.5 | 3.4 | 2.3 | 2.2 | 1.6 | 1.7 |
| 30 | 2.4 | 2.2 | 1.9 | 2.3 | - | 8.5 | 7 | 3.2 | 2.3 | 2.1 | 1.6 | 1.7 |
| 31 | 2.4 | - | 1.8 | 2.6 | - | 16 | - | 3.1 | - | 2.0 | 1.6 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 138.2 | 14 | 2.4 | 4.46 | 274 | | |
| November..... | | | | | | 74.4 | 2.7 | 2.2 | 2.48 | 148 | | |
| December..... | | | | | | 58.8 | 2.4 | 1.7 | 1.90 | 117 | | |
| Calendar year 1939..... | | | | | | 4,190.5 | 12.2 | .9 | 11.5 | 8,310 | | |
| January..... | | | | | | 144.7 | 37 | 1.8 | 4.67 | 287 | | |
| February..... | | | | | | 273.8 | 37 | 3.6 | 9.44 | 543 | | |
| March..... | | | | | | 542.5 | 28 | 0.5 | 17.5 | 1,080 | | |
| April..... | | | | | | 249.0 | 13 | 7 | 8.30 | 494 | | |
| May..... | | | | | | 155.3 | 7 | 3.1 | 5.03 | 309 | | |
| June..... | | | | | | 71.3 | 2.9 | 2.0 | 2.38 | 141 | | |
| July..... | | | | | | 62.2 | 2.2 | 1.8 | 2.01 | 123 | | |
| August..... | | | | | | 54.0 | 1.9 | 1.6 | 1.74 | 107 | | |
| September..... | | | | | | 55.9 | 2.1 | 1.6 | 1.86 | 111 | | |
| Water year 1939-40..... | | | | | | 1,880.6 | 37 | 1.6 | 5.14 | 3,730 | | |

SANTA ANA RIVER BASIN

Combined discharge, in second-feet, of San Antonio Creek and Southern California Edison Co's conduit near Claremont, Calif., water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 28 | 17 | 14 | 11 | 26 | 42 | 34 | 27 | 23 | 17 | 13 | 12 |
| 2 | 26 | 14 | 14 | 11 | 25 | 43 | 32 | 25 | 23 | 17 | 13 | 12 |
| 3 | 27 | 14 | 13 | 12 | 28 | 46 | 30 | 28 | 22 | 17 | 13 | 12 |
| 4 | 26 | 14 | 13 | 12 | 26 | 48 | 30 | 28 | 21 | 16 | 13 | 12 |
| 5 | 25 | 14 | 14 | 11 | 27 | 47 | 29 | 28 | 22 | 17 | 13 | 12 |
| 6 | 27 | 14 | 15 | 11 | 26 | 47 | 29 | 28 | 20 | 16 | 13 | 12 |
| 7 | 25 | 14 | 14 | 15 | 26 | 45 | 29 | 28 | 20 | 16 | 13 | 12 |
| 8 | 24 | 14 | 14 | 37 | 26 | 43 | 28 | 27 | 20 | 16 | 13 | 12 |
| 9 | 24 | 15 | 13 | 20 | 26 | 43 | 28 | 27 | 20 | 15 | 13 | 12 |
| 10 | 23 | 14 | 13 | 18 | 26 | 41 | 28 | 27 | 20 | 16 | 13 | 12 |
| 11 | 22 | 16 | 13 | 18 | 26 | 40 | 28 | 26 | 20 | 16 | 13 | 12 |
| 12 | 20 | 16 | 12 | 19 | 26 | 39 | 28 | 26 | 20 | 15 | 13 | 12 |
| 13 | 21 | 15 | 13 | 18 | 26 | 38 | 28 | 26 | 20 | 16 | 13 | 12 |
| 14 | 20 | 16 | 13 | 19 | 27 | 37 | 28 | 26 | 20 | 16 | 13 | 12 |
| 15 | 23 | 16 | 13 | 19 | 27 | 36 | 30 | 25 | 19 | 16 | 12 | 12 |
| 16 | 23 | 15 | 12 | 19 | 26 | 36 | 30 | 26 | 19 | 16 | 12 | 12 |
| 17 | 23 | 15 | 12 | 20 | 26 | 35 | 30 | 26 | 19 | 15 | 12 | 12 |
| 18 | 23 | 15 | 13 | 21 | 26 | 35 | 30 | 26 | 19 | 15 | 12 | 11 |
| 19 | 19 | 15 | 12 | 22 | 26 | 35 | 29 | 26 | 19 | 15 | 12 | 11 |
| 20 | 18 | 15 | 12 | 23 | 25 | 34 | 28 | 25 | 19 | 15 | 12 | 11 |
| 21 | 18 | 14 | 12 | 23 | 25 | 34 | 28 | 25 | 18 | 15 | 12 | 11 |
| 22 | 18 | 14 | 12 | 23 | 25 | 33 | 28 | 25 | 18 | 14 | 13 | 11 |
| 23 | 17 | 12 | 14 | 24 | 25 | 32 | 28 | 25 | 18 | 14 | 13 | 11 |
| 24 | 17 | 12 | 12 | 24 | 25 | 32 | 28 | 25 | 18 | 14 | 13 | 11 |
| 25 | 17 | 12 | 12 | 22 | 37 | 32 | 28 | 25 | 18 | 14 | 13 | 11 |
| 26 | 17 | 12 | 12 | 21 | 37 | 31 | 33 | 24 | 17 | 14 | 13 | 11 |
| 27 | 17 | 12 | 12 | 21 | 36 | 32 | 30 | 24 | 17 | 14 | 13 | 11 |
| 28 | 19 | 12 | 12 | 20 | 35 | 32 | 30 | 24 | 17 | 14 | 13 | 10 |
| 29 | 18 | 13 | 12 | 20 | 41 | 30 | 28 | 23 | 17 | 13 | 12 | 10 |
| 30 | 17 | 14 | 11 | 20 | - | 30 | 27 | 23 | 17 | 13 | 12 | 10 |
| 31 | 17 | - | 11 | 21 | - | 37 | - | 23 | - | 13 | 12 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 659 | 28 | 17 | 21.3 | 1,310 | | | | |
| November..... | | | | 425 | 17 | 12 | 14.2 | 843 | | | | |
| December..... | | | | 394 | 15 | 11 | 12.7 | 781 | | | | |
| Calendar year 1939..... | | | | 5,963.5 | 131 | 9 | 16.3 | 11,820 | | | | |
| January..... | | | | 595 | 37 | 11 | 19.2 | 1,180 | | | | |
| February..... | | | | 809 | 41 | 25 | 27.9 | 1,600 | | | | |
| March..... | | | | 1,166 | 48 | 30 | 37.6 | 2,310 | | | | |
| April..... | | | | 874 | 34 | 27 | 29.1 | 1,730 | | | | |
| May..... | | | | 800 | 28 | 23 | 25.8 | 1,590 | | | | |
| June..... | | | | 580 | 23 | 17 | 19.3 | 1,150 | | | | |
| July..... | | | | 470 | 17 | 13 | 16.2 | 932 | | | | |
| August..... | | | | 393 | 13 | 12 | 12.7 | 780 | | | | |
| September..... | | | | 344 | 12 | 10 | 11.5 | 682 | | | | |
| Water year 1939-40..... | | | | 7,509 | 48 | 10 | 20.5 | 14,890 | | | | |

Southern California Edison Co.'s conduit near Claremont, Calif.

Location.- At Southern California Edison Co.'s Sierra power plant, lat. $34^{\circ}12'45''$, long. $117^{\circ}40'15''$, in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T. 2 N., R. 8 W., $1\frac{1}{2}$ miles downstream from intake and 8 miles northeast of Claremont. Altitude of gage, about 3,160 feet.

Records available.- January 1917 to September 1940.

Average discharge.- 23 years, 12.5 second-feet.

Remarks.- Conduit diverts water from San Antonio Creek in SE $\frac{1}{4}$ sec. 25, T. 2 N., R. S W., 1 mile upstream from gaging station on San Antonio Creek near Claremont. Water is used for power development and then for irrigation. Discharge is computed from record of output in kilowatts of Sierra power plant.

Cooperation.- Records furnished by Southern California Edison Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-------------------------|------|------|------|------|------------------|------|---------|-----|---------|------|------|-------|----------------------|--|
| 1 | 14 | 15 | 12 | 9.5 | 7.5 | 21 | 21 | 20 | 20 | 15 | 11 | 10 | | |
| 2 | 16 | 12 | 12 | 9.5 | 12 | 20 | 21 | 21 | 20 | 15 | 11 | 10 | | |
| 3 | 18 | 12 | 11 | 10 | 20 | 20 | 21 | 21 | 19 | 15 | 11 | 10 | | |
| 4 | 18 | 12 | 11 | 10 | 19 | 20 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 5 | 18 | 12 | 12 | 9.5 | 20 | 21 | 21 | 21 | 19 | 15 | 11 | 10 | | |
| 6 | 18 | 12 | 13 | 9.5 | 20 | 21 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 7 | 18 | 12 | 12 | 9.5 | 20 | 21 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 8 | 18 | 12 | 12 | 0 | 20 | 21 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 9 | 18 | 12 | 11 | 4.6 | 21 | 21 | 21 | 21 | 18 | 13 | 11 | 10 | | |
| 10 | 18 | 11 | 11 | 12 | 21 | 20 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 11 | 18 | 13 | 11 | 13 | 21 | 20 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 12 | 17 | 13 | 10 | 14 | 21 | 20 | 21 | 21 | 18 | 13 | 11 | 10 | | |
| 13 | 18 | 13 | 11 | 14 | 21 | 20 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 14 | 17 | 13 | 11 | 15 | 21 | 20 | 21 | 21 | 18 | 14 | 11 | 10 | | |
| 15 | 20 | 13 | 11 | 16 | 21 | 20 | 21 | 20 | 17 | 14 | 10 | 9.5 | | |
| 16 | 20 | 12 | 10 | 16 | 21 | 20 | 21 | 21 | 17 | 14 | 10 | 9.5 | | |
| 17 | 20 | 12 | 10 | 17 | 21 | 20 | 21 | 21 | 17 | 13 | 10 | 9.5 | | |
| 18 | 20 | 12 | 11 | 18 | 21 | 20 | 21 | 21 | 17 | 13 | 10 | 9 | | |
| 19 | 16 | 12 | 10 | 19 | 21 | 13 | 21 | 21 | 17 | 13 | 10 | 9 | | |
| 20 | 16 | 12 | 10 | 20 | 21 | 20 | 21 | 21 | 17 | 13 | 10 | 9 | | |
| 21 | 15 | 11 | 10 | 20 | 21 | 20 | 21 | 21 | 16 | 13 | 10 | 9 | | |
| 22 | 15 | 11 | 10 | 20 | 21 | 20 | 21 | 21 | 16 | 12 | 11 | 9 | | |
| 23 | 14 | 10 | 12 | 20 | 21 | 20 | 21 | 21 | 16 | 12 | 11 | 9 | | |
| 24 | 14 | 10 | 10 | 20 | 21 | 20 | 21 | 21 | 16 | 12 | 11 | 9 | | |
| 25 | 14 | 10 | 10 | 19 | 14 | 20 | 21 | 21 | 16 | 12 | 11 | 9 | | |
| 26 | 14 | 10 | 10 | 18 | 0 | 17 | 21 | 20 | 15 | 12 | 11 | 9 | | |
| 27 | 14 | 10 | 10 | 18 | 3.5 | 22 | 21 | 20 | 15 | 12 | 11 | 9 | | |
| 28 | 16 | 10 | 10 | 18 | 21 | 22 | 21 | 20 | 15 | 12 | 11 | 8.5 | | |
| 29 | 16 | 11 | 10 | 18 | 21 | 21 | 20 | 20 | 15 | 11 | 10 | 8.5 | | |
| 30 | 15 | 12 | 9.5 | 18 | - | 21 | 20 | 20 | 15 | 11 | 10 | 8.5 | | |
| 31 | 15 | - | 9.5 | 18 | - | 21 | - | 20 | - | 11 | 10 | - | | |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | | | | | 517 | | 20 | | 14 | | 16.7 | | 1,030 | |
| November..... | | | | | 352 | | 15 | | 10 | | 11.7 | | 696 | |
| December..... | | | | | 333.0 | | 13 | | 9.5 | | 10.7 | | 660 | |
| Calendar year 1939..... | | | | | 1,775.2 | | 20 | | 0 | | 4.86 | | 3,520 | |
| January..... | | | | | 453.1 | | 20 | | 0 | | 14.6 | | 899 | |
| February..... | | | | | 534.0 | | 21 | | 0 | | 18.4 | | 1,060 | |
| March..... | | | | | 623 | | 21 | | 13 | | 20.1 | | 1,240 | |
| April..... | | | | | 628 | | 21 | | 20 | | 20.9 | | 1,260 | |
| May..... | | | | | 643 | | 21 | | 20 | | 20.7 | | 1,280 | |
| June..... | | | | | 515 | | 20 | | 15 | | 17.2 | | 1,020 | |
| July..... | | | | | 408 | | 15 | | 11 | | 13.2 | | 809 | |
| August..... | | | | | 331 | | 11 | | 10 | | 10.7 | | 657 | |
| September..... | | | | | 284.0 | | 10 | | 8.5 | | 9.47 | | 563 | |
| Water year 1939-40..... | | | | | 5,621.1 | | 21 | | 0 | | 15.4 | | 11,170 | |

Santiago Creek near Villa Park, Calif.

Location.- Water-stage recorder, lat. 33°49'10", long. 117°46'30", in SW $\frac{1}{4}$ sec. 13, T. 4 S., R. 9 W., five-eighths of a mile downstream from diversion dam of Serrano and Carpenter Irrigation Districts and $1\frac{1}{2}$ miles northeast of Villa Park. Altitude of gage, about 420 feet.

Drainage area.- 83.8 square miles.

Records available.- June 1920 to September 1940.

Average discharge.- 20 years, 8.04 second-feet.

Extremes.- Maximum discharge during year, 50 second-feet (estimated) Feb. 3 (gage height, 1.60 feet); no flow for several months.

1920-40: Maximum discharge, about 11,000 second-feet Feb. 16, 1927 (gage height, 8.4 feet), by slope-area method; no flow for several months each year.

Remarks.- Records poor. Irvine Co. and Serrano and Carpenter Irrigation Districts divert above gage. Flow completely regulated by Santiago Reservoir.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0.1 | | 0 | 0.1 | 0.3 | 0.2 | 1.0 | 0.1 | | | | |
| 2 | .1 | | 0 | .1 | .3 | .2 | .5 | .1 | | | | |
| 3 | .1 | | 0 | .1 | 3.0 | .2 | .5 | .1 | | | | |
| 4 | .1 | | 0 | .2 | .8 | .2 | .3 | .1 | | | | |
| 5 | .1 | | 0 | .2 | .6 | .2 | .2 | .1 | | | | |
| 6 | .1 | | 0 | .2 | .5 | .2 | .2 | 0 | | | | |
| 7 | .2 | | 0 | .3 | .4 | .2 | .2 | 0 | | | | |
| 8 | .2 | | 0 | .8 | .3 | .2 | .2 | 0 | | | | |
| 9 | .2 | | 0 | .4 | .2 | .3 | .2 | 0 | | | | |
| 10 | .1 | | 0 | .3 | .2 | .5 | .1 | 0 | | | | |
| 11 | .1 | | 0 | .3 | .1 | .5 | .1 | 0 | | | | |
| 12 | .1 | | 0 | .2 | .1 | .4 | .1 | 0 | | | | |
| 13 | .1 | | 0 | .2 | .1 | .3 | .1 | 0 | | | | |
| 14 | .1 | | .1 | .2 | .2 | .2 | .1 | 0 | | | | |
| 15 | .1 | | .1 | .2 | .2 | .2 | .1 | 0 | | | | |
| 16 | 0 | | .1 | .1 | .2 | .1 | 0 | 0 | | | | |
| 17 | 0 | | .1 | .1 | .1 | .1 | 0 | 0 | | | | |
| 18 | 0 | | .1 | .1 | .1 | .1 | 0 | 0 | | | | |
| 19 | 0 | | .1 | .1 | .1 | .1 | 0 | 0 | | | | |
| 20 | 0 | | .1 | .1 | .1 | .1 | 0 | 0 | | | | |
| 21 | 0 | | .1 | .1 | .1 | .1 | 0 | 0 | | | | |
| 22 | 0 | | .1 | .1 | .1 | .1 | 0 | 0 | | | | |
| 23 | 0 | | .2 | .7 | .1 | .1 | 0 | 0 | | | | |
| 24 | 0 | | .2 | .6 | .1 | .1 | 0 | 0 | | | | |
| 25 | 0 | | .2 | .4 | .4 | .1 | 0 | 0 | | | | |
| 26 | 0 | | .1 | .3 | .3 | .1 | .4 | 0 | | | | |
| 27 | 0 | | .1 | .2 | .3 | .1 | .4 | 0 | | | | |
| 28 | 0 | | .1 | .2 | .2 | .1 | .3 | 0 | | | | |
| 29 | 0 | | .1 | .2 | .2 | .1 | .2 | 0 | | | | |
| 30 | 0 | | .1 | .1 | - | .1 | .1 | 0 | | | | |
| 31 | 0 | | .1 | .1 | - | .9 | - | 0 | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 1.8 | 0.2 | 0 | 0.06 | 3.6 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 2.1 | .2 | 0 | .07 | 4.2 | | |
| Calendar year 1939..... | | | | | | 48.62 | 7.5 | 0 | .13 | 96 | | |
| January..... | | | | | | 7.3 | .8 | .1 | .24 | 14 | | |
| February..... | | | | | | 9.7 | 3.0 | .1 | .33 | 19 | | |
| March..... | | | | | | 6.4 | .9 | .1 | .21 | 13 | | |
| April..... | | | | | | 5.3 | 1.0 | 0 | .18 | 11 | | |
| May..... | | | | | | .5 | .1 | 0 | .02 | 1.0 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 33.1 | 3.0 | 0 | .09 | 66 | | |

Note.- Discharge computed on basis of one measurement, field estimate of flow, records for Santiago Creek at Santa Ana and rainfall records at Santa Ana.

Santiago Creek at Santa Ana, Calif.

Location.- Water-stage recorder, lat. 33°46'00", long. 117°52'45", in Santiago de Santa Ana grant, at end of Baker Street, Santa Ana, Orange County. Altitude of gage, about 120 feet.

Records available.- January 1929 to September 1940.

Average discharge.- 11 years, 5.37 second-feet.

Extremes.- Maximum discharge during year, 376 second-feet Feb. 3 (gage height, 2.85 feet); no flow during most of year.
1929-40: Maximum discharge, 4,400 second-feet Mar. 2, 1938; (gage height, 7.40 feet), from rating curve extended above 1,200 second-feet by logarithmic plotting; no flow during most of each year.

Remarks.- Records poor. Irvine Co. and Serrano and Carpenter Irrigation Districts divert water above gage.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | 0 | 20 | 0 | 11 | | | | | |
| 2 | | | | 0 | 15 | 0 | 0 | | | | | |
| 3 | | | | 0 | 70 | 0 | 0 | | | | | |
| 4 | | | | 0 | 4.5 | 0 | 0 | | | | | |
| 5 | | | | 0 | .5 | 0 | 0 | | | | | |
| 6 | | | | 0 | 0 | 0 | 0 | | | | | |
| 7 | | | | 0 | 0 | 0 | 0 | | | | | |
| 8 | | | | 6 | 0 | 0 | 0 | | | | | |
| 9 | | | | 0 | 0 | 0 | 0 | | | | | |
| 10 | | | | 0 | 0 | 0 | 0 | | | | | |
| 11 | | | | 0 | 0 | 0 | 0 | | | | | |
| 12 | | | | 0 | 0 | 0 | 0 | | | | | |
| 13 | | | | 0 | 0 | 0 | 0 | | | | | |
| 14 | | | | 12 | 1.5 | 0 | 0 | | | | | |
| 15 | | | | 13 | 0 | 0 | 0 | | | | | |
| 16 | | | | | | | | | | | | |
| 17 | | | | .5 | 3.0 | 0 | 0 | | | | | |
| 18 | | | | 0 | 1.0 | 0 | 0 | | | | | |
| 19 | | | | 0 | 0 | 0 | 0 | | | | | |
| 20 | | | | 0 | 0 | 0 | 0 | | | | | |
| 21 | | | | 0 | 0 | 0 | 0 | | | | | |
| 22 | | | | 0 | 0 | 0 | 0 | | | | | |
| 23 | | | | 30 | 0 | 0 | 0 | | | | | |
| 24 | | | | 12 | 0 | 0 | 0 | | | | | |
| 25 | | | | 0 | 15 | 0 | 0 | | | | | |
| 26 | | | | 0 | | | | | | | | |
| 27 | | | | 0 | .5 | 0 | 1.9 | | | | | |
| 28 | | | | 0 | 0 | 0 | .7 | | | | | |
| 29 | | | | 0 | 0 | 0 | 0 | | | | | |
| 30 | | | | 0 | 0 | 0 | 0 | | | | | |
| 31 | | | | 0 | - | 22 | 0 | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 478.0 | 86 | 0 | 1.31 | 948 | | |
| January..... | | | | | | 73.5 | 30 | 0 | 2.37 | 146 | | |
| February..... | | | | | | 131.6 | 70 | 0 | 4.54 | 261 | | |
| March..... | | | | | | 22 | 22 | 0 | .7 | 44 | | |
| April..... | | | | | | 13.6 | 11 | 0 | .45 | 27 | | |
| May..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 240.7 | 70 | 0 | .66 | 478 | | |

Note.- Discharge computed on basis of partial gage-height records, discharge measurements, and records for Santa Ana River at Santa Ana.

Irvine ranch drainage canal near Tustin, Calif.

Location.- Water-stage recorder, lat. 33°40'30", long. 117°50'05" (revised), in San Joaquin grant, on Lane Road Bridge, 5 miles south of Tustin, Orange County. Altitude of gage, about 26 feet.

Drainage area.- 93 square miles.

Records available.- November 1930 to September 1940.

Extremes.- Maximum discharge during year, 1,150 second-feet Feb. 3 (gage height, 11.30 feet); no flow for several periods.
1930-40: Maximum discharge, 5,710 second-feet Mar. 2, 1938; no flow for several periods during 1932-40.

Remarks.- This canal carries storm run-off from foothills and drains the soil in a small area between Tustin and the ocean.

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

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 0.2 | - | | 0.4 | 42 | 0.1 | 32 | - | - | 0.2 | 0.2 | 0.1 |
| 2 | .1 | - | | .5 | 12 | .2 | .5 | - | - | .2 | .2 | .1 |
| 3 | - | - | | .3 | 159 | .2 | .5 | - | - | .2 | .1 | - |
| 4 | - | - | | .3 | 10 | .2 | .4 | - | - | .2 | .1 | - |
| 5 | - | - | | .3 | | .2 | .4 | 0.1 | - | .2 | - | - |
| 6 | - | - | | .2 | - | .2 | .3 | .1 | - | .3 | - | - |
| 7 | .1 | - | | 1.1 | - | .1 | .3 | .1 | - | .3 | - | - |
| 8 | - | 0.2 | | 28 | - | .1 | .2 | .1 | - | .3 | - | - |
| 9 | - | - | | 3.5 | - | | .2 | .1 | 0.1 | .3 | - | - |
| 10 | - | - | | 2.5 | - | - | .2 | .1 | .1 | .3 | - | - |
| 11 | - | - | | - | - | - | .2 | - | .1 | .3 | - | - |
| 12 | - | - | | - | - | - | .2 | - | .1 | .3 | - | - |
| 13 | - | .4 | | - | - | - | .1 | - | .1 | .2 | - | - |
| 14 | - | - | | - | .2 | - | .1 | - | .1 | .2 | - | - |
| 15 | - | - | | - | .2 | - | .1 | - | .1 | .2 | - | - |
| 16 | - | - | | - | .1 | - | .1 | - | .1 | .2 | - | - |
| 17 | - | - | | - | - | - | .1 | - | .1 | .2 | - | - |
| 18 | - | - | | - | - | - | .1 | - | .1 | .2 | - | - |
| 19 | - | - | | - | - | .1 | .1 | - | .1 | .2 | - | - |
| 20 | - | - | | - | - | - | .1 | - | .1 | .2 | - | - |
| 21 | - | - | | - | - | - | .1 | - | .1 | .2 | - | - |
| 22 | - | .2 | | - | .1 | - | .1 | - | .1 | .2 | - | - |
| 23 | - | .2 | | 21 | - | - | .1 | - | - | .2 | - | - |
| 24 | - | .1 | | 9.5 | - | - | .1 | - | - | .2 | - | - |
| 25 | .2 | .1 | | .8 | 3.1 | - | .1 | - | - | .2 | .1 | - |
| 26 | .2 | .1 | | - | .2 | - | 1.9 | - | - | .2 | .1 | - |
| 27 | .2 | - | | - | .1 | - | 1.1 | - | - | .2 | .1 | - |
| 28 | .1 | - | | - | .1 | - | - | - | - | .2 | .1 | - |
| 29 | - | - | | - | .1 | - | - | - | .1 | .2 | .1 | - |
| 30 | - | - | | - | - | - | - | - | .1 | .2 | .1 | - |
| 31 | - | - | | - | - | 20 | - | - | - | .2 | .1 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 1.37 | | 0.2 | 0 | 0.044 | 2.7 | | | |
| November..... | | | | 2.11 | | .4 | - | .070 | 4.2 | | | |
| December..... | | | | 1.68 | | - | - | .054 | 3.3 | | | |
| Calendar year | | | | - | | - | - | - | - | | | |
| January..... | | | | 70.4 | | 28 | 0 | 2.27 | 140 | | | |
| February..... | | | | 227.95 | | 159 | 0 | 7.88 | 452 | | | |
| March..... | | | | 22.58 | | 20 | - | .73 | 45 | | | |
| April..... | | | | 39.85 | | 32 | - | 1.33 | 79 | | | |
| May..... | | | | 1.85 | | .1 | - | .060 | 3.7 | | | |
| June..... | | | | 2.50 | | .1 | - | .077 | 4.6 | | | |
| July..... | | | | 6.9 | | .3 | .2 | .22 | 14 | | | |
| August..... | | | | 1.90 | | .2 | 0 | .061 | 3.8 | | | |
| September..... | | | | .44 | | .1 | 0 | .015 | .9 | | | |
| Water year 1939-40..... | | | | 379.33 | | 159 | 0 | 1.04 | 753 | | | |

Note.- No flow, or discharge less than 0.1 second-foot on days for which no figures are given.

East Fork of San Gabriel River near Camp Bonita, Calif.
(Formerly published as San Gabriel River near Camp Bonita, Calif.)

Location.- Water-stage recorder, lat. $34^{\circ}14'12''$, long. $117^{\circ}48'30''$, in SE $\frac{1}{4}$ sec. 22, T. 2 N., R. 9 W., 1,000 feet upstream from mouth of Graveyard Canyon, 2 $\frac{1}{2}$ miles upstream from confluence with west fork, and 2 $\frac{1}{2}$ miles west of Camp Bonita, Calif.

Records available.- December 1932 to September 1940.

Extremes.- Maximum discharge during year, 1,360 second-feet Jan. 8 (gage height, 8.73 feet); minimum daily, 14 second-feet Sept. 30.

1932-40: Maximum discharge, 46,000 second-feet Mar. 2, 1938, from rating curve extended above 21,300 second-feet by logarithmic plotting (computed by Geological Survey); minimum, 1.5 second-feet Oct. 1, 1934.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 36 | 23 | 21 | 18 | 74 | 155 | 100 | 69 | 37 | 28 | 20 | 15 |
| 2 | 34 | 22 | 22 | 17 | 93 | 140 | 80 | 67 | 36 | 26 | 19 | 17 |
| 3 | 32 | 22 | 21 | 16 | 131 | 129 | 78 | 67 | 36 | 26 | 18 | 17 |
| 4 | 29 | 22 | 20 | 25 | 130 | 120 | 78 | 62 | 35 | 26 | 18 | 17 |
| 5 | 27 | 22 | 20 | 28 | 100 | 112 | 78 | 60 | 35 | 25 | 18 | 18 |
| 6 | 28 | 21 | 20 | 27 | 85 | 106 | 78 | 60 | 35 | 25 | 19 | 18 |
| 7 | 31 | 20 | 21 | 57 | 80 | 100 | 75 | 58 | 36 | 25 | 19 | 18 |
| 8 | 28 | 22 | 23 | 430 | 75 | 95 | 73 | 54 | 35 | 24 | 18 | 17 |
| 9 | 26 | 23 | 22 | 100 | 71 | 91 | 71 | 52 | 34 | 24 | 18 | 17 |
| 10 | 24 | 22 | 22 | 80 | 69 | 88 | 69 | 51 | 34 | 23 | 18 | 17 |
| 11 | 25 | 22 | 21 | 62 | 67 | 85 | 67 | 51 | 32 | 23 | 18 | 17 |
| 12 | 25 | 21 | 21 | 62 | 64 | 82 | 64 | 51 | 32 | 23 | 19 | 17 |
| 13 | 25 | 21 | 20 | 54 | 60 | 80 | 67 | 49 | 31 | 23 | 19 | 16 |
| 14 | 25 | 21 | 19 | 48 | 62 | 78 | 69 | 48 | 31 | 23 | 19 | 16 |
| 15 | 26 | 20 | 19 | 46 | 60 | 76 | 73 | 48 | 31 | 23 | 19 | 16 |
| 16 | 25 | 21 | 19 | 42 | 54 | 73 | 73 | 48 | 31 | 23 | 19 | 16 |
| 17 | 25 | 22 | 19 | 42 | 52 | 71 | 71 | 48 | 31 | 23 | 19 | 16 |
| 18 | 26 | 21 | 19 | 40 | 51 | 73 | 69 | 48 | 31 | 23 | 18 | 16 |
| 19 | 26 | 21 | 20 | 40 | 52 | 71 | 69 | 45 | 30 | 22 | 17 | 16 |
| 20 | 26 | 20 | 19 | 42 | 49 | 67 | 67 | 43 | 30 | 22 | 17 | 16 |
| 21 | 25 | 20 | 19 | 45 | 49 | 64 | 64 | 42 | 30 | 21 | 17 | 15 |
| 22 | 25 | 20 | 19 | 49 | 52 | 62 | 67 | 42 | 29 | 21 | 17 | 15 |
| 23 | 25 | 20 | 28 | 62 | 56 | 62 | 64 | 40 | 29 | 20 | 17 | 15 |
| 24 | 25 | 20 | 23 | 45 | 54 | 60 | 62 | 40 | 28 | 20 | 17 | 15 |
| 25 | 25 | 20 | 21 | 38 | 139 | 60 | 60 | 40 | 28 | 20 | 17 | 15 |
| 26 | 25 | 21 | 21 | 37 | 315 | 60 | 75 | 40 | 29 | 20 | 17 | 15 |
| 27 | 25 | 21 | 21 | 35 | 154 | 62 | 80 | 42 | 28 | 21 | 17 | 15 |
| 28 | 25 | 22 | 20 | 34 | 122 | 62 | 78 | 42 | 28 | 21 | 17 | 15 |
| 29 | 24 | 21 | 20 | 34 | 168 | 58 | 73 | 40 | 29 | 21 | 17 | 15 |
| 30 | 23 | 21 | 19 | 34 | - | 56 | 71 | 37 | 28 | 20 | 16 | 14 |
| 31 | 23 | - | 19 | 35 | - | 98 | - | 37 | - | 20 | 15 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 819 | 36 | 23 | 26.4 | 1,620 | | |
| November..... | | | | | | 635 | 23 | 20 | 21.2 | 1,260 | | |
| December..... | | | | | | 638 | 28 | 19 | 20.6 | 1,270 | | |
| Calendar year 1939..... | | | | | | 14,255 | 190 | 14 | 39.1 | 28,280 | | |
| January..... | | | | | | 1,724 | 430 | 16 | 55.6 | 3,420 | | |
| February..... | | | | | | 2,588 | 315 | 49 | 69.2 | 5,130 | | |
| March..... | | | | | | 2,586 | 155 | 56 | 63.7 | 5,150 | | |
| April..... | | | | | | 2,153 | 100 | 60 | 72.1 | 4,290 | | |
| May..... | | | | | | 1,521 | 69 | 37 | 49.1 | 3,020 | | |
| June..... | | | | | | 949 | 37 | 28 | 31.6 | 1,880 | | |
| July..... | | | | | | 705 | 28 | 20 | 22.7 | 1,400 | | |
| August..... | | | | | | 553 | 20 | 15 | 17.8 | 1,100 | | |
| September..... | | | | | | 484 | 18 | 14 | 16.1 | 960 | | |
| Water year 1939-40..... | | | | | | 15,375 | 430 | 14 | 42.0 | 30,500 | | |

SAN GABRIEL RIVER BASIN

San Gabriel River near Azusa, Calif.

Location.- Water-stage recorder, lat. 34°10'10", long. 117°53'16", in SW¹ sec. 13, T. 1 N., R. 10 W., 1 mile downstream from Morris Dam and 3 miles northeast of Azusa.

Drainage area.- 211 square miles.

Records available.- 1894 to September 1940.

Average discharge.- 44 years (1896-1940), 111 second-feet. Average combined discharge of river and diversions, adjusted for storage and evaporation in Morris Reservoir and San Gabriel River flood-control reservoirs 1 and 2, 45 years (1895-1940), 158 second-feet.

Extremes.- Maximum daily discharge during year, 506 second-feet June 24; no flow Aug. 28 to Sept. 30.

1894-1940: Maximum discharge, 65,700 second-feet Mar. 2, 1938, by computation of flow over spillway at Morris Dam; no flow for several months in each year 1894-1936, and 1940.

Remarks.- Records good. During the year, flow at station was completely regulated by Morris Reservoir of Pasadena Water Department. Azusa canal (formerly power canal of Southern California Edison Co.) diverts above high-water line of Morris Reservoir at point about 3 miles above station.

Cooperation.- Results of 43 discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------------------|------|------|---------|------|---------|------|------|------|----------------------|------|-----------------------------------|
| 1 | 30 | 56 | 61 | 52 | 82 | 78 | a6 | 0.6 | 0.4 | 344 | a49 | |
| 2 | 30 | 56 | 60 | 52 | 80 | 78 | a4.0 | .6 | .4 | 406 | a50 | |
| 3 | 30 | 56 | 60 | 52 | 80 | 80 | f2.8 | .5 | .5 | 248 | f50 | |
| 4 | 30 | 56 | 60 | 53 | 78 | 77 | 1.6 | .5 | .6 | 4.0 | | |
| 5 | 30 | 56 | 60 | 52 | 77 | 75 | 1.1 | .5 | .5 | 2.2 | 51 | |
| 6 | 30 | 56 | 60 | 52 | 77 | 77 | 1.0 | .4 | .4 | 1.6 | 51 | |
| 7 | 30 | 56 | 60 | 57 | 77 | 77 | .8 | .4 | .4 | 1.2 | 52 | |
| 8 | 30 | 57 | 56 | 64 | 77 | 77 | .7 | .4 | .4 | .9 | 52 | |
| 9 | 30 | 57 | 53 | 110 | 77 | 77 | .6 | .5 | .4 | .7 | 52 | |
| 10 | 41 | 56 | 53 | 129 | 77 | 77 | .6 | .5 | .3 | 24 | 52 | |
| 11 | 57 | 56 | 53 | 129 | 77 | 77 | .5 | .5 | .3 | 43 | 52 | |
| 12 | 56 | 54 | 53 | 129 | 78 | 77 | .5 | .5 | .3 | 48 | 52 | |
| 13 | 56 | 54 | 53 | 129 | 78 | 77 | .4 | .5 | .3 | 51 | 52 | |
| 14 | 56 | 54 | 53 | 129 | 78 | 77 | .5 | .5 | .8 | 53 | 51 | |
| 15 | 56 | 54 | 53 | 100 | 78 | 78 | .5 | .4 | 1.1 | 53 | 26 | |
| 16 | 56 | 54 | 53 | 77 | 78 | 78 | .5 | .4 | 1.4 | 52 | 3.7 | |
| 17 | 57 | 54 | 53 | 77 | 78 | 78 | .5 | .4 | 113 | 51 | 2.6 | |
| 18 | 57 | 54 | 53 | 77 | 78 | 78 | .5 | .3 | 190 | 48 | 2.0 | |
| 19 | 57 | 56 | 52 | 77 | 78 | 78 | .6 | .4 | 316 | 46 | 1.7 | |
| 20 | 57 | 58 | 51 | 75 | 80 | 78 | .6 | .4 | 344 | 46 | 1.4 | |
| 21 | 57 | 60 | 51 | 75 | 80 | 78 | .7 | .4 | 339 | 46 | 1.3 | |
| 22 | 57 | 60 | 51 | 75 | 78 | 78 | 1.2 | .4 | 355 | 25 | 1.0 | |
| 23 | 57 | 60 | 52 | 75 | 78 | 78 | 3.1 | .4 | 432 | 4.0 | .7 | |
| 24 | 57 | 61 | 52 | 75 | 78 | 78 | 1.1 | .4 | 506 | 2.6 | .4 | |
| 25 | 57 | 61 | 52 | 75 | 82 | 78 | .6 | .4 | 497 | 2.0 | .3 | |
| 26 | 57 | 61 | 52 | 75 | 80 | 78 | .8 | .4 | 159 | 1.4 | .2 | |
| 27 | 57 | 61 | 52 | 75 | 80 | 78 | .8 | .4 | 4.0 | 4.0 | .1 | |
| 28 | 57 | 61 | 52 | 77 | 82 | 77 | .8 | .4 | 2.6 | 48 | 0 | |
| 29 | 57 | 61 | 52 | 77 | 80 | 77 | .8 | .4 | 217 | 48 | 0 | |
| 30 | 56 | 61 | 52 | 77 | - | a77 | .7 | .4 | 333 | 47 | 0 | |
| 31 | 56 | - | 52 | 77 | - | a40 | - | .4 | - | a48 | 0 | |
| Month | Second-foot-days | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | Run-off in acre-feet ^f |
| October..... | 1,501 | | | 57 | | 30 | | 48.4 | | 2,980 | | 3,509 |
| November..... | 1,717 | | | 61 | | 54 | | 57.2 | | 3,410 | | 2,520 |
| December..... | 1,680 | | | 61 | | 51 | | 54.2 | | 3,530 | | 2,455 |
| Calendar year 1939 | 18,423.5 | | | 316 | | 6.5 | | 50.5 | | 36,530 | | 56,515 |
| January..... | 2,505 | | | 129 | | 52 | | 80.8 | | 4,970 | | 7,648 |
| February..... | 2,281 | | | 82 | | 77 | | 78.7 | | 4,520 | | 13,337 |
| March..... | 2,366 | | | 80 | | 40 | | 76.3 | | 4,690 | | 9,375 |
| April..... | 34.9 | | | 6 | | .4 | | 1.16 | | 69 | | 7,105 |
| May..... | 13.6 | | | .6 | | .3 | | .44 | | 27 | | 4,785 |
| June..... | 3,818.1 | | | 506 | | .3 | | 127 | | 7,570 | | 2,717 |
| July..... | 1,799.6 | | | 406 | | .7 | | 55.1 | | 3,570 | | 2,079 |
| August..... | 757.4 | | | 52 | | 0 | | 24.4 | | 1,500 | | 1,573 |
| September..... | 0 | | | 0 | | 0 | | 0 | | 0 | | 1,513 |
| Water year 1939-40 | 18,473.6 | | | 506 | | 0 | | 50.5 | | 36,640 | | 58,616 |

^fCombined run-off of river and Azusa canal, adjusted for storage and evaporation in Morris Reservoir and releases from San Gabriel River flood-control reservoirs 1 and 2 using records furnished by city of Pasadena. These figures of run-off are equivalent to combined records of San Gabriel River and Southern California Edison Co.'s canal as published from 1894 to 1933.

a No gage-height record; discharge computed on basis of records of release and leakage from Morris Reservoir furnished by city of Pasadena.

f Discharge computed from partly estimated gage-height record.

San Gabriel River at Pico, Calif.

Location.- Water-stage recorder, lat. 34°00'20", long. 118°04'05", in Paso de Bartolo Grant, at Beverly Boulevard Bridge, half a mile east of Pico, Los Angeles County. Altitude of gage, about 180 feet.

Records available.- October 1928 to September 1940.

Average discharge.- 12 years, 26.5 second-feet.

Extremes.- Maximum discharge during year, 2,110 second-feet Feb. 1; no flow for several months.

1928-40: Maximum discharge, 22,700 second-feet Mar. 2, 1938; no flow for several months in each year.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 38 | 19 | 9 | 26 | 346 | 58 | 84 | 29 | | | | |
| 2 | 32 | 24 | 7.5 | 29 | 341 | 46 | 49 | 24 | | | | |
| 3 | 26 | 24 | 10 | 29 | 434 | 42 | 53 | 21 | | | | |
| 4 | 34 | 21 | 13 | 26 | 178 | 58 | 49 | 21 | | | | |
| 5 | 38 | 24 | 16 | 29 | 78 | 53 | 46 | 19 | | | | |
| 6 | 46 | 29 | 16 | 34 | 53 | 49 | 42 | 13 | | | | |
| 7 | 49 | 32 | 16 | 47 | 58 | 46 | 42 | 9 | | | | |
| 8 | 46 | 26 | 24 | 544 | 53 | 49 | 38 | 10 | | | | |
| 9 | 38 | 21 | 24 | 79 | 49 | 49 | 42 | 11 | | | | |
| 10 | 32 | 15 | 34 | 73 | 42 | 53 | 34 | 12 | | | | |
| 11 | 42 | 11 | 19 | 91 | 42 | 53 | 29 | 13 | | | | |
| 12 | 49 | 12 | 13 | 144 | 46 | 49 | 9 | 9 | | | | |
| 13 | 38 | 11 | 13 | 124 | 49 | 53 | 1.8 | 11 | | | | |
| 14 | 34 | 11 | 15 | 104 | 53 | 49 | .5 | 16 | | | | |
| 15 | 46 | 18 | 21 | 97 | 58 | 49 | .8 | 16 | | | | |
| 16 | 38 | 16 | 29 | 46 | 53 | 53 | 4.3 | 7.5 | | | | |
| 17 | 38 | 19 | 34 | 38 | 53 | 58 | 10 | 8 | | | | |
| 18 | 46 | 19 | 29 | 46 | 58 | 63 | 24 | 10 | | | | |
| 19 | 34 | 21 | 32 | 46 | 53 | 53 | 19 | 24 | | | | |
| 20 | 42 | 19 | 34 | 53 | 49 | 49 | 11 | 8 | | | | |
| 21 | 53 | 15 | 29 | 53 | 58 | 49 | 8 | 4.7 | | | | |
| 22 | 49 | 16 | 21 | 53 | 63 | 53 | 7.5 | 3.4 | | | | |
| 23 | 49 | 18 | 16 | 68 | 46 | 46 | 10 | 3.8 | | | | |
| 24 | 49 | 12 | 19 | 91 | 42 | 58 | 5.5 | 3.0 | | | | |
| 25 | 46 | 15 | 19 | 63 | 61 | 46 | 2.1 | 2.9 | | | | |
| 26 | 38 | 16 | 19 | 73 | 125 | 42 | 10 | 4.3 | | | | |
| 27 | 38 | 15 | 21 | 84 | 68 | 49 | 29 | 1.6 | | | | |
| 28 | 34 | 10 | 21 | 68 | 63 | 46 | 21 | 0 | | | | |
| 29 | 38 | 10 | 21 | 58 | 68 | 46 | 24 | 0 | | | | |
| 30 | 29 | 8 | 19 | 49 | - | 49 | 26 | 0 | | | | |
| 31 | 19 | - | 21 | 58 | - | 58 | - | 0 | | | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 1,228 | | 53 | 19 | 39.6 | 2,440 | | | |
| November..... | | | | 527 | | 32 | 8 | 17.6 | 1,050 | | | |
| December..... | | | | 634.5 | | 34 | 7.5 | 20.5 | 1,260 | | | |
| Calendar year 1939..... | | | | 12,768.6 | | 672 | 0 | 35.0 | 25,340 | | | |
| January..... | | | | 2,422 | | 544 | 26 | 78.1 | 4,800 | | | |
| February..... | | | | 2,740 | | 434 | 42 | 94.5 | 5,430 | | | |
| March..... | | | | 1,574 | | 63 | 42 | 50.8 | 3,120 | | | |
| April..... | | | | 731.5 | | 84 | .5 | 24.4 | 1,450 | | | |
| May..... | | | | 315.2 | | 29 | 0 | 10.2 | 625 | | | |
| June..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| July..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| August..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| September..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | 10,172.2 | | 544 | 0 | 27.8 | 20,180 | | | |

SAN GABRIEL RIVER BASIN

San Gabriel River at Spring Street, near Los Alamitos, Calif.

Location.— Water-stage recorder, lat. 33°48'40", long. 118°05'30", in Los Alamitos grant, on Spring Street Bridge, 1½ miles west of Los Alamitos, Orange County. Altitude of gage, about 22 feet.

Records available.— October 1936 to September 1940 in reports of Geological Survey; 1928-36, in files of office of Los Angeles County Flood Control District, Los Angeles, Calif.

Extremes.— Maximum discharge during year, 1,400 second-feet Feb. 3; no flow during most of year.
1936-40: Maximum discharge, 27,300 second-feet (estimated) Mar. 2, 1938; no flow during most of each year.

Cooperation.— Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | 0 | 74 | | | | | | | |
| 2 | | | | 0 | 146 | | | | | | | |
| 3 | | | | 0 | 192 | | | | | | | |
| 4 | | | | 0 | 129 | | | | | | | |
| 5 | | | | 0 | 2.8 | | | | | | | |
| 6 | | | | 0 | 0 | | | | | | | |
| 7 | | | | 0 | 0 | | | | | | | |
| 8 | | | | 166 | 0 | | | | | | | |
| 9 | | | | 6.5 | 0 | | | | | | | |
| 10 | | | | 0 | 0 | | | | | | | |
| 11 | | | | 0 | 0 | | | | | | | |
| 12 | | | | 0 | 0 | | | | | | | |
| 13 | | | | 0 | 0 | | | | | | | |
| 14 | | | | 0 | 0 | | | | | | | |
| 15 | | | | 0 | 0 | | | | | | | |
| 16 | | | | 0 | 0 | | | | | | | |
| 17 | | | | 0 | 0 | | | | | | | |
| 18 | | | | 0 | 0 | | | | | | | |
| 19 | | | | 0 | 0 | | | | | | | |
| 20 | | | | 0 | 0 | | | | | | | |
| 21 | | | | 0 | 0 | | | | | | | |
| 22 | | | | 0 | 0 | | | | | | | |
| 23 | | | | 0 | 0 | | | | | | | |
| 24 | | | | 0 | 0 | | | | | | | |
| 25 | | | | 0 | 0 | | | | | | | |
| 26 | | | | 0 | 0 | | | | | | | |
| 27 | | | | 0 | 0 | | | | | | | |
| 28 | | | | 0 | 0 | | | | | | | |
| 29 | | | | 0 | 0 | | | | | | | |
| 30 | | | | 0 | 0 | | | | | | | |
| 31 | | | | 0 | - | | | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 193.8 | 75 | 0 | .53 | 383 | | |
| January..... | | | | | | 192.5 | 186 | 0 | 6.21 | 382 | | |
| February..... | | | | | | 543.8 | 192 | 0 | 18.8 | 1,080 | | |
| March..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| April..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| May..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 736.3 | 192 | 0 | 2.01 | 1,460 | | |

West Fork of San Gabriel River at Camp Rincon, Calif.

Location.- Water-stage recorder, lat. 34°14'30", long. 117°51'50", near center of sec. 19, T. 2 N., R. 9 W., a quarter of a mile upstream from Camp Rincon, half a mile downstream from North Fork of San Gabriel River, and 6 miles downstream from San Gabriel flood-control reservoir 2.

Drainage area.- 102 square miles.

Records available.- October 1927 to September 1940.

Average discharge.- 13 years, 60.6 second-feet.

Extremes.- Maximum discharge during year, 1,220 second-feet Jan. 8; minimum daily, 6.5 second-feet Aug. 23-25, Aug. 28 to Sept. 1, Sept. 12.

1927-40: Maximum discharge not determined, occurred Mar. 2, 1938; no flow at times in 1928 and 1929.

Remarks.- Flow partly regulated by flood-control reservoir 6 miles above station.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 50 | 18 | 17 | 20 | 106 | 86 | 82 | 33 | 19 | 16 | 26 | 6.5 |
| 2 | 44 | 19 | 17 | 20 | 204 | 94 | 56 | 32 | 19 | 16 | 24 | 7.5 |
| 3 | 37 | 19 | 18 | 20 | 369 | 198 | 50 | 31 | 19 | 16 | 24 | 8 |
| 4 | 39 | 18 | 18 | 20 | 340 | 168 | 47 | 31 | 19 | 15 | 23 | 8.5 |
| 5 | 33 | 18 | 19 | 20 | 252 | 65 | 50 | 30 | 19 | 15 | 22 | 8.5 |
| 6 | 32 | 15 | 19 | 19 | 229 | 58 | 61 | 30 | 20 | 14 | 22 | 8 |
| 7 | 32 | 14 | 19 | 45 | 222 | 54 | 59 | 30 | 20 | 14 | 21 | 7.5 |
| 8 | 31 | 22 | 19 | 363 | 151 | 52 | 58 | 28 | 20 | 14 | 21 | 7.5 |
| 9 | 31 | 25 | 19 | 234 | 103 | 50 | 56 | 27 | 20 | 16 | 20 | 7 |
| 10 | 29 | 17 | 19 | 278 | 97 | 88 | 52 | 26 | 19 | 22 | 35 | 7 |
| 11 | 28 | 12 | 21 | 48 | 91 | 125 | 36 | 25 | 19 | 23 | 70 | 7 |
| 12 | 26 | 14 | 19 | 47 | 86 | 97 | 34 | 25 | 19 | 21 | 96 | 6.5 |
| 13 | 26 | 15 | 19 | 109 | 82 | 44 | 33 | 24 | 19 | 21 | 85 | 7 |
| 14 | 25 | 18 | 17 | 109 | 86 | 40 | 31 | 23 | 19 | 21 | 25 | 7.5 |
| 15 | 25 | 19 | 18 | 83 | 81 | 39 | 34 | 23 | 20 | 20 | 12 | 7.5 |
| 16 | 24 | 19 | 18 | 88 | 62 | 39 | 34 | 23 | 19 | 20 | 9.5 | 7.5 |
| 17 | 24 | 19 | 18 | 52 | 38 | 38 | 32 | 24 | 19 | 20 | 8 | 7.5 |
| 18 | 24 | 18 | 17 | 44 | 36 | 76 | 31 | 25 | 18 | 21 | 8 | 8 |
| 19 | 22 | 15 | 15 | 41 | 73 | 120 | 30 | 25 | 18 | 28 | 7.5 | 8 |
| 20 | 20 | 14 | 16 | 41 | 121 | 117 | 29 | 23 | 16 | 22 | 7.5 | 8 |
| 21 | 20 | 15 | 16 | 34 | 35 | 115 | 28 | 22 | 16 | 21 | 7 | 8 |
| 22 | 20 | 16 | 16 | 36 | 29 | 111 | 27 | 22 | 16 | 21 | 7 | 8 |
| 23 | 19 | 16 | 21 | 42 | 34 | 37 | 27 | 21 | 17 | 20 | 6.5 | 8 |
| 24 | 20 | 16 | 22 | 37 | 23 | 33 | 27 | 20 | 16 | 21 | 6.5 | 8.5 |
| 25 | 20 | 16 | 21 | 24 | 132 | 51 | 27 | 20 | 16 | 24 | 6.5 | 8 |
| 26 | 19 | 16 | 21 | 22 | 192 | 155 | 60 | 21 | 16 | 23 | 7 | 8 |
| 27 | 14 | 17 | 20 | 20 | 99 | 85 | 44 | 22 | 16 | 23 | 7 | 8 |
| 28 | 13 | 17 | 19 | 18 | 81 | 42 | 37 | 22 | 16 | 23 | 6.5 | 7.5 |
| 29 | 13 | 18 | 19 | 18 | 110 | 42 | 37 | 21 | 16 | 23 | 6.5 | 7.5 |
| 30 | 14 | 18 | 19 | 20 | - | 41 | 34 | 20 | 16 | 23 | 6.5 | 7.5 |
| 31 | 16 | - | 19 | 23 | - | 82 | - | 20 | - | 26 | 6.5 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 790 | 50 | 13 | 25.5 | 1,570 | | | |
| November..... | | | | | 511 | 25 | 12 | 17.0 | 1,010 | | | |
| December..... | | | | | 574 | 22 | 15 | 18.5 | 1,140 | | | |
| Calendar year 1939..... | | | | | 13,766.0 | 1,140 | 7.5 | 37.7 | 27,300 | | | |
| January..... | | | | | 1,995 | 363 | 18 | 64.4 | 3,960 | | | |
| February..... | | | | | 3,564 | 369 | 23 | 123 | 7,070 | | | |
| March..... | | | | | 2,492 | 198 | 33 | 80.4 | 4,940 | | | |
| April..... | | | | | 1,243 | 82 | 27 | 41.4 | 2,470 | | | |
| May..... | | | | | 769 | 33 | 20 | 24.8 | 1,630 | | | |
| June..... | | | | | 541 | 20 | 16 | 18.0 | 1,070 | | | |
| July..... | | | | | 618 | 26 | 14 | 19.9 | 1,230 | | | |
| August..... | | | | | 840.0 | 96 | 6.5 | 20.6 | 1,270 | | | |
| September..... | | | | | 229.5 | 8.5 | 6.5 | 7.65 | 455 | | | |
| Water year 1939-40..... | | | | | 13,966.5 | 369 | 6.5 | 38.2 | 27,720 | | | |

SAN GABRIEL RIVER BASIN

Rogers Creek near Azusa, Calif.

Location.- Water-stage recorder, lat. $34^{\circ}09'55''$, long. $117^{\circ}54'20''$, in NW $\frac{1}{4}$ sec. 23, T. 1 N., R. 10 W., half a mile upstream from mouth and $2\frac{1}{2}$ miles north of Azusa. Altitude of gage, about 800 feet.

Drainage area.- 6.4 square miles.

Records available.- May 1916 to June 1917 (discharge measurements only), October 1917 to September 1940.

Average discharge.- 23 years, 2.87 second-feet.

Extremes.- Maximum discharge during year, 196 second-feet Jan. 8 (gage height, 6.25 feet); from rating curve extended above 30 second-feet by logarithmic plotting; no flow for part of year.

1917-40: Maximum discharge, about 2,600 second-feet Apr. 7, 1926; no flow for several months of each year.

Remarks.- Records fair. Entire flow diverted above station at times.

Cooperation.- Results of seven discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|---------|------|------|-------|
| 1 | 0.6 | 0.1 | 0.1 | 0.2 | 18 | 5 | 5.5 | 1.0 | } d0.01 | | | |
| 2 | .9 | .1 | .1 | .2 | 24 | 4.4 | 2.8 | .8 | | | | |
| 3 | .6 | .1 | 0 | .2 | 19 | 3.8 | 2.2 | .8 | | | | |
| 4 | .5 | .1 | 0 | .6 | 15 | 3.3 | 2.0 | .8 | | | | |
| 5 | .4 | .1 | .1 | .4 | 8 | 3.1 | 1.8 | .8 | | | | |
| 6 | .5 | .2 | .1 | .3 | 5 | 3.0 | 1.7 | .8 | | | | |
| 7 | 1.2 | .2 | .1 | 5.5 | 3.9 | 2.6 | 1.6 | .8 | | | | |
| 8 | .8 | .4 | .1 | 3.9 | 3.0 | 2.5 | 1.6 | .8 | | | | |
| 9 | .7 | .6 | .2 | 6 | 2.5 | 2.3 | 1.5 | .8 | | | | |
| 10 | .6 | .4 | .2 | 4.0 | 12.5 | 2.2 | 1.2 | .5 | | | | |
| 11 | .5 | .3 | .3 | 3.0 | 22.2 | 2.0 | 1.0 | .5 | | | | |
| 12 | .4 | .2 | .3 | 3.4 | 1.9 | 1.8 | 1.0 | .5 | | | | |
| 13 | .4 | .2 | .2 | 2.9 | 1.7 | 1.7 | .7 | .5 | | | | |
| 14 | .4 | .1 | .2 | 2.4 | 1.8 | 1.6 | .4 | .5 | | | | |
| 15 | .4 | 0 | .2 | 2.3 | 1.6 | 1.5 | .8 | .5 | | | | |
| 16 | .4 | 0 | .1 | 2.2 | 1.5 | 1.4 | 1.3 | .5 | | | | |
| 17 | .4 | 0 | .1 | 1.7 | 1.5 | 1.3 | .7 | .5 | | | | |
| 18 | .4 | 0 | .1 | 1.1 | 1.5 | 1.3 | .4 | .6 | | | | |
| 19 | f.4 | 0 | .1 | .9 | 1.5 | 1.3 | .4 | .6 | | | | |
| 20 | a.4 | 0 | .2 | a.8 | 1.5 | 1.2 | .4 | .6 | | | | |
| 21 | a.3 | a0 | .2 | a.7 | 1.2 | 1.2 | .4 | .5 | | | | |
| 22 | a.3 | a0 | .1 | a.6 | 1.3 | 1.2 | .4 | .5 | | | | |
| 23 | a.2 | a0 | .6 | 1.2 | 1.3 | 1.2 | .4 | .4 | | | | |
| 24 | a.2 | a0 | .6 | 1.0 | 1.1 | 1.2 | .5 | .4 | | | | |
| 25 | a.1 | a.1 | .3 | .6 | 18 | 1.2 | .5 | .4 | | | | |
| 26 | f.1 | a.1 | .3 | .6 | 12 | 1.3 | 7 | .4 | | | | |
| 27 | .1 | a.1 | .2 | .6 | 6.5 | 1.3 | 2.8 | .5 | | | | |
| 28 | .1 | f.1 | .2 | .7 | 5 | 1.1 | 1.8 | .5 | | | | |
| 29 | .1 | .1 | .2 | .7 | 8.5 | 1.1 | 1.4 | .2 | | | | |
| 30 | .1 | .1 | .2 | .7 | - | 1.0 | 1.3 | .1 | | | | |
| 31 | .1 | - | .2 | .8 | - | 7 | - | .1 | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 12.6 | 1.2 | 0.1 | 0.41 | 25 | | | | |
| November..... | | | | 3.7 | .6 | 0 | .12 | 7.3 | | | | |
| December..... | | | | 5.9 | .6 | 0 | .19 | 12 | | | | |
| Calendar year 1939..... | | | | 375.2 | 27 | 0 | 1.03 | 745 | | | | |
| January..... | | | | 64.3 | 38 | .2 | 2.72 | 167 | | | | |
| February..... | | | | 172.5 | 24 | 1.1 | 5.95 | 342 | | | | |
| March..... | | | | 66.1 | 7 | 1.0 | 2.13 | 131 | | | | |
| April..... | | | | 45.5 | 7 | .4 | 1.52 | 90 | | | | |
| May..... | | | | 17.0 | 1.0 | .1 | .55 | 34 | | | | |
| June..... | | | | .3 | - | - | .01 | .8 | | | | |
| July..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| August..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| September..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Water year 1939-40..... | | | | 407.9 | 38 | 0 | 1.11 | 809 | | | | |

Peak discharge.- Jan. 8 (2 a.m.) 196 sec.-ft.; Feb. 1 (4 p.m.) 69 sec.-ft.; Feb. 25 (5:30 p.m.) 61 sec.-ft.

a No gage-height record; discharge computed by interpolation and checked by comparison with records for Fish Creek near Duarte.

d Doubtful gage-height record; mean flow computed on basis of two discharge measurements.

f Discharge computed from partly estimated gage-height record.

Los Angeles River near Downey, Calif.

Location.- Water-stage recorder, lat. 33°57'05", long. 118°10'25", in San Antonio grant, on Firestone Boulevard Bridge, 1 mile upstream from Rio Hondo and 2½ miles west of Downey, Los Angeles County. Altitude of gage, about 100 feet.

Drainage area.- 614 square miles.

Records available.- March 1928 to September 1940.

Average discharge.- 12 years, 62.6 second-feet.

Extremes.- Maximum discharge during year, 7,610 second-feet Jan. 8 (gage height, 6.80 feet); minimum daily, 14 second-feet Aug. 1.
1928-40: Maximum discharge, 79,700 second-feet Mar. 2, 1938; no flow during parts of most years.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|-------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | 33 | 22 | 39 | 40 | 1,590 | 77 | 446 | 26 | 24 | 16 | 14 | 19 |
| 2 | 33 | 20 | 35 | 40 | 1,570 | 67 | 122 | 32 | 23 | 16 | 16 | 18 |
| 3 | 33 | 23 | 37 | 40 | 572 | 57 | 116 | 80 | 23 | 16 | 18 | 18 |
| 4 | 33 | 26 | 37 | 441 | 408 | 47 | 110 | 34 | 23 | 17 | 20 | 17 |
| 5 | 33 | 29 | 36 | 71 | 259 | 36 | 75 | 21 | 23 | 17 | 21 | 18 |
| 6 | 32 | 32 | 35 | 99 | 237 | 39 | 73 | 36 | 23 | 17 | 23 | 18 |
| 7 | 31 | 35 | 34 | 924 | 252 | 38 | 67 | 62 | 23 | 18 | 25 | 19 |
| 8 | 30 | 38 | 35 | 2,300 | 130 | 41 | 66 | 89 | 23 | 18 | 27 | 20 |
| 9 | 30 | 41 | 36 | 284 | 106 | 55 | 70 | 42 | 24 | 18 | 26 | 20 |
| 10 | 29 | 40 | 38 | 256 | 106 | 40 | 69 | 73 | 24 | 19 | 25 | 21 |
| 11 | 28 | 39 | 39 | 233 | 123 | 58 | 69 | 78 | 24 | 19 | 24 | 22 |
| 12 | 29 | 36 | 40 | 231 | 142 | 60 | 63 | 44 | 25 | 20 | 22 | 21 |
| 13 | 29 | 37 | 41 | 197 | 123 | 55 | 63 | 70 | 25 | 22 | 21 | 20 |
| 14 | 30 | 36 | 42 | 224 | 299 | 56 | 63 | 81 | 24 | 23 | 20 | 20 |
| 15 | 31 | 35 | 42 | 231 | 168 | 68 | 136 | 68 | 23 | 25 | 19 | 19 |
| 16 | 31 | 33 | 42 | 190 | 114 | 58 | 118 | 17 | 22 | 26 | 19 | 18 |
| 17 | 32 | 32 | 42 | 97 | 95 | 53 | 61 | 70 | 21 | 28 | 15 | 18 |
| 18 | 33 | 32 | 41 | 58 | 79 | 65 | 67 | 90 | 20 | 29 | 18 | 17 |
| 19 | 33 | 31 | 41 | 63 | 66 | 83 | 68 | 87 | 19 | 29 | 15 | 17 |
| 20 | 33 | 30 | 41 | 68 | 55 | 76 | 58 | 66 | 19 | 28 | 18 | 17 |
| 21 | 33 | 30 | 41 | 58 | 47 | 63 | 48 | 24 | 18 | 28 | 17 | 17 |
| 22 | 33 | 29 | 41 | 58 | 194 | 74 | 44 | 15 | 15 | 27 | 17 | 17 |
| 23 | 34 | 30 | 173 | 354 | 114 | 58 | 39 | 18 | 17 | 27 | 13 | 16 |
| 24 | 34 | 32 | 84 | 212 | 49 | 47 | 35 | 19 | 17 | 26 | 18 | 16 |
| 25 | 34 | 33 | 66 | 70 | 765 | 41 | 30 | 20 | 17 | 26 | 19 | 16 |
| 26 | 34 | 34 | 52 | 70 | 236 | 47 | 665 | 21 | 16 | 24 | 20 | 16 |
| 27 | 32 | 36 | 45 | 82 | 108 | 120 | 117 | 22 | 16 | 23 | 20 | 16 |
| 28 | 30 | 37 | 40 | 52 | 96 | 62 | 64 | 23 | 16 | 21 | 21 | 16 |
| 29 | 28 | 39 | 40 | 116 | 368 | 67 | 92 | 24 | 16 | 19 | 20 | 16 |
| 30 | 26 | 40 | 40 | 141 | - | 78 | 32 | 24 | 16 | 17 | 20 | 17 |
| 31 | 24 | - | 40 | 218 | - | 841 | - | 24 | - | 16 | 19 | - |
| Month | Second-foot-days | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | 965 | | | | | 34 | 24 | 31.2 | 1,920 | | | |
| November..... | 989 | | | | | 41 | 20 | 33.0 | 1,960 | | | |
| December..... | 1,435 | | | | | 173 | 34 | 46.4 | 2,850 | | | |
| Calendar year 1939..... | 25,324.1 | | | | | 5,090 | 0 | 69.4 | 50,220 | | | |
| January..... | 7,548 | | | | | 2,300 | 40 | 243 | 14,970 | | | |
| February..... | 8,771 | | | | | 1,590 | 47 | 302 | 17,400 | | | |
| March..... | 2,627 | | | | | 841 | 36 | 84.7 | 5,210 | | | |
| April..... | 3,145 | | | | | 665 | 30 | 105 | 6,240 | | | |
| May..... | 1,400 | | | | | 90 | 15 | 45.2 | 2,780 | | | |
| June..... | 622 | | | | | 25 | 16 | 20.7 | 1,230 | | | |
| July..... | 675 | | | | | 29 | 16 | 21.8 | 1,340 | | | |
| August..... | 621 | | | | | 27 | 14 | 20.0 | 1,230 | | | |
| September..... | 540 | | | | | 22 | 16 | 18.0 | 1,070 | | | |
| Water year 1939-40..... | 29,345 | | | | | 2,300 | 14 | 80.2 | 58,200 | | | |

LOS ANGELES RIVER BASIN

Los Angeles River at Long Beach, Calif.

Location.- Water-stage recorder, lat. 33°47'25", long. 118°12'20", on State Street Bridge at Long Beach, Los Angeles County.

Drainage area.- About 1,060 square miles.

Records available.- December 1928 to September 1940.

Average discharge.- 11 years (1929-40), 110 second-feet.

Extremes.- Maximum discharge during year, 8,440 second-feet Feb. 2; minimum daily, 15 second-feet Sept. 3.

1928-40: Maximum discharge, 99,000 second-feet Mar. 2, 1938; no flow at times in 1929, 1930, 1934.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | 33 | 24 | 36 | 40 | 1,780 | 101 | 803 | 55 | 27 | 23 | 32 | 23 |
| 2 | 30 | 24 | 36 | 38 | 2,470 | 80 | 228 | 55 | 23 | 23 | 28 | 17 |
| 3 | 26 | 26 | 34 | 40 | 1,590 | 73 | 167 | 63 | 22 | 22 | 28 | 15 |
| 4 | 22 | 28 | 34 | 401 | 954 | 68 | 133 | 57 | 34 | 26 | 22 | 19 |
| 5 | 15 | 30 | 33 | 142 | 374 | 63 | 104 | 40 | 39 | 20 | 21 | 20 |
| 6 | 18 | 31 | 34 | 86 | 222 | 59 | 83 | 34 | 39 | 25 | 21 | 21 |
| 7 | 19 | 33 | 34 | 567 | 191 | 55 | 78 | 40 | 39 | 27 | 21 | 23 |
| 8 | 19 | 35 | 36 | 2,830 | 154 | 48 | 66 | 48 | 39 | 27 | 23 | 21 |
| 9 | 19 | 37 | 36 | 332 | 117 | 50 | 63 | 42 | 34 | 28 | 30 | 21 |
| 10 | 20 | 25 | 36 | 268 | 114 | 50 | 59 | 40 | 30 | 28 | 34 | 21 |
| 11 | 20 | 20 | 36 | 291 | 110 | 46 | 50 | 48 | 28 | 30 | 33 | 21 |
| 12 | 21 | 17 | 39 | 221 | 114 | 52 | 48 | 42 | 27 | 27 | 30 | 22 |
| 13 | 22 | 16 | 38 | 154 | 114 | 57 | 42 | 44 | 26 | 28 | 26 | 22 |
| 14 | 23 | 17 | 38 | 120 | 244 | 57 | 40 | 50 | 26 | 27 | 30 | 21 |
| 15 | 24 | 19 | 36 | 122 | 181 | 59 | 39 | 48 | 26 | 28 | 28 | 16 |
| 16 | 25 | 23 | 38 | 88 | 110 | 66 | 96 | 42 | 23 | 28 | 28 | 19 |
| 17 | 26 | 26 | 38 | 68 | 76 | 70 | 57 | 30 | 21 | 30 | 28 | 19 |
| 18 | 27 | 30 | 39 | 57 | 66 | 68 | 44 | 48 | 25 | 34 | 25 | 17 |
| 19 | 28 | 25 | 40 | 57 | 61 | 80 | 40 | 46 | 23 | 36 | 25 | 19 |
| 20 | 28 | 22 | 39 | 57 | 63 | 80 | 40 | 36 | 21 | 28 | 27 | 21 |
| 21 | 27 | 30 | 39 | 48 | 68 | 78 | 22 | 36 | 23 | 28 | 33 | 20 |
| 22 | 27 | 30 | 39 | 42 | 142 | 80 | 20 | 26 | 23 | 27 | 34 | 17 |
| 23 | 26 | 30 | 79 | 392 | 136 | 78 | 23 | 22 | 22 | 27 | 34 | 21 |
| 24 | 26 | 28 | 132 | 441 | 120 | 78 | 27 | 23 | 22 | 27 | 34 | 17 |
| 25 | 25 | 33 | 83 | 101 | 930 | 76 | 26 | 27 | 23 | 25 | 32 | 20 |
| 26 | 25 | 32 | 66 | 83 | 507 | 83 | 776 | 26 | 26 | 26 | 27 | 20 |
| 27 | 25 | 30 | 52 | 63 | 167 | 114 | 279 | 26 | 25 | 26 | 26 | 21 |
| 28 | 25 | 34 | 44 | 52 | 128 | 120 | 83 | 34 | 25 | 25 | 26 | 22 |
| 29 | 25 | 39 | 42 | 48 | 477 | 101 | 73 | 33 | 25 | 25 | 25 | 22 |
| 30 | 24 | 38 | 42 | 48 | - | 94 | 73 | 33 | 25 | 30 | 23 | 22 |
| 31 | 24 | - | 40 | 66 | - | 867 | - | 26 | - | 32 | 26 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 747 | | 33 | 18 | 24.1 | 1,480 | | | |
| November..... | | | | 832 | | 39 | 16 | 27.7 | 1,660 | | | |
| December..... | | | | 1,388 | | 132 | 33 | 44.8 | 2,750 | | | |
| Calendar year 1939..... | | | | 28,784 | | 6,220 | 3.5 | 78.9 | 57,080 | | | |
| January..... | | | | 7,353 | | 2,830 | 38 | 237 | 14,580 | | | |
| February..... | | | | 11,860 | | 2,470 | 61 | 409 | 23,520 | | | |
| March..... | | | | 3,051 | | 867 | 46 | 98.4 | 6,050 | | | |
| April..... | | | | 3,682 | | 803 | 20 | 123 | 7,300 | | | |
| May..... | | | | 1,220 | | 63 | 22 | 39.4 | 2,420 | | | |
| June..... | | | | 811 | | 39 | 21 | 27.0 | 1,610 | | | |
| July..... | | | | 843 | | 36 | 22 | 27.2 | 1,670 | | | |
| August..... | | | | 860 | | 34 | 21 | 27.7 | 1,710 | | | |
| September..... | | | | 600 | | 23 | 15 | 20.0 | 1,190 | | | |
| Water year 1939-40..... | | | | 33,247 | | 2,830 | 15 | 90.8 | 65,930 | | | |

Pacoima Creek near San Fernando, Calif.

Location.- Water-stage recorder, lat. 34°20'02", long. 118°23'55", in SE¼NE¼ sec. 24, T. 3 N., R. 15 W., 600 feet upstream from mouth of canyon and 4 miles northeast of San Fernando.

Drainage area.- 27.9 square miles.

Records available.- March 1916 to September 1940.

Average discharge.- 23 years (1917-40), 7.32 second-feet.

Extremes.- Maximum discharge during year, 169 second-feet Feb. 4; no flow during several periods.

1916-40: Maximum discharge, 2,440 second-feet Mar. 3, 1938; no flow for several months in most years.

Remarks.- Flow regulated by flood-control dam above station.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 2.2 | 2.3 | 1.2 | 0.6 | 3.5 | 4.5 | 0.6 | 0.1 | 2.8 | 2.1 | 3.3 | 3.1 |
| 2 | 2.6 | 2.3 | 1.3 | .6 | 2.8 | 97 | 1.2 | .1 | 2.9 | .1 | 3.3 | 3.1 |
| 3 | 1.4 | 2.3 | .3 | .6 | 2.5 | 122 | 1.1 | .1 | 2.9 | 0 | 3.3 | 3.1 |
| 4 | 1.3 | 2.3 | .6 | .7 | 119 | 41 | 1.1 | .1 | 2.9 | 0 | 3.3 | 2.8 |
| 5 | 1.3 | 2.3 | .7 | .6 | 136 | 7 | 1.1 | .1 | 2.9 | 0 | 3.3 | 3.0 |
| 6 | 2.0 | 2.3 | .7 | .6 | 31 | 6.5 | .1 | 1.7 | 2.9 | 0 | 3.3 | 2.9 |
| 7 | 2.5 | 2.3 | .7 | .7 | 6 | 6 | .3 | 5.3 | 2.9 | 0 | 3.3 | 2.8 |
| 8 | 2.5 | 2.3 | .7 | .9 | 5.5 | 6 | 1.4 | 3.8 | 2.9 | .6 | 3.3 | 2.8 |
| 9 | 2.6 | 2.3 | .7 | .8 | 5 | 6 | 1.1 | 2.9 | 2.9 | 2.7 | 3.3 | 2.6 |
| 10 | 2.4 | 2.3 | .7 | .7 | 5 | 6 | .1 | 2.9 | 2.8 | 2.8 | 3.3 | 2.5 |
| 11 | 2.4 | 2.3 | .7 | .8 | 5 | 6 | 0 | 2.9 | 2.8 | 2.8 | 3.3 | 2.5 |
| 12 | 2.5 | 2.3 | .6 | .8 | 5.5 | 2.5 | 0 | 2.9 | 2.8 | 2.8 | 3.3 | 2.5 |
| 13 | 2.5 | 2.3 | .6 | .7 | 6 | .5 | .1 | 3.0 | 2.8 | 2.7 | 3.3 | 2.5 |
| 14 | 2.5 | 2.3 | .6 | .7 | 5.5 | .5 | .1 | 3.0 | 2.8 | 2.8 | 3.3 | 2.6 |
| 15 | 2.5 | 2.3 | .6 | .7 | 5.5 | .5 | .1 | 3.0 | 2.8 | 2.8 | 3.3 | 2.7 |
| 16 | 2.4 | 2.3 | .6 | .7 | 5.5 | .5 | .1 | 3.0 | 2.8 | 2.7 | 3.5 | 2.5 |
| 17 | 2.4 | 2.3 | .6 | .7 | 5.5 | .5 | .1 | 3.0 | 2.8 | 2.7 | 3.9 | 2.5 |
| 18 | 2.4 | 1.0 | .6 | .8 | 5.5 | .5 | .1 | 102 | 2.8 | 2.7 | 3.0 | 2.4 |
| 19 | 2.5 | 2.2 | .6 | .8 | 4.9 | .5 | .1 | 125 | 2.8 | 3.1 | 1.9 | 2.5 |
| 20 | 2.5 | 2.4 | .6 | .8 | 4.8 | .5 | .1 | 20 | 2.8 | 3.5 | 2.3 | 4.9 |
| 21 | 2.5 | 1.3 | .6 | .8 | 4.8 | .4 | .1 | 2.1 | 2.8 | 3.4 | 2.9 | 13 |
| 22 | 2.5 | 1.3 | .6 | .8 | 4.8 | .4 | .1 | .2 | 1.4 | 3.4 | 2.8 | 14 |
| 23 | 2.5 | 1.2 | .7 | .8 | 4.8 | .4 | .1 | .1 | .1 | 3.4 | 3.1 | 6 |
| 24 | 2.5 | 1.2 | .6 | .8 | 4.8 | .4 | .1 | .1 | .4 | 3.4 | 3.1 | 1.8 |
| 25 | 2.4 | 1.2 | .6 | .8 | 4.8 | .4 | .1 | .1 | 2.8 | 3.4 | 3.0 | 1.8 |
| 26 | 2.4 | 1.2 | .6 | .8 | 4.7 | .3 | .2 | .6 | 2.8 | 3.4 | 3.0 | 1.8 |
| 27 | 2.4 | 1.2 | .6 | .7 | 4.7 | .1 | .1 | 2.9 | 2.8 | 3.4 | 3.0 | 4.6 |
| 28 | 2.4 | 1.2 | .6 | .7 | 4.6 | 0 | .1 | 2.9 | 2.8 | 3.4 | 2.8 | 13 |
| 29 | 2.3 | 1.2 | .6 | 2.7 | 4.6 | 0 | .1 | 2.8 | 2.8 | 3.4 | 2.9 | 14 |
| 30 | 2.3 | 1.2 | .6 | 4.2 | - | 0 | .1 | 2.8 | 2.8 | 3.4 | 3.0 | 6.5 |
| 31 | - | - | .6 | 3.9 | - | .1 | - | 2.8 | - | 3.4 | 3.1 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 71.8 | 2.6 | 1.3 | 2.32 | 142 | | |
| November..... | | | | | | 56.9 | 2.4 | 1.0 | 1.90 | 113 | | |
| December..... | | | | | | 20.4 | 1.3 | .3 | .66 | 40 | | |
| Calendar year 1939..... | | | | | | 1,545.0 | 49 | 0 | 4.23 | 3,060 | | |
| January..... | | | | | | 31.3 | 4.2 | .6 | 1.01 | 62 | | |
| February..... | | | | | | 412.6 | 136 | 2.5 | 14.2 | 818 | | |
| March..... | | | | | | 317.0 | 122 | 0 | 10.2 | 629 | | |
| April..... | | | | | | 10.0 | 1.4 | 0 | .33 | 20 | | |
| May..... | | | | | | 300.3 | 123 | .1 | 9.69 | 596 | | |
| June..... | | | | | | 79.3 | 2.9 | .1 | 2.61 | 155 | | |
| July..... | | | | | | 74.3 | 3.5 | 0 | 2.40 | 147 | | |
| August..... | | | | | | 96.8 | 3.9 | 1.9 | 3.12 | 192 | | |
| September..... | | | | | | 132.8 | 14 | 1.9 | 4.43 | 263 | | |
| Water year 1939-40..... | | | | | | 1,602.5 | 136 | 0 | 4.38 | 3,180 | | |

Tujunga Creek near Colby ranch, Calif.

Location.- Water-stage recorder, lat. 34°18'10", long. 118°09'35", 25 feet upstream from crossing of Edison Road, 300 feet downstream from Lucas Creek, 3½ miles west of Colby ranch, and 4 miles upstream from Tujunga flood-control dam 1, Los Angeles County.

Drainage area.- 66.9 square miles.

Records available.- October 1930 to September 1940.

Average discharge.- 10 years, 15.0 second-feet.

Extremes.- Maximum discharge during year, not determined; minimum daily, 0.2 second-foot Aug. 20, 21.

1930-40: Maximum discharge not determined, probably occurred Mar. 2, 1938; no flow parts of most years.

Cooperation.- Records furnished by the Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 4.6 | 2.7 | 3.2 | 4.3 | 60 | 25 | 25 | 7 | 2.7 | 1.0 | 0.6 | 0.4 |
| 2 | 4.6 | 2.9 | 3.2 | 4.3 | 68 | 21 | 22 | 6 | 2.7 | .8 | .6 | .5 |
| 3 | 4.3 | 2.9 | 3.2 | 4.3 | 125 | 19 | 18 | 6 | 2.9 | .7 | .5 | .6 |
| 4 | 4.0 | 2.9 | 3.2 | 5.5 | 84 | 19 | 14 | 6.5 | 2.9 | .6 | .5 | .7 |
| 5 | 4.0 | 2.9 | 3.2 | 4.6 | 62 | 21 | 13 | 7 | 2.9 | .6 | .5 | .6 |
| 6 | 4.6 | 2.9 | 3.2 | 4.9 | 41 | 17 | 12 | 6.5 | 2.9 | .6 | .5 | .6 |
| 7 | 4.9 | 2.9 | 3.2 | 9 | 24 | 14 | 11 | 6 | 2.7 | .6 | .5 | .5 |
| 8 | 4.3 | 5 | 3.2 | 276 | 26 | 13 | 11 | 5.5 | 2.4 | .6 | .5 | .4 |
| 9 | 3.7 | 5 | 3.2 | 27 | 27 | 13 | 10 | 4.9 | 2.2 | .5 | .4 | .5 |
| 10 | 2.9 | 4.6 | 3.2 | 18 | 26 | 12 | 9.5 | 4.9 | 1.9 | .5 | .3 | .5 |
| 11 | 2.7 | 4.0 | 4.3 | 16 | 25 | 11 | 8.5 | 4.6 | 1.7 | .5 | .3 | .5 |
| 12 | 2.7 | 4.0 | 4.0 | 16 | 24 | 10 | 8 | 4.3 | 1.5 | .5 | .3 | .6 |
| 13 | 2.7 | 3.7 | 3.7 | 10 | 24 | 9.5 | 8.5 | 4.0 | 1.2 | .5 | .3 | .6 |
| 14 | 2.7 | 3.7 | 3.5 | 8.5 | 25 | 9 | 9 | 3.7 | 1.2 | .6 | .4 | .6 |
| 15 | 2.7 | 3.2 | 3.5 | 8.5 | 24 | 8.5 | 10 | 3.6 | 1.2 | .5 | .5 | .6 |
| 16 | 2.7 | 3.2 | 3.5 | 9 | 21 | 9 | 10 | 3.5 | 1.2 | .7 | .5 | .7 |
| 17 | 2.7 | 3.2 | 3.5 | 9 | 14 | 9.5 | 9.5 | 4.3 | 1.2 | .8 | .5 | .6 |
| 18 | 2.7 | 3.2 | 3.5 | 8.5 | 9 | 10 | 8.5 | 5 | 1.2 | 1.0 | .4 | .8 |
| 19 | 2.7 | 3.2 | 3.5 | 8.5 | 10 | 10 | 8.5 | 5 | 1.2 | .9 | .3 | .9 |
| 20 | 2.7 | 3.2 | 3.5 | 8.5 | 10 | 10 | 8 | 4.0 | 1.2 | .8 | .2 | .8 |
| 21 | 2.4 | 3.2 | 3.5 | 8.5 | 10 | 9 | 8 | 3.5 | 1.2 | .8 | .2 | .7 |
| 22 | 2.4 | 3.2 | 3.5 | 8.5 | 10 | 8.5 | 6.5 | 3.5 | 1.2 | .6 | .3 | .6 |
| 23 | 2.7 | 3.2 | 9 | 11 | 12 | 8.5 | 7.5 | 3.2 | 1.2 | .7 | .4 | .6 |
| 24 | 2.9 | 3.2 | 7 | 10 | 16 | 8.5 | 7.5 | 2.9 | 1.2 | .6 | .4 | .6 |
| 25 | 3.2 | 3.5 | 6 | 8.5 | 38 | 7.5 | 7.5 | 2.7 | 1.0 | .6 | .4 | .5 |
| 26 | 3.2 | 3.2 | 4.6 | 8.5 | 52 | 8 | 19 | 2.7 | 1.0 | .6 | .4 | .5 |
| 27 | 3.2 | 3.2 | 4.3 | 6.5 | 36 | 8 | 14 | 3.2 | 1.0 | .8 | .5 | .5 |
| 28 | 2.9 | 3.2 | 4.3 | 6.5 | 25 | 8 | 12 | 3.2 | 1.0 | .9 | .5 | .5 |
| 29 | 2.7 | 3.2 | 4.3 | 6.5 | 31 | 8 | 9.5 | 3.2 | 1.0 | .9 | .4 | .5 |
| 30 | 2.7 | 3.2 | 4.3 | 6.5 | - | 7.5 | 8 | 2.9 | 1.0 | .7 | .3 | .6 |
| 31 | 2.7 | - | 4.3 | 7 | - | 34 | - | 2.7 | - | .6 | .3 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 99.9 | 4.9 | 2.4 | 3.22 | 198 | | |
| November..... | | | | | | 101.6 | 5 | 2.7 | 3.39 | 202 | | |
| December..... | | | | | | 123.6 | 9 | 3.2 | 3.99 | 245 | | |
| Calendar year 1939..... | | | | | | 2,868.9 | 197 | .9 | 7.86 | 5,690 | | |
| January..... | | | | | | 546.4 | 276 | 4.3 | 17.7 | 1,090 | | |
| February..... | | | | | | 959 | 125 | 9 | 33.1 | 1,900 | | |
| March..... | | | | | | 386.5 | 34 | 7.5 | 12.5 | 767 | | |
| April..... | | | | | | 333.5 | 25 | 6.5 | 11.1 | 661 | | |
| May..... | | | | | | 135.9 | 7 | 2.7 | 4.38 | 270 | | |
| June..... | | | | | | 49.8 | 2.9 | 1.0 | 1.66 | 99 | | |
| July..... | | | | | | 21.3 | 1.0 | .5 | .69 | 42 | | |
| August..... | | | | | | 12.7 | .6 | .2 | .41 | 25 | | |
| September..... | | | | | | 17.5 | .8 | .4 | .58 | 35 | | |
| Water year 1939-40..... | | | | | | 2,789.7 | 276 | .2 | 7.62 | 5,530 | | |

Tujunga Creek near Sunland, Calif.

Location.- Water-stage recorder, lat. 34°17'55", long. 118°16'10", near center of sec. 32, T. 3 N., R. 13 W. (unsurveyed), a quarter of a mile downstream from a partly constructed and abandoned dam, 2 miles upstream from mouth of canyon, and 4 miles north-east of Sunland.

Drainage area.- 106 square miles.

Records available.- October 1916 to September 1940.

Average discharge.- 23 years (1917-40), 26.3 second-feet.

Extremes.- Maximum discharge during year, not determined; minimum, 1.4 second-feet Oct.

29. 1916-40: Maximum discharge, 50,000 second-feet Mar. 2, 1938; minimum, 0.1 second-foot at times in summers of 1919, 1924, 1928-31.

Remarks.- Flow regulated by flood-control dam 7 miles above station. Two or three small diversions above station for irrigation.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 57 | 2.3 | 2.0 | 2.3 | 58 | 13 | 16 | 5 | 2.2 | 3.2 | 5 | 5 |
| 2 | 56 | 2.3 | 2.0 | 2.3 | 97 | 11 | 11 | 4.1 | 2.1 | 4.9 | 5.5 | 5 |
| 3 | 55 | 2.3 | 2.0 | 2.3 | 161 | 11 | 11 | 3.5 | 1.9 | 9.5 | 5 | 5 |
| 4 | 52 | 2.3 | 1.9 | 6 | 234 | 10 | 9 | 3.5 | 1.9 | 8.5 | 5.5 | 5 |
| 5 | 51 | 2.3 | 1.9 | 4.1 | 200 | 10 | 7.5 | 3.5 | 1.8 | 8 | 5.5 | 5 |
| 6 | 42 | 2.5 | 2.0 | 3.4 | 350 | 9.5 | 7 | 3.8 | 1.8 | 5 | 5.5 | 5.5 |
| 7 | 28 | 2.9 | 2.0 | 9.5 | 300 | 12 | 7 | 3.8 | 1.8 | 8 | 5.5 | 11 |
| 8 | 57 | 2.9 | 2.0 | 320 | 70 | 22 | 7.5 | 3.5 | 1.8 | 8 | 5.5 | 12 |
| 9 | 51 | 2.9 | 2.0 | 96 | 35 | 31 | 7.5 | 3.3 | 1.8 | 7.5 | 5.5 | 12 |
| 10 | 27 | 2.3 | 2.0 | 50 | 40 | 28 | 6.5 | 3.3 | 1.7 | 5.5 | 5.5 | 12 |
| 11 | 38 | 2.3 | 2.0 | 42 | 40 | 28 | 6 | 2.8 | 1.6 | 9 | 5.5 | 15 |
| 12 | 27 | 1.9 | 2.0 | 39 | 36 | 29 | 6 | 2.7 | 1.7 | 8.5 | 5.5 | 20 |
| 13 | 12 | 1.9 | 2.0 | 38 | 34 | 30 | 5.5 | 2.5 | 1.6 | 9 | 5.5 | 20 |
| 14 | 9 | 1.5 | 2.3 | 34 | 35 | 30 | 5.5 | 2.4 | 2.4 | 9 | 5.5 | 20 |
| 15 | 8 | 1.9 | 2.3 | 30 | 33 | 30 | 5.5 | 2.3 | 2.5 | 9 | 5.5 | 19 |
| 16 | 7.5 | 2.3 | 2.0 | 26 | 27 | 28 | 5 | 2.4 | 2.8 | 9 | 5.5 | 19 |
| 17 | 7.5 | 1.9 | 2.0 | 26 | 19 | 29 | 4.7 | 2.6 | 3.0 | 9.5 | 5.5 | 19 |
| 18 | 7 | 1.9 | 2.3 | 22 | 16 | 31 | 4.2 | 3.2 | 3.2 | 9.5 | 5 | 19 |
| 19 | 7 | 1.9 | 2.3 | 25 | 14 | 30 | 4.1 | 3.1 | 3.3 | 9 | 5 | 19 |
| 20 | 7 | 1.9 | 2.3 | 18 | 9 | 30 | 4.0 | 2.6 | 3.4 | 9 | 5 | 19 |
| 21 | 6.5 | 2.0 | 2.3 | 18 | 8.5 | 29 | 3.8 | 3.0 | 3.4 | 9 | 5 | 18 |
| 22 | 6.5 | 2.0 | 2.3 | 17 | 9 | 19 | 4.2 | 2.9 | 3.4 | 9.5 | 5 | 18 |
| 23 | 6.5 | 2.0 | 6.5 | 13 | 8 | 9 | 4.4 | 2.7 | 3.4 | 9 | 5 | 18 |
| 24 | 6.5 | 1.9 | 5.5 | 14 | 8 | 8 | 4.4 | 2.6 | 3.3 | 9 | 5 | 18 |
| 25 | 7 | 1.5 | 3.9 | 19 | 34 | 7.5 | 4.5 | 2.6 | 3.3 | 9 | 5 | 18 |
| 26 | 3.9 | 1.8 | 3.4 | 18 | 31 | 7.5 | 20 | 2.6 | 3.3 | 9 | 5 | 17 |
| 27 | 2.7 | 1.9 | 3.1 | 19 | 14 | 7 | 9 | 2.8 | 3.3 | 5 | 5 | 17 |
| 28 | 2.0 | 1.9 | 2.7 | 19 | 13 | 6.5 | 9.5 | 2.7 | 3.3 | 4.7 | 5 | 17 |
| 29 | 1.6 | 1.9 | 2.7 | 17 | 22 | 6.5 | 8 | 2.6 | 3.3 | 4.7 | 5 | 17 |
| 30 | 1.8 | 2.0 | 2.5 | 12 | - | 6.5 | 6 | 2.3 | 3.3 | 5 | 5 | 17 |
| 31 | 2.3 | - | 2.3 | 9.5 | - | 20 | - | 2.2 | - | 5 | 5 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 653.3 | 57 | 1.6 | 21.1 | 1,300 | | | |
| November..... | | | | | 63.9 | 2.9 | 1.8 | 2.13 | 127 | | | |
| December..... | | | | | 78.5 | 6.5 | 1.9 | 2.53 | 156 | | | |
| Calendar year 1939..... | | | | | 4,955.1 | 64 | 1.6 | 13.5 | 9,780 | | | |
| January..... | | | | | 971.4 | 320 | 2.3 | 31.3 | 1,930 | | | |
| February..... | | | | | 1,955.5 | 350 | 8 | 67.4 | 3,880 | | | |
| March..... | | | | | 579.0 | 31 | 6.5 | 18.7 | 1,160 | | | |
| April..... | | | | | 214.3 | 20 | 3.8 | 7.14 | 425 | | | |
| May..... | | | | | 93.2 | 5 | 2.2 | 3.01 | 185 | | | |
| June..... | | | | | 77.7 | 3.4 | 1.6 | 2.89 | 154 | | | |
| July..... | | | | | 243.6 | 9.5 | 3.2 | 7.85 | 485 | | | |
| August..... | | | | | 162.5 | 5.5 | 5 | 5.24 | 322 | | | |
| September..... | | | | | 441.5 | 20 | 5 | 14.7 | 876 | | | |
| Water year 1939-40..... | | | | | 5,534.3 | 350 | 1.6 | 15.1 | 10,990 | | | |

Little Tujunga Creek near San Fernando, Calif.

Location.- Water-stage recorder, lat. 34°16'30", long. 118°22'20", in Tujunga grant, on Foothill Boulevard Bridge, 4 miles east of San Fernando, Los Angeles County.

Drainage area.- 21.0 square miles.

Records available.- December 1928 to September 1940.

Average discharge.- 12 years, 2.28 second-feet.

Extremes.- Maximum discharge during year, 2,090 second-feet Jan. 8 (gage height, 5.90 feet); no flow during most of year.

1928-40: Maximum discharge, 8,500 second-feet Mar. 2, 1938; no flow during most of each year.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | 0 | 0 | 20 | 3.8 | 8 | | | | | |
| 2 | | | 0 | 0 | 27 | 3.9 | .4 | | | | | |
| 3 | | | 0 | 0 | 18 | 3.4 | .5 | | | | | |
| 4 | | | 0 | 13 | 15 | 2.8 | .1 | | | | | |
| 5 | | | 0 | 5 | 12 | 2.3 | 0 | | | | | |
| 6 | | | 0 | .2 | 9 | 1.8 | 0 | | | | | |
| 7 | | | 0 | 18 | 6.5 | 1.2 | 0 | | | | | |
| 8 | | | 0 | 148 | 1.4 | .7 | 0 | | | | | |
| 9 | | | 0 | 7.5 | .6 | .6 | 0 | | | | | |
| 10 | | | 0 | 6 | .2 | .5 | 0 | | | | | |
| 11 | | | 0 | 3.2 | .1 | .4 | 0 | | | | | |
| 12 | | | 0 | 2.7 | 0 | .3 | 0 | | | | | |
| 13 | | | 0 | 2.2 | 0 | .2 | 0 | | | | | |
| 14 | | | 0 | 1.8 | 0 | .1 | 0 | | | | | |
| 15 | | | 0 | 1.3 | .1 | 0 | 0 | | | | | |
| 16 | | | 0 | .8 | 0 | 0 | 0 | | | | | |
| 17 | | | 0 | .5 | 0 | 0 | 0 | | | | | |
| 18 | | | 0 | .2 | 0 | 0 | 0 | | | | | |
| 19 | | | 0 | .2 | 0 | 0 | 0 | | | | | |
| 20 | | | 0 | .1 | 0 | 0 | 0 | | | | | |
| 21 | | | 0 | .1 | 0 | 0 | 0 | | | | | |
| 22 | | | 0 | .1 | 0 | 0 | 0 | | | | | |
| 23 | | | .4 | .8 | 0 | 0 | 0 | | | | | |
| 24 | | | 0 | .1 | 0 | 0 | 0 | | | | | |
| 25 | | | 0 | 0 | 17 | 0 | 0 | | | | | |
| 26 | | | 0 | 0 | 10 | 0 | 19 | | | | | |
| 27 | | | 0 | 0 | 2.1 | 0 | .5 | | | | | |
| 28 | | | 0 | 0 | 3.8 | 0 | 0 | | | | | |
| 29 | | | 0 | 0 | 10 | 0 | 0 | | | | | |
| 30 | | | 0 | 0 | - | 0 | 0 | | | | | |
| 31 | | | 0 | 0 | - | 38 | - | | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| December..... | | | | | .4 | .4 | 0 | .01 | .8 | | | |
| Calendar year 1939..... | | | | | 116.0 | 17 | 0 | .32 | 230 | | | |
| January..... | | | | | 211.8 | 148 | 0 | 6.83 | 420 | | | |
| February..... | | | | | 152.8 | 27 | 0 | 5.27 | 303 | | | |
| March..... | | | | | 60.0 | 38 | 0 | 1.94 | 119 | | | |
| April..... | | | | | 28.3 | 19 | 0 | .94 | 56 | | | |
| May..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| June..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 453.3 | 148 | 0 | 1.24 | 899 | | | |

Haines Creek near Tujunga, Calif.

Location.— Water-stage recorder and broad-crested weir control, lat. $34^{\circ}15'50''$, long. $118^{\circ}16'15''$, in W $\frac{1}{4}$ sec. 17, T. 2 N., R. 13 W., 800 feet upstream from mouth of canyon and $1\frac{1}{4}$ miles northeast of Tujunga. Altitude of gage, about 2,200 feet.

Drainage area.— 1.2 square miles.

Records available.— February 1917 to September 1934, October 1935 to September 1940.

Average discharge.— 22 years, 0.138 second-foot.

Extremes.— Maximum gage height during year, 4.3 feet Jan. 8 (discharge not determined); no flow at times in September.

1917-34, 1935-40: Maximum gage height, 11.0 feet Jan. 1, 1934 (discharge not determined); no flow for periods in nearly every year.

Remarks.— Records good except those for periods of no gage-height record or backwater, which are fair.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|--------|--------|--------|--------|
| 1 | 0.02 | 0.01 | 0.02 | 0.02 | 2.1 | 0.35 | 0.28 | 0.05 | 0.02 | | | |
| 2 | .02 | .01 | 0.02 | f.02 | 2.4 | .32 | .19 | .05 | .02 | | | |
| 3 | .02 | .01 | 0.02 | .01 | 2.3 | .29 | .17 | .05 | 0.02 | | | |
| 4 | .02 | .01 | 0.02 | .08 | f.78 | .26 | .15 | .05 | 0.02 | | | |
| 5 | .03 | .02 | 0.02 | .11 | .26 | .24 | .13 | .05 | 0.02 | | | |
| 6 | .02 | .02 | 0.02 | .11 | .24 | .24 | .13 | .05 | 0.02 | | | |
| 7 | .01 | .02 | 0.02 | .50 | .21 | .24 | .11 | .05 | 0.02 | | | |
| 8 | .01 | 0.01 | 0.02 | 7.5 | .24 | .21 | .09 | .05 | 0.02 | | | |
| 9 | .01 | 0.01 | 0.02 | .60 | .21 | .19 | .08 | .04 | 0.01 | | | |
| 10 | .01 | 0.01 | 0.02 | a.30 | .21 | .19 | .08 | .03 | 0.01 | | | |
| 11 | .02 | 0.01 | .03 | a.40 | .24 | .19 | .06 | .02 | 0.01 | | | |
| 12 | .01 | 0.01 | .02 | a.35 | .21 | .19 | .05 | .02 | 0.01 | | | |
| 13 | .01 | 0.01 | 0.02 | a.30 | .24 | .19 | .06 | .01 | 0.01 | | | |
| 14 | .01 | 0.01 | .02 | a.25 | .32 | .15 | .06 | .01 | 0.01 | | | |
| 15 | .01 | 0.01 | .02 | a.20 | .32 | .15 | .08 | .01 | 0.01 | | | |
| 16 | .01 | 0.01 | .02 | a.15 | .32 | .13 | .08 | .02 | 0.01 | c0.005 | c0.002 | c0.001 |
| 17 | .01 | .01 | .02 | a.10 | .32 | .13 | .08 | .03 | 0.01 | | | |
| 18 | .01 | .02 | .02 | f.09 | .29 | .11 | .06 | .04 | 0.01 | | | |
| 19 | .01 | .02 | .03 | .09 | .29 | .09 | .06 | .05 | 0.01 | | | |
| 20 | .01 | .02 | .03 | .11 | .29 | .09 | .06 | .05 | | | | |
| 21 | .01 | .02 | .03 | .13 | .29 | .09 | .06 | .05 | | | | |
| 22 | .01 | .02 | .03 | .13 | .26 | .09 | .06 | .04 | | | | |
| 23 | .02 | .02 | .09 | .75 | .26 | .11 | .06 | .03 | | | | |
| 24 | .02 | .02 | .06 | .39 | .24 | .11 | .06 | .03 | | | | |
| 25 | .01 | .02 | .05 | .19 | 1.4 | .13 | .06 | .05 | c0.005 | | | |
| 26 | .01 | .02 | .04 | .15 | .36 | .13 | .50 | .04 | | | | |
| 27 | .01 | .02 | .04 | a.12 | .17 | .13 | .11 | .03 | | | | |
| 28 | .01 | .04 | .03 | a.11 | .24 | .11 | .08 | .03 | | | | |
| 29 | .01 | .02 | a.03 | a.11 | .78 | .11 | .06 | .03 | | | | |
| 30 | .01 | .02 | a.03 | a.10 | - | .09 | .06 | .03 | | | | |
| 31 | .01 | - | a.02 | a.10 | - | .60 | - | .03 | - | | | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 0.41 | 0.03 | 0.01 | 0.013 | 0.81 |
| November..... | .48 | .04 | .01 | .016 | .95 |
| December..... | .58 | .09 | .02 | .028 | 1.7 |
| Calendar year 1939..... | 25.724 | 1.4 | - | .065 | 46.8 |
| January..... | 13.60 | 7.5 | .01 | .439 | 27 |
| February..... | 15.79 | 2.4 | .17 | .544 | 31 |
| March..... | 5.85 | .60 | .09 | .152 | 11 |
| April..... | 3.20 | .50 | .06 | .107 | 6.3 |
| May..... | 1.12 | .05 | .01 | .036 | 2.2 |
| June..... | .325 | .02 | - | .011 | .64 |
| July..... | .155 | - | - | .005 | .31 |
| August..... | .062 | - | - | .002 | .12 |
| September..... | .030 | - | - | .001 | .06 |
| Water year 1939-40..... | 41.702 | 7.5 | - | .114 | 82 |

a No gage-height record; discharge computed on basis of comparative hydrographs and rainfall records of nearby stations.

c Backwater from moss and debris. discharge estimated Nov. 8-16; interpolated Dec. 1-10, 13; and computed on basis of field estimates of flow from June 3 to Sept. 30.

f Discharge computed from partly estimated gage-height record.

LOS ANGELES RIVER BASIN

Arroyo Seco near Pasadena, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°13'20", long. 118°10'40", near north line of sec. 31, T. 2 N., R. 12 W., 1½ miles upstream from mouth of Millard Canyon and 5½ miles northwest of Pasadena. Altitude of gage, about 1,400 feet.

Drainage area.- 16.4 square miles.

Records available.- December 1910 to September 1939.

Average discharge.- 26 years (1913-15, 1916-40), 9.37 second-feet.

Extremes.- Maximum discharge during year, 452 second-feet Jan. 8 (gage height, 7.92 feet), from rating curve extended above 100 second-feet; minimum daily, 0.3 second-foot on several days during August and September.
1910-40: Maximum discharge, 8,620 second-feet Mar. 2, 1938, by slope-area method; practically no flow for several months in most years.

Remarks.- Records poor Oct. 1 to Apr. 30, fair May 1 to Sept. 30. No diversions above station.

Cooperation.- Results of 20 discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 9 | 1.4 | 1.3 | 1.8 | 55 | 18 | 18 | 5 | 2.0 | 0.9 | 0.6 | 0.3 |
| 2 | 8 | 1.6 | 1.3 | 1.8 | 99 | 15 | 10 | 4.6 | 2.0 | 1.0 | .6 | .3 |
| 3 | 7 | 1.4 | 1.3 | 1.8 | 100 | 12 | 8.5 | 4.6 | 2.1 | .9 | .6 | .4 |
| 4 | 6 | 1.4 | 1.3 | 9 | 54 | 11 | 7.5 | 4.4 | 2.2 | .8 | .4 | .4 |
| 5 | 5.5 | 1.6 | 1.3 | 4.2 | 32 | 10 | 7 | 4.3 | 2.4 | .7 | .4 | .4 |
| 6 | 5 | 1.8 | 1.3 | 3.1 | 25 | 9.5 | 6.5 | 4.3 | 2.2 | .6 | .5 | .3 |
| 7 | 4.5 | 1.6 | 1.3 | 21 | 20 | 9 | 6.5 | 4.0 | 2.2 | .6 | .5 | .3 |
| 8 | 4.0 | 2.2 | 1.3 | 114 | 18 | 9 | 6.5 | 3.8 | 2.1 | .5 | .5 | .3 |
| 9 | 3.5 | 2.2 | 1.3 | 27 | 16 | 8.5 | 6 | 3.2 | 2.0 | .4 | .5 | .3 |
| 10 | 3.1 | 1.6 | 1.3 | 24 | 15 | 8.5 | 5.5 | 3.0 | 2.0 | .4 | .5 | .3 |
| 11 | 3.1 | 1.4 | 2.2 | 22 | 14 | 8 | 5 | 2.9 | 1.9 | .5 | .5 | .4 |
| 12 | 3.1 | 1.4 | 1.8 | 18 | 13 | 8 | 5 | 2.7 | 1.8 | .4 | .5 | .4 |
| 13 | 2.8 | 1.4 | 1.4 | 13 | 12 | 8 | 4.8 | 2.6 | 1.7 | .4 | .5 | .3 |
| 14 | 2.8 | 1.4 | 1.4 | 11 | 12 | 7.5 | 4.8 | 2.5 | 1.6 | .5 | .5 | .3 |
| 15 | 2.6 | 1.6 | 1.4 | 9 | 11 | 7.5 | 5 | 2.4 | 1.5 | .5 | .4 | .3 |
| 16 | 2.4 | 1.4 | 1.3 | 8 | 10 | 7.5 | 5 | 2.4 | 1.5 | .5 | .4 | .3 |
| 17 | 2.4 | 1.4 | 1.4 | 7 | 9 | 7 | 5 | 2.6 | 1.5 | .6 | .4 | .3 |
| 18 | 2.2 | 1.4 | 1.4 | 6.5 | 8.5 | 7 | 4.6 | 2.9 | 1.3 | .8 | .4 | .3 |
| 19 | 1.6 | 1.4 | 1.4 | 6.5 | 8.5 | 7 | 4.6 | 2.6 | 1.2 | .7 | .4 | .3 |
| 20 | 1.6 | 1.4 | 1.4 | 6.5 | 8 | 7 | 4.6 | 2.6 | 1.1 | .7 | .4 | .3 |
| 21 | 1.4 | 1.4 | 1.4 | 6 | 8 | 6.5 | 4.4 | 2.5 | 1.1 | .7 | .4 | .3 |
| 22 | 1.4 | 1.4 | 1.6 | 6 | 9 | 6.5 | 4.6 | 2.5 | 1.0 | .6 | .4 | .3 |
| 23 | 1.4 | 1.6 | 4.5 | 8 | 9 | 6.5 | 4.8 | 2.5 | 1.0 | .6 | .4 | .3 |
| 24 | 1.6 | 1.6 | 3.6 | 8 | 8.5 | 6 | 5 | 2.4 | 1.0 | .5 | .4 | .3 |
| 25 | 1.6 | 1.6 | 2.6 | 7 | 60 | 6 | 4.8 | 2.2 | 1.0 | .5 | .4 | .3 |
| 26 | 1.4 | 1.4 | 2.6 | 6.5 | 49 | 6 | 25 | 2.4 | 1.0 | .5 | .4 | .3 |
| 27 | 1.4 | 1.3 | 2.2 | 6.5 | 21 | 6 | 14 | 2.6 | .9 | .6 | .3 | .3 |
| 28 | 1.3 | 1.3 | 2.2 | 6 | 18 | 5.5 | 9 | 2.5 | .8 | .6 | .3 | .3 |
| 29 | 1.3 | 1.3 | 2.0 | 6 | 26 | 5.5 | 6.5 | 2.2 | .8 | .6 | .3 | .3 |
| 30 | 1.3 | 1.3 | 1.8 | 6 | - | 5.5 | 6 | 2.0 | .8 | .6 | .3 | .4 |
| 31 | 1.4 | - | 1.8 | 6 | - | 30 | - | 2.0 | - | .6 | .3 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 95.7 | 9 | 1.3 | 3.09 | 190 | | | |
| November..... | | | | | 45.2 | 2.2 | 1.3 | 1.51 | 90 | | | |
| December..... | | | | | 54.4 | 4.5 | 1.3 | 1.75 | 108 | | | |
| Calendar year 1939..... | | | | | 1,496.4 | 85 | .4 | 4.10 | 2,970 | | | |
| January..... | | | | | 397.2 | 114 | 1.8 | 12.5 | 768 | | | |
| February..... | | | | | 749.5 | 100 | 8 | 25.8 | 1,480 | | | |
| March..... | | | | | 275.0 | 30 | 5.5 | 8.87 | 545 | | | |
| April..... | | | | | 214.5 | 25 | 4.4 | 7.15 | 425 | | | |
| May..... | | | | | 93.2 | 5 | 2.0 | 3.01 | 185 | | | |
| June..... | | | | | 45.7 | 2.4 | .8 | 1.52 | 91 | | | |
| July..... | | | | | 18.6 | 1.0 | .4 | .60 | 37 | | | |
| August..... | | | | | 13.4 | .6 | .3 | .45 | 27 | | | |
| September..... | | | | | 9.5 | .4 | .3 | .32 | 19 | | | |
| Water year 1939-40..... | | | | | 2,000.9 | 114 | .3 | 5.47 | 3,960 | | | |

Peak discharge.- Jan. 8 (2 a.m.) 452 sec.-ft.; Feb. 3 (4 p.m.) 155 sec.-ft.; Feb. 25 (10 p.m.) 191 sec.-ft.

Note.- Discharge for period of no gage-height record Oct. 1-9, and for periods of extremely unstable rating, Jan. 9-31, Feb. 6-21, 24, Feb. 28 to Mar. 30, computed on basis of discharge measurements, Mount Wilson rainfall record, and records for nearby stations.

Santa Anita Creek near Sierra Madre, Calif.

Location.- Water-stage recorder, lat. 34°11'30", long. 118°01'00", in SW¼ sec. 10, T. 1 N., R. 11 W., at head of Hermits Falls, 4 miles northeast of Sierra Madre.
Altitude of gage, about 1,400 feet.

Drainage area.- 10.5 square miles.

Records available.- July 1916 to September 1940.

Average discharge.- 24 years, 5.43 second-feet.

Extremes.- Maximum discharge during year, 349 second-feet Jan. 8 (gage height, 4.10 feet); minimum, 0.3 second-foot at times in August and September.
1916-40: Maximum discharge, about 5,200 second-feet Mar. 2, 1938, based on inflow to flood-control reservoir; practically no flow Aug. 18 to Sept. 14, 1929.

Remarks.- Records good. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 3.6 | 2.2 | 2.4 | 2.5 | 18 | 12 | 9.5 | 3.9 | 2.6 | 1.3 | 0.4 | 0.4 |
| 2 | 3.5 | 2.2 | 2.2 | 2.5 | 35 | 11 | 6.5 | 3.8 | 2.6 | 1.3 | .4 | .4 |
| 3 | 3.4 | 2.2 | 2.2 | 2.5 | 44 | 10 | 6 | 3.8 | 2.5 | 1.3 | .4 | .4 |
| 4 | 3.0 | 2.4 | 2.2 | 4.5 | 30 | 9 | 6 | 3.6 | 2.5 | 1.1 | .4 | .5 |
| 5 | 2.9 | 2.5 | 2.2 | 3.6 | 18 | 8.5 | 5.5 | 3.6 | 2.5 | 1.1 | .4 | .5 |
| 6 | 3.5 | 2.5 | 2.2 | 3.4 | 12 | 8 | 5 | 3.6 | 2.4 | 1.0 | .4 | .4 |
| 7 | 4.1 | 2.4 | 2.4 | 11 | 10 | 7.5 | 5 | 3.5 | 2.4 | 1.0 | .4 | .4 |
| 8 | 3.1 | 2.9 | 2.4 | 55 | 8.5 | 7 | 4.8 | 3.5 | 2.2 | .9 | .4 | .4 |
| 9 | 2.9 | 3.0 | 2.4 | 14 | 7.5 | 7 | 4.6 | 3.2 | 2.1 | .9 | .4 | .4 |
| 10 | 2.6 | 2.6 | 2.4 | 11 | 6.5 | 6.5 | 4.2 | 3.2 | 1.9 | .8 | .4 | .4 |
| 11 | 2.5 | 2.5 | 2.7 | 10 | 6.5 | 6 | 4.2 | 3.2 | 1.9 | .8 | .4 | .4 |
| 12 | 2.2 | 2.5 | 2.5 | 9.5 | 6 | 6 | 4.1 | 3.2 | 1.8 | .7 | .4 | .4 |
| 13 | 2.1 | 2.5 | 2.5 | 7.5 | 6 | 6 | 3.9 | 3.2 | 1.7 | .6 | .4 | .4 |
| 14 | 2.0 | 2.5 | 2.4 | 6.5 | 7 | 5.5 | 3.9 | 3.1 | 1.7 | .6 | .4 | .5 |
| 15 | 1.9 | 2.5 | 2.4 | 5.5 | 6 | 5.5 | 4.2 | 3.1 | 1.7 | .7 | .4 | .5 |
| 16 | 1.9 | 2.4 | 2.4 | 4.8 | 6 | 5.5 | 4.2 | 3.1 | 1.7 | .6 | .4 | .5 |
| 17 | 1.9 | 2.4 | 2.4 | 4.6 | 5.5 | 5.5 | 4.1 | 3.2 | 1.6 | .7 | .4 | .4 |
| 18 | 1.9 | 2.2 | 2.2 | 4.2 | 5.5 | 5.5 | 3.9 | 3.2 | 1.6 | .8 | .4 | .4 |
| 19 | 1.9 | 2.2 | 2.2 | 3.9 | 4.9 | 5.5 | 3.8 | 3.2 | 1.4 | .7 | .4 | .5 |
| 20 | 1.9 | 2.2 | 2.2 | 3.9 | 4.6 | 5.5 | 3.8 | 3.2 | 1.4 | .6 | .4 | .4 |
| 21 | 1.9 | 2.2 | 2.2 | 3.6 | 4.6 | 5.5 | 3.8 | 3.2 | 1.3 | .6 | .4 | .4 |
| 22 | 1.9 | 2.2 | 2.2 | 3.5 | 4.8 | 5 | 3.9 | 3.2 | 1.3 | .5 | .4 | .4 |
| 23 | 1.9 | 2.2 | 2.2 | 4.1 | 4.6 | 5 | 3.9 | 3.1 | 1.2 | .5 | .4 | .4 |
| 24 | 2.0 | 2.4 | 3.2 | 4.1 | 4.4 | 4.9 | 3.9 | 2.9 | 1.2 | .5 | .4 | .4 |
| 25 | 2.1 | 2.4 | 2.7 | 3.8 | 32 | 4.9 | 3.9 | 2.9 | 1.3 | .5 | .5 | .4 |
| 26 | 2.1 | 2.4 | 2.6 | 3.6 | 29 | 5 | 9 | 3.0 | 1.3 | .5 | .5 | .4 |
| 27 | 2.1 | 2.4 | 2.6 | 3.6 | 14 | 4.9 | 5.5 | 3.0 | 1.3 | .6 | .5 | .4 |
| 28 | 2.1 | 2.4 | 2.6 | 3.5 | 12 | 4.9 | 4.8 | 2.9 | 1.3 | .6 | .4 | .4 |
| 29 | 2.0 | 2.4 | 2.5 | 3.4 | 19 | 4.8 | 4.2 | 2.9 | 1.3 | .6 | .4 | .4 |
| 30 | 2.0 | 2.4 | 2.5 | 3.4 | - | 4.8 | 4.1 | 2.7 | 1.3 | .5 | .4 | .4 |
| 31 | 2.1 | - | 2.5 | 3.5 | - | 12 | - | 2.6 | - | .4 | .4 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 75.3 | 4.1 | 1.9 | 2.43 | 149 | | | |
| November..... | | | | | 72.2 | 3.0 | 2.2 | 2.41 | 143 | | | |
| December..... | | | | | 75.7 | 3.2 | 2.2 | 2.44 | 150 | | | |
| Calendar year 1939..... | | | | | 1,187.0 | 74 | .4 | 3.25 | 2,350 | | | |
| January..... | | | | | 210.5 | 55 | 2.5 | 6.79 | 418 | | | |
| February..... | | | | | 372.1 | 44 | 4.4 | 12.8 | 738 | | | |
| March..... | | | | | 204.7 | 12 | 4.8 | 6.60 | 406 | | | |
| April..... | | | | | 144.2 | 9.5 | 3.8 | 4.81 | 286 | | | |
| May..... | | | | | 99.8 | 3.9 | 2.6 | 3.22 | 198 | | | |
| June..... | | | | | 53.0 | 2.6 | 1.2 | 1.77 | 105 | | | |
| July..... | | | | | 23.3 | 1.3 | .4 | .75 | 45 | | | |
| August..... | | | | | 12.7 | .5 | .4 | .41 | 25 | | | |
| September..... | | | | | 12.6 | .5 | .4 | .42 | 25 | | | |
| Water year 1939-40..... | | | | | 1,356.1 | 55 | .4 | 3.71 | 2,690 | | | |

Peak discharge.- Jan. 8 (3 a.m.) 349 sec.-ft.; Feb. 1 (11 a.m.) 78 sec.-ft.; Feb. 25 (9 p.m.) 135 sec.-ft.

Little Santa Anita Creek near Sierra Madre, Calif.

Location.- Water-stage recorder and control, lat. $34^{\circ}11'15''$, long. $118^{\circ}02'35''$, near center of NW $\frac{1}{4}$ sec. 9, T. 1 N., R. 11 W., 2 miles northeast of Sierra Madre. Altitude of gage, about 2,200 feet.

Drainage area.- 1.9 square miles.

Records available.- April 1916 to September 1940.

Average discharge.- 23 years (1916-25, 1926-40), 0.94 second-foot.

Extremes.- Maximum discharge during year, 35 second-feet Jan. 8 (gage height, 1.85 feet); minimum daily, 0.1 second-foot July 13 to Sept. 30.
1916-40: Maximum discharge, 536 second-feet Mar. 2, 1939, computed on basis of inflow to Sierra Madre flood-control reservoir; no flow during periods in 1919, 1924 and 1925.

Remarks.- Records good except those for period of no gage heights, which are fair. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 0.4 | 0.3 | 0.3 | 0.3 | 2.0 | 1.5 | 1.4 | 0.5 | 0.4 | 0.2 | 0.1 | 0.1 |
| 2 | .4 | .3 | .3 | .3 | 4.3 | 1.4 | 1.1 | .5 | .4 | .2 | .1 | .1 |
| 3 | .4 | .3 | .3 | .3 | 4.3 | 1.3 | .9 | .5 | .4 | .2 | .1 | .1 |
| 4 | .4 | .3 | .3 | .7 | 3.2 | 1.2 | .8 | .5 | .4 | .2 | .1 | .1 |
| 5 | .4 | .3 | .3 | .4 | 2.4 | 1.2 | .8 | .5 | .4 | .2 | .1 | .1 |
| 6 | .5 | .3 | .3 | .4 | 2.0 | 1.1 | .7 | .5 | .4 | .2 | .1 | .1 |
| 7 | .5 | .3 | .3 | 1.2 | 1.6 | 1.1 | .6 | .5 | .3 | .2 | .1 | .1 |
| 8 | .4 | .3 | .3 | 5 | 1.5 | 1.0 | .6 | .5 | .3 | .2 | .1 | .1 |
| 9 | .4 | .3 | .3 | 2.3 | 1.2 | 1.0 | .6 | .5 | .3 | .2 | .1 | .1 |
| 10 | .4 | .3 | .3 | 1.8 | 1.1 | .9 | .6 | .5 | .3 | .2 | .1 | .1 |
| 11 | .4 | .3 | .3 | 2.0 | 1.1 | .9 | .5 | .4 | .3 | .2 | .1 | .1 |
| 12 | .3 | .3 | .3 | 2.0 | .9 | .8 | .4 | .4 | .3 | .2 | .1 | .1 |
| 13 | .3 | .3 | .3 | 1.6 | .9 | .8 | .4 | .4 | .2 | .1 | .1 | .1 |
| 14 | .3 | .3 | .3 | 1.2 | .9 | .7 | .4 | .4 | .2 | .1 | .1 | .1 |
| 15 | .3 | .3 | .3 | 1.1 | .8 | .7 | .4 | .4 | .2 | .1 | .1 | .1 |
| 16 | .3 | .3 | .3 | .9 | .8 | .7 | .4 | .4 | .3 | .1 | .1 | .1 |
| 17 | .3 | .3 | .2 | .8 | .7 | .6 | .4 | .4 | .3 | .1 | .1 | .1 |
| 18 | .3 | .3 | .2 | .8 | .7 | .6 | .4 | .4 | .3 | .1 | .1 | .1 |
| 19 | .3 | .3 | .2 | .7 | .6 | .6 | .4 | .4 | .3 | .1 | .1 | .1 |
| 20 | .3 | .3 | .2 | .7 | .6 | .6 | .4 | .4 | .3 | .1 | .1 | .1 |
| 21 | .3 | .3 | .2 | .6 | .6 | .6 | .4 | .4 | .2 | .1 | .1 | .1 |
| 22 | .3 | .3 | .2 | .6 | .6 | .6 | .4 | .4 | .2 | .1 | .1 | .1 |
| 23 | .3 | .2 | .4 | .7 | .6 | .6 | .4 | .4 | .2 | .1 | .1 | .1 |
| 24 | .3 | .2 | .3 | .6 | .6 | .6 | .4 | .4 | .2 | .1 | .1 | .1 |
| 25 | .3 | .3 | .3 | .6 | 2.6 | .6 | .4 | .4 | .2 | .1 | .1 | .1 |
| 26 | .3 | .3 | .3 | .5 | 2.5 | .6 | 1.3 | .4 | .2 | .1 | .1 | .1 |
| 27 | .3 | .3 | .3 | .5 | 1.5 | .6 | .8 | .4 | .2 | .1 | .1 | .1 |
| 28 | .3 | .3 | .3 | .5 | 1.4 | .6 | .7 | .4 | .2 | .1 | .1 | .1 |
| 29 | .3 | .3 | .3 | .5 | 2.2 | .6 | .6 | .4 | .2 | .1 | .1 | .1 |
| 30 | .3 | .3 | .3 | .5 | - | .6 | .5 | .4 | .2 | .1 | .1 | .1 |
| 31 | .3 | - | .3 | .5 | - | 1.5 | - | .4 | - | .1 | .1 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 10.6 | 0.5 | 0.3 | 0.34 | 21 |
| November..... | 8.8 | .3 | .2 | .29 | 17 |
| December..... | 8.8 | .4 | .2 | .28 | 17 |
| Calendar year 1939..... | 125.8 | 1.5 | .1 | .34 | 248 |
| January..... | 30.6 | 5 | .3 | .99 | 61 |
| February..... | 44.2 | 4.3 | .6 | 1.52 | 88 |
| March..... | 26.2 | 1.5 | .6 | .85 | 52 |
| April..... | 18.1 | 1.4 | .4 | .60 | 36 |
| May..... | 13.4 | .5 | .4 | .43 | 27 |
| June..... | 8.3 | .4 | .2 | .28 | 16 |
| July..... | 4.3 | .2 | .1 | .14 | 8.5 |
| August..... | 3.1 | .1 | .1 | .10 | 6.1 |
| September..... | 3.0 | .1 | .1 | .10 | 6.0 |
| Water year 1939-40..... | 179.4 | 5 | .1 | .49 | 356 |

Peak discharge.- Jan. 6 (2:15 a.m.) 35 sec.-ft.; Feb. 2 (8 p.m.) 8 sec.-ft.; Feb. 25 (8 p.m.) 11 sec.-ft.

Note.- No gage-height record June 18 to July 17; discharge interpolated.

Eaton Creek near Pasadena, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°11'40", long. 118°06'15", in SE¼ sec. 2, T. 1 N., R. 12 W., at mouth of canyon, just upstream from site of former Mount Wilson toll bridge, and 4 miles northeast of Pasadena. Altitude of gage, 1,230 feet.

Drainage area.- 6.5 square miles.

Records available.- March 1918 to September 1940.

Average discharge.- 22 years, 2.31 second-feet. Average combined discharge of creek and diversion, 22 years, 3.33 second-feet.

Extremes.- Maximum discharge during year, 220 second-feet Jan. 8 (gage height, 2.40 feet), from rating curve extended above 40 second-feet on basis of computed rating for broad-crested control; no flow for several months.

1918-40: Maximum discharge, 2,400 second-feet Mar. 2, 1938, from record of inflow to Eaton flood-control reservoir; no flow for some periods in each year.

Remarks.- Records good. Records do not include water diverted above station by city of Pasadena.

Cooperation.- Results of three discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|------------------|---------|---------|------|----------------------|-------------------------|------|------|-------|
| 1 | | | 0 | 0 | 15 | 4.6 | 6 | | | | | |
| 2 | | | 0 | .1 | 25 | 2.4 | .2 | | | | | |
| 3 | | | 0 | .1 | 29 | 2.7 | .1 | | | | | |
| 4 | | | 0 | .1 | 22 | 2.8 | .4 | | | | | |
| 5 | | | 0 | .1 | 12 | 1.6 | .4 | | | | | |
| 6 | | | 0 | .1 | 6 | .8 | 0 | | | | | |
| 7 | | | 0 | 6.5 | 5 | .5 | 0 | | | | | |
| 8 | | | 0 | 36 | 5 | .2 | 0 | | | | | |
| 9 | | | 0 | 12 | 1.5 | .4 | 0 | | | | | |
| 10 | | | 0 | 6 | .5 | .1 | 0 | | | | | |
| 11 | | | 0 | 5.5 | .5 | 0 | 0 | | | | | |
| 12 | | | 0 | 0 | 0 | 0 | 0 | | | | | |
| 13 | | | 0 | 4.3 | 0 | 0 | 0 | | | | | |
| 14 | | | 0 | 3.1 | .1 | 0 | 0 | | | | | |
| 15 | | | 0 | 1.6 | .2 | 0 | 0 | | | | | |
| 16 | | | 0 | .8 | 0 | 0 | 0 | | | | | |
| 17 | | | 0 | 0 | 0 | 0 | 0 | | | | | |
| 18 | | | 0 | 0 | 0 | 0 | 0 | | | | | |
| 19 | | | 0 | 0 | 0 | 0 | 0 | | | | | |
| 20 | | | 0 | 0 | 0 | 0 | 0 | | | | | |
| 21 | | | 0 | 0 | 0 | 0 | 0 | | | | | |
| 22 | | | 0 | 0 | .1 | 0 | 0 | | | | | |
| 23 | | | 0 | .7 | 0 | 0 | 0 | | | | | |
| 24 | | | 0 | .3 | 0 | 0 | 0 | | | | | |
| 25 | | | 0 | 0 | 15 | 0 | 0 | | | | | |
| 26 | | | .1 | 0 | 16 | 0 | 9 | | | | | |
| 27 | | | .1 | 0 | 5.5 | 0 | 2.0 | | | | | |
| 28 | | | .2 | 0 | 4.2 | 0 | 0 | | | | | |
| 29 | | | .1 | 0 | 14 | 0 | 0 | | | | | |
| 30 | | | 0 | 0 | - | 0 | 0 | | | | | |
| 31 | | | 0 | 0 | - | 11 | - | | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | Diversion in acre-feet* | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| December..... | | | | .5 | .2 | 0 | .02 | 1 | 53 | | | |
| Calendar year 1939 | | | | 165.5 | 64 | 0 | .45 | 328 | 1,195 | | | |
| January..... | | | | 83.3 | 36 | 0 | 2.69 | 165 | 144 | | | |
| February..... | | | | 175.6 | 28 | 0 | 6.06 | 348 | 174 | | | |
| March..... | | | | 27.1 | 11 | 0 | .87 | 54 | 228 | | | |
| April..... | | | | 18.1 | 9 | 0 | .60 | 36 | 180 | | | |
| May..... | | | | 0 | 0 | 0 | 0 | 0 | 126 | | | |
| June..... | | | | 0 | 0 | 0 | 0 | 0 | 74 | | | |
| July..... | | | | 0 | 0 | 0 | 0 | 0 | 45 | | | |
| August..... | | | | 0 | 0 | 0 | 0 | 0 | 32 | | | |
| September..... | | | | 0 | 0 | 0 | 0 | 0 | 27 | | | |
| Water year 1939-40 | | | | 304.6 | 36 | 0 | .83 | 604 | 1,240 | | | |

Peak discharge.- Jan. 8 (2:45 a.m.) 220 sec.-ft.; Feb. 1 (10 a.m.) 50 sec.-ft.; Feb. 25 (3:30 p.m.) 59 sec.-ft.

*Diversion by city of Pasadena. Records furnished by that city.

LOS ANGELES RIVER BASIN

Rio Hondo near Montebello, Calif.

Location.- Water-stage recorder, lat. 34°01'55", long. 118°04'15", in Potrero Grande grant, at Montebello oil field, about 1,000 feet upstream from Mission Bridge, and 2 miles northeast of Montebello, Los Angeles County. Altitude of gage, about 200 feet.

Records available.- October 1928 to September 1940.

Average discharge.- 12 years, 59.0 second-feet.

Extremes.- Maximum discharge during year, 2,380 second-feet Jan. 7 (gage height, 7.45 feet); minimum, 5 second-feet Sept. 4.

1928-40: Maximum discharge, 28,000 second-feet Mar. 2, 1938; minimum, 0.3 second-foot Dec. 1, 1933.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 31 | 24 | 21 | 31 | 505 | 34 | 100 | 28 | 22 | 172 | 18 | 15 |
| 2 | 36 | 24 | 22 | 27 | 444 | 27 | 33 | 26 | 21 | 190 | 16 | 14 |
| 3 | 31 | 23 | 22 | 31 | 300 | 26 | 33 | 27 | 15 | 166 | 20 | 17 |
| 4 | 33 | 26 | 22 | 103 | 77 | 30 | 30 | 24 | 23 | 29 | 18 | 13 |
| 5 | 28 | 23 | 23 | 27 | 63 | 30 | 30 | 23 | 23 | 16 | 20 | 20 |
| 6 | 30 | 24 | 26 | 40 | 47 | 31 | 31 | 27 | 21 | 18 | 20 | 20 |
| 7 | 60 | 28 | 27 | 410 | 37 | 31 | 27 | 26 | 23 | 18 | 18 | 22 |
| 8 | 26 | 37 | 22 | 372 | 30 | 33 | 27 | 26 | 26 | 17 | 17 | 21 |
| 9 | 31 | 28 | 24 | 64 | 23 | 31 | 27 | 24 | 22 | 17 | 16 | 21 |
| 10 | 27 | 28 | 23 | 86 | 24 | 26 | 27 | 26 | 20 | 18 | 21 | 20 |
| 11 | 26 | 31 | 34 | 83 | 21 | 30 | 26 | 26 | 18 | 21 | 18 | 18 |
| 12 | 23 | 28 | 27 | 56 | 23 | 30 | 23 | 26 | 17 | 16 | 16 | 18 |
| 13 | 20 | 27 | 26 | 45 | 23 | 30 | 26 | 24 | 21 | 20 | 17 | 21 |
| 14 | 24 | 27 | 26 | 31 | 56 | 30 | 21 | 26 | 22 | 18 | 14 | 23 |
| 15 | 21 | 28 | 27 | 33 | 37 | 24 | 26 | 26 | 23 | 18 | 13 | 21 |
| 16 | 23 | 28 | 27 | 34 | 37 | 28 | 27 | 27 | 23 | 17 | 17 | 22 |
| 17 | 27 | 28 | 22 | 31 | 33 | 26 | 24 | 27 | 18 | 17 | 18 | 21 |
| 18 | 27 | 26 | 27 | 28 | 27 | 26 | 26 | 26 | 20 | 17 | 18 | 22 |
| 19 | 30 | 27 | 28 | 28 | 30 | 23 | 24 | 23 | 34 | 16 | 16 | 20 |
| 20 | 28 | 24 | 27 | 28 | 28 | 22 | 22 | 27 | 116 | 18 | 15 | 22 |
| 21 | 28 | 21 | 27 | 26 | 27 | 26 | 22 | 24 | 132 | 18 | 18 | 26 |
| 22 | 31 | 24 | 22 | 28 | 24 | 23 | 23 | 22 | 135 | 17 | 20 | 22 |
| 23 | 27 | 23 | 66 | 92 | 24 | 26 | 26 | 22 | 171 | 18 | 18 | 23 |
| 24 | 33 | 22 | 31 | 35 | 22 | 24 | 23 | 24 | 217 | 18 | 21 | 21 |
| 25 | 33 | 23 | 26 | 31 | 335 | 28 | 24 | 27 | 220 | 18 | 21 | 20 |
| 26 | 30 | 21 | 28 | 33 | 51 | 31 | 252 | 26 | 104 | 20 | 20 | 21 |
| 27 | 35 | 25 | 30 | 31 | 33 | 37 | 34 | 26 | 20 | 20 | 18 | 20 |
| 28 | 30 | 22 | 31 | 26 | 32 | 28 | 22 | 23 | 18 | 21 | 20 | 26 |
| 29 | 27 | 18 | 33 | 28 | 106 | 28 | 27 | 22 | 17 | 22 | 21 | 24 |
| 30 | 28 | 23 | 36 | 27 | - | 28 | 26 | 22 | 143 | 21 | 21 | 24 |
| 31 | 24 | - | 33 | 44 | - | 222 | - | 20 | - | 21 | 21 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 906 | 60 | 20 | 29.2 | 1,800 | | |
| November..... | | | | | | 759 | 37 | 18 | 25.3 | 1,500 | | |
| December..... | | | | | | 866 | 66 | 21 | 27.9 | 1,720 | | |
| Calendar year 1939..... | | | | | | 13,113 | 1,060 | 14 | 35.9 | 26,010 | | |
| January..... | | | | | | 1,989 | 410 | 26 | 64.2 | 3,950 | | |
| February..... | | | | | | 2,519 | 505 | 21 | 36.9 | 5,000 | | |
| March..... | | | | | | 1,071 | 222 | 22 | 34.5 | 2,120 | | |
| April..... | | | | | | 1,089 | 252 | 21 | 36.3 | 2,160 | | |
| May..... | | | | | | 775 | 28 | 20 | 25.0 | 1,540 | | |
| June..... | | | | | | 1,708 | 220 | 17 | 56.9 | 3,390 | | |
| July..... | | | | | | 1,075 | 190 | 16 | 34.7 | 2,130 | | |
| August..... | | | | | | 565 | 21 | 13 | 18.2 | 1,120 | | |
| September..... | | | | | | 618 | 26 | 13 | 20.6 | 1,250 | | |
| Water year 1939-40..... | | | | | | 13,940 | 505 | 13 | 38.1 | 27,660 | | |

Rio Hondo near Downey, Calif.

Location.- Water-stage recorder, lat. 33°56'40", long. 118°09'50", in San Antonio grant, on Stewart and Gray Road Bridge, half a mile upstream from mouth and 1½ miles west of Downey, Los Angeles County. Altitude of gage, about 95 feet.

Drainage area.- 374 square miles.

Records available.- March 1928 to September 1940.

Average discharge.- 12 years, 31.3 second-feet.

Extremes.- Maximum discharge during year, 1,930 second-feet Jan. 8 (gage height, 7.75 feet); no flow during several periods.
1928-40: Maximum discharge, 24,400 second-feet Mar. 3, 1938 (gage height, 13.5 feet); no flow during part of each year.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0 | 2.1 | 4.7 | 2.5 | 238 | 0.1 | 35 | 3.9 | 1.7 | 6 | 2.3 | 2.8 |
| 2 | 0 | 1.6 | 3.4 | 0 | 329 | 0 | .2 | 2.4 | .7 | .7 | 2.5 | 2.3 |
| 3 | 0 | 2.3 | 6 | 0 | 256 | 0 | .9 | 2.1 | 1.9 | 6 | 2.1 | 3.2 |
| 4 | 0 | 1.5 | 5.5 | .6 | 38 | .1 | 1.8 | 2.1 | 2.2 | 5.5 | 3.2 | 2.5 |
| 5 | 0 | .2 | 6 | 0 | 2.8 | 0 | .2 | 3.2 | 2.5 | 4.9 | 2.3 | 1.5 |
| 6 | 0 | .4 | 5 | 0 | 0 | 0 | .3 | 3.4 | 2.8 | 7 | 2.1 | 3.2 |
| 7 | 0 | 1.6 | 6 | 107 | 0 | 0 | 1.2 | 1.8 | 3.1 | 7 | 2.2 | 3.9 |
| 8 | 0 | .7 | 5 | 442 | 0 | 1.5 | 1.2 | 2.8 | 3.3 | 3.4 | 2.0 | 8 |
| 9 | 0 | 0 | 6.5 | 6.5 | 0 | .3 | .3 | 3.0 | 4.3 | 3.6 | 1.4 | 5 |
| 10 | 0 | 0 | 6.5 | 3.7 | 0 | 0 | 1.6 | 2.3 | 2.8 | 7 | .6 | 2.3 |
| 11 | 0 | 1.8 | 5.5 | 14 | 0 | 0 | 1.8 | 1.3 | 3.1 | 3.5 | 1.8 | 2.1 |
| 12 | 0 | 3.0 | 3.7 | 3.5 | 0 | 1.2 | 1.2 | 2.8 | 1.8 | 1.6 | .6 | 2.3 |
| 13 | 0 | 2.1 | 5.5 | 0 | 0 | 0 | .1 | 2.3 | 4.2 | 1.6 | .8 | 1.6 |
| 14 | .4 | 2.5 | 5 | 0 | 0 | 0 | 1.6 | 1.7 | 2.3 | 3.9 | 1.5 | 1.4 |
| 15 | 1.6 | 3.0 | 6 | 0 | 0 | 0 | 2.8 | 1.1 | 2.5 | 3.7 | 1.2 | 2.8 |
| 16 | 0 | 2.8 | 6.5 | 0 | 0 | 1.4 | 1.8 | 1.6 | 1.7 | 2.6 | 1.6 | 3.4 |
| 17 | 0 | 3.8 | 6 | 0 | 0 | .1 | 2.1 | 2.5 | 1.6 | 1.2 | 1.6 | 1.6 |
| 18 | 1.0 | 2.5 | 6 | 0 | 0 | 1.3 | .3 | 2.8 | 2.5 | 2.2 | .6 | 2.8 |
| 19 | 0 | 2.1 | 6 | 0 | 0 | .2 | 1.6 | 3.1 | .6 | 2.2 | 2.1 | 4.3 |
| 20 | 0 | 1.1 | 6 | 0 | 0 | 0 | .8 | 2.9 | 3.0 | 1.2 | .6 | 1.6 |
| 21 | 0 | 2.1 | 6.5 | 0 | 0 | .6 | .8 | 3.7 | 3.1 | 5 | 1.2 | 2.1 |
| 22 | 0 | 3.0 | 7 | 0 | 0 | .7 | 1.1 | 3.8 | 2.6 | 4.3 | 1.5 | 2.5 |
| 23 | .6 | 2.8 | 6.5 | .4 | 0 | .5 | 3.9 | 4.3 | 3.7 | 3.3 | 1.2 | 1.4 |
| 24 | 2.8 | 2.5 | 0 | 3.3 | 0 | 0 | 4.7 | 3.7 | 2.5 | 2.8 | 3.6 | 1.6 |
| 25 | .2 | 2.5 | 0 | 0 | 104 | 0 | 4.3 | 3.6 | 1.4 | 2.6 | 5.5 | 1.5 |
| 26 | .7 | 5 | .6 | 0 | 25 | .9 | 80 | 3.3 | 2.1 | 2.0 | 4.1 | 2.1 |
| 27 | .1 | 6 | 4.7 | 0 | 0 | 3.0 | 12 | 3.2 | 1.6 | 2.0 | 3.4 | 2.5 |
| 28 | 1.6 | 8 | 4.7 | 0 | 0 | 2.0 | .1 | 5.0 | 2.8 | 1.0 | 3.7 | 2.5 |
| 29 | 1.4 | 7.5 | 3.9 | 0 | 5.5 | .7 | 0 | 2.7 | 2.1 | 3.2 | 7 | 3.4 |
| 30 | .4 | 6 | 3.9 | 0 | - | .5 | .6 | 3.2 | 4.3 | 2.7 | 4.7 | 4.7 |
| 31 | .8 | - | 3.7 | .1 | - | 15 | - | 2.5 | - | 3.1 | 3.9 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 11.6 | 2.8 | 0 | 0.37 | 23 | | |
| November..... | | | | | | 79.5 | 8 | 0 | 2.65 | 158 | | |
| December..... | | | | | | 152.3 | 7 | 0 | 4.91 | 302 | | |
| Calendar year 1939..... | | | | | | 2,342.4 | 879 | 0 | 6.42 | 4,640 | | |
| January..... | | | | | | 583.6 | 442 | 0 | 18.8 | 1,160 | | |
| February..... | | | | | | 998.3 | 329 | 0 | 34.4 | 1,960 | | |
| March..... | | | | | | 80.1 | 15 | 0 | .97 | 60 | | |
| April..... | | | | | | 164.3 | 80 | 0 | 5.46 | 326 | | |
| May..... | | | | | | 86.1 | 4.3 | 1.1 | 2.78 | 171 | | |
| June..... | | | | | | 74.7 | 4.3 | .6 | 2.49 | 148 | | |
| July..... | | | | | | 106.6 | 7 | .7 | 3.45 | 212 | | |
| August..... | | | | | | 73.1 | 5.5 | .6 | 2.36 | 145 | | |
| September..... | | | | | | 82.9 | 8 | 1.4 | 2.76 | 164 | | |
| Water year 1939-40..... | | | | | | 2,443.3 | 442 | 0 | 6.68 | 4,850 | | |

Rio Hondo Slough near Montebello, Calif.

Location.- Water-stage recorder, lat. 34°01'45", long. 118°04'07", in Paso de Bartolo grant, at San Gabriel Boulevard Bridge, 2 miles northeast of Montebello, Los Angeles County.

Records available.- October 1932 to September 1940.

Extremes.- Maximum discharge during year, 74 second-feet Jan. 8; minimum daily, 15 second-feet Aug. 19.

1932-40: Maximum discharge not determined, occurred on Mar. 2, 1938; minimum, 4.8 second-feet Oct. 4, 1935.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 25 | 22 | 22 | 25 | 41 | 25 | 25 | 22 | 21 | 18 | 15 | 18 |
| 2 | 25 | 21 | 23 | 25 | 43 | 25 | 24 | 22 | 21 | 18 | 19 | 20 |
| 3 | 24 | 22 | 23 | 26 | 44 | 25 | 22 | 22 | 21 | 18 | 20 | 19 |
| 4 | 24 | 22 | 23 | 28 | 35 | 24 | 22 | 22 | 21 | 19 | 19 | 18 |
| 5 | 23 | 22 | 23 | 28 | 30 | 24 | 22 | 22 | 21 | 19 | 18 | 18 |
| 6 | 24 | 22 | 23 | 27 | 29 | 24 | 22 | 22 | 21 | 19 | 19 | 18 |
| 7 | 24 | 22 | 22 | 33 | 28 | 24 | 24 | 22 | 21 | 20 | 18 | 17 |
| 8 | 24 | 23 | 22 | 52 | 27 | 24 | 24 | 22 | 21 | 20 | 17 | 18 |
| 9 | 23 | 22 | 22 | 33 | 26 | 24 | 23 | 22 | 21 | 18 | 16 | 18 |
| 10 | 23 | 20 | 22 | 32 | 26 | 24 | 23 | 21 | 21 | 18 | 17 | 17 |
| 11 | 22 | 22 | 23 | 32 | 27 | 23 | 22 | 21 | 20 | 20 | 17 | 17 |
| 12 | 22 | 22 | 24 | 29 | 27 | 24 | 22 | 22 | 20 | 19 | 17 | 17 |
| 13 | 22 | 23 | 24 | 27 | 26 | 23 | 22 | 22 | 20 | 18 | 18 | 18 |
| 14 | 22 | 22 | 24 | 27 | 27 | 23 | 22 | 22 | 20 | 20 | 16 | 17 |
| 15 | 23 | 23 | 25 | 26 | 27 | 23 | 22 | 22 | 20 | 20 | 17 | 17 |
| 16 | 23 | 23 | 25 | 26 | 27 | 23 | 22 | 22 | 20 | 20 | 20 | 17 |
| 17 | 22 | 22 | 25 | 26 | 26 | 24 | 22 | 21 | 20 | 19 | 20 | 17 |
| 18 | 23 | 23 | 25 | 26 | 26 | 23 | 22 | 22 | 20 | 19 | 18 | 18 |
| 19 | 22 | 22 | 25 | 26 | 26 | 23 | 22 | 22 | 17 | 17 | 15 | 18 |
| 20 | 21 | 22 | 24 | 26 | 25 | 23 | 22 | 22 | 18 | 17 | 18 | 19 |
| 21 | 21 | 22 | 24 | 27 | 24 | 23 | 23 | 22 | 16 | 18 | 20 | 19 |
| 22 | 22 | 22 | 24 | 26 | 25 | 23 | 23 | 22 | 16 | 18 | 18 | 20 |
| 23 | 22 | 22 | 26 | 28 | 25 | 23 | 23 | 22 | 16 | 18 | 18 | 19 |
| 24 | 22 | 22 | 27 | 29 | 25 | 23 | 23 | 22 | 18 | 19 | 18 | 19 |
| 25 | 22 | 23 | 27 | 28 | 30 | 23 | 24 | 22 | 18 | 19 | 18 | 19 |
| 26 | 20 | 24 | 24 | 27 | 28 | 23 | 26 | 22 | 17 | 19 | 19 | 18 |
| 27 | 20 | 24 | 25 | 27 | 27 | 24 | 25 | 22 | 18 | 19 | 19 | 19 |
| 28 | 20 | 24 | 24 | 27 | 26 | 23 | 23 | 22 | 18 | 20 | 18 | 19 |
| 29 | 21 | 24 | 24 | 27 | 27 | 22 | 22 | 21 | 17 | 19 | 18 | 19 |
| 30 | 21 | 24 | 25 | 27 | - | 22 | 22 | 21 | 17 | 19 | 17 | 19 |
| 31 | 20 | - | 25 | 28 | - | 27 | - | 21 | - | 18 | 16 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 692 | 25 | 20 | 22.3 | 1,370 | | |
| November..... | | | | | | 673 | 24 | 20 | 22.4 | 1,330 | | |
| December..... | | | | | | 744 | 27 | 22 | 24.0 | 1,480 | | |
| Calendar year 1939..... | | | | | | 8,197 | 77 | 19 | 22.5 | 16,250 | | |
| January..... | | | | | | 681 | 52 | 25 | 28.4 | 1,750 | | |
| February..... | | | | | | 530 | 44 | 24 | 25.6 | 1,650 | | |
| March..... | | | | | | 731 | 27 | 22 | 23.6 | 1,450 | | |
| April..... | | | | | | 688 | 28 | 22 | 22.9 | 1,360 | | |
| May..... | | | | | | 676 | 22 | 21 | 21.8 | 1,340 | | |
| June..... | | | | | | 576 | 21 | 16 | 19.2 | 1,140 | | |
| July..... | | | | | | 582 | 20 | 17 | 18.8 | 1,160 | | |
| August..... | | | | | | 558 | 20 | 15 | 18.0 | 1,110 | | |
| September..... | | | | | | 546 | 20 | 17 | 18.2 | 1,080 | | |
| Water year 1939-40..... | | | | | | 8,177 | 52 | 15 | 22.3 | 16,210 | | |

Ballona Creek near Culver City, Calif.

Location.- Water-stage recorder, lat. 33°59'50", long. 118°24'10", in La Ballona grant, on Sawtelle Boulevard Bridge, about 1½ miles south of Culver City, Los Angeles County. Altitude of gage, about 40 feet.

Drainage area.- 112 square miles.

Records available.- February 1928 to September 1940.

Average discharge.- 12 years, 33.0 second-feet.

Extremes.- Maximum discharge during year, 9,730 second-feet Feb. 3 (gage height, 12.05 feet); no flow May 2.

1928-40: Maximum discharge, 19,000 second-feet Mar. 2, 1938; no flow during parts of most years.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 10 | 7 | 7.5 | 4.2 | 1,270 | 13 | 113 | 2.0 | 6 | 10 | 7 | 8 |
| 2 | 8 | 7.5 | 7.5 | 10 | 883 | 9 | 9.5 | 1.3 | 3.3 | 9.5 | 9.5 | 4.8 |
| 3 | 10 | 10 | 4.2 | 8 | 872 | 6.5 | 6.5 | 2.0 | 4.2 | 8 | 7 | 6.5 |
| 4 | 6.5 | 10 | 5.5 | 296 | 22 | 10 | 5.5 | 2.6 | 4.2 | 6 | 5 | 5 |
| 5 | 8.5 | 7.5 | 12 | 4.8 | 14 | 8 | 6 | 2.2 | 3.7 | 8 | 6.5 | 6 |
| 6 | 20 | 8.5 | 11 | 56 | 10 | 6.5 | 6 | 4.2 | 4.8 | 4.8 | 7 | 5 |
| 7 | 16 | 10 | 7.5 | 1,160 | 7.5 | 5.5 | 5 | 3.9 | 3.5 | 4.8 | 7 | 6.5 |
| 8 | 8 | 26 | 7 | 254 | 6.5 | 6 | 5.5 | 5 | 6 | 8 | 7 | 6.5 |
| 9 | 9.5 | 11 | 9 | 70 | 6.5 | 4.2 | 4.8 | 6 | 3.3 | 5 | 6.5 | 6 |
| 10 | 9.5 | 6.5 | 4.8 | 248 | 6 | 3.5 | 3.9 | 6 | 6 | 4.8 | 6 | 4.5 |
| 11 | 7 | 5 | 47 | 58 | 5 | 3.7 | 4.8 | 6.5 | 5.5 | 5.5 | 3.9 | 3.3 |
| 12 | 9.5 | 2.8 | 7.5 | 8 | 6 | 3.9 | 5 | 3.7 | 6 | 5 | 5.5 | 3.7 |
| 13 | 7 | 6.5 | 4.5 | 7 | 7 | 3.3 | 4.5 | 3.9 | 6 | 5 | 5.5 | 5.5 |
| 14 | 6 | 8 | 5 | 6.5 | 183 | 2.8 | 3.7 | 6.5 | 6 | 4.2 | 3.9 | 5 |
| 15 | 3.9 | 8 | 3.1 | 6 | 8.5 | 3.1 | 4.5 | 7 | 5 | 6.5 | 5.5 | 3.9 |
| 16 | 8 | 9.5 | 3.5 | 8.5 | 6.5 | 3.1 | 7.5 | 6 | 3.9 | 5.5 | 7 | 7 |
| 17 | 9.5 | 8.5 | 2.8 | 9.5 | 7 | 2.8 | 7 | 7.5 | 5 | 4.5 | 4.2 | 5 |
| 18 | 7 | 11 | 3.3 | 6 | 6 | 3.3 | 5 | 8.5 | 4.5 | 3.9 | 3.3 | 6.5 |
| 19 | 7.5 | 3.9 | 9 | 6 | 7 | 3.9 | 3.3 | 5.5 | 5 | 5 | 4.5 | 6.5 |
| 20 | 9.5 | 5.5 | 5.5 | 4.2 | 7.5 | 4.2 | 3.7 | 6.5 | 4.2 | 4.2 | 4.8 | 6.5 |
| 21 | 8.5 | 9 | 3.3 | 3.3 | 6.5 | 4.5 | 1.7 | 6.5 | 6.5 | 6.5 | 6 | 6 |
| 22 | 6.5 | 7.5 | 3.9 | 3.9 | 39 | 3.5 | 3.7 | 7 | 6 | 4.8 | 6 | 6 |
| 23 | 8.5 | 6.5 | 157 | 681 | 8 | 3.5 | 4.8 | 9 | 4.8 | 5.5 | 7 | 9.5 |
| 24 | 8 | 7 | 6.5 | 11 | 6 | 3.3 | 6 | 6.5 | 7 | 7 | 6 | 8 |
| 25 | 9 | 7.5 | 4.8 | 6.5 | 615 | 3.9 | 12 | 6.5 | 8.5 | 4.8 | 3.3 | 6 |
| 26 | 8 | 4.5 | 4.5 | 7 | 19 | 3.5 | 404 | 5 | 7 | 6 | 6 | 4.5 |
| 27 | 6.5 | 6 | 6.5 | 5.5 | 11 | 15 | 8 | 6 | 6.5 | 7.5 | 4.2 | 3.9 |
| 28 | 8 | 6 | 4.2 | 5 | 44 | 5.5 | 5.5 | 7.5 | 9.5 | 7 | 4.2 | 2.6 |
| 29 | 8 | 8 | 3.7 | 5 | 140 | 4.2 | 4.8 | 6.5 | 7 | 8 | 3.9 | 3.1 |
| 30 | 7.5 | 5 | 3.9 | 5 | - | 4.8 | 3.5 | 5 | 6 | 8 | 5 | 4.5 |
| 31 | 8 | - | 3.5 | 69 | - | 773 | - | 6 | - | 8 | 5 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 267.4 | 20 | 3.9 | 8.63 | 530 | | | |
| November..... | | | | | 239.7 | 26 | 2.8 | 7.99 | 475 | | | |
| December..... | | | | | 369.0 | 157 | 2.8 | 11.9 | 732 | | | |
| Calendar year 1939..... | | | | | 10,103.1 | 3,080 | 1.8 | 27.7 | 20,030 | | | |
| January..... | | | | | 3,032.9 | 1,160 | 3.3 | 97.8 | 6,020 | | | |
| February..... | | | | | 4,229.5 | 1,270 | 5 | 146 | 8,390 | | | |
| March..... | | | | | 931.0 | 773 | 2.8 | 30.0 | 1,850 | | | |
| April..... | | | | | 707.2 | 404 | 1.7 | 23.6 | 1,400 | | | |
| May..... | | | | | 168.3 | 9 | 1.3 | 5.43 | 334 | | | |
| June..... | | | | | 164.9 | 9.5 | 3.3 | 5.50 | 327 | | | |
| July..... | | | | | 191.5 | 10 | 3.9 | 6.17 | 379 | | | |
| August..... | | | | | 175.2 | 9.5 | 3.3 | 5.59 | 344 | | | |
| September..... | | | | | 165.8 | 9.5 | 2.6 | 5.53 | 329 | | | |
| Water year 1939-40..... | | | | | 10,640.2 | 1,270 | 1.3 | 29.1 | 21,110 | | | |

TOPANGA CREEK BASIN

Topanga Creek near Topanga Beach, Calif.

Location.- Water-stage recorder, lat. 34°03'50", long. 118°35'10", in Boca de Santa Monica grant, at highway bridge, 2 miles north of Topanga Beach, Los Angeles County.

Drainage area.- 17.9 square miles.

Records available.- January 1930 to September 1938, October 1939 to September 1940.

Extremes.- Maximum discharge during year, 1,280 second-feet Feb. 1 (gage height, 9.65 feet); no flow July 5 to Aug. 10, Sept. 18-30.

1930-38, 1939-40: Maximum discharge, 7,960 second-feet Mar. 2, 1938; no flow at times.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 0.1 | 0.1 | 0.1 | 0.1 | 172 | 8 | 7.5 | 0.5 | 0.2 | 0.1 | 0 | 0.1 |
| 2 | .1 | .1 | .1 | .1 | 183 | 6.5 | 3.1 | .5 | .2 | .1 | 0 | .1 |
| 3 | .1 | .1 | .1 | .1 | 116 | 5.5 | 2.6 | .4 | .2 | .1 | 0 | .1 |
| 4 | .1 | .1 | .1 | .5 | 30 | 4.4 | 2.1 | .4 | .2 | .1 | 0 | .1 |
| 5 | .1 | .1 | .1 | .2 | 21 | 3.9 | 2.0 | .4 | .2 | 0 | 0 | .1 |
| 6 | .1 | .1 | .1 | .2 | 15 | 3.4 | 1.9 | .4 | .2 | 0 | 0 | .1 |
| 7 | .1 | .1 | .1 | 3.0 | 10 | 3.2 | 1.7 | .4 | .2 | 0 | 0 | .1 |
| 8 | .1 | .1 | .1 | 54 | 6 | 2.9 | 1.6 | .4 | .2 | 0 | 0 | .1 |
| 9 | .1 | .1 | .1 | 12 | 6 | 2.7 | 1.3 | .4 | .2 | 0 | 0 | .1 |
| 10 | .1 | .1 | .1 | 12 | 5.5 | 2.4 | 1.2 | .4 | .2 | 0 | 0 | .1 |
| 11 | .1 | .1 | .1 | 7.5 | 4.4 | 2.3 | 1.1 | .4 | .2 | 0 | .1 | .1 |
| 12 | .1 | .1 | .1 | 4.9 | 3.9 | 2.0 | 1.0 | .3 | .2 | 0 | .1 | .1 |
| 13 | .1 | .1 | .1 | 3.8 | 3.7 | 1.8 | .9 | .3 | .2 | 0 | .1 | .1 |
| 14 | .1 | .1 | .1 | 2.9 | 4.6 | 1.6 | .9 | .3 | .2 | 0 | .1 | .1 |
| 15 | .1 | .1 | .1 | 2.2 | 3.1 | 1.4 | .9 | .3 | .2 | 0 | .1 | .1 |
| 16 | .1 | .1 | .1 | 1.7 | 2.4 | 1.4 | .9 | .2 | .1 | 0 | .1 | .1 |
| 17 | .1 | .1 | .1 | 1.3 | 2.1 | 1.4 | .9 | .2 | .1 | 0 | .1 | .1 |
| 18 | .1 | .1 | .1 | 1.0 | 1.9 | 1.4 | .9 | .2 | .1 | 0 | .1 | 0 |
| 19 | .1 | .1 | .1 | 1.0 | 1.9 | 1.4 | .9 | .2 | .1 | 0 | .1 | 0 |
| 20 | .1 | .1 | .1 | 1.0 | 1.7 | 1.6 | .9 | .2 | .1 | 0 | .1 | 0 |
| 21 | .1 | .1 | .1 | 1.0 | 1.7 | 1.6 | .9 | .2 | .1 | 0 | .1 | 0 |
| 22 | .1 | .1 | .1 | 1.2 | 3.0 | 1.4 | .9 | .2 | .1 | 0 | .1 | 0 |
| 23 | .1 | .1 | .5 | 15 | 2.6 | 1.3 | .8 | .2 | .1 | 0 | .1 | 0 |
| 24 | .1 | .1 | .2 | 10 | 2.1 | 1.2 | .8 | .2 | .1 | 0 | .1 | 0 |
| 25 | .1 | .1 | .1 | 3.2 | 72 | 1.1 | .9 | .2 | .1 | 0 | .1 | 0 |
| 26 | .1 | .1 | .1 | 2.9 | 26 | 1.1 | 2.8 | .2 | .1 | 0 | .1 | 0 |
| 27 | .1 | .1 | .1 | 2.5 | 15 | 1.0 | .8 | .2 | .1 | 0 | .1 | 0 |
| 28 | .1 | .1 | .1 | 2.3 | 10 | 1.0 | .7 | .2 | .1 | 0 | .1 | 0 |
| 29 | .1 | .1 | .1 | 2.0 | 12 | 1.0 | .6 | .2 | .1 | 0 | .1 | 0 |
| 30 | .1 | .1 | .1 | 1.8 | - | 1.6 | .6 | .2 | .1 | 0 | .1 | 0 |
| 31 | .1 | - | .1 | 1.8 | - | 13 | - | .2 | - | 0 | .1 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 3.1 | 0.1 | 0.1 | 0.10 | 6.1 | | | | |
| November..... | | | | 3.0 | .1 | .1 | .10 | 6.0 | | | | |
| December..... | | | | 3.6 | .5 | .1 | .12 | 7.1 | | | | |
| Calendar year | | | | - | - | - | - | - | | | | |
| January..... | | | | 153.2 | 54 | .1 | 4.94 | 304 | | | | |
| February..... | | | | 740.6 | 183 | 1.7 | 25.6 | 1,470 | | | | |
| March..... | | | | 84.4 | 13 | 1.0 | 2.72 | 187 | | | | |
| April..... | | | | 44.1 | 7.5 | .6 | 1.47 | 87 | | | | |
| May..... | | | | 9.0 | 3.9 | .2 | .29 | 18 | | | | |
| June..... | | | | 4.5 | .2 | .1 | .15 | 8.9 | | | | |
| July..... | | | | .4 | .1 | 0 | .01 | .8 | | | | |
| August..... | | | | 2.1 | .1 | 0 | .07 | 4.2 | | | | |
| September..... | | | | 1.7 | .1 | 0 | .06 | 3.4 | | | | |
| Water year 1939-40 | | | | 1,049.7 | 183 | 0 | 2.87 | 2,080 | | | | |

Malibu Creek at Crater Camp, near Calabasas, Calif.

Location.- Water-stage recorder, lat. 34°04'30", long. 118°42'10", in SW¹ sec. 18, T. 1 S., R. 17 W., a quarter of a mile downstream from Crater Camp and 6 miles southwest of Calabasas.

Drainage area.- 103 square miles.

Records available.- January 1931 to September 1940.

Extremes.- Maximum discharge during year, 690 second-feet Feb. 2 (gage height, 7.15 feet); no flow July 30 to Aug. 2, Aug. 26, 27.
1931-40: Maximum discharge, 10,000 second-feet Mar. 2, 1938 (gage height, 15.90 feet); no flow during periods in some years.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 1.1 | 0.2 | 10 | 0.6 | 246 | 31 | 15 | 5.5 | 2.5 | 0.6 | 0 | 0.4 |
| 2 | .8 | .6 | 2.9 | .4 | 335 | 32 | 10 | 4.9 | 2.5 | .4 | 0 | .4 |
| 3 | .1 | 1.1 | .8 | .6 | 294 | 30 | 9 | 4.1 | 2.1 | .4 | .1 | .4 |
| 4 | .4 | 1.1 | .6 | 2.1 | 188 | 24 | 9 | 4.1 | 2.5 | .4 | .1 | .4 |
| 5 | .4 | 1.4 | .6 | 1.7 | 86 | 23 | 8.5 | 3.7 | 2.9 | .4 | .1 | .4 |
| 6 | .4 | 1.4 | .6 | 1.4 | 56 | 21 | 8.5 | 3.3 | 2.1 | .4 | .1 | .4 |
| 7 | .5 | 1.4 | .8 | 6 | 42 | 20 | 8.5 | 3.3 | 2.1 | .4 | .1 | .6 |
| 8 | .6 | 2.1 | 1.1 | 64 | 34 | 18 | 6 | 2.9 | 2.1 | .4 | .2 | .6 |
| 9 | .4 | 2.9 | 1.1 | 51 | 27 | 17 | 6 | 3.3 | 2.0 | .4 | .2 | .4 |
| 10 | .2 | 1.7 | 1.1 | 23 | 25 | 15 | 6 | 3.7 | 1.4 | .4 | .2 | .4 |
| 11 | .4 | 1.4 | 1.7 | 41 | 23 | 15 | 5.5 | 3.3 | 1.4 | .4 | .2 | .6 |
| 12 | .4 | 1.4 | 1.4 | 17 | 20 | 14 | 4.9 | 3.3 | 1.4 | .4 | .2 | .6 |
| 13 | .4 | 1.4 | 1.4 | 12 | 19 | 13 | 4.9 | 3.3 | 1.4 | .4 | .2 | .6 |
| 14 | .4 | 1.1 | 1.4 | 9 | 30 | 12 | 4.1 | 3.3 | 1.4 | .4 | .2 | .6 |
| 15 | .4 | 1.1 | 1.1 | 6.5 | 16 | 12 | 4.9 | 3.3 | 1.4 | .4 | .2 | .6 |
| 16 | .4 | 1.1 | 1.4 | 4.9 | 10 | 11 | 4.9 | 3.3 | 1.7 | .4 | .2 | .6 |
| 17 | .2 | 1.1 | 1.4 | 4.1 | 13 | 11 | 4.9 | 2.9 | 1.4 | .4 | .2 | .6 |
| 18 | .4 | .8 | 1.4 | 2.9 | 13 | 10 | 5.5 | 2.5 | 1.4 | .4 | .1 | .6 |
| 19 | .6 | .8 | 1.4 | 2.9 | 13 | 10 | 5.5 | 1.7 | 1.9 | .4 | .1 | .4 |
| 20 | .6 | .6 | 1.4 | 2.9 | 12 | 10 | 4.9 | 1.7 | 1.4 | .4 | .1 | .2 |
| 21 | .4 | .6 | 1.4 | 2.9 | 12 | 9 | 4.9 | 1.7 | 1.1 | .2 | .2 | .2 |
| 22 | .4 | .6 | 1.7 | 3.3 | 25 | 8 | 4.9 | 1.7 | 1.1 | .2 | .2 | .2 |
| 23 | .4 | .4 | 4.0 | 18 | 38 | 8.5 | 4.9 | 2.1 | 1.1 | .2 | .2 | .2 |
| 24 | .4 | .2 | 1.7 | 25 | 9.5 | 8 | 4.9 | 2.1 | 1.4 | .1 | .1 | .2 |
| 25 | .4 | .2 | 1.4 | 7 | 56 | 7.5 | 6 | 1.7 | 1.4 | .1 | .1 | .1 |
| 26 | .4 | .4 | 1.1 | 5.5 | 62 | 8 | 10 | 1.7 | 1.1 | .1 | 0 | .1 |
| 27 | .2 | .6 | 1.4 | 4.5 | 50 | 8.5 | 9 | 1.7 | 1.1 | .1 | 0 | .1 |
| 28 | .1 | .6 | 1.4 | 4.1 | 45 | 7.5 | 7 | 1.7 | .8 | .1 | .1 | .1 |
| 29 | .1 | .6 | 1.1 | 3.7 | 46 | 7.5 | 6 | 1.7 | .8 | .1 | .2 | .1 |
| 30 | .1 | .8 | .8 | 3.3 | - | 8 | 5.5 | 1.7 | .8 | 0 | .4 | .1 |
| 31 | .1 | - | .8 | 3.3 | - | 16 | - | 2.5 | - | 0 | .4 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 12.4 | 1.1 | 0.1 | 0.40 | 25 | | |
| November..... | | | | | | 29.7 | 2.9 | .2 | .99 | 59 | | |
| December..... | | | | | | 50.4 | 10 | .6 | 1.63 | 100 | | |
| Calendar year 1939..... | | | | | | 1,756.9 | 139 | 0 | 4.81 | 3,430 | | |
| January..... | | | | | | 334.6 | 64 | .4 | 10.8 | 664 | | |
| February..... | | | | | | 1,644.5 | 335 | 9.5 | 65.6 | 3,660 | | |
| March..... | | | | | | 445.5 | 32 | 7.5 | 14.4 | 884 | | |
| April..... | | | | | | 197.6 | 15 | 4.1 | 6.59 | 392 | | |
| May..... | | | | | | 87.7 | 5.5 | 1.7 | 2.83 | 174 | | |
| June..... | | | | | | 47.7 | 2.9 | .8 | 1.59 | 95 | | |
| July..... | | | | | | 9.4 | .6 | 0 | .30 | 19 | | |
| August..... | | | | | | 4.7 | .4 | 0 | .15 | 9.3 | | |
| September..... | | | | | | 11.2 | .6 | .1 | .37 | 22 | | |
| Water year 1939-40..... | | | | | | 3,075.4 | 335 | 0 | 8.40 | 6,100 | | |

SANTA CLARA RIVER BASIN

Santa Clara River near Saugus, Calif.

Location.- Water-stage recorder, lat. 34°25'42", long. 118°35'23", in San Francisco grant, on pier of old highway bridge, 3 miles west of Saugus, Los Angeles County.

Drainage area.- 355 square miles.

Records available.- October 1929 to September 1940.

Average discharge.- 11 years, 6.93 second-feet.

Extremes.- Maximum discharge during year, 676 second-feet Feb. 1 (gage height, 6.47 feet); minimum, 0.3 second-foot Sept. 20-30.

1929-40: Maximum discharge, 24,000 second-feet Mar. 2, 1938; no flow at times in each year 1935-39.

Cooperation.- Record furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 1.2 | 1.0 | 1.6 | 1.6 | 79 | 2.4 | 4.6 | 1.6 | 1.1 | 1.1 | 0.9 | 0.4 |
| 2 | 1.2 | 1.0 | 1.4 | 1.8 | 7 | 2.6 | 2.0 | 1.6 | .9 | 1.1 | .9 | .4 |
| 3 | 1.4 | 1.0 | 1.2 | 1.6 | 36 | 2.2 | 1.8 | 1.6 | 1.1 | 1.1 | .9 | .4 |
| 4 | 1.4 | .9 | 1.1 | 2.0 | 9.5 | 2.2 | 1.8 | 1.3 | 1.6 | 1.1 | 1.3 | .4 |
| 5 | 1.4 | .9 | 1.6 | 1.4 | 5.5 | 2.2 | 1.8 | 1.3 | 1.6 | 1.1 | 1.1 | .4 |
| 6 | 1.4 | .9 | 1.4 | 1.2 | 2.2 | 2.2 | 1.8 | 1.1 | 1.6 | 1.3 | 1.1 | .4 |
| 7 | 1.2 | 1.0 | 1.4 | 1.3 | 1.8 | 2.2 | 1.8 | 1.1 | 1.3 | 1.3 | 1.1 | .4 |
| 8 | 1.2 | 1.1 | 1.4 | 19 | 2.0 | 2.2 | 1.8 | 1.1 | 1.3 | 1.6 | 1.3 | .4 |
| 9 | 1.1 | 1.0 | 1.4 | 3.2 | 2.0 | 2.2 | 1.8 | 1.1 | 1.1 | 1.6 | 1.3 | .4 |
| 10 | 1.2 | .9 | 1.4 | 2.9 | 1.8 | 2.2 | .9 | .7 | 1.1 | 1.6 | .7 | .4 |
| 11 | 1.0 | 1.0 | 1.4 | 2.2 | 1.8 | 12 | 1.3 | 1.3 | 1.1 | 1.6 | .7 | .4 |
| 12 | 1.1 | 1.0 | 1.2 | 2.2 | 2.0 | 25 | 1.8 | .7 | 1.1 | 1.3 | .5 | .4 |
| 13 | 1.1 | 1.0 | 1.2 | 2.2 | 2.0 | 24 | 1.6 | .9 | 1.1 | 1.6 | .5 | .4 |
| 14 | 1.1 | 1.0 | 1.2 | 2.2 | 2.4 | 22 | 1.3 | .9 | 1.1 | 1.6 | .5 | .4 |
| 15 | 1.1 | 1.0 | 1.2 | 2.2 | 1.6 | 11 | 2.0 | .9 | 1.1 | 1.6 | .7 | .4 |
| 16 | 1.1 | 1.0 | 1.2 | 2.2 | 1.8 | 3.4 | 1.8 | .9 | 1.3 | 1.9 | .7 | .4 |
| 17 | 1.0 | 1.1 | 1.2 | 2.5 | 1.8 | 3.4 | 1.6 | 1.1 | 1.3 | 1.6 | .7 | .4 |
| 18 | 1.0 | 1.1 | 1.2 | 2.5 | 1.6 | 3.4 | 1.6 | 1.3 | 1.1 | 1.8 | .5 | .4 |
| 19 | 1.1 | 1.1 | 1.1 | 2.7 | 1.6 | 3.0 | 1.6 | 1.3 | .9 | 1.8 | .5 | .4 |
| 20 | 1.1 | 1.1 | 1.1 | 2.7 | 1.6 | 3.0 | 1.6 | .9 | .9 | 2.0 | .5 | .3 |
| 21 | 1.0 | 1.2 | 1.2 | 2.9 | 1.8 | 3.0 | 1.6 | .9 | 1.1 | 2.0 | .5 | .3 |
| 22 | 1.1 | 1.2 | 1.2 | 3.1 | 2.0 | 3.0 | 1.8 | .9 | 1.1 | 1.6 | .5 | .3 |
| 23 | 1.0 | 1.2 | 1.8 | 13 | 2.0 | 3.0 | 2.0 | .9 | 1.1 | 1.8 | .5 | .3 |
| 24 | 1.0 | 1.2 | 1.6 | 4.8 | 2.0 | 2.6 | 1.8 | 1.1 | 1.1 | 1.8 | .5 | .3 |
| 25 | 1.0 | 1.4 | 1.6 | 1.6 | 16 | 2.6 | 1.8 | .7 | 1.3 | 1.8 | .4 | .3 |
| 26 | 1.0 | 1.4 | 1.4 | 1.4 | 8 | 2.6 | 8 | 1.1 | 1.1 | 2.2 | .4 | .3 |
| 27 | 1.0 | 1.6 | 1.4 | 1.4 | 3.0 | 2.6 | 3.9 | 1.1 | 1.3 | 2.2 | .4 | .3 |
| 28 | 1.0 | 1.6 | 1.4 | 1.2 | 2.4 | 2.4 | 2.4 | 1.1 | 1.6 | 1.6 | .4 | .3 |
| 29 | .9 | 1.6 | 1.6 | 1.1 | 4.7 | 2.4 | 2.2 | 1.3 | 1.6 | 1.3 | .4 | .3 |
| 30 | .9 | 1.6 | 1.4 | 1.0 | - | 3.0 | 1.8 | 1.1 | 1.1 | 2.0 | .4 | .3 |
| 31 | 1.0 | - | 1.4 | .8 | - | 7.5 | - | 1.1 | - | 1.3 | .4 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 34.3 | 1.4 | 0.9 | 1.11 | 68 | | |
| November..... | | | | | | 34.1 | 1.6 | .9 | 1.14 | 68 | | |
| December..... | | | | | | 41.9 | 1.8 | 1.1 | 1.35 | 83 | | |
| Calendar year 1939..... | | | | | | 4,137.1 | 82 | .8 | 11.3 | 8,210 | | |
| January..... | | | | | | 91.9 | 19 | .8 | 2.96 | 182 | | |
| February..... | | | | | | 206.9 | 79 | 1.6 | 7.13 | 410 | | |
| March..... | | | | | | 167.5 | 25 | 2.2 | 5.40 | 332 | | |
| April..... | | | | | | 63.6 | 8 | .9 | 2.12 | 126 | | |
| May..... | | | | | | 34.0 | 1.6 | .7 | 1.10 | 67 | | |
| June..... | | | | | | 36.3 | 1.8 | .9 | 1.21 | 72 | | |
| July..... | | | | | | 49.2 | 2.2 | 1.1 | 1.59 | 98 | | |
| August..... | | | | | | 21.2 | 1.3 | .4 | .68 | 42 | | |
| September..... | | | | | | 10.9 | .4 | .3 | .36 | 22 | | |
| Water year 1939-40..... | | | | | | 791.8 | 79 | .3 | 2.16 | 1,570 | | |

SANTA CLARA RIVER BASIN

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Piru Creek near Piru, Calif.

Location.- Water-stage recorder, lat. 34°25'30", long. 118°45'45", in southern part of Temescal grant, about 1½ miles northeast of Piru, Ventura County, and 2 miles upstream from mouth. Altitude of gage, about 780 feet.

Drainage area.- 432 square miles.

Records available.- October 1911 to September 1913 and October 1934 to September 1940. October 1927 to September 1934, at site at Piru, 1½ miles downstream.

Average discharge.- 13 years (1927-40), 44.6 second-feet.

Extremes.- Maximum discharge during year, 1,470 second-feet Feb. 1; minimum daily, 0.4 second-foot Aug. 14, 22, 23.

1911-13, 1927-40: Maximum discharge, 35,600 second-feet Mar. 2, 1938, by slope-area method; no flow during parts of some years.

Remarks.- Records fair. Doheny ditch diverts above station and Piru Water Co.'s ditch below.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 34 | 12 | 14 | a15 | 596 | 116 | 99 | 23 | 8.5 | 4.4 | 0.8 | 1.2 |
| 2 | 32 | 13 | 13 | a14 | 182 | 93 | 68 | 22 | 8 | 3.6 | 1.0 | 1.0 |
| 3 | 28 | 12 | 13 | a14 | 298 | 77 | 54 | 22 | 8 | 3.6 | 2.1 | 1.2 |
| 4 | 24 | 13 | 12 | a18 | 283 | 73 | 50 | 20 | 6.5 | 2.4 | 1.2 | 2.4 |
| 5 | 18 | 13 | 13 | a17 | 132 | 68 | 47 | 19 | 8.5 | 1.8 | 1.2 | 3.2 |
| 6 | 18 | 13 | 13 | a17 | 71 | a63 | 42 | 19 | 8.5 | 1.8 | 1.2 | 2.1 |
| 7 | 18 | 13 | 14 | a40 | 68 | a58 | 40 | 17 | 8 | 2.1 | .6 | 2.1 |
| 8 | 16 | 14 | 16 | 166 | 60 | 54 | 40 | 16 | 9 | 3.2 | 1.5 | 2.1 |
| 9 | 15 | 18 | 14 | 66 | 54 | 52 | 39 | 16 | 7.5 | 2.8 | 1.5 | 1.8 |
| 10 | 13 | 16 | 16 | 43 | 52 | 50 | 37 | 14 | 7.5 | 2.4 | 2.4 | 1.5 |
| 11 | 12 | 15 | 19 | 39 | 49 | 47 | 34 | 14 | 6 | 1.5 | 2.4 | 1.5 |
| 12 | 12 | 14 | 16 | 45 | 45 | 43 | 33 | 16 | 5.5 | 1.2 | 2.1 | 1.2 |
| 13 | 12 | 14 | 16 | 36 | 43 | 40 | 32 | 14 | 5 | 1.2 | .6 | 1.5 |
| 14 | 12 | 14 | 14 | a29 | 47 | 39 | 30 | 15 | 5 | 1.2 | .4 | 1.5 |
| 15 | 12 | 13 | 14 | a25 | 49 | 39 | 30 | 15 | 5 | 1.2 | .6 | a1.6 |
| 16 | 12 | 13 | 14 | a22 | 40 | 37 | 29 | 15 | 5 | 1.5 | .8 | a1.6 |
| 17 | 12 | 13 | 13 | a20 | 39 | 37 | 26 | 15 | 4.8 | 1.5 | 1.2 | a1.7 |
| 18 | 12 | 13 | 13 | a20 | 37 | 36 | 26 | 17 | 4.8 | 1.2 | .8 | a1.7 |
| 19 | 12 | 13 | 13 | a19 | a36 | 36 | 25 | 18 | 4.8 | 1.0 | .5 | a1.8 |
| 20 | 12 | 13 | 14 | a19 | a55 | 33 | 25 | 14 | 4.8 | .8 | .6 | a1.8 |
| 21 | 12 | 13 | a14 | a18 | a54 | 33 | 23 | 12 | 4.6 | .8 | .5 | a1.9 |
| 22 | 12 | 13 | a14 | a18 | 91 | 33 | 22 | 12 | 4.4 | .8 | .4 | a1.9 |
| 23 | 12 | 13 | a22 | 83 | 82 | 34 | 23 | 12 | 4.0 | .8 | .4 | a2.0 |
| 24 | 12 | 13 | a24 | 69 | 39 | 33 | 23 | 12 | 4.0 | .9 | .5 | a2.0 |
| 25 | 12 | 14 | a20 | 37 | 340 | 33 | 23 | 12 | 3.6 | 1.0 | .5 | a2.1 |
| 26 | 12 | 15 | a19 | a28 | 649 | 33 | 45 | 11 | 4.0 | 1.0 | .5 | a2.1 |
| 27 | 12 | 15 | a18 | a26 | a240 | 34 | 29 | 11 | 4.4 | .8 | .6 | a2.2 |
| 28 | 12 | 15 | a18 | a24 | a180 | 34 | 24 | 10 | 4.4 | 1.2 | .5 | a2.2 |
| 29 | 11 | 15 | a18 | a22 | 161 | 33 | 24 | 10 | 4.4 | 1.2 | .5 | a2.0 |
| 30 | 11 | 14 | a17 | a22 | - | 33 | 23 | 9 | 4.4 | 1.5 | 1.2 | a1.8 |
| 31 | 11 | - | a16 | a25 | - | 83 | - | 9 | - | .8 | 1.5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 465 | 34 | 11 | 15.0 | 922 | | |
| November..... | | | | | | 414 | 18 | 12 | 13.8 | 821 | | |
| December..... | | | | | | 482 | 24 | 12 | 16.5 | 956 | | |
| Calendar year 1939..... | | | | | | 14,221.6 | 497 | 24 | 39.0 | 28,210 | | |
| January..... | | | | | | 1,056 | 166 | 14 | 34.1 | 2,090 | | |
| February..... | | | | | | 4,032 | 649 | 34 | 139 | 8,000 | | |
| March..... | | | | | | 1,507 | 116 | 33 | 38.6 | 2,990 | | |
| April..... | | | | | | 1,065 | 99 | 22 | 35.5 | 2,110 | | |
| May..... | | | | | | 461 | 23 | 9 | 14.9 | 914 | | |
| June..... | | | | | | 173.9 | 8.5 | 3.6 | 5.80 | 345 | | |
| July..... | | | | | | 51.2 | 4.4 | .8 | 1.65 | 102 | | |
| August..... | | | | | | 30.7 | 2.4 | .4 | .99 | 61 | | |
| September..... | | | | | | 54.7 | 3.2 | 1.0 | 1.82 | 108 | | |
| Water year 1939-40..... | | | | | | 9,792.5 | 649 | .4 | 26.8 | 19,420 | | |

Peak discharge.- Jan. 7 (12 p.m.) 543 sec.-ft.; Jan. 23 (7:30 p.m.) 543 sec.-ft.; Feb. 1 (12 m.) 1,470 sec.-ft.; Feb. 3 (3:45 p.m.) 668 sec.-ft.; Feb. 26 (2:30 a.m.) 1,130 sec.-ft.

a No gage-height record; discharge computed on basis of discharge measurements, probable shape of recession curve, and records for Sespe Creek near Fillmore.

SANTA CLARA RIVER BASIN

Sespe Creek near Fillmore, Calif.

Location.- Water-stage recorder, lat. 34°26'55", long. 118°55'35", in NE $\frac{1}{4}$ sec. 12, T. 4 N., R. 20 W., 0.1 mile downstream from Little Sespe Creek and $\frac{3}{4}$ miles north of Fillmore. Altitude of gage, about 590 feet.

Drainage area.- 254 square miles.

Records available.- November 1934 to September 1940. September 1911 to September 1913 and October 1927 to November 1934 at site at Sespe, 3 miles downstream.

Average discharge.- 13 years (1927-40), 85.9 second-feet.

Extremes.- Maximum discharge during year, 4,400 second-feet Feb. 25 (gage height, 9.70 feet), from rating curve extended above 1,000 second-feet by logarithmic plotting; minimum, 0.1 second-foot Nov. 22-24. 1927-40: Maximum discharge, 56,000 second-feet Mar. 2, 1938, by slope-area method; no flow at times during most years.

Remarks.- Records good except those for periods of no gage-height record, which are fair. About 4,580 acre-feet diverted by Fillmore Irrigation Co. 1 mile above station. (See p. 117).

Revisions.- Fillmore Irrigation Co. diverted from Sespe Creek above the station about 6,630 acre-feet in 1938 and 6,290 acre-feet in 1939; these figures supersede those published in Water-Supply Papers 861 and 881 respectively.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|------|------|-----|------|------|------|-------|
| 1 | 22 | 0.2 | 1.5 | 9 | 609 | 245 | 168 | 32 | 1.0 | 0.3 | 0.2 | 0.2 |
| 2 | f20 | .2 | 1.5 | 12 | 266 | 206 | 92 | 30 | .6 | .3 | .2 | .2 |
| 3 | a18 | .2 | 1.4 | 13 | 502 | 171 | 78 | 29 | .5 | .3 | .2 | .2 |
| 4 | a17 | .2 | 1.6 | 19 | 373 | 149 | 73 | 28 | .5 | .3 | .2 | .2 |
| 5 | f16 | .2 | .6 | 19 | 160 | 130 | 66 | 27 | .5 | .3 | .2 | .2 |
| 6 | 16 | .2 | .2 | 19 | 124 | 113 | 57 | 26 | .5 | .3 | .2 | .2 |
| 7 | 18 | .2 | .9 | 146 | 94 | 100 | 53 | 24 | .5 | .3 | .2 | .2 |
| 8 | 17 | 3.5 | 1.6 | 382 | 81 | 90 | 50 | 23 | .5 | .3 | .2 | .2 |
| 9 | 13 | 9 | 1.8 | 74 | 71 | 82 | 46 | 21 | .5 | .3 | .2 | .2 |
| 10 | 11 | 8 | 2.5 | 49 | 65 | 78 | 42 | 19 | .5 | .3 | .2 | .2 |
| 11 | 9.5 | 6.5 | 12 | 49 | 60 | 71 | 40 | 16 | .4 | .3 | .2 | .2 |
| 12 | 6 | 6 | 11 | 48 | 55 | 64 | 36 | 15 | .4 | .2 | .2 | .2 |
| 13 | 4.2 | 6 | 7 | a44 | 53 | 60 | 34 | 11 | .4 | .2 | .2 | .2 |
| 14 | 4.0 | 6 | 5.5 | a40 | 65 | 60 | 34 | 7.5 | .4 | .2 | .2 | .2 |
| 15 | 4.0 | 6 | 5 | a36 | 57 | 58 | 35 | 6.5 | .4 | .2 | .2 | .2 |
| 16 | 3.8 | 6 | 5 | a32 | 51 | 57 | 34 | 5.5 | .4 | .2 | .2 | .2 |
| 17 | a1.0 | 4.2 | 5 | a30 | 47 | 57 | 32 | 5 | .4 | .2 | .2 | .2 |
| 18 | a.4 | 3.2 | 5 | a28 | 46 | 55 | 31 | 15 | .4 | .2 | .2 | .2 |
| 19 | a.3 | 3.0 | 4.8 | f27 | 45 | 53 | 30 | 24 | .4 | .2 | .2 | .2 |
| 20 | a.3 | 1.5 | 5 | 27 | 43 | 51 | 31 | 13 | .4 | .2 | .2 | .2 |
| 21 | a.3 | .2 | 4.8 | 27 | 42 | 50 | 28 | 9 | .4 | .2 | .2 | .2 |
| 22 | a.2 | .1 | 4.8 | 27 | 354 | 49 | 24 | 7.5 | .4 | .2 | .2 | .2 |
| 23 | f.2 | .1 | 20 | 109 | 352 | 46 | 24 | 6 | .4 | .2 | .2 | .2 |
| 24 | .2 | .1 | 28 | 76 | 163 | 43 | 24 | 5 | .4 | .2 | .2 | .2 |
| 25 | .2 | 1.6 | 18 | 43 | 1,530 | 43 | 24 | 4.0 | .4 | .2 | .2 | .2 |
| 26 | .2 | 3.5 | 15 | 33 | 1,160 | 43 | 90 | 3.8 | .4 | .2 | .2 | .2 |
| 27 | 8 | 1.6 | 12 | 31 | 396 | 45 | 78 | 3.8 | .4 | .2 | .2 | .2 |
| 28 | 12 | 1.5 | 6 | 29 | 294 | 43 | 60 | 4.2 | .4 | .2 | .2 | .2 |
| 29 | 7 | 1.6 | 7 | 27 | 294 | 43 | 42 | 3.3 | .4 | .2 | .2 | .2 |
| 30 | 1.8 | 1.7 | 7 | 27 | - | 41 | 36 | 2.4 | .4 | .2 | .2 | .2 |
| 31 | .3 | - | 7 | 28 | - | 166 | - | 1.9 | - | .2 | .2 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 231.9 | 22 | 0.2 | 7.48 | 460 |
| November..... | 82.3 | 9 | .1 | 2.74 | 163 |
| December..... | 210.5 | 28 | .2 | 6.79 | 418 |
| Calendar year 1939..... | 16,077.3 | 939 | .1 | 44.0 | 31,880 |
| January..... | 1,560 | 382 | 9 | 50.3 | 3,090 |
| February..... | 7,487 | 1,530 | 42 | 289 | 14,850 |
| March..... | 2,561 | 245 | 41 | 82.6 | 5,080 |
| April..... | 1,492 | 168 | 24 | 49.4 | 2,940 |
| May..... | 428.9 | 32 | 1.9 | 13.8 | 851 |
| June..... | 13.6 | 1.0 | .4 | .45 | 27 |
| July..... | 7.3 | .3 | .2 | .24 | 14 |
| August..... | 6.2 | .2 | .2 | .20 | 12 |
| September..... | 6.0 | .2 | .2 | .20 | 12 |
| Water year 1939-40..... | 14,076.7 | 1,530 | .1 | 38.5 | 27,920 |

Peak discharge.- Jan. 7 (11 p.m.) 1,230 sec.-ft.; Jan. 23 (6:20 p.m.) 406 sec.-ft.; Feb. 1 (12 m.) 1,440 sec.-ft.; Feb. 3 (2 p.m.) 1,880 sec.-ft.; Feb. 22 (2:30 p.m.) 952 sec.-ft.; Feb. 25 (4 p.m.) 4,400 sec.-ft.

a No gage-height record; discharge computed on basis of probable shape of recession curve.

f Discharge computed from partly estimated gage-height record.

Fillmore Irrigation Co.'s canal near Fillmore, Calif.

Location.- Staff gage, lat. 34°27'15", long. 118°55'35", in SE $\frac{1}{4}$ sec. 1, T. 4 N., R. 20 W., 4 miles north-northwest of Fillmore. Altitude of gage, about 660 feet.

Records available.- October 1927 to September 1932 (monthly figures only), October 1935 to September 1939 (annual figures only), and October 1939 to September 1940.

Average discharge.- 10 years, 5.39 second-feet.

Remarks.- Records good. Staff gage read once daily. Canal diverts from Sespe Creek in SE $\frac{1}{4}$ sec. 1, T. 4 N., R. 20 W., 1 mile above gaging station on Sespe Creek near Fillmore.

Cooperation.- Gage-height record furnished by Fillmore Irrigation Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 2.5 | 3.6 | 15 | 7 | 4.6 | 4.2 |
| 2 | | | | | | | 2.2 | 3.1 | 15 | 7 | 5 | 4.1 |
| 3 | | | | | | | 2.0 | 3.1 | 15 | 7 | 5 | 4.1 |
| 4 | | | | | | | 1.6 | 3.4 | 15 | 7 | 4.8 | 4.1 |
| 5 | | | | | | | 1.9 | 3.4 | 15 | 7 | 5 | 4.1 |
| 6 | | | | | | | 1.9 | 3.6 | 14 | 6 | 4.8 | 4.1 |
| 7 | | | | | | | 1.7 | 3.6 | 14 | 6 | 4.8 | 4.1 |
| 8 | | | | | | | 1.7 | 4.2 | 14 | 5.5 | 4.6 | 4.1 |
| 9 | | | | | | | 2.0 | 4.8 | 13 | 5 | 4.6 | 4.1 |
| 10 | | | | | | | 1.9 | 3.9 | 13 | 5.5 | 4.6 | 4.1 |
| 11 | | | | | | | 1.9 | 9 | 12 | 5.5 | 4.6 | 4.1 |
| 12 | | | | | | | 2.8 | 11 | 12 | 5 | 4.6 | 4.1 |
| 13 | | | | | | | 2.8 | 14 | 10 | 4.8 | 4.6 | 4.1 |
| 14 | | | | | | | 3.4 | 14 | 10 | 4.8 | 4.6 | 4.1 |
| 15 | | | | | | | 3.1 | 14 | 10 | 4.8 | 4.2 | 4.1 |
| 16 | | | | | | | 6 | 14 | 10 | 5 | 4.2 | 4.4 |
| 17 | | | | | | | 5.5 | 15 | 10 | 5 | 4.2 | 4.4 |
| 18 | | | | | | | 5.5 | 15 | 9.5 | 5.5 | 4.2 | 4.4 |
| 19 | | | | | | | 6 | 15 | 9.5 | 5.5 | 4.2 | 4.4 |
| 20 | | | | | | | 6 | 14 | 9.5 | 5 | 4.2 | 4.4 |
| 21 | | | | | | | 9 | 14 | 8.5 | 5.5 | 4.2 | 4.4 |
| 22 | | | | | | | 10 | 15 | 8 | 5 | 4.2 | 4.4 |
| 23 | | | | | | | 8 | 15 | 8 | 5 | 4.6 | 4.4 |
| 24 | | | | | | | 8 | 15 | 8 | 4.4 | 4.6 | 4.4 |
| 25 | | | | | | | 3.6 | 16 | 8 | 4.4 | 4.6 | 4.4 |
| 26 | | | | | | | 6 | 15 | 7.5 | 4.4 | 4.6 | 4.4 |
| 27 | | | | | | | 1.3 | 16 | 7.5 | 5 | 4.6 | 4.4 |
| 28 | | | | | | | 1.3 | 15 | 7 | 5.5 | 4.2 | 4.4 |
| 29 | | | | | | | 2.5 | 16 | 7 | 5 | 4.6 | 4.4 |
| 30 | | | | | | | 2.5 | 16 | 7 | 5 | 4.6 | 4.4 |
| 31 | | | | | | | - | 15 | - | 5 | 4.2 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 273.5 | - | - | 8.82 | 542 | | |
| November..... | | | | | | 371 | - | - | 12.4 | 756 | | |
| December..... | | | | | | 326.0 | - | - | 10.5 | 647 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 48.5 | - | - | 1.56 | 96 | | |
| February..... | | | | | | 29 | - | - | 1.0 | 58 | | |
| March..... | | | | | | 51.5 | - | - | 1.66 | 102 | | |
| April..... | | | | | | 114.6 | 10 | 1.3 | 5.82 | 227 | | |
| May..... | | | | | | 339.7 | 16 | 3.1 | 11.0 | 674 | | |
| June..... | | | | | | 322.0 | 15 | 7 | 10.7 | 639 | | |
| July..... | | | | | | 168.1 | 7 | 4.4 | 5.42 | 333 | | |
| August..... | | | | | | 140.4 | 5 | 4.2 | 4.53 | 278 | | |
| September..... | | | | | | 127.6 | 4.4 | 4.1 | 4.25 | 253 | | |
| Water year 1939-40..... | | | | | | 2,311.9 | - | - | 6.32 | 4,580 | | |

Note.- Monthly discharge October to March computed on basis of discharge measurements and changes in flow as indicated by Sespe Creek recorder graph.

Location.— Water-stage recorder, lat. 34°23'40", long. 119°04'35", near east boundary of Ex Mission San Buenaventura grant, 50 feet upstream from Santa Paula Water Works diversion dam and about 3 miles north of Santa Paula, Ventura County. Altitude of gage, about 650 feet.

Records available.— October 1927 to September 1940. April 1912 to September 1913, at site about 2½ miles upstream. October 1927 to February 1931, at site 500 feet downstream, below diversion of Santa Paula Water Works.

Extremes.— Maximum discharge during year, 364 second-feet Feb. 25 (gage height, 3.34 feet); minimum, 0.2 second-foot Sept. 2.
1927-40: Maximum discharge, 13,500 second-feet Mar. 2, 1938 (gage height, 10.56 feet), by slope-area method; minimum, that of Sept. 2, 1940.

Remarks.- Records good except those for periods of no gage-height record, which are fair.
About 346 acre-feet diverted above station during year.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 7 | 3.0 | 3.8 | 3.5 | 74 | 18 | a30 | 6.5 | 3.3 | 3.5 | 1.0 | 0.9 |
| 2 | 6 | 3.5 | 3.8 | 3.3 | 20 | a17 | f13 | 6 | 3.3 | 2.3 | .9 | .6 |
| 3 | 6 | 3.5 | 3.8 | 3.4 | 76 | a16 | 10 | 5.5 | 3.5 | 2.5 | 1.0 | .6 |
| 4 | 5.5 | 3.6 | 3.8 | 4.3 | 47 | a16 | 12 | 5.5 | 4.7 | 2.5 | .9 | .5 |
| 5 | 5 | 3.5 | 3.8 | 3.6 | 27 | a15 | 14 | 5.5 | 4.7 | 2.6 | 1.1 | 1.2 |
| 6 | 5.5 | 3.4 | 3.8 | 3.7 | 24 | a15 | 11 | 5.5 | 4.5 | 1.9 | 1.1 | 1.4 |
| 7 | 6 | 2.4 | 3.8 | 10 | 21 | a14 | 11 | 5.5 | 4.5 | 1.9 | 1.2 | 1.2 |
| 8 | 4.8 | 3.1 | 4.0 | 30 | 16 | a14 | 11 | 5.5 | 3.1 | 1.5 | 1.8 | 1.5 |
| 9 | 3.7 | 3.6 | 4.1 | 15 | 13 | a14 | 9 | 5.5 | 2.6 | 1.6 | 1.9 | 1.2 |
| 10 | 3.0 | 3.5 | 4.1 | 15 | 12 | a14 | 8 | 5 | 3.1 | 1.2 | 1.2 | .9 |
| 11 | 3.0 | 3.5 | 4.6 | 15 | 11 | f14 | 7.5 | 4.9 | 3.3 | 1.0 | 1.6 | 1.5 |
| 12 | 2.4 | 3.5 | 3.4 | 14 | 11 | 13 | 7 | 5.5 | 3.3 | 1.9 | 1.1 | 1.1 |
| 13 | 2.1 | 3.5 | 3.2 | 11 | 10 | 13 | 7 | 7 | 3.5 | .8 | 1.8 | 1.4 |
| 14 | 3.2 | 3.6 | 2.7 | 9.5 | 13 | 13 | 7 | 4.7 | 3.7 | .6 | 1.2 | 1.4 |
| 15 | 3.4 | 3.5 | 2.2 | 8.5 | 11 | 12 | 7 | 4.3 | 3.7 | 1.1 | 1.2 | 1.6 |
| 16 | 3.6 | 3.4 | 2.2 | 8.5 | 10 | 12 | 7 | 4.7 | 5 | .8 | 1.5 | 2.2 |
| 17 | 3.2 | 2.8 | 3.6 | 7.5 | 9.5 | 12 | 6.5 | 5 | 3.5 | .8 | 1.6 | 1.5 |
| 18 | 3.0 | 2.3 | 3.4 | 7.5 | 9.5 | 11 | 6 | 5.5 | 3.5 | .9 | 1.4 | 1.5 |
| 19 | 2.3 | 2.1 | 3.8 | 7.5 | 9.5 | 11 | 6 | 6 | 3.7 | 1.1 | 1.2 | 1.8 |
| 20 | 1.3 | 1.9 | 3.4 | 8.5 | 9.5 | 10 | 6 | 5.5 | 3.7 | 1.1 | .8 | 2.3 |
| 21 | 1.0 | 2.0 | 2.0 | 10 | 9.5 | 9.5 | 6 | 5.5 | 3.5 | 1.1 | 1.0 | 2.3 |
| 22 | .9 | 2.0 | 2.1 | 11 | 41 | 9 | 6.5 | 5.5 | 3.3 | .8 | 1.1 | 2.3 |
| 23 | 1.1 | 2.3 | 4.6 | 16 | 40 | 9 | 6 | 5.5 | 3.3 | .6 | 1.4 | 1.9 |
| 24 | 1.8 | 3.3 | 4.6 | 8.5 | 32 | 8.5 | 7 | 5 | 3.1 | .6 | 1.5 | 1.2 |
| 25 | 2.1 | 4.2 | 4.3 | 7 | 151 | 8.5 | 8.5 | 5 | 2.5 | .9 | 1.5 | 1.1 |
| 26 | 3.1 | 4.2 | 4.3 | 8 | 131 | 9 | 33 | 6 | 3.0 | .8 | 1.5 | 1.4 |
| 27 | 3.3 | 4.3 | 4.1 | 9 | 50 | f10 | 15 | 6.5 | 3.0 | 2.0 | 1.6 | 1.4 |
| 28 | 3.1 | 4.6 | 4.0 | 9.5 | 30 | a9.5 | 10 | 5 | 3.1 | 3.0 | .9 | 1.1 |
| 29 | 3.1 | 4.1 | 4.0 | 9.5 | 35 | a9.5 | 8 | 4.9 | 3.3 | 2.0 | .9 | 1.8 |
| 30 | 3.0 | 3.7 | 3.8 | 9.5 | - | a9 | 6.5 | 3.9 | 3.5 | 1.7 | .9 | 2.0 |
| 31 | 2.5 | - | 3.7 | 14 | - | a35 | - | 3.7 | - | 1.5 | .9 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------------|------------------|---------|---------|------|----------------------|
| October..... | 105.0 | 7 | 0.9 | 3.39 | 208 |
| November..... | 97.9 | 4.6 | 1.9 | 3.26 | 194 |
| December..... | 112.8 | 4.6 | 2.0 | 3.64 | 224 |
| Calendar year 1939 | 3,354.0 | 134 | .9 | 9.19 | 8,640 |
| January..... | 301.3 | 30 | 3.3 | 9.72 | 598 |
| February..... | 953.5 | 151 | 9.5 | 32.9 | 1,890 |
| March..... | 400.5 | 35 | 9.5 | 12.9 | 764 |
| April..... | 302.5 | 33 | 6 | 10.1 | 600 |
| May..... | 165.6 | 7 | 3.7 | 5.34 | 328 |
| June..... | 105.8 | 5 | 2.5 | 3.63 | 210 |
| July..... | 45.5 | 3.5 | .6 | 1.47 | 90 |
| August..... | 39.5 | 1.9 | .8 | 1.27 | 78 |
| September..... | 43.5 | 2.3 | .5 | 1.45 | 86 |
| Water year 1939-40..... | 2,673.4 | 151 | .5 | 7.30 | 5,300 |

Peak discharge.- Jan. 8 (1:45 a.m.) 90 sec.-ft.; Feb. 1 (11:45 a.m.) 208 sec.-ft.; Feb. 3 (2 p.m.) 287 sec.-ft.; Feb. 22 (4 p.m.) 104 sec.-ft.; Feb. 25 (4 p.m.) 364 sec.-ft.
a No gage-height record; discharge computed on basis of rainfall records and records for Bespe Creek near Fillmore.
f Discharge computed on basis of partly estimated gage-height record.

Matilija Creek at Matilija, Calif.

Location.- Water-stage recorder, lat. 34°28'50", long. 119°18'06", in SW¼ sec. 28, T. 5 N., R. 23 W., 0.1 mile southeast of Matilija. Altitude of gage, about 950 feet.

Drainage area.- 55 square miles.

Records available.- October 1927 to September 1940.

Average discharge.- 13 years, 26.9 second-feet.

Extremes.- Maximum discharge during year, 792 second-feet Feb. 25 (gage height, 5.12 feet) from rating curve extended above 200 second-feet on basis of velocity-mean depth relation; minimum, 0.5 second-foot Sept. 27 (gage height, 1.97 feet).
1927-40: Maximum discharge, 15,900 second-feet Mar. 2, 1938, by slope-area method; minimum, 0.4 second-foot Oct. 28, 1930.

Remarks.- Records good. No diversions above station.

Cooperation.- Results of four discharge measurements furnished by Ventura County Water Survey.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 7 | 5.5 | 6 | 7 | 49 | 62 | 29 | 10 | 6.5 | 3.5 | 2.3 | 1.9 |
| 2 | 7 | 5 | 6 | 6.5 | 34 | 53 | 22 | 10 | 6.5 | 3.8 | 2.3 | 2.1 |
| 3 | 7 | 5 | 6 | 6.5 | 80 | 50 | 21 | 10 | 6.5 | 3.5 | 2.3 | 2.1 |
| 4 | 6.5 | 5 | 6 | 8.5 | 60 | 45 | 20 | 10 | 6.5 | 3.5 | 2.3 | 2.1 |
| 5 | 6.5 | 5 | 6 | 8 | 35 | 41 | 18 | 9.5 | 6.5 | 3.5 | 2.5 | 2.1 |
| 6 | 6.5 | 5 | 6 | 8 | 29 | 38 | 16 | 10 | 6.5 | 3.2 | 2.5 | 2.3 |
| 7 | 7 | 5 | 6 | 15 | 24 | 36 | 16 | 9.5 | 6.5 | 3.2 | 2.5 | 2.1 |
| 8 | 6.5 | 5 | 6 | 29 | 22 | 34 | 15 | 9 | 6.5 | 3.2 | 2.5 | 2.1 |
| 9 | 6 | 5.5 | 6 | 17 | 21 | 31 | 15 | 8.5 | 6 | 3.0 | 2.5 | 2.1 |
| 10 | 6 | 5.5 | 6.5 | 17 | 20 | 30 | 14 | 8.5 | 6 | 2.7 | 2.3 | 1.9 |
| 11 | 6 | 5.5 | 7 | 22 | 17 | 29 | 14 | 8.5 | 6 | 2.7 | 2.3 | 1.9 |
| 12 | 5 | 5.5 | 6.5 | 17 | 16 | 27 | 14 | 8.5 | 5.5 | 2.7 | 2.3 | 2.1 |
| 13 | 5 | 5.5 | 6 | 15 | 17 | 26 | 14 | 8.5 | 5 | 2.7 | 2.1 | 2.1 |
| 14 | 5 | 5.5 | 6 | 13 | 20 | 25 | 14 | 8 | 5 | 2.7 | 2.1 | 2.3 |
| 15 | 5 | 5.5 | 6.5 | 12 | 17 | 24 | 14 | 8 | 4.8 | 3.0 | 2.1 | 2.3 |
| 16 | 5 | 5.5 | 6 | 12 | 15 | 24 | 14 | 7.5 | 4.8 | 3.0 | 2.5 | 2.5 |
| 17 | 5 | 5.5 | 6 | 12 | 15 | 24 | 13 | 8.5 | 4.6 | 3.0 | 2.1 | 2.1 |
| 18 | 5 | 5.5 | 6.5 | 12 | 15 | 22 | 13 | 9 | 4.3 | 3.0 | 2.1 | 2.1 |
| 19 | 5 | 5.5 | 6.5 | 11 | 15 | 22 | 12 | 8.5 | 4.3 | 3.0 | 2.1 | 2.1 |
| 20 | 5 | 5.5 | 6.5 | 10 | 14 | 22 | 12 | 8 | 4.3 | 2.7 | 1.7 | 2.1 |
| 21 | 4.7 | 5.5 | 6.5 | 9.5 | 13 | 21 | 12 | 8 | 4.3 | 2.7 | 1.3 | 2.1 |
| 22 | 4.7 | 5.5 | 6.5 | 9.5 | 58 | 20 | 12 | 8 | 4.3 | 2.5 | 1.7 | 1.9 |
| 23 | 5 | 5.5 | 8 | 17 | 44 | 18 | 12 | 8 | 4.3 | 2.5 | 1.9 | 1.9 |
| 24 | 5 | 5.5 | 8 | 15 | 29 | 18 | 12 | 7.5 | 4.3 | 2.3 | 1.9 | 1.9 |
| 25 | 5 | 5.5 | 7 | 12 | 255 | 17 | 12 | 7.5 | 4.3 | 2.3 | 2.1 | 1.9 |
| 26 | 5 | 5.5 | 7 | 11 | 192 | 17 | 20 | 7.5 | 4.3 | 2.3 | 2.1 | 1.9 |
| 27 | 5 | 6 | 7 | 10 | 96 | 17 | 15 | 8 | 3.8 | 2.3 | 1.9 | 1.5 |
| 28 | 5 | 6 | 7 | 10 | 78 | 17 | 13 | 8.5 | 4.0 | 2.5 | 2.1 | 1.7 |
| 29 | 5 | 6 | 7 | 10 | 80 | 16 | 12 | 8 | 3.8 | 2.5 | 1.9 | 1.7 |
| 30 | 5 | 6 | 7 | 10 | - | 17 | 11 | 7 | 3.8 | 2.5 | 1.9 | 1.9 |
| 31 | 5 | - | 6.5 | 11 | - | 41 | - | 7 | - | 2.3 | 1.7 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 171.4 | 7 | 4.7 | 5.53 | 340 | | | |
| November..... | | | | | 163.5 | 6 | 5 | 5.45 | 324 | | | |
| December..... | | | | | 201.5 | 8 | 6 | 6.50 | 400 | | | |
| Calendar year 1939..... | | | | | 5,548.8 | 207 | 4.0 | 15.2 | 11,020 | | | |
| January..... | | | | | 383.5 | 29 | 6.5 | 12.4 | 761 | | | |
| February..... | | | | | 1,380 | 255 | 13 | 47.6 | 2,740 | | | |
| March..... | | | | | 884 | 62 | 16 | 28.6 | 1,760 | | | |
| April..... | | | | | 451 | 29 | 11 | 15.0 | 895 | | | |
| May..... | | | | | 253.0 | 10 | 7 | 8.48 | 522 | | | |
| June..... | | | | | 154.1 | 6.5 | 3.8 | 5.14 | 306 | | | |
| July..... | | | | | 88.9 | 3.8 | 2.3 | 2.87 | 176 | | | |
| August..... | | | | | 65.9 | 2.5 | 1.3 | 2.13 | 131 | | | |
| September..... | | | | | 60.8 | 2.5 | 1.5 | 2.03 | 121 | | | |
| Water year 1939-40..... | | | | | 4,267.6 | 255 | 1.3 | 11.7 | 8,470 | | | |

Peak discharge.- Feb. 1 (3 p.m.) 78 sec.-ft.; Feb. 3 (5 p.m.) 164 sec.-ft.; Feb. 22 (6 p.m.) 132 sec.-ft.; Feb. 25 (4 p.m.) 792 sec.-ft.

Ventura River near Ventura, Calif.

Location.- Water-stage recorder, lat. 34°20'55", long. 119°18'20", in southeast corner of Santa Ana grant, at highway bridge at entrance to Foster Memorial Park, a quarter of a mile downstream from Ventura diversion dam and Coyote Creek and 5 miles north of Ventura, Ventura County. Altitude of gage, about 210 feet.

Drainage area.- 187 square miles.

Records available.- September 1911 to January 1914, October 1929 to September 1940.

Average discharge.- 13 years (1911-13, 1929-40), 55.7 second-feet.

Extremes.- Maximum discharge during year, 4,330 second-feet Feb. 25 (gage height, 6.98 feet) from rating curve extended above 200 second-feet on basis of shape of previous high-water curve; no flow for several periods.

1911-13, 1929-40: Maximum discharge, 39,200 second-feet Mar. 2, 1938, by slope-area and contracted-opening methods; no flow for periods in each year except 1937-39.

Remarks.- Records good Jan. 8 to Apr. 30 and fair the remainder of the year. Water diverted from Ventura River and tributaries for irrigation and municipal supply.

Cooperation.- Results of eight discharge measurements furnished by Ventura County Water Survey.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|------|------|-----|------|------|------|-------|
| 1 | 4.5 | | 0 | 0.1 | 90 | 93 | 62 | 8.5 | 9.5 | 6 | 0.3 | 0 |
| 2 | 4.3 | | 0 | .1 | 52 | 82 | 36 | 9.5 | 6.5 | 5.5 | .2 | 0 |
| 3 | 3.2 | | 0 | .1 | 142 | 71 | 30 | 12 | 3.9 | 2.4 | .1 | .3 |
| 4 | 3.2 | | 0 | 1.0 | 122 | 58 | 30 | 10 | 6 | 2.0 | 1.0 | .5 |
| 5 | 3.3 | | 0 | .7 | 62 | 52 | 34 | 9 | 5.5 | 1.8 | 3.9 | .5 |
| 6 | 3.2 | | 0 | .8 | 41 | 48 | 30 | 9 | 5 | 2.6 | 1.8 | .3 |
| 7 | 3.2 | | 0 | 1.5 | 25 | 43 | 26 | 8 | 5.5 | 2.5 | .2 | .3 |
| 8 | 2.9 | | 0 | 19 | 23 | 39 | 22 | 9.5 | 4.6 | 4.4 | .1 | .3 |
| 9 | 2.5 | | 0 | 9 | 22 | 38 | 20 | 10 | 4.6 | 2.8 | .1 | .3 |
| 10 | 2.0 | | 0 | 2.9 | 22 | 33 | 18 | 7.5 | 7 | 2.6 | .2 | .2 |
| 11 | 1.5 | | 0 | 9 | 22 | 33 | 14 | 7.5 | 4.9 | 2.8 | .2 | .2 |
| 12 | 1.2 | | 0 | 4.8 | 21 | 33 | 13 | 9.5 | 3.2 | .8 | .2 | .2 |
| 13 | 1.0 | | 0 | 1.9 | 20 | 30 | 12 | 11 | 2.8 | .8 | .2 | .2 |
| 14 | .8 | | 0 | 1.2 | 28 | 28 | 9.5 | 9.5 | 5 | 1.0 | .1 | .2 |
| 15 | .6 | | 0 | 2.2 | 28 | 25 | 8.5 | 8.5 | 4.9 | 1.6 | .1 | .1 |
| 16 | .4 | | 0 | 1.4 | 22 | 23 | 8 | 9.5 | 8 | 1.1 | 0 | .1 |
| 17 | .2 | | .1 | .8 | 22 | 23 | 6.5 | 10 | 6.5 | .6 | 0 | .1 |
| 18 | .1 | | .1 | .8 | 16 | 23 | 9.5 | 10 | 4.6 | .3 | 0 | .1 |
| 19 | 0 | | .1 | .8 | 14 | 21 | 9.5 | 9 | 3.7 | .2 | 0 | .1 |
| 20 | 0 | | .1 | .7 | 14 | 20 | 8.5 | 8.5 | 3.7 | .3 | .3 | .1 |
| 21 | 0 | | .1 | .6 | 15 | 20 | 8.5 | 10 | 2.8 | .3 | .4 | .1 |
| 22 | 0 | | .1 | .7 | 45 | 20 | 9.5 | 10 | 2.4 | .2 | .4 | .1 |
| 23 | 0 | | .4 | 1.9 | 85 | 17 | 11 | 9.5 | .3 | .3 | .3 | 0 |
| 24 | 0 | | .3 | 14 | 56 | 18 | 14 | 10 | 8.5 | .2 | .2 | 0 |
| 25 | 0 | | .2 | 4.3 | 1,180 | 18 | 14 | 11 | 6 | .2 | .2 | 0 |
| 26 | 0 | | .2 | 2.9 | 596 | 18 | 39 | 9 | 1.6 | .4 | .1 | 0 |
| 27 | 0 | | .1 | 3.2 | 188 | 20 | 26 | 8 | 1.8 | .7 | 0 | 0 |
| 28 | 0 | | .1 | 3.2 | 122 | 18 | 11 | 11 | 6 | 2.0 | 0 | 0 |
| 29 | 0 | | .1 | 2.5 | 137 | 14 | 10 | 10 | 8 | 3.7 | 0 | 0 |
| 30 | 0 | | .1 | 2.2 | - | 12 | 9.5 | 9 | 6 | 3.7 | 0 | 0 |
| 31 | 0 | | .1 | 4.7 | - | 78 | - | 9 | - | .7 | 0 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 38.1 | 4.5 | 0 | 1.23 | 76 |
| November..... | 0 | 0 | 0 | 0 | 0 |
| December..... | 2.2 | .4 | 0 | .07 | 4.4 |
| Calendar year 1939..... | 7,128.1 | 642 | 0 | 19.5 | 14,140 |
| January..... | 99.0 | 19 | .1 | 3.19 | 196 |
| February..... | 3,232 | 1,180 | 14 | 112 | 6,410 |
| March..... | 1,069 | 93 | 12 | 34.5 | 2,180 |
| April..... | 559.5 | 62 | 6.5 | 18.6 | 1,110 |
| May..... | 292.5 | 12 | 7.5 | 9.44 | 580 |
| June..... | 154.5 | 9.5 | 1.6 | 5.15 | 306 |
| July..... | 54.5 | 6 | .2 | 1.76 | 108 |
| August..... | 10.6 | 3.9 | 0 | .34 | 21 |
| September..... | 4.3 | .5 | 0 | .14 | 8.5 |
| Water year 1939-40..... | 5,516.2 | 1,180 | 0 | 15.1 | 10,940 |

Peak discharge.- Feb. 1 (12 m.) 188 sec.-ft.; Feb. 3 (5 p.m.) 346 sec.-ft.; Feb. 25 (5:45 p.m.) 4,330 sec.-ft.

Note.- Discharge during periods of doubtful or no gage-height record computed on following bases: Oct. 4 to 6, one measurement and interpolation; Oct. 9 to 23, probable shape of recession curve and field estimate of no flow on Oct. 23; Oct. 24 to Jan. 7, on basis of several field estimates, two measurements, and records for Coyote Creek near Ventura; Aug. 9 to 15, one field estimate and report of no flow prior to rise of Aug. 20.

Coyote Creek near Ventura, Calif.

Location.- Water-stage recorder, lat. 34°21'20", long. 119°18'50", near southeast corner of Santa Ana grant, 200 feet downstream from highway bridge, half a mile upstream from Ventura River, and 5½ miles northwest of Ventura, Ventura County.

Drainage area.- 41.1 square miles.

Records available.- October 1927 to September 1932, October 1933 to September 1940.

Average discharge.- 12 years, 11.0 second-feet.

Extremes.- Maximum discharge during year, 1,220 second-feet Feb. 25 (gage height, 5.39 feet), from rating curve extended above 530 second-feet; minimum, less than 0.1 second-foot on many days.

1927-32, 1933-40: Maximum discharge, 11,500 second-feet Mar. 2, 1938, by slope-area method; no flow Aug. 19 to Sept. 18, 1929.

Remarks.- Records good.

Cooperation.- Results of six discharge measurements furnished by Ventura County Water Survey.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | - | - | 0.1 | 0.1 | 11 | 21 | 12 | 1.9 | 0.8 | 0.3 | | |
| 2 | - | - | - | - | 9 | 17 | 7 | 1.7 | .8 | .3 | | |
| 3 | - | - | - | .2 | 74 | 15 | 5.5 | 1.7 | .8 | .5 | | |
| 4 | - | - | - | .3 | 32 | 13 | 4.7 | 1.7 | .8 | .3 | | |
| 5 | - | - | - | .2 | 14 | 11 | 5 | 1.6 | .9 | .3 | | |
| 6 | - | - | - | .2 | 9.5 | 10 | 4.0 | 1.6 | .7 | .3 | | |
| 7 | 0.1 | - | - | .8 | 6.5 | 9.5 | 3.6 | 1.6 | .7 | .3 | | |
| 8 | - | - | - | .5 | 5.5 | 9 | 3.1 | 1.4 | .7 | .3 | | |
| 9 | .1 | 0.1 | - | .4 | 4.3 | 88.5 | 2.6 | 1.2 | .6 | .3 | | |
| 10 | - | - | .1 | .7 | 3.8 | 88 | 2.3 | 1.3 | .6 | .5 | | |
| 11 | - | - | .2 | .6 | 3.8 | 7.5 | 2.1 | 1.2 | .5 | .3 | | |
| 12 | - | - | .1 | .4 | 3.6 | 6.5 | 1.7 | 1.2 | .4 | .3 | | |
| 13 | - | - | .1 | .3 | 3.4 | 6.5 | 1.5 | 1.2 | .4 | .3 | | |
| 14 | - | .1 | .1 | .3 | 6 | 6 | 1.9 | 1.2 | .4 | .3 | | |
| 15 | - | .1 | .1 | .3 | 5 | 6 | 1.7 | 1.2 | .4 | .3 | | |
| 16 | - | .1 | .1 | .3 | 4.5 | 6 | 1.6 | 1.1 | .4 | .2 | | |
| 17 | - | - | .1 | .3 | 3.6 | 6 | 1.7 | 1.1 | .4 | .2 | | |
| 18 | - | - | .1 | .3 | 3.4 | 6 | 1.5 | 1.1 | .5 | .2 | | |
| 19 | - | - | .1 | .3 | 3.2 | 6 | 1.5 | 1.0 | .5 | .2 | | |
| 20 | - | - | .1 | .3 | 3.1 | 5.5 | 1.5 | 1.1 | .4 | .2 | | |
| 21 | - | - | .2 | .2 | 3.1 | 5 | 1.6 | 1.0 | .4 | .2 | | |
| 22 | - | - | .2 | .2 | 12 | 4.7 | 1.7 | .8 | .4 | .2 | | |
| 23 | - | - | .4 | .4 | 20 | 4.3 | 1.6 | .8 | .4 | .1 | | |
| 24 | - | - | .2 | .3 | 9.5 | 4.5 | 1.6 | .9 | .4 | .1 | | |
| 25 | - | - | .2 | .3 | 284 | 4.5 | 1.8 | .9 | .3 | .1 | | |
| 26 | - | - | .2 | .3 | 148 | 4.7 | 5 | 1.0 | .3 | .2 | | |
| 27 | - | - | .2 | .3 | 57 | 4.7 | 4.7 | 1.1 | .3 | .2 | | |
| 28 | - | - | .2 | .3 | 33 | 4.5 | 3.2 | .9 | .3 | .2 | | |
| 29 | - | - | .2 | .3 | 33 | 4.0 | 2.8 | .8 | .3 | .1 | | |
| 30 | - | - | .2 | .3 | - | 4.5 | 2.3 | .7 | .3 | - | | |
| 31 | - | - | .2 | .4 | - | 14 | - | .7 | - | - | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 1.37 | - | - | 0.044 | 2.7 | | |
| November..... | | | | | | 2.07 | - | - | .069 | 4.1 | | |
| December..... | | | | | | 4.25 | - | - | .137 | 8.4 | | |
| Calendar year 1939..... | | | | | | 1,258.29 | 144 | - | 3.45 | 2,490 | | |
| January..... | | | | | | 10.2 | .8 | 0.1 | .33 | 20 | | |
| February..... | | | | | | 908.8 | 284 | 3.1 | 27.9 | 1,600 | | |
| March..... | | | | | | 243.4 | 21 | 4.0 | 7.85 | 483 | | |
| April..... | | | | | | 92.8 | 12 | 1.5 | 3.09 | 184 | | |
| May..... | | | | | | 36.7 | 1.9 | .7 | 1.18 | 73 | | |
| June..... | | | | | | 15.0 | .9 | .3 | .50 | 30 | | |
| July..... | | | | | | 7.06 | .3 | - | .228 | 14 | | |
| August..... | | | | | | 2.48 | - | - | .080 | 4.9 | | |
| September..... | | | | | | 2.25 | - | - | .075 | 4.5 | | |
| Water year 1939-40..... | | | | | | 1,226.38 | 284 | - | 3.35 | 2,430 | | |

Peak discharge.- Feb. 3 (3 p.m.) 240 sec.-ft.; Feb. 25 (4 p.m.) 1,220 sec.-ft.

a No gage-height record; discharge interpolated.

Note.- Discharge less than 0.1 second-foot on days for which no figures are shown.

Santa Ynez River at Jameson Lake, near Montecito, Calif.

Location.- Water-stage recorder, lat. $34^{\circ}29'30''$, long. $119^{\circ}30'50''$, in sec. 28, T. 5 N., R. 25 W., at Juncal Dam, 8.5 miles northeast of Montecito. Altitude of gage, about 1,950 feet.

Records available.- December 1930 to September 1940.

Remarks.- During year Montecito County Water District diverted 1,400 acre-feet from Jameson Lake for municipal supply of city of Montecito.

Cooperation.- Records furnished by Montecito County Water District.

Discharge, in second-feet, water year October 1939 to September 1940

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|---------|---------|------|----------------------|
| October..... | 0.7 | 0.3 | 0.36 | 22 |
| November..... | 1.0 | .3 | .39 | 23 |
| December..... | 1.1 | .3 | .50 | 31 |
| Calendar year 1939..... | 51 | .04 | 2.10 | 1,520 |
| January..... | 6.0 | .3 | 1.02 | 63 |
| February..... | 64 | .4 | 7.15 | 411 |
| March..... | 5.9 | 1.7 | 2.83 | 174 |
| April..... | 2.8 | .3 | 1.77 | 105 |
| May..... | 1.8 | .4 | 1.00 | 61 |
| June..... | 1.3 | .2 | .55 | 33 |
| July..... | .6 | .1 | .19 | 12 |
| August..... | 1.8 | .1 | .35 | 22 |
| September..... | 1.1 | .1 | .20 | 12 |
| Water year 1939-40..... | 64 | .1 | 1.33 | 969 |

Note.- Discharge is change in storage plus diversion to city plus release to river plus spillway overflow plus bank storage plus evaporation minus precipitation.

Santa Ynez River near Santa Barbara, Calif.

Location.- Lat. $34^{\circ}31'40''$, long. $119^{\circ}41'00''$, about on line between secs. 10 and 11, T. 5 N., R. 27 W., at Gibraltar Dam, 7 miles north of Santa Barbara. Altitude of gage, about 1,200 feet.

Drainage area.- 219 square miles.

Records available.- November 1903 to April 1907, October 1907 to January 1908, February 1910 to November 1912, April 1920 to September 1940.

Average discharge.- 26 years (1904-6, 1911-14, 1916-17, 1920-40), 50.6 second-feet.

Remarks.- Discharge represents inflow to Gibraltar Reservoir and is computed from reservoir records. Flow regulated by Jameson Lake. During year Montecito County Water District diverted 1,400 acre-feet from Jameson Lake.

Cooperation.- Records furnished by city of Santa Barbara.

Discharge, in second-feet, water year October 1939 to September 1940

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|---------|---------|------|----------------------|
| October..... | 0 | 0 | 0 | 0 |
| November..... | 0 | 0 | 0 | 0 |
| December..... | 0 | 0 | 0 | 0 |
| Calendar year 1939..... | 580 | 0 | 16.8 | 12,130 |
| January..... | 96 | 0 | 16.4 | 1,010 |
| February..... | 540 | 11 | 63.7 | 3,660 |
| March..... | 113 | 13 | 35.0 | 2,150 |
| April..... | 72 | 8 | 16.4 | 975 |
| May..... | 9.5 | 2.1 | 5.03 | 309 |
| June..... | 2.1 | 0 | .79 | 47 |
| July..... | 0 | 0 | 0 | 0 |
| August..... | 0 | 0 | 0 | 0 |
| September..... | 0 | 0 | 0 | 0 |
| Water year 1939-40..... | 540 | 0 | 11.2 | 8,150 |

Note.- Discharge is change in storage plus diversion to city plus release to river plus spillway overflow plus evaporation minus precipitation.

Santa Ynez River below Gibraltar Dam, near Santa Barbara, Calif.

Location.- Lat. 34°31'40", long. 119°41'00", about on line between secs. 10 and 11, T. 5 N., R. 27 W., just downstream from Gibraltar Dam, 7 miles north of Santa Barbara. Altitude of gage, about 1,200 feet.

Records available.- April 1920 to September 1940.

Average discharge.- 20 years, 31.0 second-feet (19 years 1920-39, 32.3 second-feet; figure published in Water-Supply Paper 821 in error).

Remarks.- Discharge represents flow in Santa Ynez River passing Gibraltar Reservoir. Flow regulated by Gibraltar Reservoir and Jameson Lake. During the year, the city of Santa Barbara diverted 4,240 acre-feet from Gibraltar Reservoir and Montecito County Water District diverted 1,400 acre-feet from Jameson Lake.

Cooperation.- Records furnished by city of Santa Barbara.

Discharge, in second-feet, water year October 1939 to September 1940

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|---------|---------|------|-------------------------|
| October..... | 0.5 | 0.5 | 0.50 | 31 |
| November..... | .5 | .5 | .50 | 30 |
| December..... | .5 | .5 | .50 | 31 |
| Calendar year 1939..... | 670 | 0 | 14.3 | 10,360 |
| January..... | .5 | 0 | .06 | 3.6 |
| February..... | 261 | 0 | 24.8 | 1,430 |
| March..... | 126 | 7 | 31.4 | 1,930 |
| April..... | 78 | 0 | 10.9 | 647 |
| May..... | 0 | 0 | 0 | 0 |
| June..... | .5 | 0 | .17 | 10 |
| July..... | .5 | .5 | .50 | 31 |
| August..... | .5 | .5 | .50 | 31 |
| September..... | .5 | .5 | .50 | 30 |
| Water year 1939-40..... | 261 | 0 | 5.79 | 4,200 |

Note.- Discharge is spillway overflow plus release to river.

SANTA YNEZ RIVER BASIN

Santa Ynez River near Santa Ynez, Calif.

Location.- Water-stage recorder, lat. 34°35'20", long. 120°01'25", in Canada de los Pinos grant, at San Marcos Road Bridge, 4 miles southeast of Santa Ynez, Santa Barbara County. Altitude of gage, about 500 feet.

Drainage area.- 435 square miles.

Records available.- December 1928 to September 1931, October 1932 to September 1940.

Average discharge.- 10 years (1929-31, 1932-40), 77.8 second-feet.

Extremes.- Maximum discharge during year, 710 second-feet Feb. 26 (gage height, 6.18 feet), from rating curve extended above 500 second-feet by logarithmic plotting; no flow Oct. 1-3.

1929-31, 1932-40: Maximum discharge, 43,700 second-feet Mar. 2, 1933 (gage height, 17.90 feet), from rating curve extended above float measurement of 34,100 second-feet; no flow for several months in most years.

Remarks.- Records good except those for Oct. 1 to Jan. 9 and May 16 to Sept. 30, which are fair. Flow regulated by Jameson Lake and Gibraltar Reservoir; water diverted above station to cities of Montecito and Santa Barbara.

Cooperation.- Results of 45 discharge measurements furnished by city of Santa Barbara.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0 | 0.3 | 0.3 | 0.7 | 4.9 | 286 | 81 | 18 | 3.3 | 1.0 | 0.6 | 0.4 |
| 2 | 0 | .3 | .3 | .7 | 4.9 | 177 | 62 | 15 | 3.2 | 1.0 | .6 | .4 |
| 3 | 0 | .3 | .3 | .7 | 9 | 133 | 48 | 13 | 3.2 | 1.0 | .6 | .4 |
| 4 | .1 | .3 | .3 | .7 | 90 | 106 | 43 | 11 | 3.2 | 1.0 | .6 | .4 |
| 5 | .1 | .3 | .3 | .8 | 33 | 86 | 39 | 10 | 3.2 | .9 | .6 | .4 |
| 6 | .1 | .3 | .3 | .8 | 22 | 76 | 36 | 9 | 3.0 | .9 | .6 | .4 |
| 7 | .2 | .3 | .3 | .8 | 17 | 69 | 34 | 8 | 2.7 | .9 | .6 | .4 |
| 8 | .2 | .3 | .3 | .9 | 13 | 60 | 33 | 6.5 | 2.4 | .8 | .5 | .3 |
| 9 | .2 | .3 | .3 | 1.0 | 13 | 56 | 30 | 5.5 | 2.2 | .8 | .6 | .3 |
| 10 | .3 | .3 | .3 | 33 | 11 | 53 | 29 | 5 | 2.0 | .8 | .6 | .3 |
| 11 | .3 | .2 | .4 | 230 | 11 | 50 | 26 | 5 | 1.8 | .8 | .6 | .3 |
| 12 | .3 | .2 | .4 | 80 | 10 | 48 | 24 | 5.5 | 1.7 | .8 | .6 | .3 |
| 13 | .4 | .2 | .5 | 26 | 10 | 44 | 22 | 5.5 | 1.6 | .8 | .6 | .3 |
| 14 | .4 | .2 | .5 | 13 | 15 | 41 | 20 | 4.4 | 1.6 | .7 | .6 | .3 |
| 15 | .4 | .2 | .6 | 8.5 | 28 | 39 | 18 | 4.4 | 1.5 | .7 | .5 | .2 |
| 16 | .5 | .2 | .6 | 6.5 | 21 | 36 | 18 | 4.3 | 1.5 | .7 | .5 | .2 |
| 17 | .5 | .2 | .7 | 4.9 | 18 | 34 | 15 | 4.2 | 1.4 | .7 | .5 | .2 |
| 18 | .5 | .2 | .7 | 3.9 | 17 | 33 | 13 | 4.1 | 1.4 | .7 | .5 | .2 |
| 19 | .5 | .2 | .7 | 3.9 | 15 | 33 | 13 | 4.0 | 1.3 | .7 | .5 | .2 |
| 20 | .5 | .2 | .7 | 3.9 | 14 | 33 | 11 | 3.9 | 1.3 | .7 | .5 | .2 |
| 21 | .5 | .2 | .7 | 3.5 | 13 | 29 | 10 | 3.9 | 1.3 | .7 | .5 | .1 |
| 22 | .5 | .2 | .7 | 3.5 | 13 | 28 | 10 | 3.8 | 1.2 | .7 | .5 | .1 |
| 23 | .5 | .2 | .7 | 6.5 | 21 | 27 | 11 | 3.9 | 1.2 | .7 | .5 | .1 |
| 24 | .4 | .2 | .7 | 10 | 23 | 25 | 10 | 3.7 | 1.2 | .7 | .5 | .1 |
| 25 | .4 | .2 | .7 | 8.5 | 63 | 24 | 10 | 3.6 | 1.1 | .5 | .5 | .1 |
| 26 | .4 | .2 | .7 | 7.5 | 551 | 23 | 13 | 3.5 | 1.1 | .6 | .4 | .1 |
| 27 | .4 | .2 | .7 | 6 | 334 | 26 | 20 | 3.4 | 1.1 | .6 | .4 | .1 |
| 28 | .4 | .2 | .7 | 4.9 | 197 | 27 | 21 | 3.3 | 1.1 | .6 | .4 | .1 |
| 29 | .4 | .2 | .7 | 4.4 | 297 | 27 | 26 | 3.3 | 1.1 | .6 | .4 | .1 |
| 30 | .4 | .3 | .7 | 4.4 | - | 29 | 21 | 3.3 | 1.0 | .6 | .4 | .1 |
| 31 | .3 | - | .7 | 4.4 | - | 56 | - | 3.3 | - | .6 | .4 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 10.1 | | 0.5 | 0 | 0.33 | 20 | | | |
| November..... | | | | 7.1 | | .3 | .2 | .24 | 14 | | | |
| December..... | | | | 16.5 | | .7 | .3 | .53 | 33 | | | |
| Calendar year 1939..... | | | | 9,098.7 | | 825 | 0 | 24.9 | 18,050 | | | |
| January..... | | | | 483.3 | | 230 | .7 | 15.6 | 959 | | | |
| February..... | | | | 1,888.8 | | 551 | 4.9 | 65.1 | 3,750 | | | |
| March..... | | | | 1,813 | | 286 | 23 | 58.5 | 3,600 | | | |
| April..... | | | | 767 | | 81 | 10 | 25.6 | 1,520 | | | |
| May..... | | | | 185.2 | | 18 | 3.3 | 5.97 | 367 | | | |
| June..... | | | | 54.9 | | 3.3 | 1.0 | 1.83 | 109 | | | |
| July..... | | | | 23.4 | | 1.0 | .6 | .75 | 46 | | | |
| August..... | | | | 16.3 | | .6 | .4 | .33 | 32 | | | |
| September..... | | | | 7.1 | | .4 | .1 | .24 | 14 | | | |
| Water year 1939-40..... | | | | 5,272.7 | | 551 | 0 | 14.4 | 10,460 | | | |

Peak discharge.- Jan. 11 (5 p.m.) 320 sec.-ft.; Feb. 4 (2 a.m.) 163 sec.-ft.; Feb. 26 (1 a.m.) 710 sec.-ft.; Feb. 29 (11:30 a.m.) 431 sec.-ft.

Note.- Discharge for Oct. 1 to Jan. 9 computed on basis of discharge measurements, that for May 16 to Sept. 30 on basis of discharge measurements adjusted for losses between the gage and measuring section.

Santa Ynez River at Solvang, Calif.

Location.- Water-stage recorder, lat. 34°35'10", long. 120°08'40", in San Carlos de Jonata grant, at Mission Bridge, 25 feet downstream from Alisal Creek, and 0.9 mile south of Solvang, Santa Barbara County.

Drainage area.- 585 square miles.

Records available.- October 1928 to November 1940. (June 1937 to November 1940, irrigation seasons only).

Remarks.- Records good.

Cooperation.- Gage-height record and results of 15 discharge measurements furnished by city of Santa Barbara.

Discharge, in second-feet, 1939-40

| Day | Oct. | Nov. | | | | | June | July | Aug. | Sept. | Oct. | Nov. |
|-----------------|------|------|--|--|--|--|------------------|---------|---------|-------|----------------------|------|
| 1 | 6 | 4.7 | | | | | 6 | 3.7 | 3.7 | 3.2 | 3.2 | 4.2 |
| 2 | 5.5 | 5.5 | | | | | 5.5 | 3.7 | 3.7 | 3.2 | 3.3 | 4.3 |
| 3 | 5.5 | 5.5 | | | | | 5.5 | 3.7 | 3.5 | 3.2 | 3.3 | 4.3 |
| 4 | 5.5 | 5 | | | | | 5.5 | 3.7 | 3.5 | 3.3 | 3.2 | 4.5 |
| 5 | 5.5 | 4.8 | | | | | 6 | 3.7 | 3.4 | 3.3 | 3.2 | 4.5 |
| 6 | 6 | 5 | | | | | 6 | 3.7 | 3.3 | 3.2 | 3.2 | 4.7 |
| 7 | 6 | 4.8 | | | | | 6 | 3.5 | 3.2 | 3.1 | a3.2 | 4.7 |
| 8 | 6 | 4.8 | | | | | 6 | 3.9 | 3.2 | 3.0 | a3.2 | 4.7 |
| 9 | 6 | 4.7 | | | | | 6.5 | 3.9 | 3.1 | 3.0 | a3.2 | 4.7 |
| 10 | 6 | 4.7 | | | | | 6.5 | 3.8 | 3.1 | 3.0 | 3.2 | 5 |
| 11 | 6 | 4.8 | | | | | 6 | 3.8 | 3.1 | 2.9 | 3.1 | 5 |
| 12 | 6 | 4.8 | | | | | 6 | 3.7 | 3.0 | 2.8 | 3.0 | 5 |
| 13 | 6 | 5 | | | | | 6 | 3.5 | 3.0 | 2.7 | 3.0 | 5 |
| 14 | 6 | 5.5 | | | | | 5.5 | 3.4 | 3.0 | 2.9 | 2.9 | 5 |
| 15 | 6 | 5.5 | | | | | 5 | 3.4 | 3.1 | 3.1 | 2.9 | 5.5 |
| 16 | 5.5 | 5.5 | | | | | 4.7 | 3.4 | 3.1 | 3.1 | 2.8 | 5.5 |
| 17 | 6 | 5.5 | | | | | 4.4 | 3.4 | 3.0 | 3.1 | 2.7 | 5.5 |
| 18 | 6 | 5.5 | | | | | 4.0 | 3.5 | 3.1 | 3.2 | 2.6 | 5.5 |
| 19 | 6 | 5.5 | | | | | 3.9 | 3.5 | 3.0 | 3.2 | 2.6 | 5.5 |
| 20 | 6 | 6 | | | | | 4.0 | 3.7 | 2.9 | 3.3 | 2.7 | 5.5 |
| 21 | 5.5 | 6 | | | | | 3.9 | 3.7 | 2.8 | 3.3 | 2.7 | 5.5 |
| 22 | 5.5 | 6 | | | | | 3.8 | 3.7 | 2.8 | 3.4 | 2.8 | 5.5 |
| 23 | 5.5 | 6 | | | | | 3.8 | 3.7 | 2.9 | 3.3 | 2.8 | 5.5 |
| 24 | 5.5 | 6 | | | | | 3.8 | 3.5 | 3.1 | 3.3 | 3.0 | 5.5 |
| 25 | 5.5 | 6.5 | | | | | 3.7 | 3.7 | 3.2 | 3.3 | 3.5 | 5.5 |
| 26 | 5 | 7 | | | | | 3.7 | 3.7 | 3.3 | 3.3 | 3.7 | 5.5 |
| 27 | 5 | 7 | | | | | 3.7 | 3.8 | 3.3 | 3.3 | 3.8 | 5.5 |
| 28 | 5 | 7 | | | | | 3.7 | 3.8 | 3.3 | 3.2 | 4.0 | 5.5 |
| 29 | 4.8 | 7.5 | | | | | 3.7 | 3.8 | 3.3 | 3.2 | 4.0 | 5.5 |
| 30 | 4.7 | 8 | | | | | 3.5 | 3.8 | 3.2 | 3.2 | 4.0 | 5.5 |
| 31 | 4.6 | - | | | | | - | 3.7 | 3.2 | - | 4.2 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| 1939 | | | | | | | | | | | | |
| October..... | | | | | | | 174.1 | 6 | 4.6 | 5.62 | 345 | |
| November..... | | | | | | | 170.1 | 8 | 4.7 | 5.67 | 337 | |
| 1940 | | | | | | | | | | | | |
| June..... | | | | | | | 146.3 | 6.5 | 3.5 | 4.98 | 290 | |
| July..... | | | | | | | 113.9 | 3.9 | 3.4 | 3.67 | 226 | |
| August..... | | | | | | | 98.4 | 3.7 | 2.8 | 3.17 | 195 | |
| September..... | | | | | | | 94.6 | 3.4 | 2.7 | 3.15 | 188 | |
| October..... | | | | | | | 99.0 | 4.2 | 2.6 | 3.19 | 196 | |
| November..... | | | | | | | 153.6 | 5.5 | 4.2 | 5.12 | 305 | |
| The period..... | | | | | | | - | - | - | - | 1,400 | |

a No gage-height record; discharge interpolated.

SANTA YNEZ RIVER BASIN

Santa Ynez River near Lompoc, Calif.

Location.- Water-stage recorder, lat. 34°38'30", long. 120°25'50", near boundary of La Mission Vieja La Purisima grant, at highway bridge, 1½ miles east of Lompoc, Santa Barbara County. Altitude of gage, about 100 feet. Prior to Dec. 1, 1939, water-stage recorder at site at old highway bridge, about 600 feet upstream.

Drainage area.- 790 square miles.

Records available.- November 1906 to September 1918 (1909, gage heights only), April 1925 to September 1940.

Average discharge.- 24 years (1907-8, 1910-18, 1925-40), 213 second-feet.

Extremes.- Maximum discharge during year, 752 second-feet Feb. 28 (gage height, 8.42 feet); no flow Oct. 24 to Nov. 3, July 13 to Sept. 30.
1906-18, 1925-40: Maximum discharge, 50,100 second-feet Mar. 3, 1938 (gage height, 28.10 feet), from rating curve extended above float measurement of 38,000 second-feet; no flow at times in 1929-31, 1934, 1936, 1937, 1939, 1940.

Remarks.- Records fair. Water diverted by city of Santa Barbara at Gibraltar Dam, and some water for irrigation pumped from wells along banks of river.

Cooperation.- Results of 41 discharge measurements furnished by city of Santa Barbara.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.5 | 0 | 1.2 | 5.5 | 40 | 475 | 91 | 24 | 3.1 | 40.5 | | |
| 2 | .5 | 0 | 1.2 | 7 | 50 | 374 | 102 | 25 | 3.1 | d.5 | | |
| 3 | .5 | 0 | 1.2 | 9 | 116 | 277 | 100 | 25 | 2.8 | d.5 | | |
| 4 | .5 | .1 | 1.2 | 10 | 96 | 217 | 89 | 22 | d2.8 | d.5 | | |
| 5 | .5 | .1 | 1.2 | 12 | 96 | 180 | 82 | 22 | d2.7 | d.5 | | |
| 6 | .4 | .2 | 1.2 | 12 | 83 | 158 | 76 | 22 | 2.7 | d.5 | | |
| 7 | .4 | .2 | 1.2 | 14 | 68 | 138 | 78 | 21 | 2.3 | d.5 | | |
| 8 | .4 | .3 | 1.2 | 30 | 59 | 127 | 74 | 21 | 1.9 | d.5 | | |
| 9 | .4 | .3 | 1.2 | 30 | 53 | 117 | 64 | 19 | 1.9 | d.4 | | |
| 10 | .4 | .3 | 1.3 | 58 | 50 | 114 | 59 | 17 | 1.9 | d.4 | | |
| 11 | .3 | .3 | 1.4 | 150 | 45 | 107 | 54 | 16 | 1.6 | d.4 | | |
| 12 | .3 | .3 | 1.7 | 197 | 45 | 100 | 52 | 15 | 1.6 | d.2 | | |
| 13 | .3 | .4 | 1.5 | 143 | 48 | 93 | 50 | 15 | 1.6 | 0 | | |
| 14 | .3 | .4 | 1.4 | 83 | 64 | 87 | 46 | 14 | 1.6 | 0 | | |
| 15 | .3 | .4 | 1.3 | 64 | 59 | 82 | 42 | 13 | 1.6 | 0 | | |
| 16 | .2 | .5 | 1.3 | 53 | 51 | 82 | 40 | 12 | 1.3 | 0 | | |
| 17 | .2 | .5 | 1.3 | 48 | 50 | 80 | 37 | 12 | 1.1 | 0 | | |
| 18 | .2 | .5 | 1.4 | 44 | 46 | 74 | 34 | 11 | 1.1 | 0 | | |
| 19 | .2 | .6 | 1.4 | 39 | 44 | 68 | 32 | 11 | 1.1 | 0 | | |
| 20 | .1 | .6 | 1.4 | 35 | 42 | 66 | 29 | 10 | 1.1 | 0 | | |
| 21 | .1 | .6 | 1.4 | 34 | 39 | 64 | 28 | 9 | 1.1 | 0 | | |
| 22 | .1 | .7 | 1.4 | 31 | 38 | 59 | 27 | 9 | 1.1 | 0 | | |
| 23 | .1 | .7 | 1.9 | 80 | 39 | 52 | 26 | 8 | 1.1 | 0 | | |
| 24 | 0 | .7 | 2.6 | 96 | 36 | 49 | 24 | 7.5 | 1.1 | 0 | | |
| 25 | 0 | .8 | 2.5 | 68 | 131 | 49 | 23 | 7.5 | .9 | 0 | | |
| 26 | 0 | .8 | 2.7 | 53 | 222 | 49 | 25 | 7.5 | .7 | 0 | | |
| 27 | 0 | 1.0 | 3.1 | 46 | 523 | 50 | 27 | 6.5 | .5 | 0 | | |
| 28 | 0 | 1.1 | 4.2 | 44 | 485 | 52 | 25 | 5.5 | .5 | 0 | | |
| 29 | 0 | 1.2 | 5 | 40 | 406 | 52 | 25 | 4.9 | d.5 | 0 | | |
| 30 | 0 | 1.2 | 5 | 38 | - | 54 | 25 | 4.4 | d.5 | 0 | | |
| 31 | 0 | - | 5 | 36 | - | 70 | - | 3.5 | - | 0 | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 7.2 | | 0.5 | 0 | 0.23 | 14 | | | |
| November..... | | | | 14.8 | | 1.2 | 0 | .49 | 29 | | | |
| December..... | | | | 61.0 | | 5 | 1.2 | 1.97 | 121 | | | |
| Calendar year 1939..... | | | | 15,518.0 | | 927 | 0 | 42.5 | 30,780 | | | |
| January..... | | | | 1,639.5 | | 197 | 5.5 | 51.9 | 3,190 | | | |
| February..... | | | | 3,124 | | 523 | 39 | 108 | 6,200 | | | |
| March..... | | | | 3,616 | | 475 | 49 | 117 | 7,170 | | | |
| April..... | | | | 1,486 | | 102 | 23 | 49.5 | 2,950 | | | |
| May..... | | | | 420.3 | | 25 | 3.5 | 13.6 | 834 | | | |
| June..... | | | | 46.9 | | 3.1 | .5 | 1.56 | 93 | | | |
| July..... | | | | 5.4 | | .5 | 0 | .17 | 11 | | | |
| August..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| September..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | 10,391.1 | | 523 | 0 | 28.4 | 20,610 | | | |

Peak discharge.- Jan. 12 (4 p.m.) 228 sec.-ft.; Jan. 23 (6:30 p.m.) 289 sec.-ft.; Feb. 3 (6:30 p.m.) 300 sec.-ft.; Feb. 25 (7:30 p.m.) 454 sec.-ft.; Feb. 28 (7 p.m.) 752 sec.-ft.

d Gage-height record missing or doubtful; discharge interpolated.

Note.- Gage-height record missing or doubtful, Oct. 1-23, Nov. 4-30; discharge computed on basis of discharge measurements and weather records.

Cuyama River near Santa Maria, Calif.

Location.- Water-stage recorder, lat. 35°00'50", long. 120°16'45", in Suey grant, at highway bridge, 3 miles upstream from Alamos Creek and 10 miles northeast of Santa Maria, Santa Barbara County. Altitude of gage, about 610 feet.

Drainage area.- 902 square miles.

Records available.- December 1929 to September 1940.

Average discharge.- 10 years, 24.2 second-feet.

Extremes.- Maximum discharge during year, 224 second-feet Feb. 26 (gage height, 3.78 feet), from rating curve extended above 50 second-feet; minimum daily, 0.1 second-foot Sept. 11-30.

1929-40: Maximum discharge, 17,300 second-feet Mar. 3, 1938 (gage height, 16.6 feet) by slope-area method; no flow for long periods in some years.

Remarks.- Records good except those for periods of no gage-height records, which are fair. No diversion.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | a11 | 3.3 | 5.5 | 9 | 30 | 30 | 32 | 7 | 2.3 | 1.0 | 0.4 | 0.3 |
| 2 | a8 | 3.3 | 5 | 11 | 70 | 25 | 39 | 6.5 | 2.3 | .9 | .3 | .2 |
| 3 | a6 | 3.3 | 5 | 12 | 59 | 21 | 49 | 6 | 2.3 | .9 | .3 | .2 |
| 4 | 5.5 | 3.3 | 5 | 13 | 52 | 19 | 27 | 6 | 2.1 | .9 | .3 | .3 |
| 5 | 5.5 | 3.3 | 5 | 13 | 56 | 18 | 20 | 5.5 | 2.1 | .8 | .3 | .3 |
| 6 | 5.5 | 3.3 | 5 | 12 | 26 | 15 | 20 | 5 | 2.1 | .8 | .3 | .3 |
| 7 | 8 | 3.3 | 5.5 | 12 | 19 | 14 | 16 | 5 | 2.1 | .7 | .3 | .2 |
| 8 | 7.5 | 3.3 | 5 | 13 | 16 | 13 | 15 | 4.7 | 1.7 | .7 | .3 | .2 |
| 9 | 7 | 3.3 | 5 | 16 | 16 | 13 | 13 | 4.1 | 1.6 | .6 | .3 | .2 |
| 10 | 6 | 3.5 | 5.5 | 35 | 15 | 12 | 12 | 3.9 | 1.4 | .5 | .3 | .2 |
| 11 | 4.8 | 3.5 | 5.5 | 71 | 15 | 12 | 11 | 3.9 | 1.4 | .4 | .2 | a.1 |
| 12 | 4.3 | 3.5 | 5.5 | 49 | 15 | 12 | 10 | 3.6 | 1.3 | .4 | .2 | .1 |
| 13 | 4.0 | 3.5 | 5.5 | 47 | 15 | 11 | 9 | 3.4 | 1.1 | .4 | .3 | .1 |
| 14 | 4.0 | 3.5 | 5.5 | 29 | 29 | 11 | 8.5 | 3.1 | 1.1 | .5 | .3 | .1 |
| 15 | 4.0 | 3.5 | 6 | 24 | 23 | 9.5 | 8 | 2.9 | 1.1 | .5 | .4 | .1 |
| 16 | 3.5 | 3.5 | 6.5 | 20 | 19 | 9.5 | 8 | 2.7 | 1.1 | .5 | .4 | .1 |
| 17 | 3.5 | 3.8 | 6.5 | 19 | 15 | 9.5 | 7 | 2.9 | 1.1 | .6 | .3 | .1 |
| 18 | 3.3 | a3.8 | 6.5 | 18 | 15 | 9.5 | 7 | 2.7 | 1.1 | .6 | .3 | .1 |
| 19 | 3.5 | a3.8 | 6.5 | 17 | 14 | 9.5 | 6 | 2.7 | 1.0 | .6 | .3 | .1 |
| 20 | 3.5 | a3.8 | 6.5 | 16 | 14 | 9.5 | 6 | 2.7 | 1.0 | .5 | .3 | .1 |
| 21 | 3.5 | a3.8 | 6.5 | 16 | 13 | 9.5 | 6 | 2.9 | .9 | .4 | .3 | .1 |
| 22 | 3.3 | a3.8 | 6.5 | 16 | 13 | 8 | 5.5 | 2.9 | .9 | .4 | .3 | .1 |
| 23 | 3.3 | a3.8 | 11 | 22 | 13 | 7.5 | 5.5 | 2.5 | 1.0 | .4 | .3 | .1 |
| 24 | 3.1 | a3.8 | 13 | 50 | 13 | 7.5 | 6 | 2.5 | 1.0 | .3 | .3 | .1 |
| 25 | 3.1 | a5 | 15 | 48 | 20 | 6.5 | 9.5 | 2.5 | 1.0 | .3 | .3 | .1 |
| 26 | 3.1 | a7 | 12 | 38 | 54 | 7.5 | 10 | 2.3 | .9 | .3 | .3 | .1 |
| 27 | 3.1 | a6.5 | 9.5 | 37 | 82 | 9.5 | 9 | 2.3 | .9 | .4 | .3 | .1 |
| 28 | 3.1 | a6 | 9.5 | 34 | 28 | 9.5 | 10 | 2.3 | .9 | .4 | .3 | .1 |
| 29 | 3.1 | a6 | 9 | 31 | 36 | 11 | 12 | 2.3 | .9 | .4 | .3 | .1 |
| 30 | 3.1 | a5.5 | 8.5 | 29 | - | 12 | 8.5 | 2.3 | .9 | .4 | .3 | .1 |
| 31 | 3.1 | - | 8.5 | 29 | - | 21 | - | 2.3 | - | .4 | .3 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 143.3 | 11 | 3.1 | 4.62 | 284 | | |
| November..... | | | | | | 120.6 | 7 | 3.3 | 4.02 | 239 | | |
| December..... | | | | | | 221.0 | 15 | 5 | 7.13 | 436 | | |
| Calendar year 1939..... | | | | | | 3,934.7 | 85 | .4 | 10.8 | 7,800 | | |
| January..... | | | | | | 811 | 71 | 9 | 26.2 | 1,610 | | |
| February..... | | | | | | 805 | 82 | 13 | 27.8 | 1,600 | | |
| March..... | | | | | | 392.5 | 30 | 6.5 | 12.7 | 779 | | |
| April..... | | | | | | 405.5 | 49 | 5.5 | 13.5 | 904 | | |
| May..... | | | | | | 111.4 | 7 | 2.3 | 3.59 | 221 | | |
| June..... | | | | | | 40.6 | 2.3 | .9 | 1.35 | 81 | | |
| July..... | | | | | | 16.9 | 1.0 | .3 | .55 | 34 | | |
| August..... | | | | | | 9.4 | .4 | .2 | .30 | 19 | | |
| September..... | | | | | | 4.4 | .3 | .1 | .15 | 8.7 | | |
| Water year 1939-40..... | | | | | | 3,081.6 | 82 | .1 | 8.42 | 6,120 | | |

Peak discharge.- Jan. 11 (12 m.) 100 sec.-ft.; Jan. 24 (6 p.m.) 130 sec.-ft.; Feb. 2 (4 p.m.) 183 sec.-ft.; Feb. 4 (9 p.m.) 128 sec.-ft.; Feb. 26 (9 p.m.) 224 sec.-ft.

a No gage-height record; discharge for Oct. 1-3 computed on basis of discharge measurements and probable shape of recession curve, that for Nov. 18-30 computed on basis of records for Huasna River near Santa Maria, that for Sept. 11 interpolated.

SANTA MARIA RIVER BASIN

Huasna River near Santa Maria, Calif.

Location.- Water-stage recorder, lat. $35^{\circ}01'20''$, long. $120^{\circ}19'20''$, in Suey grant, half a mile upstream from Cuyama River and 8 miles northeast of Santa Maria, Santa Barbara County. Altitude of gage, about 600 feet.

Drainage area.- 119 square miles.

Records available.- December 1929 to September 1940.

Average discharge.- 10 years (1930-40), 2.04 second-feet.

Extremes.- Maximum discharge during year, 493 second-feet Jan. 10 (gage height, 3.24 feet); no flow Oct. 14, 15, 22-24.

1929-40: Maximum discharge, 11,400 second-feet Feb. 11, 1938 (gage height, 11.26 feet), by slope-area method; no flow during parts of several years.

Remarks.- Records fair. No diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.2 | 0.2 | 1.1 | 1.9 | 5.5 | 164 | 48 | 4.0 | 1.6 | 0.8 | 0.2 | 0.2 |
| 2 | .2 | .3 | 1.1 | 2.9 | 4.4 | 109 | 45 | 4.0 | 1.6 | 1.1 | .2 | .2 |
| 3 | .2 | .4 | 1.2 | 3.4 | 5 | 81 | f37 | 4.0 | 1.6 | .9 | .2 | .3 |
| 4 | .2 | .4 | 1.2 | 7 | 63 | 60 | f32 | 4.0 | 1.6 | .8 | .2 | .2 |
| 5 | .2 | .4 | 1.2 | 4.1 | 45 | 48 | f28 | 3.6 | 1.2 | .8 | .2 | .2 |
| 6 | | | | | | | | | | | | |
| 7 | .3 | .5 | 1.2 | 3.5 | 34 | 39 | 28 | 3.4 | .9 | .4 | .2 | .2 |
| 8 | .6 | .5 | 1.3 | 3.2 | 27 | 32 | 22 | 3.2 | .8 | .4 | .2 | .2 |
| 9 | .5 | .6 | 1.2 | 4.1 | 34 | 28 | 19 | 2.9 | .9 | .4 | .2 | .2 |
| 10 | .4 | .7 | 1.2 | 4.3 | 21 | 25 | 16 | 2.7 | 1.2 | .4 | .2 | .2 |
| 11 | .3 | .7 | 1.7 | 39 | 19 | 22 | 14 | 2.5 | 1.6 | .4 | .2 | .2 |
| 12 | .2 | .8 | 2.3 | 192 | 18 | 19 | 13 | 2.7 | 1.2 | .4 | .2 | .2 |
| 13 | .1 | .8 | 1.7 | 110 | 16 | 17 | 12 | 2.7 | .9 | .4 | .1 | .2 |
| 14 | 0 | .8 | 1.5 | 26 | 15 | 15 | 10 | 2.5 | .9 | .3 | .1 | .3 |
| 15 | 0 | .8 | 1.5 | 8 | 35 | 14 | 9.5 | 2.1 | .8 | .4 | .2 | .3 |
| 16 | .1 | .8 | 1.4 | 6.5 | 28 | 13 | 8 | 2.1 | 1.1 | .5 | .3 | .3 |
| 17 | .1 | .8 | 1.4 | 5.5 | 24 | 11 | 7 | 2.1 | 1.2 | .5 | .3 | .3 |
| 18 | .1 | .8 | 1.3 | 5 | 24 | 10 | 6 | 2.1 | .9 | .6 | .2 | d.3 |
| 19 | .1 | .8 | 1.3 | 4.6 | 22 | 9.5 | 6 | 2.1 | .8 | .5 | .2 | d.3 |
| 20 | .1 | .8 | 1.2 | 4.2 | 20 | 9.5 | 5.5 | 2.5 | .6 | .5 | .2 | d.3 |
| 21 | .1 | .8 | 1.2 | 4.0 | 19 | 8.5 | 5.5 | 2.9 | .9 | .4 | .2 | d.3 |
| 22 | 0 | .8 | 1.3 | 4.0 | 20 | 8 | 5 | 2.9 | .8 | .4 | .2 | d.3 |
| 23 | 0 | .9 | 2.5 | 4.6 | 19 | 7.5 | 4.6 | 2.5 | .8 | .3 | .4 | d.3 |
| 24 | 0 | .9 | 2.7 | 4.4 | 18 | 6.5 | 4.4 | 2.1 | .9 | .3 | .4 | d.3 |
| 25 | .1 | 1.1 | 2.0 | 3.8 | 23 | 6 | 5 | 1.9 | .8 | .2 | .5 | d.3 |
| 26 | .2 | 2.0 | 1.8 | 4.2 | 72 | 6 | 7.5 | 1.7 | .6 | .2 | .5 | d.3 |
| 27 | .1 | 1.3 | 1.6 | 4.0 | 78 | 9.5 | 6 | 1.9 | .6 | .2 | .4 | d.3 |
| 28 | .1 | 1.2 | 1.6 | 3.4 | 68 | 8 | 6 | 1.7 | .6 | .2 | .4 | d.3 |
| 29 | .1 | 1.1 | 1.5 | 3.2 | 227 | 9 | 4.9 | 1.7 | .6 | .3 | .4 | d.3 |
| 30 | .1 | 1.1 | 1.5 | 3.2 | - | 12 | 4.2 | 1.6 | .9 | .3 | .2 | d.3 |
| 31 | .1 | - | 1.7 | 3.2 | - | 22 | - | 1.6 | - | .3 | .2 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 4.9 | | 0.6 | 0 | 0.16 | 9.7 | | | |
| November..... | | | | 23.9 | | 2.0 | .2 | .80 | 47 | | | |
| December..... | | | | 46.9 | | 2.7 | 1.1 | 1.51 | 93 | | | |
| Calendar year 1939..... | | | | 547.1 | | 12 | 0 | 1.50 | 1,080 | | | |
| January..... | | | | 489.2 | | 192 | 1.9 | 15.8 | 970 | | | |
| February..... | | | | 1,017.9 | | 227 | 4.4 | 35.1 | 2,020 | | | |
| March..... | | | | 842 | | 164 | 6 | 27.2 | 1,670 | | | |
| April..... | | | | 426.5 | | 48 | 4.2 | 14.2 | 846 | | | |
| May..... | | | | 79.8 | | 4.0 | 1.6 | 2.57 | 158 | | | |
| June..... | | | | 30.0 | | 1.6 | .6 | 1.00 | 60 | | | |
| July..... | | | | 14.2 | | 1.1 | .2 | .46 | 28 | | | |
| August..... | | | | 7.7 | | .5 | .1 | .25 | 15 | | | |
| September..... | | | | 7.9 | | .3 | .2 | .26 | 16 | | | |
| Water year 1939-40..... | | | | 2,990.9 | | 227 | 0 | 8.17 | 5,930 | | | |

Peak discharge.- Jan. 10 (11 p.m.) 493 sec.-ft.; Feb. 4 (7 a.m.) 82 sec.-ft.; Feb. 29 (10 a.m.) 374 sec.-ft.

d Doubtful gage-height record; discharge interpolated.

f Discharge computed from partial gage-height record and recorded range of stage.

Arroyo Grande at Arroyo Grande, Calif.

Location.- Water-stage recorder and concrete broad-crested weir control, lat. 35°07'25", long. 120°34'20", in Pismo grant, at Arroyo Grande, San Luis Obispo County, a quarter of a mile upstream from Pacific Coast Railway bridge. Altitude of gage, about 100 feet.

Drainage area.- 106 square miles.

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 426 second-feet Jan. 10 (gage height, 3.77 feet), from rating curve extended above 75 second-feet; minimum, about 0.1 second-foot July 31 (gage height, 0.09 foot).

Remarks.- Records good except those for period of low flow, June to September, which are fair.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | - | 7 | 25 | 128 | 35 | 18 | 8 | 6.5 | 2.6 | 3.9 |
| 2 | | | - | 8 | 21 | 86 | 32 | 17 | 8 | 6 | 1.8 | 3.0 |
| 3 | | | - | 8.5 | 32 | 69 | 28 | 17 | 6.5 | 6 | 2.4 | 3.0 |
| 4 | | | - | 11 | 73 | 59 | 26 | 17 | 7 | 6.5 | 2.8 | 3.8 |
| 5 | | | - | 8.5 | 50 | 52 | 25 | 17 | 6.5 | 6.5 | 2.8 | 3.7 |
| 6 | | | - | 8.5 | 39 | 48 | 24 | 15 | 6 | 5.5 | 2.0 | 3.9 |
| 7 | | | - | 7.5 | 36 | 44 | 23 | 14 | 7 | 7 | 2.0 | 3.8 |
| 8 | | | - | 7 | 32 | 40 | 22 | 12 | 6.5 | 6 | 2.6 | 3.5 |
| 9 | | | - | 7 | 26 | 36 | 22 | 12 | 7.5 | 4.5 | 3.1 | 3.5 |
| 10 | | | - | 76 | 23 | 34 | 22 | 11 | 7 | 3.8 | 3.1 | 2.8 |
| 11 | | | - | 142 | 21 | 32 | 21 | 10 | 6 | 4.2 | 3.4 | 2.4 |
| 12 | | | - | 46 | 20 | 32 | 19 | 11 | 5 | 4.7 | 2.6 | 3.0 |
| 13 | | | - | 16 | 19 | 30 | 17 | 11 | 4.4 | 4.1 | 2.8 | 1.9 |
| 14 | | | - | 13 | 39 | 29 | 18 | 10 | 4.5 | 4.7 | 3.4 | 1.9 |
| 15 | | | - | 12 | 38 | 28 | 17 | 11 | 5.5 | 4.1 | 3.4 | 2.5 |
| 16 | | | - | 11 | 31 | 28 | 16 | 11 | 7.5 | 3.8 | 3.8 | 3.1 |
| 17 | | | - | 11 | 28 | 26 | 16 | 11 | 6.5 | 4.1 | 3.5 | 3.1 |
| 18 | | | - | 11 | 28 | 26 | 15 | 10 | 6.5 | 3.8 | 3.8 | 3.0 |
| 19 | | | 6 | 10 | 24 | 25 | 14 | 8.5 | 6 | 3.5 | 4.2 | 2.6 |
| 20 | | | 6 | 10 | 22 | 24 | 14 | 9.5 | 5.5 | 3.0 | 3.7 | 2.5 |
| 21 | | | 5.5 | 11 | 21 | 24 | 16 | 10 | 5.5 | 3.8 | 4.4 | 2.2 |
| 22 | | | 5.5 | 11 | 21 | 23 | 18 | 9.5 | 5.5 | 2.7 | 3.9 | 3.1 |
| 23 | | | 8 | 14 | 19 | 22 | 17 | 9 | 6.5 | 3.5 | 4.4 | 3.1 |
| 24 | | | 8 | 14 | 18 | 22 | 16 | 9 | 6 | 2.5 | 4.5 | 2.6 |
| 25 | | | 6.5 | 14 | 28 | 22 | 20 | 7.5 | 5.5 | 2.8 | 4.5 | 2.6 |
| 26 | | | 6 | 19 | 81 | 22 | 24 | 9 | 5 | 2.8 | 4.4 | 3.0 |
| 27 | | | 6 | 17 | 68 | 23 | 21 | 9 | 6 | 2.6 | 3.8 | 3.1 |
| 28 | | | 6.5 | 16 | 100 | 22 | 20 | 9.5 | 6 | 3.5 | 3.7 | 2.7 |
| 29 | | | 6.5 | 16 | 240 | 22 | 19 | 8 | 7 | 3.1 | 3.1 | 3.2 |
| 30 | | | 6.5 | 17 | - | 25 | 18 | 8.5 | 7 | 2.7 | 2.6 | 2.8 |
| 31 | | | 6.5 | 19 | - | 31 | - | 8.5 | - | 2.1 | 3.2 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December 19-31..... | | | | | | 83.5 | 8 | 5.5 | 6.42 | 166 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 599.0 | 142 | 7 | 19.3 | 1,190 | | |
| February..... | | | | | | 1,223 | 240 | 18 | 42.2 | 2,430 | | |
| March..... | | | | | | 1,134 | 128 | 22 | 36.6 | 2,250 | | |
| April..... | | | | | | 615 | 35 | 14 | 20.5 | 1,220 | | |
| May..... | | | | | | 350.5 | 18 | 7.5 | 11.3 | 695 | | |
| June..... | | | | | | 187.4 | 8 | 4.4 | 6.25 | 372 | | |
| July..... | | | | | | 130.4 | 7 | 2.1 | 4.21 | 259 | | |
| August..... | | | | | | 102.3 | 4.5 | 1.5 | 3.80 | 203 | | |
| September..... | | | | | | 69.3 | 3.9 | 1.9 | 2.98 | 177 | | |
| The period..... | | | | | | - | - | - | - | 8,960 | | |

Salinas River near Santa Margarita, Calif.

Location.- Water-stage recorder, lat. $35^{\circ}24'20''$, long. $102^{\circ}34'05''$, in $N\frac{1}{2}$ sec. 15, T. 29 S., R. 13 E., 250 feet downstream from Calif Canyon highway bridge, 250 feet upstream from Morano Creek, and 2½ miles northeast of Santa Margarita. Altitude of gage, about 960 feet (from topographic map).

Drainage area.- 148 square miles (revised).

Records available.- April to September 1922, February 1932 to September 1940.

Extremes.- Maximum discharge during year, 1,040 second-feet Feb. 29 (gage height, 8.73 feet); no flow Oct. 1 to Dec. 13 and June 13 to Sept. 30.
1932-40: Maximum discharge, 11,000 second-feet Feb. 11, 1938 (gage height, 17.0 feet), from rating curve extended above 3,000 second-feet on basis of velocity-area studies; no flow during several months of each year.

Remarks.- Records fair.

Cooperation.- Results of three discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | 0 | 5.5 | 23 | 252 | 129 | 6.5 | 1.7 | | | |
| 2 | | | 0 | 7 | 22 | 148 | 85 | 5.5 | 1.7 | | | |
| 3 | | | 0 | 6.5 | 103 | 105 | 51 | 5 | 1.5 | | | |
| 4 | | | 0 | 15 | 148 | 78 | 38 | 5 | 1.3 | | | |
| 5 | | | 0 | 25 | 64 | 65 | 44 | 5 | 1.2 | | | |
| 6 | | | 0 | 12 | 36 | 52 | 29 | 4.6 | 1.0 | | | |
| 7 | | | 0 | 9 | 25 | 43 | 24 | 4.2 | .8 | | | |
| 8 | | | 0 | 32 | 19 | 36 | 19 | 3.8 | .7 | | | |
| 9 | | | 0 | 73 | 14 | 31 | 16 | 3.5 | .7 | | | |
| 10 | | | 0 | 303 | 13 | 26 | 15 | 3.3 | .4 | | | |
| 11 | | | 0 | 405 | 12 | 23 | 15 | 3.1 | .3 | | | |
| 12 | | | 0 | 195 | 10 | 19 | 13 | 3.1 | .1 | | | |
| 13 | | | 0 | 67 | 9.5 | 18 | 11 | 2.7 | 0 | | | |
| 14 | | | .6 | 37 | 75 | 16 | 11 | 2.5 | 0 | | | |
| 15 | | | 2.4 | 23 | 82 | 17 | 10 | 2.3 | 0 | | | |
| 16 | | | 2.7 | 18 | 38 | 16 | 9.5 | 2.3 | 0 | | | |
| 17 | | | 2.8 | 15 | 31 | 16 | 8 | 2.5 | 0 | | | |
| 18 | | | 2.8 | 13 | 25 | 15 | 8 | 2.7 | 0 | | | |
| 19 | | | 3.0 | 11 | 20 | 15 | 8 | 2.5 | 0 | | | |
| 20 | | | 3.0 | 9.5 | 17 | 14 | 7 | 2.1 | 0 | | | |
| 21 | | | 3.0 | 8.5 | 15 | 14 | 7 | 2.1 | 0 | | | |
| 22 | | | 3.0 | 7.5 | 15 | 12 | 7 | 2.3 | 0 | | | |
| 23 | | | 5.0 | 8 | 22 | 12 | 7 | 2.3 | 0 | | | |
| 24 | | | 26 | 8 | 16 | 11 | 6.5 | 2.3 | 0 | | | |
| 25 | | | 15 | 8 | 73 | 10 | 7.5 | 1.9 | 0 | | | |
| 26 | | | 8 | 17 | 302 | 10 | 12 | 1.7 | 0 | | | |
| 27 | | | 7.5 | 19 | 162 | 11 | 26 | 1.9 | 0 | | | |
| 28 | | | 6.5 | 11 | 286 | 10 | 15 | 2.1 | 0 | | | |
| 29 | | | 6 | 9.5 | 691 | 9 | 11 | 2.1 | 0 | | | |
| 30 | | | 5.5 | 8.5 | - | 15 | 9 | 1.9 | 0 | | | |
| 31 | | | 5.5 | 9.5 | - | 60 | - | 1.9 | - | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| December..... | | | | 108.3 | 26 | 0 | 3.49 | 215 | | | | |
| Calendar year 1939..... | | | | 1,114.3 | 39 | 0 | 3.05 | 2,210 | | | | |
| January..... | | | | 1,396.0 | 405 | 5.5 | 45.0 | 2,770 | | | | |
| February..... | | | | 2,368.5 | 691 | 9.5 | 51.7 | 4,700 | | | | |
| March..... | | | | 1,175 | 252 | 9 | 37.9 | 2,330 | | | | |
| April..... | | | | 658.5 | 129 | 6.5 | 22.0 | 1,310 | | | | |
| May..... | | | | 94.7 | 6.5 | 1.7 | 3.05 | 188 | | | | |
| June..... | | | | 11.4 | 1.7 | 0 | .53 | 23 | | | | |
| July..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| August..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| September..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Water year 1939-40..... | | | | 5,812.4 | 691 | 0 | 15.9 | 11,540 | | | | |

Peak discharge.- Jan. 10 (6 p.m.) 898 sec.-ft.; Jan. 12 (1 a.m.) 378 sec.-ft.; Feb. 3 (11 p.m.) 297 sec.-ft.; Feb. 14 (5 p.m.) 251 sec.-ft.; Feb. 26 (6 a.m.) 499 sec.-ft.; Feb. 29 (5 a.m.) 1,040 sec.-ft.

Salinas River at Paso Robles, Calif.

Location.- Wire-weight gage, lat. 35°37'40", long. 120°41'05", at bridge on State Highway No. 41 in Paso Robles and about 3½ miles upstream from Huerfuer Creek. Altitude of gage, about 700 feet (from topographic map).

Drainage area.- 389 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 4,420 second-feet Jan. 10 (gage height, 11.32 feet); no flow Oct. 1 to Jan. 3 and June 10 to Sept. 30.
Maximum stage known, 16.9 feet during flood of Feb. 10-13, 1938.

Remarks.- Records fair except those for period of low water, May 15 to June 9, which are poor. Gage read twice daily with extra readings during periods of high flow. Small diversions above gage.

Cooperation.- Results of 19 discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | 0 | 399 | 1,550 | 378 | 40 | 1.0 | | | |
| 2 | | | | 0 | 408 | 668 | 327 | 34 | .8 | | | |
| 3 | | | | 0 | 705 | 605 | 255 | 30 | .5 | | | |
| 4 | | | | 22 | 1,160 | 493 | 203 | 28 | .5 | | | |
| 5 | | | | 18 | 638 | 426 | 176 | 27 | .5 | | | |
| 6 | | | | 6 | 420 | 371 | 161 | 27 | .4 | | | |
| 7 | | | | 13 | 305 | 315 | 140 | 22 | .3 | | | |
| 8 | | | | 160 | 237 | 265 | 123 | 21 | .2 | | | |
| 9 | | | | 373 | 192 | 219 | 109 | 13 | .1 | | | |
| 10 | | | | 1,590 | 175 | 187 | 99 | 17 | 0 | | | |
| 11 | | | | 2,940 | 154 | 180 | 91 | 16 | 0 | | | |
| 12 | | | | 1,220 | 128 | 149 | 83 | 15 | 0 | | | |
| 13 | | | | 628 | 115 | 134 | 81 | 11 | 0 | | | |
| 14 | | | | 325 | 280 | 134 | 78 | 9 | 0 | | | |
| 15 | | | | 232 | 354 | 125 | 78 | 8 | 0 | | | |
| 16 | | | | 165 | 237 | 114 | 69 | 7.5 | 0 | | | |
| 17 | | | | 111 | 196 | 111 | 65 | 7 | 0 | | | |
| 18 | | | | 97 | 189 | 103 | 58 | 6.5 | 0 | | | |
| 19 | | | | 78 | 164 | 103 | 54 | 6 | 0 | | | |
| 20 | | | | 64 | 134 | 100 | 54 | 5.5 | 0 | | | |
| 21 | | | | 62 | 128 | 95 | 49 | 5 | 0 | | | |
| 22 | | | | 58 | 124 | 90 | 49 | 4.5 | 0 | | | |
| 23 | | | | 54 | 144 | 78 | 49 | 4 | 0 | | | |
| 24 | | | | 48 | 134 | 71 | 44 | 3.5 | 0 | | | |
| 25 | | | | 42 | 381 | 71 | 46 | 3 | 0 | | | |
| 26 | | | | 347 | 1,240 | 69 | 57 | 2.5 | 0 | | | |
| 27 | | | | 498 | 1,090 | 65 | 65 | 2 | 0 | | | |
| 28 | | | | 295 | 1,780 | 73 | 58 | 2 | 0 | | | |
| 29 | | | | 200 | 3,300 | 69 | 52 | 1.5 | 0 | | | |
| 30 | | | | 155 | - | 71 | 41 | 1.5 | 0 | | | |
| 31 | | | | 148 | - | 362 | - | 1 | - | | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| November..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| December..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Calendar year | | | | - | | - | - | - | - | | | |
| January..... | | | | 9,949 | | 2,940 | 0 | 321 | 19,730 | | | |
| February..... | | | | 14,901 | | 3,300 | 115 | 514 | 29,560 | | | |
| March..... | | | | 7,466 | | 1,550 | 65 | 241 | 14,810 | | | |
| April..... | | | | 3,196 | | 378 | 41 | 107 | 6,340 | | | |
| May..... | | | | 386.0 | | 40 | 1 | 12.5 | 766 | | | |
| June..... | | | | 4.3 | | 1 | 0 | .14 | 8.5 | | | |
| July..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| August..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| September..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | 35,902.3 | | 3,300 | 0 | 98.1 | 71,210 | | | |

Salinas River near Spreckels, Calif.

Location.- Water-stage recorder, lat. 36°37'50", long. 121°40'40", in El Toro grant, at bridge on Salinas-Monterey highway, half a mile upstream from Toro Creek, 2 miles west of Spreckels, Monterey County, and 4 miles south of Salinas, Zero of gage is 22.64 feet above mean sea level.

Drainage area.- 4,231 square miles (revised).

Records available.- January 1900 to August 1901, December 1929 to September 1940.

Average discharge.- 10 years (1930-40), 543 second-feet.

Extremes.- Maximum discharge during year, 26,700 second-feet Feb. 28 (gage height, 15.0 feet); maximum gage height, 15.65 feet, Jan. 12; no flow Oct. 1 to Jan. 8.
1929-40: Maximum discharge, about 75,000 second-feet Feb. 12, 1938 (gage height, 25.0 feet), from rating curve extended above 25,800 second-feet on basis of velocity-area studies, verified by slope-area determination; no flow at times during period 1929-40.

Maximum stage known, 26.6 feet, Mar. 7, 1911, as indicated at oil-pumping station opposite gage (discharge not determined).

Remarks.- Records good Jan. 11 to Mar. 27; fair Mar. 28 to July 31; poor Jan. 9, 10, Aug. 1 to Sept. 30. Small diversions above station for irrigation.

Cooperation.- Gage-height record May 11 to July 29 and results of 15 discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | | | | 0 | 1,520 | 17,300 | 2,710 | 261 | 18 | 4.5 | | |
| 2 | | | | 0 | 1,980 | 10,200 | 3,310 | 231 | 15 | 4.5 | | |
| 3 | | | | 0 | 2,810 | 7,200 | 2,480 | 213 | 13 | a4.5 | | |
| 4 | | | | 0 | 4,910 | 5,380 | 2,010 | 198 | 13 | 4.5 | | |
| 5 | | | | 0 | 6,230 | 4,090 | 1,730 | 180 | 11 | 4.5 | | |
| 6 | | | | 0 | 3,800 | 3,250 | 1,490 | 165 | 11 | 4.2 | | |
| 7 | | | | 0 | 2,750 | 2,760 | 1,280 | 156 | 10 | 4.2 | | |
| 8 | | | | 0 | 2,110 | 2,370 | 1,160 | 146 | a10 | 3.9 | | |
| 9 | | | | 5 | 1,720 | 2,050 | 1,050 | 138 | 10 | 3.7 | | |
| 10 | | | | 20 | 1,460 | 1,840 | 1,070 | 136 | 9 | a3.6 | | |
| 11 | | | | 9,930 | 1,280 | 1,690 | 932 | 113 | 8 | 3.4 | | |
| 12 | | | | 14,300 | 1,120 | 1,580 | 770 | 105 | 7.5 | 3.1 | | |
| 13 | | | | 5,940 | 1,000 | 1,460 | 754 | 98 | 7 | 3.1 | | |
| 14 | | | | 3,210 | 958 | 1,340 | 706 | 99 | 7 | a3.1 | | |
| 15 | | | | 2,060 | 1,120 | 1,280 | 626 | 81 | 7 | 3.1 | | |
| 16 | | | | 1,440 | 1,550 | 1,180 | 561 | 70 | 6.5 | 3.1 | | |
| 17 | | | | 1,060 | 1,690 | 1,080 | 498 | 64 | 6.8 | a3.1 | | |
| 18 | | | | 805 | 1,480 | 1,030 | 450 | 59 | 5.5 | 3.1 | | |
| 19 | | | | 610 | 1,310 | 980 | 416 | 55 | 5.5 | 2.5 | | |
| 20 | | | | 467 | 1,420 | 930 | 373 | 51 | 4.9 | 2.3 | | |
| 21 | | | | 376 | 1,230 | 855 | 345 | 47 | 4.9 | 2.3 | | |
| 22 | | | | 308 | 1,140 | 794 | 333 | 44 | a4.8 | 2.3 | | |
| 23 | | | | 269 | 1,870 | 730 | 317 | 43 | a4.6 | 2.3 | | |
| 24 | | | | 230 | 3,370 | 674 | 288 | 38 | 4.5 | a2.0 | | |
| 25 | | | | 191 | 4,190 | 642 | 290 | 33 | 4.5 | 1.7 | | |
| 26 | | | | 220 | 4,920 | 626 | 333 | 30 | a4.5 | 1.7 | | |
| 27 | | | | 2,500 | 9,740 | 586 | 294 | 26 | 4.5 | 1.6 | | |
| 28 | | | | 4,280 | 19,400 | 640 | 264 | 25 | a4.5 | 1.4 | | |
| 29 | | | | 2,550 | 21,600 | 626 | 240 | 23 | 4.5 | a1.3 | | |
| 30 | | | | 1,800 | - | 744 | 264 | 20 | 4.4 | a1.3 | | |
| 31 | | | | 1,440 | - | 2,090 | - | 20 | - | a1.2 | | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| December..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Calendar year 1939..... | | | | 6,359 | 882 | 0 | 17.4 | 12,610 | | | | |
| January..... | | | | 54,011 | 14,300 | 0 | 1,742 | 107,100 | | | | |
| February..... | | | | 109,678 | 21,600 | 958 | 3,782 | 217,500 | | | | |
| March..... | | | | 77,997 | 17,300 | 586 | 2,616 | 154,700 | | | | |
| April..... | | | | 27,334 | 3,310 | 240 | 911 | 54,220 | | | | |
| May..... | | | | 2,958 | 261 | 20 | 95.4 | 5,870 | | | | |
| June..... | | | | 230.6 | 18 | 4.4 | 7.69 | 457 | | | | |
| July..... | | | | 91.1 | 4.5 | 1.2 | 2.94 | 181 | | | | |
| August..... | | | | 31 | - | - | 1.0 | 61 | | | | |
| September..... | | | | 111 | - | - | 3.7 | 220 | | | | |
| Water year 1939-40..... | | | | 272,441.7 | 21,600 | 0 | 744 | 540,300 | | | | |

Peak discharge.- Jan. 12 (2 a.m.) 19,000 sec.-ft.; Jan. 27 (11 p.m.) 6,000 sec.-ft.; Feb. 4 (11 p.m.) 10,200 sec.-ft.; Feb. 24 (9 p.m.) 5,790 sec.-ft.; Feb. 28 (7 to 9 p.m.) 26,700 sec.-ft.; Feb. 29 (3 p.m.) 25,700 sec.-ft.

a No gage-height record; discharge interpolated except Aug. 1 to Sept. 30, which was computed on basis of discharge measurements on Aug. 17 and Sept. 27.

Note.- Discharge computed from recorder record Jan. 9 to Feb. 27, Mar. 28 to May 10; from stage graph based on frequent staff-gage readings Feb. 28 to Mar. 27; from daily staff-gage readings May 10 to July 29.

Estrella Creek near Paso Robles, Calif.

Location.— Wire-weight gage, lat. 35°39'10", long. 120°30'25". in NE¼ sec. 19, T. 26 S., R. 14 E., at Fifteenmile Bridge on State Highway 41, 9 miles downstream from Cholame Creek and 10 miles east of Paso Robles. Altitude of gage, about 650 feet (from topographic map).

Drainage area.— 816 square miles.

Records available.— December 1939 to September 1940.

Extremes.— Maximum discharge during period, 1,000 second-feet Feb. 26 (gage height, 8.8 feet from floodmarks); minimum observed, 0.6 second-foot July 13.
Maximum stage known, 19.2 feet, from floodmarks, Feb. 11, 1938.

Remarks.— Records fair except those for periods of variable stage and shifting control, which are poor. Gage read twice daily with extra readings during periods of high water. One small diversion above station for irrigation.

Cooperation.— Results of seven discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | - | 8 | 13 | 110 | 15 | 3.6 | 3.3 | 1.0 | 0.9 | 1.0 |
| 2 | | | - | 9.5 | e37 | 49 | 12 | 3.6 | 3.3 | 1.4 | 1.2 | 1.0 |
| 3 | | | - | 8 | e41 | 24 | 9 | 3.6 | 3.6 | 1.2 | 1.2 | 1.0 |
| 4 | | | - | 10 | 72 | 15 | 8 | 3.6 | 3.0 | 1.4 | 1.4 | 1.0 |
| 5 | | | - | 7.5 | 22 | 12 | 7 | 3.3 | 3.0 | .9 | 1.2 | .9 |
| 6 | | | - | 8.5 | 13 | 10 | 5.5 | 4.2 | 2.8 | 1.2 | 1.0 | .9 |
| 7 | | | - | 8.5 | 12 | 10 | 5.5 | 4.5 | 3.0 | .7 | 1.2 | 1.0 |
| 8 | | | - | 15 | 11 | 9 | 5.5 | 4.5 | 3.0 | 1.0 | 1.0 | 1.6 |
| 9 | | | - | 10 | 10 | 8 | 5.5 | 3.9 | 2.8 | 1.0 | 1.0 | 1.6 |
| 10 | | | - | 12 | 10 | 7.5 | 5.5 | 3.9 | 2.6 | .9 | 1.0 | 1.6 |
| 11 | | | - | e49 | 10 | 8 | 5 | 3.3 | 2.6 | 1.0 | 1.0 | 2.0 |
| 12 | | | - | 41 | 10 | 7.5 | 4.5 | 3.6 | 2.2 | 1.0 | .8 | 1.8 |
| 13 | | | - | 13 | 10 | 7.5 | 4.2 | 3.9 | 1.7 | .7 | .8 | 2.0 |
| 14 | | | - | 7.5 | 18 | 7.5 | 3.9 | 3.6 | 1.8 | .8 | .8 | 1.8 |
| 15 | | | 6 | 7 | 12 | 7.5 | 3.9 | 3.6 | 1.6 | .9 | 1.0 | 2.0 |
| 16 | | | 6.5 | 7 | 9.5 | 7 | 3.9 | 4.5 | 1.8 | .9 | 1.4 | 1.8 |
| 17 | | | 6 | 7 | 8 | 7 | 3.3 | 4.5 | 2.2 | 1.0 | 1.4 | 1.6 |
| 18 | | | 6 | 7 | 7.5 | 7 | 3.6 | 4.5 | 2.2 | 1.4 | 1.6 | 2.0 |
| 19 | | | 6 | 7.5 | 7 | 7 | 3.9 | 4.2 | 2.2 | 1.6 | 1.8 | 2.0 |
| 20 | | | 6 | 7 | 7 | 6.5 | 3.9 | 4.2 | 1.4 | 1.0 | 1.4 | 1.6 |
| 21 | | | 6 | 7 | 7 | 6.5 | 3.3 | 4.2 | 1.8 | 1.0 | 1.2 | 1.6 |
| 22 | | | 6 | 6.5 | 8 | 6.5 | 3.6 | 4.2 | 1.6 | .8 | .9 | 2.0 |
| 23 | | | 10 | 6.5 | 8.5 | 6 | 3.9 | 3.9 | 2.0 | .7 | .9 | 2.2 |
| 24 | | | 10 | 9 | 7.5 | 6 | 3.6 | 4.5 | 1.4 | .9 | 1.0 | 2.6 |
| 25 | | | 7 | 9 | e41 | 6 | 3.9 | 3.9 | 1.4 | .9 | 1.2 | 2.6 |
| 26 | | | 6.5 | 10 | 409 | 5.5 | 5 | 3.9 | 1.0 | .9 | 1.2 | 2.8 |
| 27 | | | 6 | 9 | 59 | 6 | 5 | 4.2 | 1.2 | .8 | 1.2 | 2.8 |
| 28 | | | 6 | 7.5 | 76 | 6.5 | 4.8 | 4.2 | 1.0 | .9 | 1.2 | 3.0 |
| 29 | | | 6 | 7.5 | 333 | 6.5 | 4.5 | 3.6 | 1.2 | .9 | 1.2 | 4.2 |
| 30 | | | 6 | 7.5 | - | 8 | 3.9 | 3.6 | .9 | 1.0 | 1.0 | 5.5 |
| 31 | | | 6 | 10 | - | 31 | - | 3.3 | - | .9 | .9 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December 15-31..... | | | | | | 112 | 10 | 6 | 6.6 | 222 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 339.5 | 49 | 6.5 | 11.0 | 673 | | |
| February..... | | | | | | 1,289.0 | 409 | 7 | 44.4 | 2,560 | | |
| March..... | | | | | | 421.5 | 110 | 5.5 | 13.6 | 336 | | |
| April..... | | | | | | 160.1 | 15 | 3.3 | 5.34 | 31.8 | | |
| May..... | | | | | | 122.1 | 4.5 | 3.3 | 3.94 | 242 | | |
| June..... | | | | | | 53.1 | 3.6 | .9 | 2.10 | 125 | | |
| July..... | | | | | | 30.7 | 1.6 | .7 | .99 | 61 | | |
| August..... | | | | | | 35.0 | 1.8 | .8 | 1.13 | 69 | | |
| September..... | | | | | | 59.5 | 5.5 | .9 | 1.98 | 118 | | |
| The period..... | | | | | | - | - | - | - | 5,220 | | |

e Variable stage and shifting control, discharge computed by subdividing day and using shifts and transition curves.

Nacimiento River near San Miguel, Calif.

Location.- Water-stage recorder, lat. $35^{\circ}47'00''$, long. $120^{\circ}47'24''$, in SE $\frac{1}{4}$ sec. 4, T. 25 S., R. 11 E., about 4 miles upstream from mouth and 5.5 miles northwest of San Miguel. Altitude of gage, about 560 feet (from topographic map).

Drainage area.- 354 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 17,100 second-feet Feb. 28 (gage height, 6.74 feet); no flow for several months.

Flood of February 1938 reached a stage of 9.2 feet, from floodmarks (discharge 41,000 second-feet, by slope-area method).

Remarks.- Records fair. No large diversions.

Cooperation.- Results of four discharge measurements furnished by Corps of Engineers, U. S. Army.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|------|-----|-----|-----|-----|-------|-----|--------|
| 0.15 | 2.2 | 0.5 | 73 | 1.4 | 850 | 3.5 | 4,850 |
| .2 | 3.2 | .6 | 123 | 1.6 | 1,125 | 4 | 5,600 |
| .25 | 6.5 | .7 | 181 | 1.8 | 1,420 | 4.6 | 7,000 |
| .3 | 14 | .8 | 247 | 2.0 | 1,750 | 5 | 8,800 |
| .35 | 24 | 1.0 | 410 | 2.5 | 2,630 | 6 | 13,200 |
| .40 | 37 | 1.2 | 620 | 3.0 | 3,570 | 7 | 18,700 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|--------|--------|-------|-------|-----|------|------|------|-------|
| 1 | | | | 0 | 1,920 | 3,870 | 1,460 | 93 | 28 | | | |
| 2 | | | | 20 | 1,680 | 2,590 | 877 | 88 | 34 | | | |
| 3 | | | | 736 | 4,750 | 1,980 | 653 | 83 | 28 | | | |
| 4 | | | | 1,820 | 3,460 | 1,400 | 543 | 83 | 24 | | | |
| 5 | | | | 709 | 1,800 | 1,120 | 460 | 83 | 22 | | | |
| 6 | | | | 322 | 1,240 | 958 | 392 | 78 | 20 | | | |
| 7 | | | | 504 | 931 | 814 | 348 | 73 | 18 | | | |
| 8 | | | | 3,900 | 719 | 708 | 307 | 69 | 16 | | | |
| 9 | | | | 6,330 | 576 | 631 | 277 | 66 | 14 | | | |
| 10 | | | | 8,240 | 490 | 543 | 254 | 62 | 10 | | | |
| 11 | | | | 10,500 | 420 | 460 | 234 | 59 | 10 | | | |
| 12 | | | | 3,400 | 357 | 401 | 214 | 55 | 10 | | | |
| 13 | | | | 1,530 | 322 | 348 | 201 | 51 | 9 | | | |
| 14 | | | | 904 | 1,580 | 322 | 188 | 48 | 9 | | | |
| 15 | | | | 620 | 1,350 | 307 | 175 | 44 | 6.5 | | | |
| 16 | | | | 450 | 838 | 294 | 164 | 41 | 6.5 | 1 | 0.05 | |
| 17 | | | | 357 | 766 | 270 | 152 | 41 | 6.5 | | | |
| 18 | | | | 292 | 931 | 247 | 146 | 41 | 5.5 | | | |
| 19 | | | | 247 | 664 | 234 | 135 | 41 | 5.5 | | | |
| 20 | | | | 207 | 587 | 221 | 129 | 37 | 4.6 | | | |
| 21 | | | | 181 | 521 | 214 | 123 | 37 | 4.6 | | | |
| 22 | | | | 158 | 500 | 194 | 118 | 34 | 4.0 | | | |
| 23 | | | | 152 | 3,690 | 175 | 118 | 31 | 4.0 | | | |
| 24 | | | | 207 | 1,630 | 175 | 113 | 31 | 3.2 | | | |
| 25 | | | | 188 | 2,530 | 169 | 108 | 31 | 3.0 | | | |
| 26 | | | | 4,980 | 4,820 | 164 | 135 | 31 | 3.0 | | | |
| 27 | | | | 2,490 | 6,590 | 194 | 181 | 28 | 2.6 | | | |
| 28 | | | | 1,270 | 10,500 | 284 | 129 | 26 | 2.4 | | | |
| 29 | | | | 826 | 7,830 | 247 | 113 | 26 | 2.2 | | | |
| 30 | | | | 620 | - | 986 | 98 | 26 | 2.0 | | | |
| 31 | | | | 1,040 | - | 3,180 | - | 26 | - | | | |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 0 | 0 | 0 | 0 | 0 |
| November..... | 0 | 0 | 0 | 0 | 0 |
| December..... | 0 | 0 | 0 | 0 | 0 |
| Calendar year | - | - | - | - | - |
| January..... | 53,190 | 10,500 | 0 | 1,716 | 105,500 |
| February..... | 65,972 | 10,500 | 322 | 2,275 | 130,900 |
| March..... | 23,610 | 3,870 | 184 | 762 | 46,830 |
| April..... | 8,546 | 1,460 | 93 | 285 | 16,950 |
| May..... | 1,563 | 93 | 26 | 50.4 | 3,100 |
| June..... | 318.1 | 34 | 2.0 | 10.6 | 631 |
| July..... | 31 | - | - | 1 | 61 |
| August..... | 1.65 | - | - | .05 | 3.1 |
| September..... | 0 | 0 | 0 | 0 | 0 |
| Water year 1939-40..... | 153,230.65 | 10,500 | 0 | 419 | 304,000 |

Peak discharge.- Jan. 10 (11:30 p.m.) 16,200 sec.-ft.; Feb. 27 (6 p.m.) 16,400 sec.-ft.; Feb. 28 (3:30 p.m.) 17,100 sec.-ft.

Note.- No gage-height record July and August; discharge computed on basis of discharge measurements made on July 11, 19, and Aug. 16 and weather records.

San Antonio River at Pleyto, Calif.

Location.- Water-stage recorder, lat. 35°51'55", long. 120°59'30", in Pleyto grant, at highway bridge at old town site of Pleyto, Monterey County, 1.1 miles downstream from Copperhead Creek and 15 miles west of Bradley. Altitude of gage, about 720 feet.

Drainage area.- 282 square miles.

Records available.- April to September 1922, December 1929 to September 1940.

Extremes.- Maximum discharge during year, 10,300 second-feet Feb. 28 (gage height, 5.47 feet), from rating curve extended above 8,000 second-feet; no flow Oct. 1 to Jan. 1 and July 6 to Sept. 30.
1929-40: Maximum discharge, 10,700 second-feet Feb. 11, 1938 (gage height, 6.10 feet present datum), from rating curve extended above 7,500 second-feet; no flow for several months each year.

Remarks.- Records fair. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | 0 | 674 | 1,770 | 504 | 58 | 20 | 0.6 | | |
| 2 | | | | .2 | 508 | 1,260 | 380 | 58 | 20 | .5 | | |
| 3 | | | | .2 | 1,570 | 990 | 325 | 60 | 18 | .4 | | |
| 4 | | | | .5 | 1,410 | 805 | 286 | 62 | 17 | .3 | | |
| 5 | | | | .3 | 840 | 670 | 270 | 63 | 16 | .2 | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | .2 | 627 | 586 | 266 | 56 | 15 | .1 | | |
| 8 | | | | 10 | 492 | 520 | 252 | 54 | 14 | 0 | | |
| 9 | | | | 291 | 407 | 460 | 239 | 53 | 13 | 0 | | |
| 10 | | | | 878 | 314 | 425 | 222 | 46 | 12 | 0 | | |
| 11 | | | | 1,140 | 276 | 380 | 207 | 42 | 10 | 0 | | |
| 12 | | | | | | | | | | | | |
| 13 | | | | 2,470 | 250 | 335 | 188 | 37 | 10 | 0 | | |
| 14 | | | | 1,100 | 216 | 290 | 166 | 36 | 8.5 | 0 | | |
| 15 | | | | 578 | 199 | 261 | 170 | 36 | 7.5 | 0 | | |
| 16 | | | | 388 | 349 | 235 | 159 | 34 | 7 | 0 | | |
| 17 | | | | 256 | 394 | 222 | 145 | 33 | 7 | 0 | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | 196 | 286 | 207 | 139 | 30 | 6.5 | 0 | | |
| 20 | | | | 168 | 288 | 203 | 136 | 30 | 6 | 0 | | |
| 21 | | | | 142 | 388 | 196 | 129 | 29 | 6 | 0 | | |
| 22 | | | | 115 | 281 | 199 | 122 | 27 | 5.5 | 0 | | |
| 23 | | | | 105 | 250 | 196 | 116 | 26 | 5 | 0 | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | 84 | 224 | 184 | 114 | 23 | 4.5 | 0 | | |
| 26 | | | | 68 | 232 | 170 | 106 | 22 | 4.1 | 0 | | |
| 27 | | | | 54 | 1,300 | 159 | 96 | 22 | 3.4 | 0 | | |
| 28 | | | | 68 | 829 | 156 | 89 | 21 | 3.4 | 0 | | |
| 29 | | | | 63 | 776 | 145 | 64 | 20 | 3.1 | 0 | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | 2,060 | 1,270 | 142 | 89 | 18 | 1.6 | 0 | | |
| | | | | 1,050 | 3,760 | 149 | 91 | 18 | 1.0 | 0 | | |
| | | | | 618 | 5,180 | 145 | 78 | 17 | .9 | 0 | | |
| | | | | 455 | 3,060 | 136 | 73 | 16 | .8 | 0 | | |
| | | | | 331 | - | 203 | 67 | 14 | .7 | 0 | | |
| | | | | 359 | - | 680 | - | 16 | - | 0 | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| December..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Calendar year 1939..... | | | | | 3,354.5 | 227 | 0 | 9.19 | 6,660 | | | |
| January..... | | | | | 13,048.4 | 2,470 | 0 | 421 | 25,880 | | | |
| February..... | | | | | 26,650 | 5,180 | 199 | 919 | 52,860 | | | |
| March..... | | | | | 12,479 | 1,770 | 136 | 403 | 24,750 | | | |
| April..... | | | | | 5,308 | 504 | 87 | 177 | 10,530 | | | |
| May..... | | | | | 1,077 | 63 | 14 | 34.7 | 2,140 | | | |
| June..... | | | | | 247.5 | 20 | .7 | 8.25 | 491 | | | |
| July..... | | | | | 2.1 | .6 | 0 | .07 | 4.2 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 58,812.0 | 5,180 | 0 | 161 | 116,700 | | | |

Peak discharge.- Jan. 10 (1 p.m.) 3,000 sec.-ft.; Jan. 26 (11 a.m.) 3,080 sec.-ft.; Feb. 3 (7 p.m.) 4,770 sec.-ft.; Feb. 23 (9 a.m.) 2,180 sec.-ft.; Feb. 27 (8 p.m.) 9,100 sec.-ft.; Feb. 28 (4 p.m.) 10,300 sec.-ft.

San Lorenzo Creek near King City, Calif.

Location.- Staff gage, lat. $36^{\circ}15'35''$, long. $121^{\circ}01'05''$, in SE $\frac{1}{4}$ sec. 20, T. 19 S., R. 9 E., 7 miles northeast of King City and about 11 miles upstream from mouth. Altitude of gage, about 600 feet (from topographic map).

Drainage area.- 215 square miles.

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 2,810 second-feet Feb. 25 (gage height, 6.8 feet, from floodmarks), from rating curve extended above 1,200 second-feet; minimum observed, 0.8 second-foot July 4-8.

Maximum stage known, about 11.0 feet, from floodmarks, probably during flood of February 1938.

Remarks.- Records fair except those for periods of variable stage and shifting control, which are poor. Gage read once daily with extra readings during periods of high water. Small diversion above station for irrigation.

Cooperation.- Results of 20 discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | - | 2.8 | 137 | 153 | e285 | 2.4 | 1.1 | 0.7 | 1.0 | 1.1 |
| 2 | | | - | 3.9 | 66 | 101 | 59 | 1.9 | 1.1 | .7 | .9 | 1.1 |
| 3 | | | - | 3.4 | 465 | 82 | 13 | 2.0 | 1.1 | .7 | .9 | 1.1 |
| 4 | | | - | 4.3 | e613 | 62 | 9 | 2.2 | 1.1 | .6 | 1.0 | 1.1 |
| 5 | | | - | 6.5 | 40 | 41 | 8 | 2.0 | 1.1 | .6 | .9 | 1.1 |
| 6 | | | - | 6.5 | 19 | 21 | 9 | 2.0 | 1.1 | .6 | .8 | 1.1 |
| 7 | | | - | 68 | 15 | 16 | 9 | 2.0 | 1.1 | .7 | .8 | 1.1 |
| 8 | | | - | 109 | 14 | 14 | 8 | 2.0 | 1.1 | .7 | .8 | 1.1 |
| 9 | | | - | 27 | 9 | 14 | 8 | 1.9 | 1.0 | .7 | .8 | 1.1 |
| 10 | | | - | e471 | 7 | 11 | 7.5 | 1.9 | 1.0 | .7 | .8 | 1.1 |
| 11 | | | 2.2 | e584 | 7 | 9 | 7 | 1.8 | 1.0 | .7 | .9 | 1.2 |
| 12 | | | 2.2 | e103 | 7 | 9 | 6 | 1.8 | 1.0 | .7 | .8 | 1.2 |
| 13 | | | 2.2 | 29 | 6.5 | 8 | 4.6 | 1.8 | 1.0 | .7 | .8 | 1.2 |
| 14 | | | 2.2 | 14 | e98 | 8 | 4.0 | 1.7 | 1.0 | .8 | .8 | 1.2 |
| 15 | | | 2.2 | 8 | e50 | 9 | 3.8 | 1.7 | 1.0 | .8 | .8 | 1.1 |
| 16 | | | 2.2 | 6 | 20 | 8 | 4.0 | 1.7 | 1.0 | .8 | .8 | 1.2 |
| 17 | | | 2.2 | 4.9 | 14 | 7.5 | 3.8 | 1.7 | 1.0 | .7 | .8 | 1.2 |
| 18 | | | 2.2 | 4.4 | 7 | 7 | 3.8 | 1.7 | 1.0 | .8 | .8 | 1.2 |
| 19 | | | 2.2 | 4.3 | 5.5 | 7.5 | 3.6 | 1.7 | 1.0 | .8 | .8 | 1.2 |
| 20 | | | 2.2 | 4.3 | 5.5 | 7.5 | 3.6 | 1.6 | .9 | .8 | .8 | 1.2 |
| 21 | | | 2.2 | 4.3 | 5.5 | 7.5 | 3.4 | 1.6 | .9 | .9 | 1.0 | 1.2 |
| 22 | | | 2.4 | 4.2 | 9 | 7 | 3.4 | 1.5 | .9 | .9 | .8 | 1.2 |
| 23 | | | 3.9 | 4.3 | 252 | 6 | 3.2 | 1.5 | 1.1 | .9 | .8 | 1.2 |
| 24 | | | 4.1 | 4.4 | e44 | 6 | 3.2 | 1.5 | .7 | 1.0 | .8 | 1.2 |
| 25 | | | 3.0 | 4.3 | e706 | 6.5 | 3.6 | 1.4 | .8 | 1.0 | .9 | 1.2 |
| 26 | | | 2.4 | 16 | 354 | 8 | 7.5 | 1.4 | .7 | 1.0 | .9 | 1.2 |
| 27 | | | 2.4 | 13 | 397 | 19 | 3.8 | 1.4 | .7 | 1.0 | .9 | 1.2 |
| 28 | | | 2.4 | 6.5 | 976 | 18 | 3.4 | 1.4 | .7 | 1.0 | 1.1 | 1.2 |
| 29 | | | 2.4 | 4.6 | 784 | 11 | 3.0 | 1.4 | .7 | 1.0 | .9 | 1.2 |
| 30 | | | 2.4 | 4.7 | - | e27 | 3.0 | 1.3 | .9 | 1.0 | .9 | 1.2 |
| 31 | | | 2.6 | 156 | - | e248 | - | 1.1 | - | 1.0 | .9 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December 11-31..... | | | | | | 52.2 | 4.1 | 2.2 | 2.49 | 104 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 1,696.6 | 584 | 2.8 | 54.4 | 3,350 | | |
| February..... | | | | | | 5,133.0 | 976 | 5.5 | 177 | 10,180 | | |
| March..... | | | | | | 959.5 | 248 | 6 | 31.0 | 1,900 | | |
| April..... | | | | | | 497.2 | 285 | 3.0 | 16.6 | 986 | | |
| May..... | | | | | | 53.0 | 2.4 | 1.1 | 1.71 | 105 | | |
| June..... | | | | | | 28.8 | 1.1 | .7 | .96 | 57 | | |
| July..... | | | | | | 25.0 | 1.0 | .6 | .81 | 50 | | |
| August..... | | | | | | 26.7 | 1.1 | .8 | .86 | 53 | | |
| September..... | | | | | | 34.9 | 1.2 | 1.1 | 1.16 | 69 | | |
| The period..... | | | | | | - | - | - | - | 16,850 | | |

e Variable stage and shifting control; discharge computed by subdividing day and using shifts and transition curves.

Arroyo Seco near Soledad, Calif.

Location.- Water-stage recorder, lat. 36°16'05", long. 121°19'55", in NW¼ sec. 21, T. 19 S., R. 6 E., half a mile downstream from Vaquero Creek and 11 miles south of Soledad. Altitude of gage, about 370 feet.

Drainage area.- 238 square miles.

Records available.- November 1901 to September 1940.

Average discharge.- 38 years (1902-40), 174 second-feet.

Extremes.- Maximum discharge during year, 13,600 second-feet Feb. 27 (gage height, 15.0 feet); no flow Oct. 1 to about Nov. 10.

1901-40: Maximum discharge observed, about 22,000 second-feet Feb. 21, 1917, and Nov. 25, 1926 (gage height, 16.5 feet), from rating curve extended above 7,500 second-feet; no flow at times during several years.

Remarks.- Records good except those for periods of doubtful, or no gage-height record, which are poor. No large diversions above station.

Cooperation.- Results of nine discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|------|-----|------|------|------|-------|
| 1 | | | 2.6 | 14 | 594 | 2,670 | 956 | 145 | 78 | | | |
| 2 | | | 3.4 | 561 | 501 | 1,930 | 665 | 134 | 71 | | | |
| 3 | | | 4.6 | 282 | 1,090 | 1,490 | 552 | 129 | 68 | | | |
| 4 | | | 4.9 | 771 | 940 | 1,160 | 490 | 134 | 63 | | | |
| 5 | | | 5 | 241 | 690 | 968 | 444 | 131 | 60 | | | |
| 6 | | | 4.9 | 194 | 563 | 900 | 409 | 124 | 58 | | | |
| 7 | | | 4.9 | 349 | 493 | 705 | 378 | 118 | 55 | | | |
| 8 | | | 4.6 | 1,400 | 416 | 650 | 356 | 115 | 55 | | | |
| 9 | | | 4.6 | 2,200 | 366 | 568 | 328 | 113 | 54 | | | |
| 10 | | | 4.6 | 3,220 | 327 | 524 | 300 | 110 | 53 | | | |
| 11 | | | 9.6 | 4,790 | 302 | 486 | 284 | 106 | 51 | | | |
| 12 | | | 29 | 1,520 | 278 | 448 | 269 | 102 | 49 | | | |
| 13 | | | 20 | 792 | 260 | 416 | 255 | 98 | 47 | | | |
| 14 | | | 15 | 532 | 654 | 381 | 245 | 96 | 45 | | | |
| 15 | | | 14 | 358 | 453 | 350 | 238 | 92 | 45 | | | |
| 16 | | al | 12 | 316 | 376 | 336 | 230 | 91 | 45 | al2 | a4.5 | a4 |
| 17 | | | 12 | 265 | 469 | 311 | 218 | 91 | 45 | | | |
| 18 | | | 10 | 441 | 287 | 210 | 90 | 45 | | | | |
| 19 | | | 9.5 | 202 | 387 | 275 | 198 | 85 | 44 | | | |
| 20 | | | 9 | 182 | 350 | 263 | 195 | 83 | d40 | | | |
| 21 | | | 9.5 | 166 | 318 | 245 | 192 | 80 | d37 | | | |
| 22 | | | 9.5 | 147 | 474 | 230 | 185 | 79 | d33 | | | |
| 23 | | | 11 | 149 | 2,260 | 220 | 178 | 78 | d30 | | | |
| 24 | | | 20 | 190 | 1,060 | 212 | 168 | 75 | d29 | | | |
| 25 | | | 29 | 182 | 1,240 | 205 | 178 | 73 | d28 | | | |
| 26 | | | 22 | 2,230 | 1,460 | 202 | 198 | 70 | d26 | | | |
| 27 | | | 19 | 1,060 | 6,830 | 314 | 175 | 70 | d24 | | | |
| 28 | | | 16 | 680 | 6,660 | 250 | 162 | 71 | d22 | | | |
| 29 | | | 15 | 517 | 4,490 | 281 | 149 | 71 | d21 | | | |
| 30 | | | 15 | 422 | - | 1,400 | 145 | 70 | d21 | | | |
| 31 | | | 14 | 481 | - | 1,690 | - | 96 | - | | | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 0 | 0 | 0 | 0 | 0 |
| November..... | 30 | - | - | 1 | 60 |
| December..... | 450.8 | 96 | 2.6 | 14.5 | 894 |
| Calendar year 1939..... | 10,676.7 | 789 | 0 | 29.3 | 21,180 |
| January..... | 24,675 | 4,790 | 14 | 796 | 48,940 |
| February..... | 34,734 | 6,830 | 260 | 1,198 | 68,890 |
| March..... | 20,237 | 2,670 | 202 | 653 | 40,140 |
| April..... | 8,950 | 956 | 145 | 298 | 17,750 |
| May..... | 3,020 | 145 | 70 | 97.4 | 5,990 |
| June..... | 1,342 | 78 | 21 | 44.7 | 2,660 |
| July..... | 372 | - | - | 12 | 738 |
| August..... | 139.5 | - | - | 4.5 | 277 |
| September..... | 120 | - | - | 4 | 238 |
| Water year 1939-40..... | 94,070.3 | 6,830 | 0 | 257 | 186,600 |

Peak discharge.- Jan. 4 (9 a.m.) 2,620 sec.-ft.; Jan. 11 (5 a.m.) 8,530 sec.-ft.; Jan. 26 (10:30 a.m.) 3,010 sec.-ft.; Feb. 23 (2 a.m.) 4,240 sec.-ft.; Feb. 27 (2:30 p.m.) 13,600 sec.-ft.; Mar. 30 (3:30 p.m.) 3,540 sec.-ft.

a No gage-height record; discharge computed on basis of discharge measurements made on Nov. 29, July 11, 23, Aug. 16, and Sept. 27 and weather records.
d Doubtful gage-height record; discharge computed on basis of records for San Antonio River at Pleyto, weather records, and measurements made on June 26.

PAJARO RIVER BASIN

Pajaro River near Chittenden, Calif.

Location.- Wire-weight gage, lat. 36°54'00", long. 121°35'50", at State highway bridge 0.6 mile downstream from Pescadero Creek, one mile southeast of Chittenden, and 2.5 miles downstream from San Benito River. Altitude of gage, about 90 feet (from topographic map).

Drainage area.- 1,188 square miles (Corps of Engineers, U. S. Army).

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 9,880 second-feet Feb. 28 (gage height, 25.5 feet); minimum discharge observed, 3.8 second-feet July 24.

Remarks.- Records fair. Gage read twice daily with extra readings during storm flows. Numerous diversions above station for irrigation.

Cooperation.- Results of 27 discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|-------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | | | - | 12 | 1,010 | 5,180 | 2,590 | 77 | 18 | 10 | 6 | 5 |
| 2 | | | - | 23 | 1,110 | 2,760 | 1,610 | 75 | 13 | 10 | 5.5 | 5.5 |
| 3 | | | - | 35 | 856 | 1,760 | 1,080 | 69 | 17 | 10 | 5.5 | 6 |
| 4 | | | - | 78 | 1,820 | 1,220 | 922 | 68 | 13 | 9 | 5 | 6 |
| 5 | | | - | 76 | 917 | 915 | 649 | 69 | 16 | 8 | 5 | 6.5 |
| 6 | | | - | 34 | 655 | 747 | 520 | 60 | 15 | 8 | 6 | 6.5 |
| 7 | | | - | 25 | 531 | 624 | 448 | 58 | 14 | a7.5 | 6 | 6.5 |
| 8 | | | - | 166 | 431 | 521 | 382 | 53 | 14 | 7.5 | 6 | 6 |
| 9 | | | - | 1,110 | 358 | 462 | 334 | 49 | 15 | 7 | 6 | 6 |
| 10 | | | - | 1,140 | 313 | a420 | 284 | 47 | 16 | 7 | 6 | 6 |
| 11 | | | - | 3,080 | 271 | a386 | 248 | 44 | 14 | 7 | 6 | 6 |
| 12 | | | - | 1,710 | 238 | a354 | 213 | 41 | 15 | 7.5 | 5 | 6 |
| 13 | | | - | 818 | 219 | a318 | 200 | 39 | 14 | 7 | 6 | 6 |
| 14 | | | - | 476 | 619 | a285 | 190 | 36 | 14 | 7 | 6.5 | 6.5 |
| 15 | | | - | 322 | 846 | a255 | 165 | 33 | 14 | 7 | 6.5 | 6 |
| 16 | | | - | 238 | 492 | 228 | 160 | 32 | 13 | 7 | 6 | 6 |
| 17 | | | 10 | 175 | 582 | 206 | 144 | 31 | a12 | 7 | 5 | 6.5 |
| 18 | | | 11 | 134 | 700 | 184 | 133 | 30 | a12 | 6.5 | 4.5 | 7 |
| 19 | | | 11 | 111 | 418 | 165 | 127 | 28 | a11 | 6.5 | 5 | 7.5 |
| 20 | | | 11 | 92 | 328 | 147 | 116 | 27 | a11 | 6 | 5.5 | 8 |
| 21 | | | 11 | 80 | 305 | 141 | 112 | 26 | a10 | 6 | 5.5 | 7 |
| 22 | | | 11 | 72 | 276 | 123 | 113 | 25 | 10 | 6 | 6 | 8 |
| 23 | | | 11 | 64 | 422 | 103 | 108 | 24 | 10 | 6 | 6 | 7.5 |
| 24 | | | 11 | 62 | 635 | 90 | 101 | 22 | 10 | 6 | 6 | 8 |
| 25 | | | 11 | 113 | 619 | 90 | 101 | 21 | 10 | 6 | 6.5 | 8 |
| 26 | | | 11 | 1,260 | 1,960 | 92 | 114 | 18 | 9 | 6 | 6 | 8 |
| 27 | | | 11 | 1,160 | 5,340 | 245 | 96 | 20 | 10 | 7 | 6.5 | 8.5 |
| 28 | | | 11 | 768 | 9,530 | 219 | 88 | 23 | 9.5 | 7 | 6 | 9 |
| 29 | | | 11 | 437 | 8,620 | 226 | 84 | 21 | 10 | 7 | 6 | 8.5 |
| 30 | | | 11 | 265 | - | 1,500 | 82 | 19 | 9.5 | 7 | 6 | 8 |
| 31 | | | 11 | 390 | - | 3,450 | - | 18 | - | 6.5 | 6 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December 17-31..... | | | | | | 164 | 11 | 10 | 10.9 | 326 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 14,516 | 3,080 | 12 | 468 | 28,790 | | |
| February..... | | | | | | 40,111 | 9,530 | 219 | 1,583 | 79,560 | | |
| March..... | | | | | | 25,416 | 5,180 | 90 | 755 | 46,440 | | |
| April..... | | | | | | 11,414 | 2,590 | 32 | 380 | 22,640 | | |
| May..... | | | | | | 1,801 | 77 | 13 | 38.7 | 2,380 | | |
| June..... | | | | | | 368.0 | 18 | 9 | 12.9 | 470 | | |
| July..... | | | | | | 222.0 | 10 | 5 | 7.16 | 440 | | |
| August..... | | | | | | 179.5 | 6.5 | 4.5 | 5.79 | 356 | | |
| September..... | | | | | | 205.0 | 9 | 5 | 6.83 | 407 | | |
| The period..... | | | | | | - | - | - | - | 182,100 | | |

a No gage-height record; discharge interpolated.

Pacheco Creek near Dunneville, Calif.

Location.- Staff gage, lat. 36°58'50", long. 121°22'50", in Ausaymas y San Felipe land grant, at private road bridge, 3.3 miles northeast of Dunneville, Santa Clara County. Altitude of gage, about 240 feet (from topographic map).

Drainage area.- 146 square miles (Corps of Engineers, U. S. Army).

Records available.- January to September 1940.

Extremes.- Maximum discharge during period, 3,650 second-feet Feb. 27 (gage height, 9.90 feet); no flow Jan. 1-7, June 12-26 (result of regulation).

Remarks.- Records fair Jan. 1 to Apr. 16, poor Apr. 17 to Sept. 30. Gage read twice daily with extra readings during storm flows. A detaining reservoir (capacity, about 6,000 acre-feet) several miles upstream stores flood water for gradual release during low-flow periods.

Cooperation.- Results of 21 discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|-------|------------------|---------|---------|------|------|----------------------|-------|
| 1 | | | | 0 | 226 | 983 | 266 | 6.5 | 1.3 | 12 | 5.5 | 5 |
| 2 | | | | 0 | 142 | 545 | 199 | 6 | 1.3 | 19 | 5.5 | 4.0 |
| 3 | | | | 0 | 335 | 174 | 125 | 5.5 | 1.3 | 16 | 5.5 | 4.0 |
| 4 | | | | 0 | 398 | 32 | 87 | 4.5 | 1.3 | 14 | 6 | 4.5 |
| 5 | | | | 0 | 215 | 86 | 70 | 4.5 | 1.3 | 12 | 6 | 4.5 |
| 6 | | | | 0 | 150 | 33 | 54 | 4.2 | 1.3 | 12 | 6 | 4.5 |
| 7 | | | | 0 | 112 | 76 | 44 | 4.0 | 1.3 | 12 | 6 | 4.5 |
| 8 | | | | 5 | 87 | 72 | 43 | 3.8 | 1.3 | 12 | 6.5 | 4.2 |
| 9 | | | | 44 | 62 | 62 | 42 | 3.5 | 1.3 | 11 | 5.5 | 4.2 |
| 10 | | | | 518 | 48 | 56 | 31 | 3.5 | 1.3 | 11 | 4.5 | 4.2 |
| 11 | | | | 649 | 39 | 50 | 30 | 3.0 | 1.3 | 9 | 4.5 | 4.2 |
| 12 | | | | 206 | 31 | 42 | 26 | 3.0 | 0 | 9 | 5 | 4.0 |
| 13 | | | | 59 | 28 | 37 | 26 | 2.2 | 0 | 6.5 | 5 | 4.0 |
| 14 | | | | 30 | 218 | 33 | 25 | 2.0 | 0 | 8.5 | 4.5 | 4.0 |
| 15 | | | | 15 | 145 | 32 | 22 | 2.0 | 0 | 8.5 | 5.5 | 4.0 |
| 16 | | | | 9.5 | 110 | 30 | 17 | 1.9 | 0 | 6 | 7 | 3.8 |
| 17 | | | | 45 | 138 | 29 | 16 | 1.8 | 0 | 8 | 6.5 | 3.8 |
| 18 | | | | 36 | 135 | 27 | 15 | 1.8 | 0 | 7.5 | 6.5 | 3.8 |
| 19 | | | | 28 | 95 | 21 | 15 | 1.8 | 0 | 7 | 5.5 | 3.5 |
| 20 | | | | 24 | 76 | 18 | 14 | 1.8 | 0 | 6.5 | 4.5 | 3.0 |
| 21 | | | | 23 | 57 | 14 | 13 | 1.8 | 0 | 6 | 4.2 | 3.0 |
| 22 | | | | 23 | 50 | 14 | 11 | 1.8 | 0 | 5.5 | 4.2 | 3.0 |
| 23 | | | | 25 | 298 | 14 | 10 | 1.8 | 0 | 5.5 | 6 | 3.0 |
| 24 | | | | 27 | 217 | 12 | 9 | 1.8 | 0 | 4.5 | 8 | 3.0 |
| 25 | | | | 48 | 186 | 12 | 9 | 1.8 | 0 | 4.5 | 5.5 | 3.2 |
| 26 | | | | 261 | 743 | 14 | 12 | 1.8 | 0 | 4.5 | 5.5 | 3.2 |
| 27 | | | | 99 | 2,690 | 126 | 11 | 1.8 | 16 | 5 | 5.5 | 3.0 |
| 28 | | | | 57 | 1,640 | 60 | 9.5 | 1.6 | 20 | 5 | 5.5 | 2.8 |
| 29 | | | | 37 | 1,530 | 64 | 8 | 1.6 | 18 | 5 | 5 | 2.8 |
| 30 | | | | 28 | - | 458 | 6.5 | 1.3 | 14 | 5 | 5 | 2.8 |
| 31 | | | | 72 | - | 1,050 | - | 1.3 | - | 5.5 | 5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | | | | | | | |
| November..... | | | | | | | | | | | | |
| December..... | | | | | | | | | | | | |
| Calendar year | | | | | | | | | | | | |
| January..... | | | | | | 2,364.0 | 649 | 0 | 76.3 | | 4,690 | |
| February..... | | | | | | 10,201 | 2,690 | 28 | 352 | | 20,230 | |
| March..... | | | | | | 4,276 | 1,050 | 12 | 138 | | 8,480 | |
| April..... | | | | | | 1,286 | 286 | 6.5 | 42.9 | | 2,550 | |
| May..... | | | | | | 65.7 | 6.5 | 1.3 | 2.76 | | 170 | |
| June..... | | | | | | 82.3 | 20 | 0 | 2.74 | | 163 | |
| July..... | | | | | | 267.5 | 19 | 4.5 | 8.63 | | 531 | |
| August..... | | | | | | 168.9 | 7 | 4.2 | 5.45 | | 336 | |
| September..... | | | | | | 111.5 | 5 | 2.8 | 3.72 | | 221 | |
| The period..... | | | | | | - | - | - | - | | 37,370 | |

PAJARO RIVER BASIN

Uvas Creek near Morgan Hill, Calif.

Location.— Water-stage recorder and concrete control, lat. 37°04'00", long. 121°41'30", in Las Uvas grant, 500 feet upstream from Uvas Dam, 0.6 mile downstream from Eastman Canyon, and 4.8 miles southwest of Morgan Hill, Santa Clara County. Altitude of gage, about 390 feet (from topographic map).

Drainage area.— 30.2 square miles.

Records available.— December 1930 to September 1940.

Extremes.— Maximum discharge during year, 5,720 second-feet Feb. 27 (gage height, 11.37 feet); no flow Oct. 1 to Dec. 3.
1930-40: Maximum discharge, 8,630 second-feet Dec. 11, 1937 (gage height, 13.70 feet), from rating curve extended above 3,000 second-feet; no flow at times in each of years 1931-34, 1939 and 1940.

Remarks.— Records good except those for periods of no gage-height record, which are poor. No regulation or large diversion above station. Water diverted at Uvas Dam for municipal supply of Gilroy.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | 0 | 4.4 | 236 | 422 | 330 | 22 | 10 | 2.9 | 1.0 | 0.4 |
| 2 | | | 0 | 197 | 139 | 294 | 226 | 21 | 9 | 2.9 | .9 | .4 |
| 3 | | | 0 | 32 | 338 | 231 | 174 | 21 | 8.5 | 2.3 | .8 | .4 |
| 4 | | | .3 | 322 | 224 | 183 | 143 | 26 | 8.5 | 2.0 | 1.8 | .4 |
| 5 | | | .4 | 49 | 166 | 160 | 120 | 21 | 8 | 1.8 | 3.8 | .5 |
| 6 | | | .4 | 60 | 135 | 130 | 105 | 19 | 8 | 1.7 | 1.0 | .6 |
| 7 | | | .4 | 123 | 113 | 112 | 91 | 19 | 7 | 1.7 | .9 | .8 |
| 8 | | | .3 | 660 | 93 | 101 | 85 | 18 | 7 | 1.5 | .8 | .8 |
| 9 | | | 3.0 | 750 | 81 | 91 | 75 | 17 | 7 | 1.5 | .8 | .8 |
| 10 | | | 10 | 400 | 71 | 86 | 68 | 15 | 6.5 | 1.4 | .6 | .6 |
| 11 | | | 5 | 300 | 61 | 76 | 61 | 15 | 6 | 1.4 | .5 | .6 |
| 12 | | | 1.4 | 150 | 54 | 71 | 55 | 14 | 5.5 | 1.4 | .6 | .6 |
| 13 | | | 1.2 | 100 | 63 | 64 | 50 | 14 | 5.5 | 1.5 | .4 | .5 |
| 14 | | | 1.1 | 80 | 171 | 59 | 48 | 13 | 4.7 | 1.4 | .4 | .5 |
| 15 | | | 1.0 | 60 | 97 | 55 | 45 | 13 | 4.4 | 1.4 | .4 | .6 |
| 16 | | | 1.0 | 50 | 79 | 55 | 41 | 13 | 4.7 | 1.5 | .4 | .5 |
| 17 | | | 1.0 | 45 | 204 | 50 | 38 | 12 | 4.4 | 1.7 | .4 | .5 |
| 18 | | | 1.0 | 40 | 127 | 46 | 37 | 12 | 5 | 1.8 | .4 | .5 |
| 19 | | | 1.0 | 35 | 106 | 44 | 34 | 12 | 5 | 1.5 | .4 | .6 |
| 20 | | | 1.0 | 30 | 93 | 40 | 33 | 11 | 4.7 | 1.4 | .4 | .5 |
| 21 | | | 1.1 | 30 | 81 | 38 | 33 | 11 | 4.2 | 1.2 | .4 | .5 |
| 22 | | | 1.1 | 30 | 86 | 35 | 33 | 10 | 4.0 | 1.2 | .4 | .4 |
| 23 | | | 1.0 | 25 | 125 | 33 | 32 | 10 | 4.0 | 1.1 | .4 | .5 |
| 24 | | | 1.2 | 25 | 110 | 33 | 31 | 10 | 3.8 | 2.5 | .4 | .4 |
| 25 | | | 1.2 | 200 | 174 | 32 | 34 | 9.5 | 3.8 | 3.1 | .4 | .4 |
| 26 | | | 1.1 | 700 | 454 | 52 | 33 | 9 | 3.6 | 2.9 | .4 | .4 |
| 27 | | | 1.1 | 250 | 3,390 | 82 | 30 | 9.5 | 3.1 | 2.7 | .4 | .5 |
| 28 | | | 1.2 | 152 | 1,460 | 53 | 30 | 9.5 | 2.9 | 2.3 | .4 | .5 |
| 29 | | | 1.2 | 113 | 810 | 202 | 26 | 9.5 | 2.9 | 1.2 | .4 | .5 |
| 30 | | | 1.1 | 91 | - | 1,340 | 25 | 11 | 2.9 | 1.1 | .4 | .5 |
| 31 | | | 1.1 | 128 | - | 691 | - | 12 | - | 1.0 | .4 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 41.9 | 10 | 0 | 1.55 | 83 | | |
| Calendar year 1939..... | | | | | | 2,211.6 | 380 | 0 | 6.06 | 4,380 | | |
| January..... | | | | | | 5,226.4 | 750 | 4.4 | 169 | 10,370 | | |
| February..... | | | | | | 9,341 | 3,390 | 54 | 322 | 18,530 | | |
| March..... | | | | | | 4,950 | 1,340 | 32 | 160 | 9,820 | | |
| April..... | | | | | | 2,166 | 330 | 25 | 72.2 | 4,300 | | |
| May..... | | | | | | 439.0 | 26 | 9 | 14.2 | 871 | | |
| June..... | | | | | | 164.6 | 10 | 2.9 | 5.49 | 326 | | |
| July..... | | | | | | 55.0 | 3.1 | 1.0 | 1.77 | 109 | | |
| August..... | | | | | | 21.0 | 3.8 | .4 | .68 | 42 | | |
| September..... | | | | | | 15.7 | .8 | .4 | .52 | 31 | | |
| Water year 1939-40..... | | | | | | 22,420.6 | 3,390 | 0 | 61.3 | 44,480 | | |

Peak discharge.— Jan. 4 (3 a.m.) 1,740 sec.-ft.; Feb. 27 (2:30 p.m.) 5,720 sec.-ft.; Mar. 30 (10 a.m.) 2,380 sec.-ft.

Note.— No gage-height record Dec. 5-11 and Jan. 8-27; discharge computed on basis of records for Los Gatos Creek at Los Gatos.

Tres Pinos Creek near Tres Pinos, Calif.

Location.- Wire-weight gage, lat. 36°45'55", long. 121°17'45", in Santa Ana y Quien Sabe land grant, 2.2 miles southeast of settlement of Tres Pinos, San Benito County, and about 4½ miles upstream from mouth. Altitude of gage, about 530 feet (from topographic map).

Drainage area.- 210 square miles (Corps of Engineers, U. S. Army).

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 4,480 second-feet Feb. 25 (gage height, 6.75 feet); no flow Aug. 30-31 and parts of other days in August and September.
Flood of February 1938 reached a stage of 8.7 feet, gage datum, from floodmarks.

Remarks.- Records poor. Gage read twice daily with extra readings during storm flows. Diversion above station for irrigation.

Cooperation.- Results of 22 discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------------------|------|------|---------|------|---------|------|------|------|----------------------|------|-------|
| 1 | | | - | 0.1 | 190 | 241 | 138 | 4.5 | 3.2 | 1.9 | 1.3 | 0.6 |
| 2 | | | - | 1.0 | 126 | 125 | 84 | 4.5 | 3.6 | 2.2 | 1.6 | .2 |
| 3 | | | - | 1.3 | 147 | 87 | 58 | 4.5 | 3.6 | 1.9 | 1.5 | .2 |
| 4 | | | - | 1.6 | 110 | 65 | 47 | 4.5 | 3.2 | 1.7 | 1.2 | .4 |
| 5 | | | - | 1.2 | 59 | 51 | 36 | 4.5 | 3.6 | 1.8 | 1.0 | .5 |
| 6 | | | - | 1.3 | 34 | 48 | 29 | 4.5 | 2.5 | 1.8 | .8 | .5 |
| 7 | | | - | 1.1 | 38 | 35 | 23 | 4.5 | 1.9 | 1.9 | .7 | 1.4 |
| 8 | | | - | 1.0 | 26 | 34 | 20 | 4.0 | 1.9 | 1.9 | .7 | 1.9 |
| 9 | | | - | 1.0 | 19 | 20 | 18 | 4.5 | 3.2 | 1.9 | .8 | 2.1 |
| 10 | | | - | 20 | 16 | 19 | 14 | 4.0 | 1.9 | 1.0 | .7 | 2.1 |
| 11 | | | - | 1,400 | 13 | 22 | 13 | 4.5 | 1.9 | 1.6 | 1.0 | 2.4 |
| 12 | | | - | 424 | 12 | 17 | 11 | 4.5 | 2.2 | .9 | 1.6 | 2.1 |
| 13 | | | - | 468 | 10 | 16 | 10 | 3.6 | 2.2 | 1.5 | 1.6 | 2.1 |
| 14 | | | - | 16 | 174 | 15 | 8 | 2.5 | 2.2 | 1.7 | 1.0 | 2.4 |
| 15 | | | - | 3.6 | 148 | 14 | 7.5 | 1.8 | 1.6 | 1.4 | 1.3 | 2.2 |
| 16 | | | - | 3.1 | 42 | 13 | 7 | 2.2 | 2.9 | 1.7 | 1.7 | 2.4 |
| 17 | | | - | 2.9 | 41 | 12 | 5 | 2.4 | 2.0 | 1.5 | 1.7 | 2.4 |
| 18 | | | - | 2.6 | 42 | 11 | 5 | 1.6 | 2.0 | 1.4 | 1.7 | 2.4 |
| 19 | | | 0.4 | 2.4 | 26 | 9 | 5 | 2.2 | 2.1 | .5 | 1.0 | 2.6 |
| 20 | | | .3 | 2.3 | 20 | 6 | 4.5 | 2.8 | 1.7 | .9 | .1 | 2.2 |
| 21 | | | .2 | 2.2 | 17 | 6.5 | 4.5 | 1.5 | 1.5 | 1.5 | 1.4 | 2.7 |
| 22 | | | .5 | 2.2 | 19 | 6 | 4.5 | 1.2 | .8 | 1.0 | .8 | 2.4 |
| 23 | | | 1.0 | 2.2 | 72 | 5 | 4.5 | 1.0 | 2.7 | .6 | .2 | 1.4 |
| 24 | | | .9 | 2.3 | 41 | 6 | 4.0 | 1.1 | 1.0 | .9 | .1 | 1.4 |
| 25 | | | .8 | 2.3 | 855 | 5.5 | 6 | 1.7 | 1.0 | .9 | 1.0 | 1.4 |
| 26 | | | .9 | 2.3 | 746 | 6 | 10 | 3.2 | 2.0 | 1.2 | .6 | 1.9 |
| 27 | | | .6 | 2.3 | 717 | 50 | 8 | 2.8 | 1.5 | 1.7 | .5 | 2.4 |
| 28 | | | .5 | 2.2 | 442 | 33 | 4.5 | 3.6 | 1.3 | 1.7 | 1.0 | 2.7 |
| 29 | | | .4 | 2.1 | 566 | 35 | 5 | 3.6 | 1.9 | 1.7 | .6 | 2.4 |
| 30 | | | .2 | 2.2 | - | 47 | 4.5 | 3.6 | 2.2 | 1.6 | 0 | 2.1 |
| 31 | | | .1 | 2.9 | - | 320 | - | 3.6 | - | 1.2 | 0 | - |
| Month | Second-foot-days | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | |
| October..... | - | | | - | | - | | - | | - | | |
| November..... | - | | | - | | - | | - | | - | | |
| December 19-31..... | 6.8 | | | 1.0 | | 0.1 | | 0.52 | | 13 | | |
| Calendar year | - | | | - | | - | | - | | - | | |
| January..... | 2,379.7 | | | 1,400 | | .1 | | 76.8 | | 4,720 | | |
| February..... | 4,767 | | | 835 | | 10 | | 164 | | 9,460 | | |
| March..... | 1,385.0 | | | 320 | | 5 | | 44.7 | | 2,760 | | |
| April..... | 595.5 | | | 183 | | 4.0 | | 20.0 | | 1,190 | | |
| May..... | 99.0 | | | 4.5 | | 1.0 | | 3.19 | | 196 | | |
| June..... | 65.3 | | | 3.6 | | .8 | | 2.18 | | 130 | | |
| July..... | 45.1 | | | 2.2 | | .5 | | 1.45 | | 89 | | |
| August..... | 29.2 | | | 1.7 | | 0 | | .94 | | 58 | | |
| September..... | 53.9 | | | 2.7 | | .2 | | 1.80 | | 107 | | |
| The period..... | - | | | - | | - | | - | | 18,710 | | |

San Benito River near Willow Creek School, Calif.

Location.- Water-stage recorder, lat. 36°36'55", long. 121°12'50", in SW¼ sec. 21, T. 15 S., R. 7 E., 1¼ miles downstream from Willow Creek, 1¼ miles northwest of Willow Creek School, and 10 miles northwest of San Benito. Altitude of gage, about 900 feet (from topographic map).

Drainage area.- 250 square miles (Corps of Engineers, U. S. Army).

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 1,750 second-feet Feb. 25 (gage height, 4.45 feet); minimum, 1.2 second-feet Aug. 10-13, 20, 21.
Highest stage known, about 9.0 feet (present gage datum) from floodmarks made during 1937-38.

Remarks.- Records fair. Small diversions above station for irrigation.

Cooperation.- Results of nine discharge measurements furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | - | 2.5 | 275 | 414 | 220 | 19 | 5.5 | 2.4 | 1.7 | 1.6 |
| 2 | | | - | 4.0 | 144 | 259 | 110 | 19 | 4.9 | 2.4 | 1.7 | 1.6 |
| 3 | | | - | 3.2 | 303 | 195 | 74 | 18 | 4.4 | 2.2 | 1.7 | 1.6 |
| 4 | | | - | 5.5 | 315 | 154 | 62 | 18 | 4.4 | 2.0 | 1.7 | 1.6 |
| 5 | | | - | 3.8 | 128 | 126 | 60 | 17 | 4.4 | 2.0 | 1.7 | 1.7 |
| 6 | | | - | 8 | 90 | 108 | 56 | 16 | 4.0 | 1.9 | 1.7 | 1.7 |
| 7 | | | - | 13 | 62 | 98 | 48 | 15 | 4.0 | 1.9 | 1.7 | 1.7 |
| 8 | | | - | 124 | 50 | 86 | 44 | 14 | 4.0 | 1.8 | 1.7 | 1.7 |
| 9 | | 1.8 | 81 | 41 | 63 | 42 | 13 | 3.7 | 1.8 | 1.6 | 1.6 | 1.6 |
| 10 | | 2.0 | 300 | 34 | 77 | 38 | 12 | 3.7 | 1.8 | 1.5 | 1.7 | 1.7 |
| 11 | | | 2.3 | 451 | 30 | 69 | 36 | 12 | 3.7 | 1.8 | 1.3 | 1.7 |
| 12 | | | 2.0 | 202 | 27 | 63 | 34 | 11 | 3.3 | 1.8 | 1.3 | 1.7 |
| 13 | | | 2.0 | 114 | 25 | 57 | 31 | 10 | 3.3 | 1.8 | 1.5 | 1.7 |
| 14 | | | 2.0 | 51 | 56 | 53 | 31 | 9 | 3.3 | 1.8 | 1.6 | 1.7 |
| 15 | | | 1.9 | 30 | 91 | 51 | 31 | 8.5 | 3.3 | 1.9 | 1.6 | 1.7 |
| 16 | | | 1.9 | 22 | 52 | 49 | 31 | 8.5 | 3.3 | 1.9 | 1.6 | 1.8 |
| 17 | | | 1.9 | 16 | 42 | 44 | 30 | 8.5 | 3.3 | 1.9 | 1.6 | 1.8 |
| 18 | | | 1.9 | 13 | 39 | 42 | 28 | 8 | 2.8 | 1.9 | 1.6 | 1.8 |
| 19 | | | 1.9 | 11 | 33 | 40 | 27 | 7 | 3.3 | 1.9 | 1.6 | 1.8 |
| 20 | | | 1.9 | 9 | 29 | 49 | 26 | 7 | 2.8 | 1.8 | 1.5 | 1.7 |
| 21 | | | 1.9 | 9 | 26 | 43 | 24 | 6.5 | 2.8 | 1.8 | 1.5 | 1.7 |
| 22 | | | 1.9 | 7 | 29 | 36 | 24 | 6 | 2.8 | 1.7 | 1.5 | 1.7 |
| 23 | | | 2.5 | 7 | 366 | 32 | 24 | 6 | 2.8 | 1.7 | 1.6 | 1.8 |
| 24 | | | 2.7 | 7 | 130 | 31 | 23 | 6 | 2.8 | 1.6 | 1.6 | 1.8 |
| 25 | | | 2.1 | 10 | 220 | 31 | 23 | 6 | 2.8 | 1.6 | 1.6 | 1.8 |
| 26 | | | 2.0 | 20 | 728 | 32 | 34 | 5.5 | 3.7 | 1.6 | 1.6 | 1.8 |
| 27 | | | 1.9 | 41 | 673 | 51 | 32 | 5.5 | 2.4 | 1.7 | 1.6 | 1.8 |
| 28 | | | 1.9 | 27 | 908 | 49 | 27 | 5.5 | 2.2 | 1.8 | 1.6 | 1.8 |
| 29 | | | 1.9 | 20 | 882 | 41 | 23 | 5.5 | 2.4 | 1.8 | 1.6 | 1.8 |
| 30 | | | 1.9 | 16 | - | 54 | 20 | 4.9 | 2.8 | 1.8 | 1.6 | 1.7 |
| 31 | | | 1.9 | 73 | - | 281 | - | 6 | - | 1.7 | 1.6 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December 9-31..... | | | | | | 46.1 | 2.7 | 1.8 | 2.00 | 91 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 1,680.0 | 431 | 2.5 | 54.2 | 3,330 | | |
| February..... | | | | | | 5,818 | 908 | 25 | 201 | 11,540 | | |
| March..... | | | | | | 2,798 | 414 | 31 | 90.3 | 5,560 | | |
| April..... | | | | | | 1,513 | 220 | 20 | 43.8 | 2,600 | | |
| May..... | | | | | | 313.9 | 19 | 4.9 | 10.1 | 623 | | |
| June..... | | | | | | 102.9 | 5.5 | 2.2 | 5.43 | 204 | | |
| July..... | | | | | | 87.6 | 2.4 | 1.3 | 1.85 | 114 | | |
| August..... | | | | | | 49.3 | 1.7 | 1.3 | 1.59 | 98 | | |
| September..... | | | | | | 51.6 | 1.8 | 1.6 | 1.72 | 102 | | |
| The period..... | | | | | | - | - | - | - | 24,250 | | |

Peak discharge.- Feb. 23 (6:30 a.m.) 1,440 sec.-ft.; Feb. 25 (12 p.m.) 1,750 sec.-ft.; Feb. 27 (7:30 p.m.) 1,490 sec.-ft.

San Lorenzo River at Big Trees, Calif.

Location.- Water-stage recorder, lat. $37^{\circ}01'40''$, long. $122^{\circ}03'30''$, in Canada del Rincon grant, half a mile south of Big Trees, Santa Cruz County, 1.6 miles downstream from Zayante Creek, and 4 miles north of Santa Cruz. Altitude of gage, about 150 feet (from topographic map).

Drainage area.- 110 square miles.

Records available.- April 1937 to September 1940.

Extremes.- Maximum discharge during year, 24,000 second-feet Feb. 27 (gage height, 21.1 feet, from floodmarks); minimum, 9.5 second-feet Oct. 15.
1937-40: Maximum discharge, that of Feb. 27, 1940, from rating curve extended above 5,000 second-feet on basis of slope-area studies and logarithmic plotting; minimum, 0.8 second-foot (regulated) June 25, 1939.

Remarks.- Records good except for period of fragmentary gage-height record, which are fair. Many small diversions above station for domestic supply.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|--------|------------------|---------|---------|-------|------|----------------------|-------|
| 1 | 11 | 12 | 13 | 193 | 351 | 1,250 | 1,140 | 130 | 76 | 40 | 28 | 21 |
| 2 | 10 | 10 | 13 | 555 | 289 | 885 | 787 | 125 | 71 | 39 | 26 | 21 |
| 3 | 10 | 10 | 13 | 142 | 1,380 | 694 | 649 | 121 | 69 | 37 | 26 | 20 |
| 4 | 10 | 10 | 13 | 596 | 652 | 573 | 555 | 125 | 66 | 36 | 24 | 19 |
| 5 | 10 | 10 | 13 | 202 | 483 | 495 | 483 | 115 | 65 | 34 | 25 | 21 |
| 6 | 12 | 11 | 13 | 96 | 385 | 429 | 435 | 113 | 64 | 34 | 25 | 23 |
| 7 | 15 | 12 | 13 | 392 | 318 | 382 | 394 | 105 | 65 | 35 | 27 | 24 |
| 8 | 15 | 12 | 13 | 1,030 | 266 | 352 | 368 | 106 | 63 | 34 | 24 | 23 |
| 9 | 14 | 12 | 14 | 975 | 231 | 315 | 335 | 101 | 60 | 33 | 23 | 23 |
| 10 | 12 | 12 | 24 | 1,240 | 209 | 289 | 308 | 99 | 61 | 34 | 22 | 22 |
| 11 | 12 | 12 | 46 | 1,100 | 190 | 266 | 284 | 94 | 59 | 34 | 21 | 22 |
| 12 | 12 | 13 | 21 | 420 | 173 | 247 | 271 | 93 | 59 | 34 | 21 | 22 |
| 13 | 11 | 13 | 16 | 247 | 182 | 229 | 249 | 91 | 50 | 30 | 21 | 23 |
| 14 | 11 | 13 | 14 | 150 | 552 | 216 | 238 | 89 | 53 | 33 | 18 | 23 |
| 15 | 11 | 13 | 13 | 146 | 360 | 205 | 231 | 56 | 53 | 32 | 19 | 23 |
| 16 | 12 | 13 | 13 | 122 | 276 | 205 | 216 | 86 | 54 | 36 | 21 | 23 |
| 17 | 12 | 12 | 13 | 108 | 985 | 192 | 205 | 85 | 54 | 36 | 21 | 23 |
| 18 | 11 | 13 | 13 | 98 | 582 | 150 | 196 | 83 | 54 | 37 | 21 | 23 |
| 19 | 11 | 13 | 12 | 90 | 414 | 171 | 186 | 80 | 50 | 34 | 19 | 23 |
| 20 | 12 | 13 | 12 | 84 | 332 | 164 | 180 | 80 | 50 | 30 | 20 | 26 |
| 21 | 11 | 13 | 12 | 79 | 284 | 157 | 173 | 80 | 44 | 36 | 19 | 26 |
| 22 | 10 | 13 | 12 | 76 | 276 | 150 | 169 | 79 | 44 | 32 | 20 | 23 |
| 23 | 11 | 13 | 16 | 72 | 266 | 142 | 164 | 79 | 46 | 32 | 20 | 20 |
| 24 | 10 | 13 | 17 | 71 | 240 | 139 | 157 | 77 | 43 | 32 | 22 | 20 |
| 25 | 12 | 19 | 15 | 1,540 | 824 | 139 | 182 | 70 | 44 | 30 | 23 | 20 |
| 26 | 12 | 19 | 14 | 2,900 | 1,850 | 211 | 165 | 68 | 43 | 26 | 25 | 19 |
| 27 | 13 | 15 | 14 | 731 | 13,700 | 390 | 152 | 69 | 42 | 28 | 23 | 19 |
| 28 | 13 | 14 | 14 | 428 | 16,430 | 295 | 144 | 74 | 42 | 30 | 22 | 19 |
| 29 | 12 | 13 | 14 | 310 | 2,390 | 916 | 141 | 74 | 42 | 31 | 21 | 19 |
| 30 | 11 | 13 | 14 | 249 | - | 7,580 | 134 | 89 | 41 | 30 | 21 | 18 |
| 31 | 11 | - | 16 | 220 | - | 2,490 | - | 85 | - | 28 | 21 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 360 | 15 | 10 | 11.6 | | 714 | |
| November..... | | | | | | 384 | 19 | 10 | 12.8 | | 762 | |
| December..... | | | | | | 473 | 46 | 12 | 15.3 | | 938 | |
| Calendar year 1939..... | | | | | | 10,433.0 | 532 | 7.5 | 28.6 | | 20,700 | |
| January..... | | | | | | 14,695 | 2,900 | 71 | 474 | | 29,150 | |
| February..... | | | | | | 34,870 | 13,700 | 173 | 1,202 | | 69,160 | |
| March..... | | | | | | 20,348 | 7,580 | 139 | 656 | | 40,360 | |
| April..... | | | | | | 9,291 | 1,140 | 134 | 310 | | 18,430 | |
| May..... | | | | | | 2,857 | 130 | 28 | 92.2 | | 5,670 | |
| June..... | | | | | | 1,627 | 76 | 41 | 54.2 | | 3,250 | |
| July..... | | | | | | 1,027 | 40 | 26 | 33.1 | | 2,040 | |
| August..... | | | | | | 689 | 28 | 18 | 22.2 | | 1,370 | |
| September..... | | | | | | 651 | 26 | 18 | 21.7 | | 1,290 | |
| Water year 1939-40..... | | | | | | 87,272 | 13,700 | 10 | 238 | | 173,100 | |

Peak discharge.- Jan. 10 (9 p.m.) 2,240 sec.-ft.; Jan. 25 (12 p.m.) 6,380 sec.-ft.; Feb. 3 (11:30 a.m.) 2,790 sec.-ft.; Feb. 17 (9 a.m.) 2,010 sec.-ft.; Feb. 27 (2:30 p.m.) 24,000 sec.-ft.; Mar. 30 (9 a.m.) 12,200 sec.-ft.

f Fragmentary gage-height record; discharge computed from graph based on partial record and floodmark.

Scott Creek near Davenport, Calif.

Location.- Water-stage recorder, lat. $37^{\circ}03'35''$, long. $122^{\circ}13'40''$, in Agua Puerca y Las Trancas land grant, about 1,000 feet downstream from mouth of Little Creek and 3 $\frac{1}{2}$ miles northwest (revised) of Davenport, Santa Cruz County. Altitude of gage, about 50 feet (from topographic map).

Drainage area.- 27.6 square miles.

Records available.- February 1939 to September 1940.

Extremes.- Maximum discharge during year, 7,550 second-feet Feb. 27 (gage height, 12.96 feet), from rating curve extended above 1,400 second-feet by logarithmic plotting; minimum, 0.2 second-foot (regulated) several days in October.

1939-40: Maximum discharge, that of Feb. 27, 1940; minimum, that in October 1939.

Remarks.- Records good except those above 1,500 second-feet, which are fair. Flow regulated by power plant upstream.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|------|-----|------|------|------|-------|
| 1 | 0.5 | 0.8 | 1.0 | 41 | 107 | 476 | 338 | 47 | 25 | 11 | 4.9 | 2.8 |
| 2 | .6 | .7 | 1.2 | 130 | 105 | 384 | 294 | 46 | 21 | 10 | 4.6 | 2.8 |
| 3 | .6 | .7 | 1.2 | 42 | 357 | 338 | 276 | 44 | 21 | a10 | 4.9 | 3.3 |
| 4 | .8 | .8 | 2.1 | 167 | 236 | 274 | 256 | 45 | 20 | a10 | 4.3 | 2.8 |
| 5 | .7 | .5 | 2.1 | 43 | 177 | 230 | 232 | 42 | 20 | a10 | 4.9 | 2.9 |
| 6 | .8 | .8 | 2.0 | 31 | 153 | 196 | 219 | 41 | 20 | a10 | 4.3 | 3.1 |
| 7 | .8 | .8 | 2.1 | 34 | 137 | 167 | 208 | 38 | 19 | a9.5 | 4.3 | 3.3 |
| 8 | .6 | .7 | 2.3 | 132 | 122 | 162 | 197 | 37 | 18 | a9.5 | 4.3 | 3.1 |
| 9 | .5 | .8 | 3.0 | 144 | 110 | 157 | 182 | 34 | 17 | a9.5 | 3.7 | 2.9 |
| 10 | .3 | .8 | 2.5 | 265 | 101 | 155 | 166 | 32 | 18 | a9.5 | 3.7 | 2.6 |
| 11 | .6 | .8 | 4.6 | 312 | 92 | 153 | 153 | 30 | 17 | a9.5 | 3.7 | 2.6 |
| 12 | .5 | .7 | 4.2 | 155 | 84 | 148 | 140 | 30 | 17 | a9 | 4.3 | 2.8 |
| 13 | .5 | .7 | 3.9 | 110 | 94 | 143 | 151 | 29 | 17 | a9 | 4.0 | 2.8 |
| 14 | .6 | .7 | 1.4 | a80 | 179 | 136 | 117 | 28 | 16 | a9 | 4.0 | 2.2 |
| 15 | .5 | .8 | 1.3 | a75 | 141 | 129 | 102 | 28 | 16 | a9 | 4.3 | 2.4 |
| 16 | .3 | .8 | 1.3 | a55 | 118 | 124 | 90 | 28 | 14 | a8.5 | 4.9 | 2.6 |
| 17 | .4 | .7 | 1.3 | a50 | 164 | 116 | 82 | 28 | 16 | 8.5 | 3.7 | 2.9 |
| 18 | .3 | .7 | 1.3 | a55 | 147 | 105 | 77 | 28 | 15 | 8.5 | 3.5 | 2.4 |
| 19 | .5 | .8 | 1.3 | a50 | 123 | 97 | 73 | 25 | 15 | 8.5 | 3.5 | 2.2 |
| 20 | .5 | .8 | 1.3 | a45 | 110 | 87 | 69 | 25 | 15 | 8.5 | 3.7 | 1.8 |
| 21 | .6 | .8 | 1.4 | a40 | 103 | 79 | 67 | 24 | 14 | 7 | 4.0 | 1.7 |
| 22 | .4 | .7 | 1.4 | a40 | 98 | 69 | 65 | 24 | 13 | 7 | 4.0 | 1.7 |
| 23 | .4 | .8 | 1.4 | a35 | 94 | 60 | 61 | 23 | 12 | 7 | 3.5 | 2.2 |
| 24 | 1.0 | .8 | 1.6 | a35 | 96 | 56 | 59 | 23 | 13 | 7 | 3.5 | 1.8 |
| 25 | .8 | 1.2 | 1.6 | a150 | 386 | 54 | 62 | 22 | 13 | 6.5 | 3.5 | 2.0 |
| 26 | .7 | 1.4 | 1.5 | a700 | 696 | 78 | 58 | 21 | 13 | 5 | 3.7 | 1.7 |
| 27 | .8 | 1.3 | 1.4 | 250 | 3,020 | 157 | 55 | 22 | 13 | 6 | 3.3 | 2.0 |
| 28 | .7 | 1.2 | 1.5 | 172 | 1,160 | 110 | 53 | 22 | 11 | 5 | 3.1 | 1.6 |
| 29 | .4 | 1.2 | 1.4 | 131 | 772 | 279 | 52 | 22 | 11 | 6.5 | 3.1 | 1.6 |
| 30 | .5 | 1.2 | 1.5 | 107 | - | 2,190 | 49 | 28 | 10 | 5 | 2.9 | 1.8 |
| 31 | .6 | - | 1.6 | 94 | - | 599 | - | 28 | - | 7 | 2.9 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 17.9 | 1.0 | 0.3 | 0.58 | 36 |
| November..... | 25.5 | 1.4 | .5 | .85 | 51 |
| December..... | 57.7 | 4.6 | 1.0 | 1.86 | 114 |
| Calendar year | - | - | - | - | - |
| January..... | 3,800 | 700 | 31 | 123 | 7,540 |
| February..... | 9,272 | 3,020 | 84 | 320 | 18,390 |
| March..... | 7,508 | 2,190 | 54 | 242 | 14,890 |
| April..... | 3,983 | 338 | 49 | 133 | 7,900 |
| May..... | 945 | 47 | 21 | 30.5 | 1,870 |
| June..... | 480 | 25 | 10 | 16.0 | 952 |
| July..... | 257.0 | 11 | 5 | 8.29 | 510 |
| August..... | 121.0 | 4.9 | 2.9 | 3.90 | 240 |
| September..... | 72.3 | 3.3 | 1.6 | 2.41 | 143 |
| Water year 1939-40..... | 26,539.4 | 3,020 | .3 | 72.5 | 52,640 |

Peak discharge.- Feb. 27 (2:30 p.m.) 7,550 sec.-ft.; Mar. 30 (5 p.m.) 3,760 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of peak flow determination over a weir Jan. 25, discharge measurement Jan. 26, and records for station on San Lorenzo River at Big Trees.

San Francisquito Creek at Stanford University, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°25'20", long. 122°11'25", in Rinconada del Arroyo de San Francisquito grant, at golf course, three-quarters of a mile downstream from Los Trancos Creek, and 1.2 miles west of Stanford University post office, Santa Clara County. Altitude of gage, about 120 feet (from topographic map).

Drainage area.- 37.7 square miles.

Records available.- January 1931 to September 1940.

Extremes.- Maximum discharge during year, 3,100 second-feet Feb. 27 (gage height, 9.4 feet); no flow for several months.
1931-40: Maximum discharge, that of Feb. 27, 1940; practically no flow for several months in each year.

Remarks.- Records good. There was a very small unmeasured discharge at times in August and September, owing to return flow from irrigation of golf course. Flow regulated by Searsville Lake and diversion to Los Trancos and Lagunita canals.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|------|-----|-----|-----|-------|
| 0.0 | 0.0 | 0.8 | 12.7 | 2.5 | 200 | 5.5 | 1,210 |
| .2 | .3 | 1.0 | 22.2 | 3.0 | 320 | 6.0 | 1,430 |
| .3 | .8 | 1.2 | 35 | 3.5 | 464 | 6.5 | 1,655 |
| .4 | 1.8 | 1.4 | 51 | 4.0 | 620 | 7.0 | 1,880 |
| .5 | 3.3 | 1.6 | 70 | 4.5 | 798 | 7.5 | 2,120 |
| .6 | 5.6 | 2.0 | 117 | 5.0 | 998 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | 0 | 30 | 248 | 187 | 1.4 | 0.3 | 0.1 | | |
| 2 | | | | .2 | 26 | 160 | 127 | .7 | .3 | .1 | | |
| 3 | | | | .2 | 128 | 116 | 100 | .6 | .3 | .1 | | |
| 4 | | | | 28 | 85 | 77 | 89 | 1.1 | .2 | .1 | | |
| 5 | | | | .2 | 35 | 60 | 53 | 2.6 | .2 | .1 | | |
| 6 | | | | 3.6 | 35 | 63 | 28 | 3.0 | .2 | .1 | | |
| 7 | | | | 16 | 14 | 48 | 41 | 2.0 | .2 | .1 | | |
| 8 | | | | 58 | 4.5 | 32 | 41 | .6 | .1 | .1 | | |
| 9 | | | | 166 | .3 | 40 | 44 | .3 | .1 | .1 | | |
| 10 | | | | 178 | 9.5 | 42 | 39 | .3 | .1 | .1 | | |
| 11 | | | | 167 | 12 | 30 | 34 | .3 | .2 | .1 | | |
| 12 | | | | 65 | .3 | 28 | 27 | .3 | .2 | .1 | | |
| 13 | | | | 38 | 14 | 23 | 24 | .3 | .2 | .1 | | |
| 14 | | | | .9 | 104 | 24 | 22 | .2 | .2 | .1 | | |
| 15 | | | | .3 | 53 | 22 | 20 | .3 | .2 | .1 | | |
| 16 | | | | .2 | 14 | 22 | 16 | .3 | .2 | .1 | | |
| 17 | | | | .2 | 121 | 19 | 10 | .3 | .2 | .1 | | |
| 18 | | | | .2 | 80 | 18 | 8.5 | .3 | .2 | .1 | | |
| 19 | | | | .2 | 26 | 17 | 9.5 | .4 | .2 | .1 | | |
| 20 | | | | .2 | .4 | 14 | 10 | .4 | .2 | .1 | | |
| 21 | | | | .2 | 13 | 9.5 | 14 | .4 | .2 | 0 | | |
| 22 | | | | .2 | 55 | 3.5 | 7 | .4 | .2 | 0 | | |
| 23 | | | | .2 | 55 | 1.3 | 8.5 | .4 | .1 | 0 | | |
| 24 | | | | .2 | 9 | 2.4 | 8 | .4 | .1 | 0 | | |
| 25 | | | | 151 | 125 | 4.2 | 10 | .3 | .1 | 0 | | |
| 26 | | | | 339 | 384 | 89 | 15 | .3 | .1 | 0 | | |
| 27 | | | | 61 | 2,120 | 178 | 12 | .3 | .1 | 0 | | |
| 28 | | | | 20 | 1,000 | 87 | 11 | .3 | .1 | 0 | | |
| 29 | | | | .6 | 832 | 212 | 8 | .3 | .1 | .1 | | |
| 30 | | | | 6.5 | - | 1,570 | 2.7 | .3 | .1 | .1 | | |
| 31 | | | | 12 | - | 400 | - | .3 | - | .1 | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 293.7 | 73 | 0 | .80 | 582 | | |
| January..... | | | | | | 1,313.3 | 339 | 0 | 42.4 | 2,600 | | |
| February..... | | | | | | 5,385.1 | 2,120 | .3 | 186 | 10,680 | | |
| March..... | | | | | | 3,659.9 | 1,570 | 1.3 | 118 | 7,260 | | |
| April..... | | | | | | 1,026.2 | 187 | 2.7 | 34.2 | 2,040 | | |
| May..... | | | | | | 19.4 | 3.0 | .2 | .63 | 38 | | |
| June..... | | | | | | 5.2 | .3 | .1 | .17 | 10 | | |
| July..... | | | | | | 2.3 | .1 | 0 | .07 | 4.6 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 11,411.4 | 2,120 | 0 | 31.2 | 22,630 | | |

Peak discharge.- Feb. 27 (4 p.m.) 3,100 sec.-ft.; Feb. 29 (12:30 a.m.) 1,780 sec.-ft.; Mar. 30 (7:30 a.m.) 2,480 sec.-ft.

SAN FRANCISQUITO CREEK BASIN

San Francisquito Creek at Palo Alto, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°27'10", long. 122°08'20", in Rancho de las Pulgas grant, 175 feet upstream from Newell Avenue Bridge, in Palo Alto, Santa Clara County, and about 2 miles upstream from mouth. Altitude of gage, about 5 feet (from topographic map).

Drainage area.- 38.6 square miles.

Records available.- January 1931 to September 1940.

Extremes.- Maximum discharge during year, 3,100 second-feet Feb. 27 (gage height, 17.22 feet); no flow for several months.
1931-40: Maximum discharge, that of Feb. 27, 1940; no flow for several months of each year.

Remarks.- Records good. Flow regulated by Searsville Lake and diversion into Los Trancos and Lagunita canals.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|------|-----|-----|------|-------|------|-------|
| 0.0 | 0.0 | 2.4 | 56 | 7.0 | 528 | 12.0 | 1,520 |
| .4 | 1.3 | 3.0 | 93 | 8.0 | 688 | 13.0 | 1,790 |
| 1.0 | 6.9 | 4.0 | 178 | 9.0 | 864 | 14.5 | 2,230 |
| 1.4 | 14.5 | 5.0 | 282 | 10.0 | 1,060 | | |
| 1.8 | 28 | 6.0 | 396 | 11.0 | 1,280 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | 0 | 28 | 254 | 207 | | | | | |
| 2 | | | | 0 | 18 | 164 | 136 | | | | | |
| 3 | | | | 0 | 127 | 117 | 107 | | | | | |
| 4 | | | | 18 | 82 | 77 | 92 | | | | | |
| 5 | | | | .8 | 37 | 55 | 60 | | | | | |
| 6 | | | | .6 | 30 | 58 | 23 | | | | | |
| 7 | | | | 4.2 | 11 | 46 | 38 | | | | | |
| 8 | | | | 52 | 5.5 | 28 | 35 | | | | | |
| 9 | | | | 176 | 0 | 32 | 42 | | | | | |
| 10 | | | | 161 | 0 | 37 | 35 | | | | | |
| 11 | | | | 187 | 14 | 27 | 31 | | | | | |
| 12 | | | | 64 | .1 | 23 | 24 | | | | | |
| 13 | | | | 36 | .2 | 18 | 20 | | | | | |
| 14 | | | | 5.5 | 109 | 19 | 17 | | | | | |
| 15 | | | | 0 | 55 | 18 | 15 | | | | | |
| 16 | | | | 0 | 19 | 17 | 12 | | | | | |
| 17 | | | | 0 | 116 | 14 | 6.5 | | | | | |
| 18 | | | | 0 | 83 | 12 | 5.5 | | | | | |
| 19 | | | | 0 | 33 | 13 | 5.5 | | | | | |
| 20 | | | | 0 | .1 | 9 | 6 | | | | | |
| 21 | | | | 0 | .8 | 7 | 10 | | | | | |
| 22 | | | | 0 | 50 | 1.5 | 3.5 | | | | | |
| 23 | | | | 0 | 58 | .1 | 4.9 | | | | | |
| 24 | | | | 0 | 7.5 | 0 | 4.7 | | | | | |
| 25 | | | | 114 | 120 | 0 | 4.2 | | | | | |
| 26 | | | | 360 | 320 | 55 | 10 | | | | | |
| 27 | | | | 60 | 2,220 | 190 | 8 | | | | | |
| 28 | | | | 24 | 983 | 82 | 7 | | | | | |
| 29 | | | | .2 | 314 | 162 | 5 | | | | | |
| 30 | | | | 0 | - | 1,570 | 4 | | | | | |
| 31 | | | | 14 | - | 439 | - | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 228.6 | 66 | 0 | .63 | 454 | | |
| January..... | | | | | | 1,277.3 | 360 | 0 | 41.2 | 2,530 | | |
| February..... | | | | | | 5,441.2 | 2,220 | 0 | 188 | 10,790 | | |
| March..... | | | | | | 3,534.6 | 1,570 | 0 | 114 | 7,010 | | |
| April..... | | | | | | 975.2 | 207 | .4 | 32.5 | 1,930 | | |
| May..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 11,228.3 | 2,220 | 0 | 30.7 | 22,260 | | |

Peak discharge.- Feb. 27 (5:30 p.m.) 3,100 sec.-ft.; Feb. 29 (2:30 a.m.) 1,820 sec.-ft.; Mar. 30 (9:30 a.m.) 2,800 sec.-ft.

Los Trancos Creek at Stanford University, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°24'35", long. 122°11'35", in El Corte de Madera grant, about 800 feet upstream from mouth and 1.6 miles southwest of Stanford University post office, Santa Clara County. Altitude of gage, about 160 feet (from topographic map).

Drainage area.- 7.5 square miles.

Records available.- January 1931 to September 1940.

Extremes.- Maximum discharge during year, 647 second-feet Feb. 27 (gage height, 4.07 feet) from rating curve extended above 320 second-feet by logarithmic plotting; no flow for several months.
1931-40: Maximum discharge, that of Feb. 27, 1940; no flow for several months in each year.

Remarks.- Records fair. Water diverted above station by Los Trancos canal; during some years part is returned to creek above station, through Felt Lake spillway.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | 0.1 | 3.8 | 66 | 101 | 0.6 | 0.1 | | | |
| 2 | | | | .1 | 1.2 | 41 | 27 | .4 | .1 | | | |
| 3 | | | | .1 | 6 | 30 | 22 | .5 | .1 | | | |
| 4 | | | | .3 | 2.4 | 23 | 18 | .6 | .1 | | | |
| 5 | | | | .1 | 1.2 | 20 | 15 | .5 | .1 | | | |
| 6 | | | | .1 | 1.0 | 17 | 14 | .5 | .1 | | | |
| 7 | | | | .3 | .7 | 15 | 13 | .9 | .1 | | | |
| 8 | | | | .5 | .5 | 14 | 12 | 1.1 | .1 | | | |
| 9 | | | | 1.0 | .4 | 13 | 11 | 1.0 | .1 | | | |
| 10 | | | | 11 | .3 | 12 | 11 | .9 | .1 | | | |
| 11 | | | | 5 | .3 | 11 | 10 | .6 | .1 | | | |
| 12 | | | | .7 | .3 | 11 | 9.5 | .8 | .1 | | | |
| 13 | | | | .3 | 5 | 10 | 9 | .9 | .1 | | | |
| 14 | | | | .2 | 2.4 | 10 | 9.5 | .6 | .1 | | | |
| 15 | | | | .1 | .8 | 9.5 | 9.5 | .4 | .1 | | | |
| 16 | | | | .1 | .5 | 9 | 6.5 | .3 | .1 | | | |
| 17 | | | | 0 | 8 | 9 | 1.3 | .3 | .1 | | | |
| 18 | | | | 0 | 1.6 | 9.5 | 1.2 | .3 | .1 | | | |
| 19 | | | | 0 | 1.2 | 8 | 2.6 | .2 | .1 | | | |
| 20 | | | | 0 | 1.0 | 7.5 | 3.9 | .2 | .1 | | | |
| 21 | | | | 0 | .9 | 7.5 | 6.5 | .2 | 0 | | | |
| 22 | | | | 0 | 1.5 | 5.5 | 5.5 | .2 | 0 | | | |
| 23 | | | | 0 | 2.8 | .9 | 5 | .2 | 0 | | | |
| 24 | | | | 0 | 3.8 | .5 | 4.8 | .2 | 0 | | | |
| 25 | | | | 3.1 | 21 | .4 | 5 | .2 | .1 | | | |
| 26 | | | | 5 | 80 | 6.5 | 5.5 | .2 | 0 | | | |
| 27 | | | | 1.1 | 368 | 23 | 4.8 | .1 | 0 | | | |
| 28 | | | | .6 | 272 | 12 | 4.6 | .1 | 0 | | | |
| 29 | | | | .4 | 199 | 25 | 2.8 | .1 | 0 | | | |
| 30 | | | | .3 | - | 244 | .8 | .1 | 0 | | | |
| 31 | | | | .5 | - | 94 | - | .1 | - | | | |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| November..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| December..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Calendar year 1939 | | | | 30.5 | | 3.3 | 0 | .08 | 60 | | | |
| January..... | | | | 31.0 | | 11 | 0 | 1.00 | 61 | | | |
| February..... | | | | 987.6 | | 368 | .3 | 34.1 | 1,960 | | | |
| March..... | | | | 763.8 | | 244 | .4 | 24.6 | 1,510 | | | |
| April..... | | | | 352.3 | | 101 | .8 | 11.7 | 699 | | | |
| May..... | | | | 13.3 | | 1.1 | .1 | .43 | 26 | | | |
| June..... | | | | 2.1 | | .1 | 0 | .07 | 4.2 | | | |
| July..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| August..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| September..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40 | | | | 2,150.1 | | 368 | 0 | 5.87 | 4,260 | | | |

Peak discharge.- Feb. 27 (2:30 p.m.) 647 sec.-ft.; Mar. 30 (4:30 p.m.) 370 sec.-ft.

Los Trancos canal near Stanford University, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°23'20", long. 122°11'10", in El Corte de Madera grant, half a mile downstream from intake and 3 miles south-west of Stanford University post office, Santa Clara County. When Felt Lake is full, recorder is moved to Cippolletti weir at canal intake. Altitude of gage, about 360 feet (from topographic map).

Records available.- October 1931 to September 1940.

Extremes.- Maximum daily discharge during year, 42-second-feet Jan. 10; no flow at times. 1931-40: Maximum daily discharge, that of Jan. 10, 1940; no flow at times in each year.

Remarks.- Records excellent except those for period of no gage-height record, which are fair. Canal diverts water from Los Trancos Creek 2 miles above mouth and conveys it to Felt Lake, an irrigation reservoir on Stanford University campus.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | 0 | 0.2 | 8.5 | 0 | 0 | 3.4 | 1.4 | 0.9 | 0.3 | 0.3 |
| 2 | | | 0 | .4 | 4.9 | 0 | 0 | 3.2 | 1.3 | .6 | .3 | .3 |
| 3 | | | 0 | 3.1 | 16 | 0 | 0 | 3.2 | 1.3 | .8 | .3 | .3 |
| 4 | | | 0 | 6.5 | 8.5 | 0 | 0 | 3.4 | 1.2 | .7 | .3 | .3 |
| 5 | | | 0 | .5 | 6 | 0 | 0 | 3.0 | 1.1 | .6 | .6 | .3 |
| 6 | | | 0 | .7 | 5.5 | 0 | 0 | 3.0 | 1.0 | .5 | .3 | .3 |
| 7 | | | 0 | 8.5 | 4.5 | 0 | 0 | 2.8 | 1.0 | .5 | .3 | .3 |
| 8 | | | 0 | 16 | 3.7 | 0 | 0 | 2.6 | .9 | .8 | .3 | .3 |
| 9 | | | 0 | 26 | 3.0 | 0 | 0 | 2.6 | .9 | .5 | .3 | .5 |
| 10 | | | .2 | 42 | 2.8 | 0 | 0 | 2.6 | .8 | .5 | .3 | .2 |
| 11 | | | .1 | 32 | 2.5 | 0 | 0 | 2.5 | .8 | .5 | .3 | .2 |
| 12 | | | 0 | 10 | 2.3 | 0 | 0 | 2.4 | .8 | .5 | .6 | .2 |
| 13 | | | 0 | 5.5 | 2.7 | 0 | 0 | 2.4 | .8 | .5 | .3 | .2 |
| 14 | | | 0 | 3.6 | 14 | 0 | 0 | 2.3 | .7 | .5 | .3 | .2 |
| 15 | | | 0 | 2.6 | 6 | 0 | 0 | 2.3 | .7 | .8 | .3 | .2 |
| 16 | | | 0 | 2.1 | 4.2 | 0 | 3.0 | 2.2 | .7 | .5 | .3 | .2 |
| 17 | | | 0 | 1.8 | 20 | 0 | 5 | 2.2 | .6 | .5 | .3 | .2 |
| 18 | | | 0 | 1.6 | 9 | 0 | 4.9 | 2.2 | .6 | .5 | .3 | .2 |
| 19 | | | 0 | 1.4 | | 0 | 4.8 | 2.2 | .6 | .5 | .6 | .2 |
| 20 | | | 0 | 1.2 | | 0 | 2.0 | 2.0 | .6 | .5 | .3 | .1 |
| 21 | | | 0 | 1.2 | a7 | 0 | 0 | 1.8 | .6 | .5 | .3 | .1 |
| 22 | | | 0 | 1.1 | | 0 | 0 | 1.7 | .6 | .8 | .3 | .2 |
| 23 | | | 0 | 1.0 | | 0 | 0 | 1.7 | .6 | .4 | .3 | .2 |
| 24 | | | 0 | 1.0 | | 0 | 0 | 1.7 | .8 | .4 | .3 | .2 |
| 25 | | | 0 | 12 | | 0 | 0 | 1.6 | 1.2 | .4 | .3 | .2 |
| 26 | | | 0 | 29 | 0 | 1.6 | 0 | 1.5 | 1.1 | .3 | .3 | .2 |
| 27 | | | 0 | 8.5 | 0 | 0 | 0 | 1.6 | 1.4 | .3 | .3 | .2 |
| 28 | | | 0 | 5.5 | 0 | 0 | 0 | 1.6 | 1.6 | .3 | .3 | .2 |
| 29 | | | 0 | 3.3 | 0 | 0 | 2.0 | 1.4 | 1.6 | .6 | .3 | .2 |
| 30 | | | 0 | 2.6 | - | 0 | 3.4 | 1.4 | 1.3 | .3 | .3 | .2 |
| 31 | | | 0 | 2.5 | - | 0 | - | 1.4 | - | .3 | .3 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| December..... | | | | .3 | .2 | 0 | .01 | .6 | | | | |
| Calendar year 1939..... | | | | 166.7 | 17 | 0 | .46 | 335 | | | | |
| January..... | | | | 233.4 | 42 | .2 | 7.53 | 463 | | | | |
| February..... | | | | 173.1 | 20 | 0 | 5.97 | 343 | | | | |
| March..... | | | | 1.6 | 1.6 | 0 | .05 | 3.2 | | | | |
| April..... | | | | 25.1 | 5 | 0 | .84 | 50 | | | | |
| May..... | | | | 69.9 | 3.4 | 1.4 | 2.25 | 139 | | | | |
| June..... | | | | 28.6 | 1.6 | .6 | .95 | 57 | | | | |
| July..... | | | | 16.3 | .9 | .3 | .53 | 32 | | | | |
| August..... | | | | 10.2 | .6 | .3 | .33 | 20 | | | | |
| September..... | | | | 6.9 | .5 | .1 | .23 | 14 | | | | |
| Water year 1939-40..... | | | | 565.4 | 42 | 0 | 1.54 | 1,120 | | | | |

a No gage-height record; discharge computed on basis of increase in contents in Felt Lake.

Lagunita canal at Stanford University, Calif.

Location.- Water-stage recorder, lat. 37°25'05", long. 122°11'15", in Rinconada del Arroyo de San Francisquito grant, 500 feet downstream from intake, at Stanford University, Santa Clara County. Altitude of gage, about 150 feet (from topographic map).

Records available.- January 1931 to September 1940.

Extremes.- Maximum daily discharge during year, 20 second-feet Jan. 4, 8 and Mar. 8; no flow for several months.

1931-40: Maximum daily discharge, 23 second-feet Feb. 13, 1936; no flow for several months of each year.

Remarks.- Records good except those for periods of very low flow, which are fair. Canal diverts water from San Francisquito Creek below Los Trancos Creek, to supply the Lagunita, an irrigation reservoir on Stanford University campus.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | 0 | 1.0 | 10 | 0.5 | 0 | 6.5 | 0.6 | | | |
| 2 | | | 0 | 1.7 | 12 | .4 | 0 | 6.5 | .5 | | | |
| 3 | | | 0 | 1.1 | .3 | 0 | 0 | 6.5 | .5 | | | |
| 4 | | | 0 | 20 | .3 | 0 | 0 | 6 | .4 | | | |
| 5 | | | 0 | 3.9 | 1.8 | 0 | 6 | 5.5 | .4 | | | |
| 6 | | | 0 | 11 | 0 | 0 | 14 | 5 | .2 | | | |
| 7 | | | 0 | 11 | 0 | 8.5 | 12 | 5.5 | .2 | | | |
| 8 | | | 0 | 20 | 4.6 | 20 | 6 | 5.5 | .2 | | | |
| 9 | | | 0 | 18 | 8.5 | 6.5 | 1.9 | 4.8 | .2 | | | |
| 10 | | | .4 | 18 | 15 | 0 | 1.7 | 4.3 | .2 | | | |
| 11 | | | .8 | 17 | 14 | 7 | 1.6 | 3.4 | .2 | | | |
| 12 | | | .4 | 16 | 3.8 | 5.5 | 4.1 | 3.7 | .1 | | | |
| 13 | | | .3 | 17 | 2.0 | 5 | 5.5 | 3.2 | .1 | | | |
| 14 | | | .3 | 6.5 | 0 | 5 | 5 | 2.2 | .1 | | | |
| 15 | | | .5 | 3.3 | 9 | 4.9 | 5.5 | 3.6 | .1 | | | |
| 16 | | | .3 | 2.8 | 14 | 5.5 | 5.5 | 3.2 | .1 | | | |
| 17 | | | .3 | 2.1 | .8 | 7 | 6 | 2.0 | 0 | | | |
| 18 | | | .4 | 2.3 | 0 | 6 | 6 | 1.9 | 0 | | | |
| 19 | | | .3 | 1.6 | 11 | 5.5 | 6 | 1.7 | 0 | | | |
| 20 | | | .3 | 1.4 | 14 | 5 | 6 | 1.8 | 0 | | | |
| 21 | | | .4 | 1.3 | 4.6 | 5 | 6 | 1.9 | 0 | | | |
| 22 | | | .5 | 1.3 | 0 | 4.9 | 4.9 | 1.5 | 0 | | | |
| 23 | | | .4 | 1.6 | 0 | 4.1 | 4.2 | 1.4 | 0 | | | |
| 24 | | | .4 | 1.8 | 5.5 | 4.1 | 4.3 | 1.0 | 0 | | | |
| 25 | | | .3 | 13 | 0 | 4.5 | 4.3 | 1.1 | 0 | | | |
| 26 | | | .4 | 19 | .2 | 3.7 | 4.8 | 1.1 | 0 | | | |
| 27 | | | .4 | 17 | 7 | 0 | 5.5 | 1.0 | 0 | | | |
| 28 | | | .4 | 15 | 1.2 | 0 | 5.5 | .8 | 0 | | | |
| 29 | | | .4 | 11 | .6 | 0 | 6.5 | .6 | 0 | | | |
| 30 | | | .4 | 9 | - | 4.9 | 7 | .6 | 0 | | | |
| 31 | | | .5 | 12 | - | 0 | - | .5 | - | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 8.6 | .8 | 0 | .28 | 17 | | |
| Calendar year 1939..... | | | | | | 277.5 | 15 | 0 | .76 | 551 | | |
| January..... | | | | | | 277.7 | 20 | 1.0 | 8.96 | 551 | | |
| February..... | | | | | | 140.2 | 15 | 0 | 4.83 | 278 | | |
| March..... | | | | | | 123.5 | 20 | 0 | 3.98 | 245 | | |
| April..... | | | | | | 145.8 | 14 | 0 | 4.86 | 289 | | |
| May..... | | | | | | 94.1 | 6.5 | .5 | 3.04 | 187 | | |
| June..... | | | | | | 4.1 | .6 | 0 | .14 | 8.1 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 794.0 | 20 | 0 | 2.17 | 1,580 | | |

STEVENS CREEK BASIN

Stevens Creek near Cupertino, Calif.

Location.— Water-stage recorder and concrete control, lat. 37°18'20", long. 122°04'25", in SW¼ sec. 22, T. 7 S., R. 2 W., at county highway bridge, a quarter of a mile downstream from Stevens Creek Dam and about 4 miles west of Cupertino. Altitude of gage, about 385 feet (from topographic map).

Drainage area.— 18.1 square miles.

Records available.— January 1930 to September 1940.

Average discharge.— 10 years, 10.6 second-feet.

Extremes.— Maximum discharge during year, 2,390 second-feet Feb. 28 (gage height, 7.05 feet) from rating curve extended above 350 second-feet; practically no flow Oct. 1 to Dec. 9.

1930-40: Maximum discharge, that of Feb. 28, 1940; no flow at times each year except 1938.

Remarks.— Records good. Storage in Stevens Creek Reservoir (capacity 4,000 acre-feet) above station began in 1936; water released during summer.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|------|-----|-----|-----|-----|
| 1.2 | 0.2 | 1.7 | 11.6 | 2.6 | 117 | 3.9 | 510 |
| 1.3 | .8 | 1.8 | 17 | 2.8 | 165 | 4.2 | 650 |
| 1.4 | 2.1 | 2.0 | 31.5 | 3.0 | 220 | 4.5 | 770 |
| 1.5 | 4.2 | 2.2 | 51 | 3.3 | 308 | 4.8 | 920 |
| 1.6 | 7.2 | 2.4 | 76 | 3.6 | 406 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | 0 | 0.2 | 39 | 206 | 138 | 17 | 11 | 5.5 | 20 | 1.6 |
| 2 | | | 0 | 7.5 | 32 | 145 | 96 | 18 | 11 | 7 | 20 | 1.6 |
| 3 | | | 0 | 12 | 33 | 111 | 80 | 17 | 12 | 9 | 15 | 12 |
| 4 | | | 0 | 22 | 30 | 87 | 54 | 18 | 12 | 6.5 | 6 | 20 |
| 5 | | | 0 | 22 | 28 | 74 | 58 | 16 | 12 | 8 | 6 | 20 |
| 6 | | | 0 | 14 | 21 | 66 | 53 | 15 | 12 | 11 | 14 | 17 |
| 7 | | | 0 | 13 | 22 | 58 | 50 | 14 | 12 | 11 | 2.0 | 16 |
| 8 | | | 0 | 37 | 20 | 49 | 48 | 14 | 12 | 11 | 1.3 | 16 |
| 9 | | | 0 | 49 | 20 | 48 | 44 | 14 | 12 | 9 | 1.3 | 16 |
| 10 | | .3 | 42 | 13 | 48 | 41 | 13 | 13 | 8 | 11 | 16 | |
| 11 | | .1 | 46 | 11 | 41 | 39 | 13 | 13 | 8 | 20 | 16 | |
| 12 | | .2 | 42 | 13 | 38 | 36 | 13 | 13 | 8 | 20 | 17 | |
| 13 | | .2 | 40 | 13 | 38 | 32 | 12 | 13 | 8 | 20 | 17 | |
| 14 | | .2 | 38 | 16 | 34 | 32 | 12 | 13 | 8 | 18 | 16 | |
| 15 | | .2 | 32 | 13 | 33 | 32 | 12 | 13 | 8 | 17 | 16 | |
| 16 | | .2 | 28 | 13 | 32 | 30 | 12 | 13 | 8 | 17 | 16 | |
| 17 | | .2 | 21 | 16 | 32 | 29 | 10 | 12 | 7.5 | 17 | 16 | |
| 18 | | .2 | 14 | 16 | 29 | 28 | 9 | 5.5 | 10 | 17 | 16 | |
| 19 | | .2 | 11 | 14 | 29 | 27 | 9.5 | 5.5 | 14 | 17 | 16 | |
| 20 | | .2 | 12 | 14 | 28 | 24 | 9 | 5.5 | 14 | 17 | 16 | |
| 21 | | .2 | 11 | 14 | 24 | 24 | 11 | 5.5 | 14 | 16 | 16 | |
| 22 | | .2 | 9 | 14 | 24 | 24 | 12 | 5.5 | 14 | 16 | 16 | |
| 23 | | .2 | 8.5 | 14 | 24 | 25 | 12 | 5.5 | 16 | 16 | 16 | |
| 24 | | .2 | 8.5 | 14 | 24 | 22 | 10 | 5 | 20 | 7.5 | 16 | |
| 25 | | .2 | 9 | 15 | 22 | 24 | 10 | 5 | 20 | 1.6 | 16 | |
| 26 | | .2 | 25 | 23 | 28 | 22 | 10 | 5 | 20 | 1.4 | 16 | |
| 27 | | .2 | 41 | 49 | 50 | 21 | 9.5 | 5 | 20 | 1.4 | 16 | |
| 28 | | .2 | 46 | 876 | 31 | 20 | 9.5 | 5 | 20 | 1.4 | 16 | |
| 29 | | .2 | 43 | 467 | 62 | 19 | 9.5 | 5 | 20 | 1.4 | 16 | |
| 30 | | .2 | 39 | - | 664 | 18 | 10 | 5 | 20 | 1.4 | 16 | |
| 31 | | .2 | 32 | - | 252 | - | 11 | - | 20 | 1.6 | - | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| December..... | | | | | 4.4 | .3 | 0 | .14 | 8.7 | | | |
| Calendar year 1939..... | | | | | 911.4 | 34 | 0 | 2.50 | 1,810 | | | |
| January..... | | | | | 774.7 | 49 | .2 | 25.0 | 1,540 | | | |
| February..... | | | | | 1,882 | 876 | 11 | 64.9 | 3,730 | | | |
| March..... | | | | | 2,431 | 664 | 22 | 78.4 | 4,820 | | | |
| April..... | | | | | 1,188 | 158 | 18 | 59.6 | 2,360 | | | |
| May..... | | | | | 322 | 18 | 9 | 12.3 | 768 | | | |
| June..... | | | | | 277 | 13 | 5 | 9.23 | 549 | | | |
| July..... | | | | | 383.5 | 20 | 5.5 | 12.4 | 761 | | | |
| August..... | | | | | 340.3 | 20 | 1.3 | 11.0 | 675 | | | |
| September..... | | | | | 458.2 | 20 | 1.6 | 15.3 | 909 | | | |
| Water year 1939-40..... | | | | | 8,121.1 | 876 | 0 | 22.2 | 16,110 | | | |

Peak discharge.— Feb. 28 (7 a.m.) 2,390 sec.-ft.; Mar. 30 (9:30 a.m.) 1,400 sec.-ft.

Guadalupe Creek at Guadalupe, Calif.

Location.— Water-stage recorder and concrete control, lat. 37°13'05", long. 121°54'35", in SW $\frac{1}{4}$ sec. 19, T. 8 S., R. 1 E., half a mile northwest of Guadalupe and 3.5 miles upstream from Alamitos Creek. Altitude of gage, about 325 feet (from topographic map).

Drainage area.— 12.6 square miles.

Records available.— January 1930 to September 1940.

Average discharge.— 10 years, 10.5 second-feet.

Extremes.— Maximum discharge during year, 705 second-feet Feb. 27 (gage height, 3.20 feet); no flow Oct. 30 and part of Oct. 31.

1930-40: Maximum discharge, 1,160 second-feet Dec. 28, 1931 (gage height, 4.05 feet), from rating curve extended above 840 second-feet; no flow during part of each year except 1937 and 1938.

Remarks.— Records good except those for period of no gage-height record, which are fair. Small diversions above station. Flow regulated by Guadalupe Reservoir (capacity 3,500 acre-feet); water released during summer.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 2 to Sept. 30)

| | | | | | | | |
|-----|-----|-----|------|-----|----|-----|-----|
| 0.2 | 0 | 0.6 | 2.9 | 1.0 | 20 | 1.8 | 122 |
| .3 | .1 | .7 | 5.6 | 1.2 | 35 | 2.0 | 170 |
| .4 | .5 | .8 | 9.6 | 1.4 | 57 | 2.3 | 270 |
| .5 | 1.3 | .9 | 14.4 | 1.6 | 85 | 2.7 | 440 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | a0.2 | 0.3 | 0.5 | 0.8 | 29 | 73 | 112 | 20 | 7 | 9.5 | 7.5 | 8 |
| 2 | a.2 | .3 | .5 | 4.3 | 17 | 50 | 72 | 24 | 6 | 9.5 | 7.5 | 8 |
| 3 | a.2 | .3 | .5 | 1.8 | 21 | 37 | 56 | 24 | 6.5 | 10 | 7.5 | 7.5 |
| 4 | a.1 | .3 | .5 | 8.5 | 18 | 31 | 43 | 24 | 6.5 | 9.5 | 7.5 | 8 |
| 5 | a.1 | .3 | .5 | 2.7 | 28 | 26 | 37 | 23 | 6.5 | 9 | 7.5 | 5 |
| 6 | .3 | .3 | .5 | 3.3 | 39 | 23 | 33 | 23 | 6.5 | 8.5 | 8 | .6 |
| 7 | .1 | .2 | .6 | 10 | 40 | 24 | 29 | 22 | 6.5 | 8.5 | 8 | .5 |
| 8 | .1 | .3 | .5 | 63 | 38 | 31 | 25 | 22 | 6 | 8.5 | 5.5 | .2 |
| 9 | .1 | .3 | .6 | 70 | 42 | 27 | 24 | 22 | 6 | 8.5 | 5.5 | .2 |
| 10 | .1 | .3 | 3.5 | 31 | 44 | 26 | 21 | 21 | 6.5 | 8.5 | 5.5 | .3 |
| 11 | .1 | .3 | 1.0 | 22 | 43 | 24 | 21 | 21 | 7 | 8.5 | 5.5 | .8 |
| 12 | .1 | .4 | .6 | 15 | 44 | 21 | 20 | 21 | 12 | 8.5 | 8.5 | 2.0 |
| 13 | .1 | .4 | .5 | 11 | 42 | 25 | 18 | 21 | 13 | 8.5 | 8.5 | 2.0 |
| 14 | .1 | .4 | .5 | 8 | 24 | 24 | 17 | 21 | 13 | 8.5 | 8.5 | 2.0 |
| 15 | .1 | .4 | .4 | 11 | 32 | 30 | 17 | 21 | 13 | 8.5 | 8.5 | 2.0 |
| 16 | .1 | .4 | .4 | 16 | 40 | 30 | 15 | 21 | 13 | 8.5 | 8.5 | 2.0 |
| 17 | .1 | .4 | .4 | 15 | 27 | 29 | 16 | 21 | 12 | 8.5 | 8.5 | 2.3 |
| 18 | .1 | .4 | .4 | 18 | 14 | 31 | 19 | 21 | 11 | 8.5 | 8.5 | 2.3 |
| 19 | .1 | .5 | .4 | 19 | 34 | 37 | 21 | 21 | 11 | 8.5 | 8.5 | 2.1 |
| 20 | .1 | .2 | .4 | 21 | 42 | 37 | 21 | 21 | 11 | 8.5 | 8 | 2.3 |
| 21 | .1 | .4 | .4 | 21 | 40 | 37 | 21 | 20 | 11 | 8.5 | 8 | 2.3 |
| 22 | .1 | .5 | .4 | 20 | 30 | 39 | 29 | 20 | 8.5 | 8.5 | 8.5 | 2.3 |
| 23 | .1 | .3 | .5 | 21 | 28 | 33 | 26 | 20 | 4.6 | 8 | 8.5 | 2.3 |
| 24 | .2 | .4 | .5 | 24 | 37 | 30 | 18 | 20 | 5.5 | 7.5 | 8.5 | 2.1 |
| 25 | .2 | .6 | .5 | 33 | 34 | 33 | 20 | 14 | 10 | 7.5 | 8 | 2.1 |
| 26 | .2 | .5 | .5 | 33 | 65 | 38 | 22 | 6.5 | 9.5 | 7.5 | 8 | 2.1 |
| 27 | .2 | .5 | .5 | 32 | 401 | 24 | 18 | 7 | 9.5 | 7.5 | 8 | 3.3 |
| 28 | .3 | .5 | .5 | 39 | 239 | 33 | 15 | 7 | 9.5 | 7.5 | 8 | 6 |
| 29 | .4 | .5 | .5 | 36 | 125 | 38 | 17 | 7 | 9.5 | 7.5 | 8 | 5.5 |
| 30 | 0 | .5 | .5 | 38 | - | 131 | 20 | 8 | 9.5 | 7.5 | 8 | 5.5 |
| 31 | .1 | - | .5 | 36 | - | 172 | - | 7.5 | - | 7.5 | 8 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 4.4 | 0.4 | 0 | 0.14 | 8.7 |
| November..... | 11.4 | .6 | .2 | .38 | 23 |
| December..... | 18.5 | 3.5 | .4 | .60 | 37 |
| Calendar year 1939..... | 830.2 | 40 | 0 | 2.27 | 1,650 |
| January..... | 684.4 | 70 | .8 | 22.1 | 1,360 |
| February..... | 1,657 | 401 | 14 | 57.1 | 3,290 |
| March..... | 1,244 | 172 | 21 | 40.1 | 2,470 |
| April..... | 843 | 112 | 15 | 28.1 | 1,870 |
| May..... | 572 | 24 | 6.5 | 18.5 | 1,130 |
| June..... | 267.1 | 13 | 4.6 | 8.90 | 530 |
| July..... | 260 | 10 | 7.5 | 8.39 | 516 |
| August..... | 247 | 8.5 | 5.5 | 7.97 | 490 |
| September..... | 91.6 | 8 | .2 | 3.05 | 182 |
| Water year 1939-40..... | 5,900.4 | 401 | 0 | 16.1 | 11,710 |

a No gage-height record; discharge computed on basis of records for Campbell Creek at Saratoga.

Guadalupe Creek at San Jose, Calif.

Location.— Water-stage recorder and concrete control, lat. 37°20'00", long. 121°54'00", 100 feet downstream from Los Gatos Creek, in city of San Jose, Santa Clara County. Altitude of gage, about 80 feet (from topographic map).

Drainage area.— 131 square miles.

Records available.— January 1930 to September 1940.

Average discharge.— 10 years, 33.2 second-feet.

Extremes.— Maximum discharge during year, 8,680 second-feet Feb. 27 (gage height, 11.88 feet) from rating curve extended above 3,200 second-feet by logarithmic plotting; no flow during several months.
1930-40: Maximum discharge, that of Feb. 27, 1940; no flow during most of each year.

Remarks.— Records excellent. Small diversions above station. Flow regulated by several reservoirs.

Rating table, water year 1939-40 (gage height, in feet, and discharge in second-feet)

| | | | | | | | |
|------|-----|-----|-----|-----|-------|-----|-------|
| 0.45 | 0 | 1.0 | 6.4 | 2.2 | 130 | 5.0 | 2,200 |
| .5 | .2 | 1.2 | 12 | 2.6 | 300 | 6.0 | 3,100 |
| .6 | .6 | 1.4 | 19 | 3.0 | 565 | 7.0 | 4,000 |
| .7 | 1.4 | 1.6 | 29 | 3.5 | 950 | 8.0 | 4,950 |
| .8 | 2.5 | 1.8 | 49 | 4.0 | 1,350 | 9.0 | 5,900 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|------|-----|------|------|------|-------|
| 1 | | | 0 | 0 | 160 | 954 | 806 | 0 | | | | |
| 2 | | | 0 | 0 | 52 | 595 | 457 | 0 | | | | |
| 3 | | | 0 | 0 | 165 | 412 | 518 | 0 | | | | |
| 4 | | | 0 | 17 | 125 | 284 | 229 | 0 | | | | |
| 5 | | | 0 | 0 | 49 | 198 | 175 | 0 | | | | |
| 6 | | | 0 | 0 | 7.5 | 140 | 137 | 0 | | | | |
| 7 | | | 0 | 9 | 0 | 112 | 120 | .2 | | | | |
| 8 | | | 0 | 235 | 0 | 94 | 98 | 0 | | | | |
| 9 | | | 0 | 425 | 0 | 79 | 68 | 0 | | | | |
| 10 | | | 0 | 220 | 0 | 61 | 50 | 0 | | | | |
| 11 | | | 0 | 190 | 0 | 52 | 49 | 0 | | | | |
| 12 | | | 0 | 44 | 0 | 40 | 21 | 0 | | | | |
| 13 | | | 0 | 24 | 0 | 28 | 17 | 0 | | | | |
| 14 | | | .1 | 4.3 | 124 | 24 | 19 | 0 | | | | |
| 15 | | | 0 | 0 | 45 | 17 | 19 | 0 | | | | |
| 16 | | | 0 | 0 | 5.5 | 14 | 19 | 0 | | | | |
| 17 | | | 0 | 0 | 199 | 15 | 17 | 0 | | | | |
| 18 | | | 0 | 0 | 80 | 4.9 | 2.6 | 0 | | | | |
| 19 | | | 0 | 0 | 17 | 4.1 | .2 | 0 | | | | |
| 20 | | | 0 | 0 | 1.5 | 2.3 | 0 | 0 | | | | |
| 21 | | | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 22 | | | 0 | 0 | 59 | 0 | 0 | 0 | | | | |
| 23 | | | 0 | 0 | 25 | 0 | 0 | 0 | | | | |
| 24 | | | 0 | 8 | 8.5 | 0 | 0 | 0 | | | | |
| 25 | | | 0 | 46 | 348 | 0 | 0 | 0 | | | | |
| 26 | | | 0 | 580 | 619 | .3 | 6.5 | 0 | | | | |
| 27 | | | 0 | 130 | 5,560 | 6.5 | .5 | 0 | | | | |
| 28 | | | 0 | 17 | 4,270 | 5.5 | 0 | 0 | | | | |
| 29 | | | 0 | 11 | 2,160 | 146 | 0 | 0 | | | | |
| 30 | | | 0 | 4.9 | — | 2770 | — | 0 | | | | |
| 31 | | | 0 | 0 | — | 1,780 | — | 0 | | | | |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 0 | 0 | 0 | 0 | 0 |
| November..... | 0 | 0 | 0 | 0 | 0 |
| December..... | .1 | .1 | 0 | .003 | .2 |
| Calendar year 1939..... | 185.6 | 166 | 0 | .51 | 368 |
| January..... | 1,966.2 | 580 | 0 | 63.4 | 3,900 |
| February..... | 14,080.0 | 5,560 | 0 | 486 | 27,930 |
| March..... | 7,638.6 | 2,770 | 0 | 253 | 15,550 |
| April..... | 2,638.8 | 806 | 0 | 88.0 | 5,230 |
| May..... | .2 | .2 | 0 | .006 | .4 |
| June..... | 0 | 0 | 0 | 0 | 0 |
| July..... | 0 | 0 | 0 | 0 | 0 |
| August..... | 0 | 0 | 0 | 0 | 0 |
| September..... | 0 | 0 | 0 | 0 | 0 |
| Water year 1939-40..... | 26,523.9 | 5,560 | 0 | 72.5 | 52,610 |

Alamitos Creek near Edenvale, Calif.

Location.- Water-stage recorder, lat. $37^{\circ}14'20''$, long. $121^{\circ}52'15''$, in SW $\frac{1}{4}$ sec. 16, T. 8 S., R. 1 E., 0.4 mile upstream from mouth and 4 miles southwest of Edenvale.

Altitude of gage, about 200 feet (from topographic map).

Drainage area.- 35 square miles.

Records available.- January 1930 to September 1940.

Average discharge.- 10 years, 18.4 second-feet.

Extremes.- Maximum discharge during year, 2,440 second-feet Feb. 28 (gage height, 6.60 feet); no flow for several months.

1930-40: Maximum discharge, 2,670 second-feet Dec. 27, 1931 (gage height, 6.60 feet), from rating curve extended above 1,800 second-feet; no flow for several months each year.

Remarks.- Records fair. Small diversions above station. Flow regulated by Calero

Reservoir (capacity, 9,000 acre-feet) and Almaden Reservoir (capacity, 2,500 acre-feet); water released during summer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | 0 | 31 | 238 | 164 | 15 | 29 | 38 | 39 | 24 |
| 2 | | | | 0 | 16 | 171 | 99 | 14 | 32 | 33 | 39 | 24 |
| 3 | | | | 0 | 24 | 97 | 61 | 14 | 30 | 31 | 39 | 24 |
| 4 | | | | 0 | 15 | 50 | 45 | 14 | 29 | 33 | 39 | 24 |
| 5 | | | | 0 | 12 | 32 | 62 | 13 | 32 | 34 | 40 | 23 |
| 6 | | | | 0 | 10 | 25 | 62 | 12 | 33 | 36 | 40 | 23 |
| 7 | | | | 0 | 8 | 18 | 56 | 12 | 32 | 37 | 40 | 22 |
| 8 | | | | 20 | 7.5 | 15 | 47 | 11 | 31 | 36 | 39 | 21 |
| 9 | | | | 94 | 6.5 | 15 | 44 | 10 | 30 | 36 | 38 | 21 |
| 10 | | | | 26 | 6.5 | 14 | 39 | 11 | 32 | 35 | 37 | 21 |
| 11 | | | | | | | | | | | | |
| 12 | | | | 21 | 6 | 14 | 36 | 14 | 34 | 33 | 38 | 21 |
| 13 | | | | 22 | 5.5 | 15 | 35 | 14 | 35 | 34 | 38 | 22 |
| 14 | | | | 39 | 5.5 | 12 | 30 | 15 | 37 | 35 | 37 | 21 |
| 15 | | | | 46 | 11 | 12 | 27 | 22 | 31 | 36 | 35 | 24 |
| 16 | | | | 46 | 9.5 | 12 | 25 | 23 | 7 | 37 | 20 | 25 |
| 17 | | | | 46 | 8 | 11 | 23 | 24 | 8.5 | 36 | 18 | 25 |
| 18 | | | | 34 | 20 | 10 | 21 | 24 | 8 | 36 | 23 | 25 |
| 19 | | | | 14 | 12 | 9 | 20 | 25 | 18 | 35 | 23 | 25 |
| 20 | | | | 11 | 9.5 | 8.5 | 19 | 25 | 51 | 35 | 23 | 25 |
| 21 | | | | 15 | 8 | 8 | 18 | 24 | 52 | 34 | 22 | 25 |
| 22 | | | | | | | | | | | | |
| 23 | | | | 14 | 8 | 8 | 17 | 23 | 34 | 34 | 22 | 25 |
| 24 | | | | 12 | 8 | 8 | 17 | 21 | 37 | 34 | 22 | 24 |
| 25 | | | | 11 | 7.5 | 8 | 16 | 21 | 40 | 34 | 22 | 23 |
| 26 | | | | 11 | 7 | 8 | 16 | 23 | 40 | 33 | 22 | 23 |
| 27 | | | | 16 | 15 | 8 | 17 | 22 | 41 | 33 | 22 | 22 |
| 28 | | | | | | | | | | | | |
| 29 | | | | 35 | 90 | 8 | 15 | 22 | 42 | 35 | 24 | 23 |
| 30 | | | | 16 | 1,180 | 8 | 14 | 24 | 38 | 35 | 24 | 25 |
| 31 | | | | 14 | 1,180 | 15 | 14 | 32 | 33 | 36 | 24 | 25 |
| | | | | 16 | 493 | 20 | 14 | 31 | 39 | 35 | 24 | 24 |
| | | | | 15 | - | 508 | 15 | 30 | 41 | 35 | 24 | 22 |
| | | | | 14 | - | 384 | - | 30 | - | 37 | 24 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| November..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| December..... | | | | 0 | | 0 | 0 | 0 | 0 | | | |
| Calendar year 1939..... | | | | 627.7 | | 30 | 0 | 1.72 | 1,250 | | | |
| January..... | | | | 608 | | 94 | 0 | 19.6 | 1,210 | | | |
| February..... | | | | 3,220 | | 1,180 | 5.5 | 111 | 6,390 | | | |
| March..... | | | | 1,767.5 | | 508 | 8 | 57.0 | 3,510 | | | |
| April..... | | | | 1,066 | | 164 | 14 | 36.2 | 2,150 | | | |
| May..... | | | | 613 | | 32 | 10 | 19.8 | 1,220 | | | |
| June..... | | | | 976.5 | | 52 | 7 | 32.6 | 1,940 | | | |
| July..... | | | | 1,061 | | 35 | 31 | 34.9 | 2,140 | | | |
| August..... | | | | 921 | | 40 | 18 | 29.7 | 1,830 | | | |
| September..... | | | | 701 | | 25 | 21 | 23.4 | 1,390 | | | |
| Water year 1939-40..... | | | | 10,974 | | 1,180 | 0 | 30.0 | 21,780 | | | |

Los Gatos Creek at Los Gatos, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°13'15", long. 121°59'00", in SW 1/4 sec. 21, T. 8 S., R. 1 W., about 700 feet upstream from highway bridge at Los Gatos. Altitude of gage, about 360 feet (from topographic map).

Drainage area.- 40.0 square miles.

Records available.- January 1930 to September 1940.

Average discharge.- 10 years, 37.5 second-feet.

Extremes.- Maximum discharge during year, 7,110 second-feet Feb. 27 (gage height, 14.71 feet) from rating curve extended above 2,600 second-feet by logarithmic plotting, verified by area-velocity study and slope-area computation; no flow parts of several months.

1930-40: Maximum discharge, that of Feb. 27, 1940; no flow during part of most years.

Remarks.- Records good except those for very low flow, which are fair. Several small reservoirs and diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0 | 0 | 0.1 | 19 | 172 | 638 | 501 | 43 | 23 | 3.3 | 0.2 | 0 |
| 2 | 0 | 0 | .1 | 158 | 120 | 473 | 342 | 40 | 22 | 4.6 | .2 | 0 |
| 3 | 0 | 0 | .1 | 44 | 255 | 349 | 268 | 40 | 21 | 2.9 | .2 | 0 |
| 4 | 0 | 0 | .1 | 163 | 191 | 300 | 221 | 40 | 20 | 2.3 | .2 | 0 |
| 5 | 0 | 0 | .1 | 47 | 148 | 252 | 186 | 35 | 20 | 2.3 | .2 | 0 |
| 6 | .1 | 0 | .1 | 41 | 129 | 208 | 160 | 34 | 19 | 1.2 | .2 | 1 |
| 7 | 0 | 0 | .1 | 140 | 111 | 178 | 147 | 32 | 18 | .4 | .2 | .3 |
| 8 | 0 | 0 | .1 | 575 | 98 | 160 | 133 | 31 | 16 | 3.4 | .2 | .2 |
| 9 | 0 | 0 | 1.3 | 616 | 88 | 142 | 117 | 31 | 12 | 7 | .1 | .3 |
| 10 | 0 | 0 | 16 | 353 | 82 | 126 | 99 | 29 | 9 | 5.5 | .1 | .3 |
| 11 | 0 | 0 | 15 | 286 | 74 | 115 | 96 | 27 | 10 | 5 | 0 | .4 |
| 12 | 0 | 0 | 7 | 166 | 68 | 106 | 92 | 27 | 13 | 3.4 | 0 | .3 |
| 13 | 0 | 0 | 3.8 | 110 | 97 | 96 | 86 | 28 | 12 | 1.0 | 0 | .2 |
| 14 | 0 | 0 | 1.4 | 82 | 150 | 91 | 82 | 24 | 7.5 | .3 | 0 | .2 |
| 15 | 0 | 0 | .8 | 62 | 105 | 84 | 81 | 22 | 7.5 | .3 | 0 | .3 |
| 16 | .5 | 0 | .4 | 51 | 92 | 82 | 77 | 25 | 13 | .4 | 0 | .2 |
| 17 | .2 | 0 | .3 | 46 | 264 | 78 | 73 | 25 | 10 | 1.2 | 0 | .3 |
| 18 | .1 | 0 | .2 | 42 | 150 | 74 | 65 | 23 | 8 | 2.9 | 0 | .3 |
| 19 | 0 | 0 | .2 | 35 | 128 | 70 | 52 | 22 | 7.5 | 4.0 | 0 | .9 |
| 20 | 0 | 0 | .2 | 31 | 112 | 68 | 50 | 21 | 10 | .8 | .3 | .3 |
| 21 | .2 | 0 | .2 | 29 | 100 | 64 | 51 | 22 | 10 | 1.2 | .2 | .2 |
| 22 | .2 | 0 | .2 | 28 | 105 | 62 | 50 | 22 | 8 | 1.0 | .2 | .2 |
| 23 | .1 | 0 | .4 | 26 | 110 | 58 | 45 | 22 | 7 | .3 | .6 | .8 |
| 24 | .1 | 0 | 2.2 | 27 | 101 | 61 | 44 | 24 | 5.5 | .2 | .2 | .4 |
| 25 | 0 | .1 | .4 | 174 | 285 | 60 | 54 | 22 | 6.5 | .8 | .2 | .3 |
| 26 | 0 | .3 | .3 | 590 | 804 | 97 | 54 | 20 | 4.0 | .3 | 0 | .3 |
| 27 | 0 | .2 | .3 | 228 | 4,160 | 104 | 48 | 20 | 6 | .3 | 0 | .3 |
| 28 | 0 | .1 | .2 | 150 | 2,180 | 75 | 46 | 24 | 1.9 | .3 | 0 | .8 |
| 29 | 0 | .1 | .2 | 117 | 1,040 | 391 | 43 | 23 | 2.9 | .3 | 0 | 1.7 |
| 30 | 0 | .1 | .3 | 97 | - | 1,860 | 43 | 32 | 3.8 | .3 | 0 | 1 |
| 31 | 0 | - | .3 | 90 | - | 917 | - | 29 | - | .3 | 0 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 1.5 | 0.5 | 0 | 0.05 | 3.0 | | |
| November..... | | | | | | .9 | .3 | 0 | .03 | 1.8 | | |
| December..... | | | | | | 52.4 | 16 | .1 | 1.69 | 104 | | |
| Calendar year 1939..... | | | | | | 1,670.2 | 293 | 0 | 4.58 | 3,310 | | |
| January..... | | | | | | 4,623 | 616 | 19 | 149 | 9,170 | | |
| February..... | | | | | | 11,519 | 4,160 | 68 | 397 | 22,850 | | |
| March..... | | | | | | 7,439 | 1,860 | 58 | 240 | 14,760 | | |
| April..... | | | | | | 3,406 | 501 | 43 | 114 | 6,760 | | |
| May..... | | | | | | 859 | 43 | 20 | 27.7 | 1,700 | | |
| June..... | | | | | | 334.1 | 23 | 1.9 | 11.1 | 663 | | |
| July..... | | | | | | 57.5 | 7 | .2 | 1.85 | 114 | | |
| August..... | | | | | | 3.5 | .6 | 0 | .11 | 6.9 | | |
| September..... | | | | | | 11.5 | 1.7 | 0 | .38 | 23 | | |
| Water year 1939-40..... | | | | | | 28,307.4 | 4,160 | 0 | 77.3 | 56,160 | | |

Peak discharge.- Jan. 8 (9 p.m.) 1,040 sec.-ft.; Jan. 26 (2 a.m.) 1,000 sec.-ft.; Feb. 3 (10 a.m.) 439 sec.-ft.; Feb. 17 (4 a.m.) 735 sec.-ft.; Feb. 27 (1 p.m.) 7,110 sec.-ft.; Mar. 30 (9 a.m.) 2,640 sec.-ft.

Campbell Creek at Saratoga, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°15'15", long. 122°02'25", in Quito grant, half a mile southwest of Saratoga post office, Santa Clara County. Altitude of gage, about 500 feet (from topographic map).

Drainage area.- 8.8 square miles.

Records available.- October 1933 to September 1940.

Extremes.- Maximum gage height during year, 5.35 feet Feb. 27 (discharge not determined); no flow on many days during October and November.

1933-40: Maximum discharge computed, 910 second-feet Feb. 13, 1937, from rating curve extended above 430 second-feet; discharge probably greater on Feb. 27, 1940; maximum gage height, that of Feb. 27, 1940; no flow part of each year.

Remarks.- Records fair October to April; poor May to September. Diversion and regulation above station by San Jose Water Works.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.2 | 0 | 0.2 | 8 | 28 | 160 | 128 | 11 | 4 | | | |
| 2 | .1 | 0 | .1 | 26 | 18 | 120 | 81 | 11 | 4 | | | |
| 3 | 0 | 0 | .3 | 9 | 43 | 65 | 59 | 10 | 4 | | | |
| 4 | 0 | 0 | .3 | 33 | 32 | 55 | 51 | 11 | 4 | | | |
| 5 | 0 | 0 | .2 | 10 | 24 | 45 | 45 | 10 | 4 | | | |
| 6 | .4 | 0 | .1 | 8.5 | 22 | 40 | 41 | 9 | 4 | | | |
| 7 | .6 | 0 | .2 | 54 | 18 | 36 | 40 | 8 | 4 | | | |
| 8 | .2 | 0 | .1 | 133 | 16 | 32 | 37 | 8 | 4 | | | |
| 9 | .1 | 0 | .6 | 110 | 14 | 26 | 34 | 8 | 3.5 | | | |
| 10 | 0 | 0 | 8 | 89 | 13 | 26 | 30 | 7 | 3.5 | | | |
| 11 | 0 | 0 | 2.8 | 74 | 12 | 24 | 27 | 7 | 3.5 | | | |
| 12 | 0 | 0 | 1.3 | 34 | 11 | 22 | 23 | 7 | 3.5 | | | |
| 13 | 0 | 0 | .9 | 20 | 16 | 20 | 23 | 7 | 3.5 | | | |
| 14 | 0 | 0 | .4 | 15 | 29 | 18 | 22 | 6.5 | 3 | | | |
| 15 | 0 | 0 | .6 | 13 | 21 | 17 | 20 | 6.5 | 3 | | | |
| 16 | .1 | 0 | .7 | 10 | 18 | 15 | 19 | 6.5 | 3 | | | |
| 17 | .1 | 0 | 1.0 | 8.5 | 67 | 15 | 17 | 6.5 | 3 | | | |
| 18 | .1 | 0 | .8 | 8 | 38 | 13 | 16 | 6.5 | 3 | | | |
| 19 | .1 | 0 | .8 | 7 | 29 | 12 | 15 | 6 | 2.5 | | | |
| 20 | 0 | 0 | .7 | 7 | 25 | 11 | 15 | 6 | 2.5 | | | |
| 21 | 0 | 0 | .8 | 8.5 | 21 | 13 | 14 | 6 | 2.5 | | | |
| 22 | 0 | 0 | .8 | 6 | 20 | 12 | 14 | 6 | 2.5 | | | |
| 23 | 0 | 0 | .9 | 6 | 18 | 12 | 13 | 5 | 2.5 | | | |
| 24 | 0 | 0 | .9 | 8.5 | 17 | 12 | 12 | 5 | 2.5 | | | |
| 25 | 0 | .6 | .8 | 35 | 60 | 12 | 14 | 5 | 2.5 | | | |
| 26 | 0 | .5 | .8 | 96 | 250 | 17 | 13 | 5 | 2 | | | |
| 27 | 0 | .3 | .8 | 42 | 800 | 20 | 12 | 4.5 | 2 | | | |
| 28 | 0 | .2 | .8 | 27 | 500 | 14 | 11 | 4.5 | 2 | | | |
| 29 | 0 | .1 | .8 | 21 | 200 | 80 | 11 | 4.5 | 2 | | | |
| 30 | 0 | .5 | .8 | 17 | - | 350 | 11 | 4.5 | 2 | | | |
| 31 | 0 | - | .9 | 15 | - | 250 | - | 4.5 | - | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 2.0 | 0.6 | 0 | 0.06 | 4.0 | | | |
| November..... | | | | | 2.0 | .6 | 0 | .07 | 4.0 | | | |
| December..... | | | | | 29.2 | 8 | .1 | .94 | 68 | | | |
| Calendar year 1939..... | | | | | 565.2 | 63 | 0 | 1.55 | 1,120 | | | |
| January..... | | | | | 954.0 | 133 | 5.5 | 30.8 | 1,890 | | | |
| February..... | | | | | 2,380 | 800 | 11 | 82.1 | 4,720 | | | |
| March..... | | | | | 1,584 | 380 | 11 | 51.1 | 3,140 | | | |
| April..... | | | | | 870 | 128 | 11 | 29.0 | 1,730 | | | |
| May..... | | | | | 213.0 | 11 | 4.5 | 5.87 | 182 | | | |
| June..... | | | | | 92.0 | 4 | 2 | 1 | 61 | | | |
| July..... | | | | | 31 | - | - | .3 | 18 | | | |
| August..... | | | | | 9.3 | - | - | .3 | 18 | | | |
| September..... | | | | | 9.0 | - | - | - | - | | | |
| Water year 1939-40..... | | | | | 6,175.5 | 800 | 0 | 16.9 | 12,250 | | | |

Note.- Rating doubtful or gage-height record not usable Feb. 25 to Mar. 7, Mar. 27-31, Apr. 19-28, May 16 to Sept. 30; discharge computed on basis of several discharge measurements and records for Los Gatos Creek at Los Gatos.

COYOTE CREEK BASIN

Coyote Creek near Madrone, Calif.

Location.— Water-stage recorder, lat. 37°10'00", long. 121°37'40", in northwest corner of San Jose grant, a quarter of a mile upstream from highway bridge at mouth of canyon, a quarter of a mile downstream from Las Animas Creek, and 2.8 miles northeast of Madrone, Santa Clara County. Altitude of gage, about 420 feet (from topographic map).

Drainage area.— 193 square miles.

Records available.— October 1902 to September 1912, December 1916 to September 1940.

Average discharge.— 34 years, 74.6 second-feet.

Extremes.— Maximum discharge during year, 3,920 second-feet Feb. 29 (gage height, 10.28 feet); minimum, 0.1 second-foot Oct. 13.

1902-12, 1916-40: Maximum discharge, about 25,000 second-feet, probably on Mar. 7, 1911 (record furnished by Duryea, Haehl, & Gilman); no flow at times.

Remarks.— Records excellent except those for period of no gage-height record, which are good. No large diversion. Flow regulated by Coyote Reservoir (capacity, 30,000 acre-feet); water released during summer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.4 | 0.3 | 0.3 | 1.0 | 167 | 1,570 | 1,190 | 34 | 53 | 59 | 48 | 52 |
| 2 | .3 | .3 | .3 | 5.5 | 80 | 806 | 651 | 32 | 53 | 59 | 57 | 52 |
| 3 | .3 | .3 | .3 | 2.3 | 94 | 459 | 420 | 37 | 53 | 59 | 58 | 50 |
| 4 | .2 | .3 | .3 | 7.5 | 73 | 342 | 228 | 48 | 55 | 58 | 58 | 49 |
| 5 | .4 | .3 | .3 | 34 | 50 | 276 | 109 | 42 | 59 | 58 | 58 | 48 |
| 6 | 1.0 | .2 | .3 | 27 | 42 | 238 | 135 | 40 | 64 | 58 | a58 | 48 |
| 7 | .6 | .2 | .4 | 27 | 36 | 135 | 137 | 40 | 69 | 58 | a58 | 48 |
| 8 | .3 | .2 | .4 | 49 | 36 | 83 | 130 | 39 | 69 | 58 | a58 | 48 |
| 9 | .3 | .2 | .4 | 136 | 55 | 98 | 116 | 46 | 69 | 58 | a57 | 48 |
| 10 | .2 | .2 | .8 | 320 | 42 | 100 | 107 | 62 | 69 | 58 | a57 | 48 |
| 11 | .2 | .2 | 1.0 | 265 | 41 | 98 | 98 | 83 | 68 | 58 | 57 | 48 |
| 12 | .2 | .2 | .6 | 63 | 40 | 90 | 88 | 68 | 58 | 57 | 48 | 48 |
| 13 | .2 | .2 | .6 | 42 | 40 | 83 | 81 | 89 | 68 | 52 | 58 | 48 |
| 14 | .2 | .2 | .5 | 54 | 125 | 78 | 80 | 83 | 64 | 53 | 58 | 48 |
| 15 | 1.0 | .3 | .5 | 48 | 60 | 70 | 70 | 76 | 64 | 57 | 59 | 48 |
| 16 | .7 | .3 | .5 | 43 | 41 | 68 | 62 | 69 | 64 | 45 | 58 | 48 |
| 17 | .6 | .3 | .5 | 22 | 70 | 66 | 59 | 59 | 64 | 31 | 58 | 48 |
| 18 | .5 | .3 | .5 | 20 | 51 | 63 | 55 | 59 | 63 | 31 | 57 | 48 |
| 19 | .5 | .3 | .4 | 20 | 40 | 58 | 51 | 58 | 63 | 30 | 50 | 47 |
| 20 | .5 | .3 | .4 | 19 | 40 | 52 | 48 | 58 | 62 | 32 | 52 | 52 |
| 21 | .4 | .3 | .4 | 19 | 48 | 51 | 48 | 58 | 62 | 37 | 52 | 55 |
| 22 | .3 | .3 | .5 | 19 | 50 | 49 | 46 | 57 | 61 | 37 | 53 | 55 |
| 23 | .3 | .3 | .6 | 20 | 50 | 47 | 42 | 59 | 61 | 36 | 49 | 55 |
| 24 | .4 | .3 | .8 | 18 | 45 | 46 | 40 | 66 | 61 | 43 | 42 | 55 |
| 25 | .5 | .3 | .7 | 18 | 82 | 60 | 45 | 71 | 60 | 42 | 41 | 51 |
| 26 | .4 | .3 | .6 | 97 | 191 | 51 | 49 | 71 | 60 | 41 | 41 | 49 |
| 27 | .4 | .3 | .6 | 97 | 1,330 | 127 | 45 | 71 | 60 | 40 | 46 | 49 |
| 28 | .3 | .3 | .6 | 117 | 2,810 | 117 | 41 | 71 | 60 | 40 | 52 | 49 |
| 29 | .3 | .3 | .6 | 102 | 3,320 | 114 | 38 | 63 | 60 | 40 | 52 | 49 |
| 30 | .4 | .3 | .6 | 66 | - | 1,260 | 36 | 55 | 59 | 43 | 52 | 48 |
| 31 | .3 | - | .6 | 106 | - | 2,490 | - | 54 | - | 48 | 52 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 12.6 | 1.0 | 0.2 | 0.41 | 25 | | | |
| November..... | | | | | 8.1 | .3 | .2 | .27 | 16 | | | |
| December..... | | | | | 15.9 | 1.0 | .7 | .51 | 32 | | | |
| Calendar year 1939..... | | | | | 4,652.4 | 195 | .1 | 12.7 | 9,230 | | | |
| January..... | | | | | 1,884.3 | 320 | 1.0 | 60.8 | 3,740 | | | |
| February..... | | | | | 9,149 | 3,320 | 36 | 315 | 18,150 | | | |
| March..... | | | | | 9,233 | 2,490 | 46 | 298 | 18,310 | | | |
| April..... | | | | | 4,345 | 1,190 | 36 | 145 | 8,620 | | | |
| May..... | | | | | 1,838 | 89 | 32 | 59.3 | 3,550 | | | |
| June..... | | | | | 1,865 | 69 | 53 | 62.2 | 3,700 | | | |
| July..... | | | | | 1,477 | 59 | 30 | 47.6 | 2,930 | | | |
| August..... | | | | | 1,663 | 59 | 41 | 53.6 | 3,300 | | | |
| September..... | | | | | 1,489 | 55 | 47 | 49.6 | 2,950 | | | |
| Water year 1939-40..... | | | | | 32,979.9 | 3,320 | .2 | 90.1 | 65,420 | | | |

a No gage-height record; discharge interpolated.

Coyote Creek near Edenvale, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°16'15", long. 121°47'55", 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. Altitude of gage about 190 feet (from topographic map).

Drainage area.- 229 square miles.

Records available.- October 1916 to September 1940.

Average discharge.- 24 years, 34.5 second-feet.

Extremes. Maximum discharge during year, 3,230 second-feet Feb. 29 (gage height, 6.72 feet); no flow for several months.

1916-40: Maximum discharge, 10,000 second-feet (unregulated) Feb. 10, 1922 (gage height, 12.8 feet, from floodmarks), from rating curve extended above 4,900 second-feet parallel to 1917 curve defined by current-meter measurements to 8,400 second-feet; no flow during several periods in each year.

Remarks.- Records excellent except those for Jan. 27 to Feb. 24, which are fair. Water pumped from wells along creek above station for irrigation. Flow regulated by Coyote Reservoir (capacity, 30,000 acre-feet) and by detention in percolating reservoir 6 miles above station; water released during summer.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | | | | 0 | 106 | 1,610 | 1,330 | 0 | 7 | 8 | 4.7 | 5.5 |
| 2 | | | | 0 | 93 | 887 | 738 | 0 | 8.5 | 8 | 8.5 | 5.5 |
| 3 | | | | 0 | 40 | 523 | 465 | 0 | 6 | 9.5 | 19 | 6 |
| 4 | | | | 0 | 59 | 348 | 272 | 0 | 16 | 16 | 20 | 5.5 |
| 5 | | | | 0 | 20 | 270 | 101 | 0 | 18 | 15 | 20 | 4.7 |
| 6 | | | | 0 | 4.7 | 219 | 115 | 0 | 16 | 15 | 16 | 8 |
| 7 | | | | 0 | .6 | 168 | 118 | 0 | 18 | 16 | 13 | 8.5 |
| 8 | | | | 0 | 0 | 60 | 112 | 0 | 19 | 16 | 11 | 8.5 |
| 9 | | | | 0 | 0 | 60 | 101 | 0 | 16 | 16 | 12 | 8.5 |
| 10 | | | | 0 | 0 | 67 | 83 | 0 | 7 | 14 | 13 | 8.5 |
| 11 | | | | 222 | 0 | 65 | 50 | 0 | 6 | 13 | 13 | 7.5 |
| 12 | | | | 22 | 0 | 56 | 24 | 17 | 5.5 | 15 | 12 | 7 |
| 13 | | | | .1 | 0 | 47 | 36 | 27 | 8 | 11 | 11 | 7.5 |
| 14 | | | | 0 | 3.7 | 42 | 37 | 29 | 9.5 | 4.4 | 11 | 7.5 |
| 15 | | | | 0 | 48 | 34 | 33 | 25 | 14 | 2.7 | 10 | 7.5 |
| 16 | | | | 0 | 15 | 29 | 22 | 21 | 18 | .2 | 9 | 7 |
| 17 | | | | 0 | 7.5 | 24 | 22 | 17 | 16 | 3.7 | 8 | 6 |
| 18 | | | | 0 | 27 | 19 | 18 | 12 | 14 | 5 | 9 | 5.5 |
| 19 | | | | 0 | 10 | 16 | 14 | 16 | 13 | 4.1 | 10 | 6.5 |
| 20 | | | | 0 | 3.0 | 11 | 11 | 15 | 16 | 8.5 | 7.5 | 7.5 |
| 21 | | | | 0 | .9 | 9 | 8.5 | 14 | 13 | 2.7 | 7 | 10 |
| 22 | | | | 0 | 4.4 | 6 | 7.5 | 14 | 11 | .3 | 7 | 10 |
| 23 | | | | 0 | 6.5 | 4.3 | 4.4 | 13 | 11 | 6.5 | 4.7 | 10 |
| 24 | | | | 0 | 1.7 | 2.8 | 2.7 | 16 | 10 | 6.5 | 2.3 | 10 |
| 25 | | | | 0 | 6.5 | 5 | 2.7 | 20 | 10 | 4.4 | .7 | 10 |
| 26 | | | | 0 | 101 | 5 | 6.5 | 25 | 8.5 | 1.0 | .2 | 9.5 |
| 27 | | | | 0 | 1,810 | 43 | 4.7 | 20 | 8.5 | 0 | 1.1 | 8.5 |
| 28 | | | | 0 | 2,430 | 78 | 1.6 | 19 | 8.5 | 0 | 7 | 7.5 |
| 29 | | | | 9 | 2,910 | 67 | .1 | 18 | 8.5 | 2.0 | 13 | 7 |
| 30 | | | | 14 | - | 745 | 0 | 9.5 | 9.5 | 5.5 | 11 | 7 |
| 31 | | | | 6.5 | - | 2,240 | - | 5 | - | 6.5 | 6 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| December..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Calendar year 1939..... | | | | 184.2 | 79 | 0 | .50 | 365 | | | | |
| January..... | | | | 272.6 | 222 | 0 | 8.79 | 541 | | | | |
| February..... | | | | 7,708.5 | 2,910 | 0 | 266 | 15,290 | | | | |
| March..... | | | | 7,750.1 | 2,240 | 2.8 | 260 | 15,370 | | | | |
| April..... | | | | 3,745.7 | 1,350 | 0 | 125 | 7,450 | | | | |
| May..... | | | | 352.5 | 29 | 0 | 11.4 | 699 | | | | |
| June..... | | | | 350.0 | 19 | 5.5 | 11.7 | 694 | | | | |
| July..... | | | | 236.5 | 16 | 0 | 7.63 | 469 | | | | |
| August..... | | | | 297.7 | 20 | .2 | 9.60 | 590 | | | | |
| September..... | | | | 228.2 | 10 | 4.7 | 7.61 | 453 | | | | |
| Water year 1939-40..... | | | | 20,941.8 | 2,910 | 0 | 57.2 | 41,540 | | | | |

Alameda Creek near Niles, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°35'15", long. 121°57'35", in Arroyo de la Alameda grant, an eighth of a mile upstream from highway bridge and 1½ miles northeast of Niles, Alameda County. Altitude of gage, about 100 feet (from topographic map).

Drainage area.- 633 square miles.

Records available.- October 1916 to September 1940.

Average discharge.- 23 years (1916-19, 1920-40), 77.8 second-feet.

Extremes.- Maximum discharge during year, 8,600 second-feet Feb. 27 (gage height, 10.60 feet); minimum, 0.7 second-foot Oct. 12, 13.

1916-40: Maximum discharge, 13,900 second-feet Feb. 10, 1922 (gage height, 12.44 feet, former site and datum), from rating curve extended above 7,600 second-feet; no flow during periods in 1918, each year of 1924-35, and possibly 1920.

Remarks.- Records good. Flow regulated by Calaveras Reservoir (capacity 100,000 acre-feet). Diversions for San Francisco water supply and other uses above station.

Cooperation.- Gage-height record collected in cooperation with city of San Francisco.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.6 | 2.2 | 4.3 | 4.6 | 192 | 1,860 | 1,220 | 26 | 7.5 | 2.7 | 1.0 | 1.1 |
| 2 | .5 | 2.3 | 4.1 | 6.5 | 292 | 910 | 629 | 24 | 7 | 2.1 | 1.3 | 1.3 |
| 3 | .4 | 2.3 | 4.1 | 6.5 | 514 | 567 | 422 | 24 | 7 | 1.9 | 1.9 | 1.2 |
| 4 | .3 | 2.3 | 4.1 | 12 | 776 | 444 | 332 | 25 | 7 | 1.6 | .9 | .9 |
| 5 | .3 | 2.3 | 3.2 | 8 | 346 | 370 | 257 | 24 | 7 | 1.0 | .6 | .7 |
| 6 | .5 | 2.3 | 2.9 | 12 | 238 | 269 | 237 | 23 | 4.2 | .7 | .5 | .7 |
| 7 | .5 | 2.5 | 3.6 | 17 | 189 | 214 | 184 | 21 | 2.4 | .7 | .4 | .6 |
| 8 | .4 | 2.5 | 4.3 | 270 | 136 | 172 | 157 | 20 | 1.9 | .7 | .4 | .6 |
| 9 | .3 | 2.5 | 4.4 | 618 | 104 | 175 | 151 | 19 | 1.4 | 1.2 | 1.0 | .6 |
| 10 | .3 | 3.2 | 5 | 772 | 77 | 157 | 148 | 18 | 1.3 | 1.2 | 2.3 | .5 |
| 11 | .3 | 3.3 | 4.6 | 2,180 | 62 | 139 | 130 | 17 | 1.3 | 1.4 | 2.7 | .4 |
| 12 | .2 | 3.5 | 4.1 | 618 | 49 | 125 | 118 | 16 | 1.2 | 1.6 | 3.3 | .4 |
| 13 | .2 | 3.5 | 3.9 | 238 | 42 | 115 | 103 | 15 | 1.2 | 1.9 | 2.6 | .3 |
| 14 | .5 | 3.5 | 4.1 | 117 | 229 | 108 | 91 | 15 | 1.1 | 2.1 | 2.4 | .4 |
| 15 | .8 | 4.1 | 4.1 | 66 | 198 | 101 | 85 | 14 | 1.0 | 2.3 | 2.4 | .5 |
| 16 | .9 | 4.4 | 4.1 | 55 | 129 | 97 | 80 | 13 | 1.0 | 2.1 | 2.6 | .5 |
| 17 | 1.1 | 4.4 | 4.1 | 30 | 256 | 93 | 82 | 12 | .9 | 2.0 | 3.2 | .6 |
| 18 | 1.1 | 4.1 | 4.1 | 17 | 216 | 87 | 78 | 12 | 1.0 | 1.6 | 3.2 | .8 |
| 19 | 1.1 | 4.6 | 3.9 | 12 | 153 | 83 | 65 | 10 | 1.0 | 1.0 | 4.0 | .9 |
| 20 | 1.1 | 4.6 | 3.9 | 11 | 112 | 80 | 64 | 10 | .9 | .7 | 7.5 | .8 |
| 21 | 1.1 | 4.4 | 3.9 | 9.5 | 93 | 73 | 58 | 10 | .9 | .4 | 4.6 | .6 |
| 22 | 1.1 | 4.4 | 3.9 | 8.5 | 84 | 64 | 53 | 9.5 | 2.0 | .7 | 3.8 | .6 |
| 23 | 1.2 | 4.4 | 4.1 | 8 | 102 | 59 | 46 | 9.5 | 2.3 | .6 | 3.8 | .6 |
| 24 | 1.6 | 4.4 | 4.3 | 7.5 | 104 | 56 | 40 | 6.5 | 2.1 | .4 | 16 | .6 |
| 25 | 1.6 | 4.8 | 4.1 | 20 | 260 | 59 | 39 | 8 | 2.1 | .7 | 35 | .7 |
| 26 | 1.4 | 4.6 | 4.1 | 650 | 663 | 110 | 44 | 8 | 2.0 | 1.0 | 7.5 | .7 |
| 27 | 1.4 | 4.4 | 4.1 | 450 | 4,860 | 328 | 40 | 8.5 | 1.6 | 1.2 | 2.4 | .6 |
| 28 | 1.4 | 4.3 | 4.1 | 206 | 5,860 | 200 | 35 | 9.5 | 1.3 | 1.6 | 1.9 | .6 |
| 29 | 1.4 | 4.4 | 3.9 | 119 | 5,040 | 178 | 31 | 9 | 1.2 | 1.6 | 2.3 | .6 |
| 30 | 1.3 | 4.4 | 3.2 | 78 | - | 2,180 | 28 | 8.5 | 2.0 | 1.3 | 2.0 | .4 |
| 31 | 1.9 | - | 3.0 | 78 | - | 3,100 | - | 8.5 | - | .9 | 1.6 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 26.8 | 1.9 | 0.2 | 0.86 | 53 | | | |
| November..... | | | | | 108.9 | 4.8 | 2.2 | 3.63 | 216 | | | |
| December..... | | | | | 123.6 | 5 | 2.9 | 3.99 | 245 | | | |
| Calendar year 1939 | | | | | 7,418.2 | 446 | .2 | 20.3 | 14,710 | | | |
| January..... | | | | | 6,705.1 | 2,180 | 4.6 | 216 | 13,300 | | | |
| February..... | | | | | 21,376 | 5,860 | 42 | 737 | 42,400 | | | |
| March..... | | | | | 12,573 | 3,100 | 46 | 406 | 24,940 | | | |
| April..... | | | | | 5,047 | 1,220 | 28 | 168 | 10,010 | | | |
| May..... | | | | | 455.5 | 26 | 8 | 14.7 | 903 | | | |
| June..... | | | | | 74.8 | 7.5 | .9 | 2.49 | 148 | | | |
| July..... | | | | | 40.9 | 2.7 | .4 | 1.32 | 81 | | | |
| August..... | | | | | 125.1 | 35 | .4 | 4.04 | 248 | | | |
| September..... | | | | | 19.8 | 1.3 | .3 | .66 | 39 | | | |
| Water year 1939-40 | | | | | 46,676.5 | 5,860 | .2 | 128 | 92,580 | | | |

Peak discharge.- Jan. 11 (7 a.m.) 3,080 sec.-ft.; Feb. 27 (11 p.m.) 8,600 sec.-ft.; Mar. 31 (1 a.m.) 4,540 sec.-ft.

San Lorenzo Creek at Haywards, Calif.

Location.- Wire-weight gage, lat. 37°41'05", long. 122°03'50", at highway bridge on B Street, 0.5 mile downstream from Palomares Creek and half a mile northeast of Haywards. Datum of gage is 133.16 feet above mean sea level (general adjustment of 1929).

Drainage area.- 38 square miles.

Records available.- January to September 1940 (discontinued).

Extremes.- Maximum discharge during period, 3,440 second-feet Feb. 27 (gage height, 13.13 feet), from rating curve extended above 2,000 second-feet; practically no flow Sept. 19, 20, 22, 23.

Remarks.- Wire-weight gage read twice daily, with many extra readings during periods of high water. Records good except those for days of no gage-height record, which are fair. A few very small diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | | - | 26 | 186 | 144 | 12 | 4.7 | 1.6 | 0.2 | 0.1 |
| 2 | | | | - | 22 | 132 | 95 | 12 | 4.4 | 1.4 | .2 | .1 |
| 3 | | | | - | 85 | 100 | 78 | a13 | 4.7 | 1.4 | .1 | .1 |
| 4 | | | | 20 | 55 | 80 | 66 | 14 | 4.2 | 1.2 | .2 | .1 |
| 5 | | | | 5.5 | 38 | 69 | 59 | 11 | 3.8 | 1.8 | .2 | .2 |
| 6 | | | | 11 | 35 | 62 | 52 | 11 | 3.3 | .6 | .2 | .2 |
| 7 | | | | 19 | 34 | 52 | 48 | 10 | 2.9 | .8 | .1 | .2 |
| 8 | | | | 114 | 28 | 48 | 43 | 10 | 2.9 | .7 | .2 | .3 |
| 9 | | | | 154 | 25 | 42 | 39 | 9.5 | 2.9 | .7 | .2 | .3 |
| 10 | | | | 220 | 24 | 37 | 36 | 9.5 | 2.4 | .7 | .2 | .2 |
| 11 | | | | 224 | 21 | 34 | 33 | 9 | 2.2 | .7 | .2 | a.2 |
| 12 | | | | 65 | 19 | 30 | 30 | a9 | 1.8 | .7 | a.2 | .4 |
| 13 | | | | 31 | 22 | 28 | 28 | a8.5 | 1.8 | .8 | .2 | .5 |
| 14 | | | | 22 | 121 | 28 | 27 | a8.5 | 1.8 | .8 | .2 | .2 |
| 15 | | | | 16 | 44 | 27 | 25 | a8 | 1.6 | .7 | .2 | .2 |
| 16 | | | | 12 | 39 | 27 | 24 | 8 | 1.8 | .7 | .2 | .2 |
| 17 | | | | 11 | 113 | 25 | 23 | 7.5 | 1.8 | .5 | .2 | .3 |
| 18 | | | | 11 | 52 | 24 | 21 | 7 | 1.8 | .7 | .2 | .1 |
| 19 | | | | 9 | 39 | 22 | 19 | 6.5 | 1.4 | .8 | .2 | 0 |
| 20 | | | | 8 | 35 | 22 | 18 | 6 | 1.8 | .8 | .2 | 0 |
| 21 | | | | 7.5 | a32 | 20 | 19 | 6 | 1.8 | .7 | .2 | .1 |
| 22 | | | | 7 | 30 | 20 | 18 | 7 | 1.6 | .8 | .2 | 0 |
| 23 | | | | 7 | 28 | 20 | 16 | 6.5 | 1.6 | .5 | .2 | 0 |
| 24 | | | | 6.5 | 26 | 18 | 16 | 7.5 | 1.6 | .3 | .3 | .2 |
| 25 | | | | 80 | 106 | 18 | 22 | 7 | 1.3 | .3 | .2 | .1 |
| 26 | | | | 151 | 329 | 59 | 16 | 4.7 | 1.3 | .4 | .4 | .1 |
| 27 | | | | 52 | 1,470 | 44 | 16 | 4.7 | 1.3 | .5 | .3 | .1 |
| 28 | | | | 32 | 795 | 26 | 14 | 5.5 | .8 | .3 | .3 | .1 |
| 29 | | | | 26 | 595 | 62 | 14 | 5.5 | 1.2 | .5 | .2 | .1 |
| 30 | | | | 22 | - | 978 | 14 | 6 | 1.3 | .5 | .2 | .1 |
| 31 | | | | 21 | - | 304 | - | 5.5 | - | .5 | .2 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| January 4-31..... | | | | 1,364.5 | 224 | 5.5 | 48.7 | 2,710 | | | | |
| February..... | | | | 4,293 | 1,470 | 19 | 148 | 8,520 | | | | |
| March..... | | | | 2,644 | 978 | 18 | 85.3 | 5,240 | | | | |
| April..... | | | | 1,073 | 144 | 14 | 35.8 | 2,130 | | | | |
| May..... | | | | 255.9 | 14 | 4.7 | 8.25 | 508 | | | | |
| June..... | | | | 67.8 | 4.7 | .8 | 2.26 | 134 | | | | |
| July..... | | | | 25.4 | 1.6 | .3 | .75 | 46 | | | | |
| August..... | | | | 6.5 | .4 | .1 | .21 | 13 | | | | |
| September..... | | | | 4.8 | .5 | 0 | .16 | 9.5 | | | | |
| The period..... | | | | - | - | - | - | 19,310 | | | | |

a No gage-height record; discharge interpolated.

Kern River near Kernville, Calif.

Location.- Water-stage recorder, lat. 35°56', long. 118°29', in NE¼ sec. 14, T. 23 S., R. 32 E., 3 miles upstream from Salmon Creek and 15 miles north of Kernville. Altitude of gage, about 3,550 feet (from topographic map).

Drainage area.- 845 square miles.

Records available.- January 1912 to September 1940.

Average discharge.- 28 years, 691 second-feet, combined flow of Kern River near Kernville and Kern River No. 3 canal.

Extremes.- Maximum discharge during year, 3,480 second-feet May 25 (gage height, 9.62 feet); minimum, 0.8 second-foot Aug. 30.
1912-40: Maximum discharge, 9,690 second-feet (unregulated) Jan. 17, 1916 (gage height, 8.8 feet, former datum), from rating curve extended above 4,100 second-feet; no flow at times during period July 31, 1924, to Feb. 7, 1925.

Remarks.- Records excellent except those for extreme low water, which are fair. Kern River No. 3 canal, (p. 163), diverts water 1 mile above station.

Cooperation.- Water-stage recorder graph and results of 15 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 1.1 | 1.3 | 1.5 | 1.7 | 2.6 | 196 | 506 | 1,160 | 2,080 | 1,020 | 1.1 | 1.0 |
| 2 | 1.3 | 1.3 | 1.5 | 43 | 2.9 | 146 | 399 | 1,480 | 2,140 | 714 | 1.0 | 1.1 |
| 3 | 1.2 | 1.3 | 1.5 | 143 | 284 | 106 | 339 | 1,590 | 2,020 | 599 | .9 | 1.0 |
| 4 | 1.3 | 1.3 | 1.5 | 79 | 248 | 74 | 325 | 1,480 | 2,110 | 554 | 1.0 | 1.1 |
| 5 | 1.2 | 1.3 | 1.5 | 12 | 32 | 68 | 284 | 1,390 | 1,950 | 502 | 1.0 | 1.2 |
| 6 | 1.2 | 1.3 | 1.4 | 1.6 | 4.3 | 88 | 279 | 1,400 | 2,000 | 463 | 1.1 | 1.1 |
| 7 | 1.3 | 1.3 | 1.5 | 1.7 | 4.3 | 115 | 308 | 1,460 | 2,070 | 415 | 1.1 | 1.0 |
| 8 | 1.3 | 1.3 | 1.6 | 15 | 2.9 | 170 | 336 | 1,600 | 2,150 | 383 | 1.2 | 1.0 |
| 9 | 1.3 | 1.3 | 1.6 | 1.6 | 2.5 | 218 | 405 | 1,920 | 2,570 | 328 | 1.2 | 1.0 |
| 10 | 1.2 | 1.3 | 1.5 | 224 | 2.2 | 196 | 479 | 2,310 | 2,140 | 271 | 1.2 | 1.0 |
| 11 | 1.2 | 1.3 | 1.5 | 696 | 1.9 | 135 | 566 | 2,570 | 2,070 | 200 | 1.0 | 1.0 |
| 12 | 1.2 | 1.3 | 1.5 | 304 | 1.8 | 57 | 696 | 2,550 | 2,120 | 148 | 1.0 | 1.1 |
| 13 | 1.2 | 1.3 | 1.4 | 6.5 | 1.9 | 31 | 853 | 2,590 | 2,190 | 115 | 1.0 | 1.1 |
| 14 | 1.1 | 1.4 | 1.4 | 2.3 | 2.7 | 21 | 1,010 | 2,770 | 2,150 | 84 | 1.0 | 1.1 |
| 15 | 1.0 | 1.4 | 1.3 | 1.8 | 2.7 | 24 | 1,100 | 2,950 | 2,050 | 65 | 1.0 | 1.3 |
| 16 | 1.0 | 1.4 | 1.3 | 1.6 | 2.6 | 31 | 886 | 2,940 | 1,900 | 36 | 1.0 | 1.3 |
| 17 | 1.0 | 1.3 | 1.5 | 1.6 | 2.6 | 71 | 793 | 2,480 | 1,840 | 15 | 1.0 | 1.3 |
| 18 | 1.1 | 1.3 | 1.6 | 1.6 | 2.7 | 91 | 862 | 2,040 | 1,510 | 2.9 | 1.1 | 1.3 |
| 19 | 1.1 | 1.2 | 1.7 | 1.6 | 2.6 | 115 | 1,020 | 1,820 | 1,320 | 1.3 | 1.1 | 1.3 |
| 20 | 1.2 | 1.6 | 1.7 | 1.5 | 2.5 | 130 | 1,100 | 1,950 | 1,080 | 1.2 | 1.1 | 1.3 |
| 21 | 1.3 | 1.4 | 1.7 | 1.3 | 2.3 | 183 | 1,210 | 2,340 | 1,010 | 1.1 | 1.0 | 1.3 |
| 22 | 1.3 | 1.5 | 1.7 | 1.3 | 3.0 | 256 | 1,420 | 2,550 | 1,030 | 1.0 | 1.0 | 1.3 |
| 23 | 1.3 | 1.5 | 1.8 | 1.4 | 320 | 331 | 1,380 | 2,610 | 938 | 1.0 | 1.1 | 1.3 |
| 24 | 1.3 | 1.5 | 1.9 | 1.4 | 111 | 396 | 1,390 | 2,950 | 914 | 1.0 | 1.0 | 1.3 |
| 25 | 1.6 | 1.4 | 1.7 | 4.3 | 247 | 467 | 1,340 | 3,170 | 914 | 1.0 | 1.1 | 1.3 |
| 26 | 1.4 | 1.5 | 1.7 | 428 | 900 | 542 | 1,190 | 2,910 | 821 | 1.0 | 1.0 | 1.3 |
| 27 | 1.3 | 1.5 | 1.8 | 88 | 425 | 1,090 | 1,020 | 2,730 | 749 | 1.0 | 1.0 | 1.3 |
| 28 | 1.3 | 1.4 | 1.8 | 3.0 | 306 | 771 | 929 | 2,680 | 775 | 1.0 | .9 | 1.3 |
| 29 | 1.3 | 1.4 | 1.8 | 2.1 | 380 | 599 | 929 | 2,420 | 784 | 1.0 | .9 | 1.3 |
| 30 | 1.3 | 1.4 | 1.7 | 1.8 | - | 542 | 996 | 2,160 | 1,030 | 1.0 | .9 | 1.3 |
| 31 | 1.3 | - | 1.7 | 1.6 | - | 604 | - | 1,910 | - | 1.0 | .9 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 38.2 | 1.6 | 1.0 | 1.23 | 76 | | |
| November..... | | | | | | 40.7 | 1.5 | 1.2 | 1.56 | 81 | | |
| December..... | | | | | | 49.3 | 1.9 | 1.3 | 1.59 | 98 | | |
| Calendar year 1939..... | | | | | | 49,704.5 | 1,090 | .7 | 136 | 98,590 | | |
| January..... | | | | | | 2,075.3 | 696 | 1.3 | 66.9 | 4,120 | | |
| February..... | | | | | | 3,304.0 | 900 | 1.8 | 114 | 6,550 | | |
| March..... | | | | | | 7,864 | 1,090 | 21 | 254 | 15,600 | | |
| April..... | | | | | | 24,350 | 1,420 | 279 | 812 | 48,300 | | |
| May..... | | | | | | 68,660 | 3,170 | 1,160 | 2,221 | 136,600 | | |
| June..... | | | | | | 48,425 | 2,570 | 749 | 1,614 | 96,050 | | |
| July..... | | | | | | 5,928.5 | 1,020 | 1.0 | 191 | 11,760 | | |
| August..... | | | | | | 31.9 | 1.2 | .9 | 1.03 | 63 | | |
| September..... | | | | | | 35.6 | 1.3 | 1.0 | 1.19 | 71 | | |
| Water year 1939-40..... | | | | | | 161,002.5 | 3,170 | .9 | 440 | 319,400 | | |

Combined discharge, in second-feet, of Kern River and Kern River No. 3 canal near Kernville, Calif., for water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|-------|----------------------|-------|------|-------|
| 1 | 236 | 199 | 178 | 188 | 466 | 795 | 1,100 | 1,730 | 2,630 | 1,620 | 386 | 222 |
| 2 | 246 | 197 | 184 | 300 | 454 | 744 | 988 | 2,050 | 2,690 | 1,310 | 379 | 221 |
| 3 | 264 | 194 | 184 | 468 | 801 | 704 | 927 | 2,160 | 2,570 | 1,200 | 365 | 223 |
| 4 | 270 | 193 | 182 | 395 | 841 | 673 | 914 | 2,050 | 2,660 | 1,150 | 348 | 225 |
| 5 | 262 | 193 | 180 | 293 | 620 | 666 | 872 | 1,960 | 2,500 | 1,100 | 337 | 225 |
| 6 | 257 | 192 | 184 | 229 | 556 | 686 | 867 | 1,970 | 2,550 | 1,050 | 327 | 222 |
| 7 | 277 | 189 | 194 | 254 | 554 | 711 | 894 | 2,030 | 2,620 | 1,000 | 319 | 215 |
| 8 | 285 | 191 | 189 | 366 | 466 | 765 | 919 | 2,170 | 2,700 | 968 | 316 | 210 |
| 9 | 280 | 198 | 188 | 360 | 432 | 815 | 989 | 2,490 | 2,780 | 910 | 313 | 210 |
| 10 | 277 | 197 | 184 | 650 | 422 | 793 | 1,070 | 2,880 | 2,740 | 850 | 307 | 206 |
| 11 | 267 | 193 | 192 | 1,280 | 420 | 732 | 1,150 | 3,140 | 2,670 | 776 | 303 | 204 |
| 12 | 258 | 191 | 188 | 893 | 409 | 656 | 1,280 | 3,120 | 2,730 | 722 | 302 | 206 |
| 13 | 254 | 189 | 174 | 482 | 386 | 628 | 1,450 | 3,160 | 2,800 | 686 | 302 | 206 |
| 14 | 250 | 186 | 176 | 371 | 423 | 615 | 1,590 | 3,340 | 2,760 | 654 | 299 | 206 |
| 15 | 246 | 189 | 181 | 352 | 406 | 619 | 1,680 | 3,520 | 2,660 | 635 | 294 | 204 |
| 16 | 242 | 186 | 183 | 332 | 400 | 629 | 1,470 | 3,510 | 2,500 | 600 | 288 | 206 |
| 17 | 236 | 187 | 180 | 317 | 412 | 671 | 1,370 | 3,050 | 2,440 | 577 | 280 | 205 |
| 18 | 231 | 197 | 178 | 300 | 407 | 690 | 1,440 | 2,610 | 2,110 | 553 | 273 | 206 |
| 19 | 225 | 183 | 178 | 290 | 385 | 710 | 1,600 | 2,390 | 1,920 | 524 | 265 | 206 |
| 20 | 222 | 180 | 176 | 278 | 388 | 724 | 1,680 | 2,500 | 1,680 | 501 | 258 | 202 |
| 21 | 218 | 178 | 169 | 270 | 401 | 771 | 1,790 | 2,900 | 1,610 | 478 | 252 | 199 |
| 22 | 215 | 180 | 165 | 269 | 433 | 844 | 2,000 | 3,110 | 1,630 | 461 | 248 | 198 |
| 23 | 212 | 178 | 167 | 275 | 913 | 919 | 1,960 | 3,170 | 1,540 | 447 | 245 | 198 |
| 24 | 210 | 177 | 181 | 267 | 701 | 984 | 1,960 | 3,510 | 1,520 | 444 | 243 | 197 |
| 25 | 213 | 184 | 167 | 342 | 838 | 1,060 | 1,920 | 3,730 | 1,520 | 469 | 241 | 194 |
| 26 | 208 | 188 | 171 | 1,020 | 1,490 | 1,130 | 1,770 | 3,470 | 1,420 | 478 | 241 | 192 |
| 27 | 211 | 184 | 179 | 670 | 1,020 | 1,680 | 1,600 | 3,290 | 1,350 | 458 | 234 | 192 |
| 28 | 215 | 180 | 184 | 498 | 900 | 1,360 | 1,500 | 3,240 | 1,380 | 440 | 228 | 192 |
| 29 | 208 | 179 | 188 | 444 | 979 | 1,190 | 1,500 | 2,980 | 1,390 | 429 | 227 | 194 |
| 30 | 204 | 176 | 190 | 425 | - | 1,130 | 1,570 | 2,710 | 1,630 | 412 | 225 | 194 |
| 31 | 201 | - | 190 | 414 | - | 1,190 | - | 2,460 | - | 398 | 220 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 7,400 | | 285 | 201 | 239 | 14,680 | | | |
| November..... | | | | 5,628 | | 199 | 176 | 188 | 11,160 | | | |
| December..... | | | | 5,604 | | 194 | 165 | 181 | 11,120 | | | |
| Calendar year 1939..... | | | | 182,169 | | 1,670 | 165 | 499 | 361,300 | | | |
| January..... | | | | 13,292 | | 1,280 | 188 | 429 | 26,360 | | | |
| February..... | | | | 17,305 | | 1,490 | 385 | 597 | 34,320 | | | |
| March..... | | | | 26,284 | | 1,680 | 615 | 948 | 52,130 | | | |
| April..... | | | | 41,800 | | 2,000 | 867 | 1,393 | 82,910 | | | |
| May..... | | | | 86,400 | | 3,730 | 1,730 | 2,787 | 171,400 | | | |
| June..... | | | | 65,700 | | 2,800 | 1,350 | 2,190 | 130,300 | | | |
| July..... | | | | 22,298 | | 1,620 | 398 | 719 | 44,230 | | | |
| August..... | | | | 8,865 | | 386 | 220 | 256 | 17,580 | | | |
| September..... | | | | 6,182 | | 225 | 192 | 206 | 12,260 | | | |
| Water year 1939-40..... | | | | 306,756 | | 3,730 | 165 | 838 | 608,400 | | | |

Kern River near Bakersfield, Calif.

Location.- Water-stage recorder, lat. 35°25'54", long. 118°56'43", in SW $\frac{1}{4}$ sec. 2, T. 29 S., R. 28 E., at mouth of lower canyon, 5 miles northeast of Bakersfield. Altitude of gage, about 470 feet (from topographic map).

Drainage area.- 2,420 square miles.

Records available.- October 1893 to September 1940.

Average discharge.- 45 years (1893-1906, 1908-40), 959 second-feet.

Extremes.- Maximum discharge during year, 5,454 second-feet Feb. 26 (gage height, 4.55 feet); minimum, 188 second-feet Dec. 21.

1896-40: Maximum discharge, 20,000 second-feet Feb. 7, 1937 (gage height, 9.12 feet); minimum, 57 second-feet (regulated) in November 1924.

Remarks.- Many diversions for irrigation and four power plants above station.

Cooperation.- Complete record, except run-off, in acre-feet, and annual figures, furnished by Kern County Land Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|------------------|---------|---------|-------|----------------------|-------|------|-------|
| 1 | 278 | 243 | 220 | 286 | 693 | 1,965 | 1,891 | 2,114 | 2,780 | 1,800 | 426 | 239 |
| 2 | 270 | 233 | 220 | 300 | 756 | 1,503 | 1,736 | 2,326 | 2,929 | 1,625 | 419 | 241 |
| 3 | 274 | 231 | 220 | 331 | 833 | 1,362 | 1,589 | 2,621 | 2,973 | 1,425 | 407 | 240 |
| 4 | 291 | 237 | 221 | 439 | 1,908 | 1,367 | 1,450 | 2,665 | 2,873 | 1,268 | 393 | 240 |
| 5 | 298 | 237 | 222 | 420 | 1,630 | 1,355 | 1,399 | 2,526 | 2,969 | 1,186 | 382 | 234 |
| 6 | 301 | 237 | 222 | 419 | 1,151 | 1,246 | 1,344 | 2,439 | 2,786 | 1,140 | 373 | 231 |
| 7 | 308 | 237 | 223 | 359 | 1,041 | 1,177 | 1,301 | 2,446 | 2,882 | 1,127 | 359 | 230 |
| 8 | 321 | 238 | 226 | 365 | 964 | 1,183 | 1,354 | 2,507 | 2,885 | 1,083 | 354 | 234 |
| 9 | 322 | 238 | 228 | 414 | 986 | 1,186 | 1,379 | 2,713 | 2,933 | 1,001 | 344 | 229 |
| 10 | 317 | 235 | 228 | 482 | 838 | 1,229 | 1,453 | 3,023 | 3,075 | 942 | 330 | 228 |
| 11 | 315 | 233 | 229 | 2,827 | 805 | 1,226 | 1,535 | 3,354 | 2,967 | 950 | 325 | 218 |
| 12 | 307 | 229 | 225 | 2,460 | 790 | 1,155 | 1,623 | 3,565 | 2,913 | 910 | 316 | 217 |
| 13 | 297 | 226 | 222 | 1,544 | 776 | 1,071 | 1,853 | 3,536 | 2,979 | 841 | 313 | 218 |
| 14 | 289 | 225 | 217 | 998 | 753 | 993 | 2,011 | 3,596 | 3,009 | 784 | 307 | 217 |
| 15 | 280 | 223 | 217 | 782 | 819 | 972 | 2,192 | 3,764 | 2,950 | 729 | 304 | 217 |
| 16 | 276 | 221 | 219 | 662 | 780 | 961 | 2,367 | 3,945 | 2,828 | 692 | 302 | 216 |
| 17 | 264 | 224 | 221 | 580 | 747 | 959 | 2,105 | 3,885 | 2,714 | 667 | 300 | 222 |
| 18 | 256 | 225 | 222 | 507 | 767 | 960 | 1,967 | 3,457 | 2,609 | 629 | 293 | 223 |
| 19 | 252 | 227 | 221 | 480 | 785 | 972 | 2,054 | 3,014 | 2,290 | 617 | 280 | 219 |
| 20 | 248 | 227 | 218 | 453 | 773 | 969 | 2,227 | 2,823 | 2,113 | 595 | 271 | 220 |
| 21 | 251 | 226 | 211 | 434 | 776 | 974 | 2,357 | 2,946 | 1,880 | 573 | 265 | 221 |
| 22 | 250 | 227 | 218 | 422 | 795 | 1,014 | 2,569 | 3,340 | 1,791 | 544 | 261 | 222 |
| 23 | 251 | 228 | 217 | 425 | 879 | 1,066 | 2,838 | 3,472 | 1,809 | 528 | 259 | 221 |
| 24 | 247 | 229 | 220 | 425 | 1,463 | 1,140 | 2,741 | 3,657 | 1,729 | 499 | 265 | 220 |
| 25 | 244 | 229 | 225 | 438 | 1,249 | 1,196 | 2,708 | 3,976 | 1,683 | 469 | 256 | 217 |
| 26 | 245 | 230 | 226 | 534 | 2,891 | 1,235 | 2,677 | 4,091 | 1,675 | 473 | 250 | 213 |
| 27 | 247 | 234 | 225 | 1,506 | 2,672 | 1,461 | 2,485 | 3,760 | 1,583 | 507 | 240 | 208 |
| 28 | 248 | 231 | 230 | 1,088 | 1,751 | 2,270 | 2,232 | 3,651 | 1,572 | 489 | 239 | 201 |
| 29 | 254 | 225 | 244 | 874 | 1,816 | 1,796 | 2,094 | 3,570 | 1,589 | 467 | 242 | 204 |
| 30 | 242 | 221 | 257 | 773 | - | 1,653 | 2,049 | 3,283 | 1,588 | 451 | 234 | 208 |
| 31 | 240 | - | 271 | 702 | - | 1,612 | - | 2,996 | - | 435 | 230 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | - | 325 | 226 | 274 | 16,830 | | | |
| November..... | | | | | - | 249 | 220 | 230 | 13,700 | | | |
| December..... | | | | | - | 279 | 188 | 225 | 13,850 | | | |
| Calendar year 1939..... | | | | | - | 2,028 | 178 | 637 | 461,100 | | | |
| January..... | | | | | - | 4,749 | 279 | 733 | 45,080 | | | |
| February..... | | | | | - | 5,454 | 673 | 1,131 | 65,030 | | | |
| March..... | | | | | - | 2,735 | 948 | 1,265 | 77,810 | | | |
| April..... | | | | | - | 2,930 | 1,282 | 1,986 | 118,200 | | | |
| May..... | | | | | - | 4,438 | 2,048 | 3,195 | 196,500 | | | |
| June..... | | | | | - | 3,271 | 1,483 | 2,445 | 145,500 | | | |
| July..... | | | | | - | 1,905 | 429 | 821 | 50,470 | | | |
| August..... | | | | | - | 429 | 225 | 308 | 18,920 | | | |
| September..... | | | | | - | 250 | 197 | 222 | 13,230 | | | |
| Water year 1939-40..... | | | | | - | 5,454 | 188 | 1,068 | 775,100 | | | |

Note.- The figures of maximum and minimum discharge as shown for each month represent the instantaneous values.

Kern River No. 3 canal near Kernville, Calif.

Location.- Water-stage recorder, lat. 35°54', long. 118°28', in NE¼ sec. 25, T. 23 S., R. 32 E., 4 miles downstream from intake and 12 miles north of Kernville. Altitude of gage, about 3,590 feet (from topographic map).

Records available.- March 1921 to September 1940.

Average discharge.- 19 years, 352 second-feet.

Extremes.- Maximum daily discharge during year, 606 second-feet June 12 and 28; minimum daily, 163 second-feet Dec. 22.

1921-40: Maximum daily discharge, 689 second-feet May 28, 1938; no flow at times.

Remarks.- Records excellent except those for period of no gage-height record, which are fair. Canal diverts from left bank of Kern River in sec. 12, T. 23 S., R. 32 E. Water is used for power and returned to river 8 miles below station.

Cooperation.- Water-stage recorder graph and results of 12 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 235 | 198 | 177 | 186 | 463 | 599 | 589 | 573 | 553 | 601 | 385 | 221 |
| 2 | 245 | 196 | 182 | 257 | 451 | 598 | 589 | 570 | 551 | 599 | 378 | 220 |
| 3 | 263 | 193 | 182 | 325 | 517 | 598 | 588 | 569 | 550 | 596 | 364 | 222 |
| 4 | 269 | 192 | 180 | 316 | 503 | 599 | 589 | 570 | 550 | 594 | 347 | 224 |
| 5 | 261 | 192 | 178 | 281 | 588 | 598 | 588 | 570 | 548 | 593 | 336 | 224 |
| 6 | 266 | 191 | 183 | 227 | 552 | 598 | 588 | 570 | 547 | 590 | 326 | 221 |
| 7 | 278 | 188 | 192 | 252 | 530 | 596 | 586 | 571 | 546 | 588 | 318 | 214 |
| 8 | 284 | 190 | 187 | 351 | 463 | 595 | 583 | 568 | 545 | 585 | 315 | 209 |
| 9 | 279 | 197 | 186 | 358 | 429 | 597 | 584 | 567 | 513 | 582 | 312 | 209 |
| 10 | 276 | 196 | 182 | 426 | 420 | 597 | 537 | 566 | 605 | 579 | 306 | 206 |
| 11 | 266 | 192 | 190 | 589 | 418 | 597 | 585 | 568 | 602 | 576 | 302 | 203 |
| 12 | 287 | 190 | 197 | 589 | 437 | 599 | 593 | 572 | 606 | 574 | 301 | 205 |
| 13 | 263 | 188 | 173 | 475 | 384 | 597 | 580 | 572 | 605 | 571 | 301 | 205 |
| 14 | 249 | 185 | 175 | 369 | 420 | 594 | 580 | 571 | 605 | 570 | 298 | 205 |
| 15 | 245 | 188 | 180 | 350 | 403 | 590 | 579 | 570 | 605 | 568 | 293 | 203 |
| 16 | 241 | 185 | 182 | 330 | 397 | 593 | 580 | 569 | 604 | 564 | 287 | 205 |
| 17 | 236 | 186 | 178 | 315 | 409 | 600 | 581 | 570 | 604 | 562 | 279 | 204 |
| 18 | 230 | 186 | 176 | 298 | 404 | 599 | 581 | 569 | 603 | 550 | 272 | 205 |
| 19 | 224 | 182 | 176 | 288 | 382 | 595 | 580 | 568 | 603 | 523 | 264 | 205 |
| 20 | 221 | 178 | 174 | 277 | 386 | 594 | 578 | 567 | 603 | 500 | 257 | 201 |
| 21 | 217 | 177 | 167 | 269 | 399 | 588 | 578 | 564 | 602 | 477 | 251 | 198 |
| 22 | 214 | 179 | 163 | 268 | 430 | 588 | 576 | 562 | 603 | 460 | 247 | 197 |
| 23 | 211 | 177 | 165 | 274 | 593 | 588 | 575 | 562 | 605 | 446 | 244 | 197 |
| 24 | 209 | 176 | 179 | 266 | 590 | 588 | 575 | 560 | 605 | 443 | 242 | 196 |
| 25 | 211 | 183 | 166 | 358 | 591 | 588 | 576 | 567 | 605 | 468 | 240 | 193 |
| 26 | 207 | 187 | 169 | 588 | 594 | 586 | 576 | 558 | 604 | 477 | 240 | 191 |
| 27 | 210 | 182 | 177 | 582 | 592 | 585 | 575 | 558 | 604 | 457 | 233 | 191 |
| 28 | 214 | 179 | 182 | 495 | 594 | 592 | 575 | 558 | 606 | 439 | 227 | 191 |
| 29 | 207 | 178 | 186 | 442 | 599 | 592 | 575 | 556 | 604 | 428 | 226 | 193 |
| 30 | 203 | 175 | 188 | 423 | - | 592 | 574 | 554 | 602 | 411 | 224 | 195 |
| 31 | 200 | - | 188 | 412 | - | 589 | - | 553 | - | 397 | 219 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 7,368 | 284 | 200 | 238 | 14,610 | | |
| November..... | | | | | | 5,596 | 198 | 175 | 187 | 11,100 | | |
| December..... | | | | | | 5,549 | 192 | 163 | 179 | 11,010 | | |
| Calendar year 1939..... | | | | | | 132,489 | 612 | 163 | 363 | 262,809 | | |
| January..... | | | | | | 11,216 | 589 | 186 | 362 | 22,250 | | |
| February..... | | | | | | 13,998 | 599 | 382 | 483 | 27,760 | | |
| March..... | | | | | | 18,419 | 600 | 585 | 594 | 36,530 | | |
| April..... | | | | | | 17,433 | 589 | 574 | 581 | 34,580 | | |
| May..... | | | | | | 17,532 | 573 | 553 | 566 | 34,770 | | |
| June..... | | | | | | 17,288 | 606 | 213 | 578 | 34,290 | | |
| July..... | | | | | | 16,568 | 601 | 397 | 528 | 32,470 | | |
| August..... | | | | | | 8,834 | 585 | 219 | 285 | 17,520 | | |
| September..... | | | | | | 6,152 | 224 | 191 | 205 | 12,200 | | |
| Water year 1939-40..... | | | | | | 145,753 | 606 | 163 | 398 | 289,100 | | |

a No gage-height record; discharge interpolated.

Borel canal at Tilley Creek, Calif.

Location.- Water-stage recorder, lat. $35^{\circ}42'$, long. $118^{\circ}27'$, in NW $\frac{1}{4}$ sec. 4, T. 26 S., R. 33 E., at point where canal crosses Tilley Creek, three-quarters of a mile south of Kernville. Altitude of gage, about 2,570 feet (from topographic map).

Records available.- January 1910 to September 1914, October 1925 to September 1940.

Average discharge.- 15 years (1925-40), 342 second-feet.

Extremes.- Maximum daily discharge during year, 555 second-feet July 9, 10; minimum daily, 5.5 second-feet Apr. 13.

1925-40: Maximum daily discharge, 605 second-feet June 3-5, 1927, and May 22, 1936; no flow at times.

Remarks.- Records good. Canal diverts water from Kern River half a mile below Kernville to supply Borel hydroelectric plant of Southern California Edison Co., 10 miles below station, at which point water is returned to Kern River.

Cooperation.- Water-stage recorder graph and results of 14 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 234 | 190 | 169 | 183 | 517 | 540 | 548 | 549 | 549 | 551 | 377 | 213 |
| 2 | 238 | 187 | 174 | 218 | 536 | 539 | 549 | 551 | 549 | 553 | 366 | 213 |
| 3 | 259 | 187 | 177 | 463 | 532 | 539 | 549 | 551 | 549 | 553 | 361 | 212 |
| 4 | 270 | 187 | 175 | 379 | 538 | 539 | 549 | 549 | 549 | 554 | 334 | 212 |
| 5 | 266 | 186 | 173 | 432 | 539 | 540 | 549 | 549 | 549 | 554 | 333 | 210 |
| 6 | 260 | 185 | 173 | 266 | 539 | 541 | 550 | 549 | 550 | 554 | 323 | 207 |
| 7 | 276 | 184 | 185 | 271 | 539 | 541 | 550 | 549 | 551 | 554 | 316 | 200 |
| 8 | 284 | 183 | 180 | 365 | 538 | 543 | 551 | 549 | 551 | 554 | 308 | 194 |
| 9 | 282 | 194 | 177 | 415 | 532 | 544 | 551 | 549 | 551 | 555 | 301 | 196 |
| 10 | 282 | 194 | 175 | 426 | 525 | 543 | 551 | 548 | 551 | 555 | 297 | 192 |
| 11 | 271 | 190 | 178 | 531 | 521 | 544 | 551 | 548 | 551 | 554 | 293 | 189 |
| 12 | 260 | 187 | 182 | 530 | 498 | 546 | 476 | 548 | 551 | 554 | 292 | 192 |
| 13 | 262 | 184 | 165 | 531 | 474 | 546 | 5.5 | 548 | 551 | 553 | 293 | 193 |
| 14 | 244 | 181 | 163 | 489 | 508 | 547 | 115 | 548 | 551 | 553 | 290 | 190 |
| 15 | 238 | 180 | 169 | 426 | 508 | 548 | 546 | 548 | 551 | 552 | 286 | 185 |
| 16 | 231 | 185 | 171 | 407 | 493 | 548 | 547 | 548 | 551 | 550 | 280 | 193 |
| 17 | 226 | 178 | 171 | 386 | 505 | 549 | 547 | 548 | 550 | 550 | 270 | 191 |
| 18 | 220 | 187 | 166 | 373 | 518 | 549 | 547 | 548 | 550 | 547 | 262 | 191 |
| 19 | 216 | 182 | 163 | 338 | 484 | 549 | 547 | 548 | 550 | 522 | 258 | 193 |
| 20 | 211 | 175 | 163 | 322 | 476 | 549 | 547 | 548 | 549 | 499 | 253 | 192 |
| 21 | 209 | 171 | 157 | 311 | 487 | 550 | 547 | 548 | 550 | 475 | 244 | 189 |
| 22 | 205 | 172 | 154 | 299 | 510 | 550 | 547 | 548 | 550 | 459 | 236 | 187 |
| 23 | 202 | 172 | 157 | 313 | 541 | 550 | 546 | 548 | 550 | 438 | 235 | 185 |
| 24 | 202 | 166 | 165 | 310 | 541 | 550 | 547 | 547 | 550 | 427 | 232 | 186 |
| 25 | 207 | 171 | 161 | 329 | 541 | 549 | 548 | 547 | 550 | 446 | 230 | 183 |
| 26 | 202 | 183 | 157 | 532 | 538 | 549 | 544 | 547 | 551 | 463 | 232 | 180 |
| 27 | 202 | 177 | 167 | 534 | 541 | 547 | 546 | 546 | 551 | 448 | 228 | 183 |
| 28 | 210 | 172 | 181 | 532 | 541 | 546 | 548 | 547 | 551 | 430 | 219 | 183 |
| 29 | 192 | 171 | 181 | 529 | 540 | 547 | 548 | 548 | 550 | 421 | 214 | 185 |
| 30 | 198 | 167 | 183 | 612 | - | 548 | 548 | 548 | 550 | 405 | 214 | 187 |
| 31 | - | - | 186 | 503 | - | 548 | - | 549 | - | 388 | 211 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 7,247 | 284 | 192 | 234 | 14,370 | | |
| November..... | | | | | | 5,428 | 194 | 166 | 181 | 10,770 | | |
| December..... | | | | | | 5,298 | 186 | 164 | 171 | 10,510 | | |
| Calendar year 1939..... | | | | | | 131,568 | 567 | 115 | 360 | 261,000 | | |
| January..... | | | | | | 12,455 | 534 | 183 | 402 | 24,700 | | |
| February..... | | | | | | 15,100 | 541 | 474 | 521 | 29,980 | | |
| March..... | | | | | | 16,918 | 550 | 539 | 546 | 33,560 | | |
| April..... | | | | | | 15,394.5 | 551 | 5.5 | 513 | 30,530 | | |
| May..... | | | | | | 16,996 | 551 | 546 | 548 | 33,710 | | |
| June..... | | | | | | 16,507 | 551 | 549 | 550 | 32,740 | | |
| July..... | | | | | | 15,771 | 555 | 388 | 509 | 31,280 | | |
| August..... | | | | | | 8,588 | 377 | 211 | 277 | 17,030 | | |
| September..... | | | | | | 5,806 | 213 | 180 | 194 | 11,520 | | |
| Water year 1939-40..... | | | | | | 141,508.5 | 555 | 5.5 | 387 | 280,700 | | |

South Fork of Kern River near Onyx, Calif.

Location.- Water-stage recorder, lat. 35°44', long. 118°10', in SW¼ sec. 24, T. 25 S., R. 35 E., three-quarters of a mile north of Kernville-Walker Pass road, 1.4 miles upstream from Canebrake Creek, and 5 miles northeast of Onyx. Altitude of gage, about 2,900 feet (from topographic map).

Drainage area.- 531 square miles.

Records available.- September 1911 to August 1914, January 1919 to September 1940.

Average discharge.- 19 years (1911-13, 1919-25, 1929-40), 98.7 second-feet.

Extremes.- Maximum discharge during year, 651 second-feet Apr. 15 (gage height, 3.72 feet); minimum, 3 second-feet Aug. 17.

1911-14, 1919-40: Maximum discharge, 3,450 second-feet Mar. 2, 1938 (gage height, 6.69 feet), from rating curve extended above 1,900 second-feet; maximum gage height, 7.1 feet Jan. 25, 1914, former site, same datum; no flow several days in July and August 1929 and September 1934.

Remarks.- Records fair October to March, good April to September. Lowell and Thomas irrigation ditches divert about 2,000 acre-feet yearly above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 29 | 23 | 26 | 32 | 71 | 148 | 298 | 360 | 121 | 43 | 10 | 6.5 |
| 2 | 29 | 23 | 28 | 36 | 84 | 133 | 242 | 363 | 118 | 38 | 7 | 8.5 |
| 3 | 30 | 22 | 29 | 59 | 178 | 127 | 228 | 356 | 114 | 30 | 7 | 9.5 |
| 4 | 30 | 23 | 30 | 60 | 162 | 112 | 225 | 328 | 111 | 23 | 7 | 10 |
| 5 | 29 | 23 | 28 | 47 | 110 | 108 | 204 | 307 | 107 | 21 | 6.5 | 10 |
| 6 | 29 | 24 | 29 | 36 | 93 | 106 | 225 | 294 | 103 | 18 | 6.5 | 9 |
| 7 | 30 | 23 | 33 | 38 | 90 | 104 | 250 | 288 | 99 | 18 | 5.5 | 6.5 |
| 8 | 31 | 23 | 32 | 52 | 74 | 110 | 288 | 282 | 99 | 17 | 4.9 | 6.5 |
| 9 | 30 | 26 | 32 | 42 | 66 | 112 | 350 | 279 | 94 | 16 | 5.5 | 7 |
| 10 | 28 | 26 | 31 | 67 | 66 | 110 | 406 | 276 | 90 | 12 | 6 | 7 |
| 11 | 27 | 26 | 30 | 177 | 68 | 104 | 434 | 270 | 84 | 12 | 6 | 6.5 |
| 12 | 26 | 24 | 31 | 125 | 66 | 93 | 459 | 267 | 79 | 12 | 4.9 | 7 |
| 13 | 23 | 24 | 27 | 61 | 63 | 95 | 504 | 261 | 76 | 12 | 3.6 | 7.5 |
| 14 | 22 | 24 | 25 | 43 | 68 | 95 | 536 | 249 | 71 | 12 | 3.8 | 8 |
| 15 | 22 | 26 | 26 | 37 | 61 | 96 | 585 | 240 | 66 | 12 | 3.8 | 9.5 |
| 16 | 22 | 26 | 29 | 35 | 59 | 98 | 464 | 235 | 64 | 12 | 3.5 | 11 |
| 17 | 22 | 26 | 30 | 36 | 62 | 102 | 390 | 230 | 60 | 12 | 3.0 | 13 |
| 18 | 22 | 25 | 30 | 41 | 67 | 108 | 418 | 230 | 56 | 12 | 3.1 | 15 |
| 19 | 22 | 24 | 29 | 40 | 61 | 118 | 482 | 212 | 52 | 12 | 3.1 | 15 |
| 20 | 22 | 24 | 29 | 40 | 59 | 122 | 508 | 192 | 50 | 11 | 3.2 | 15 |
| 21 | 22 | 24 | 28 | 39 | 62 | 133 | 536 | 188 | 47 | 11 | 3.2 | 15 |
| 22 | 22 | 24 | 25 | 40 | 67 | 148 | 570 | 190 | 45 | 11 | 3.6 | 15 |
| 23 | 22 | 24 | 24 | 43 | 93 | 162 | 560 | 188 | 43 | 11 | 4.8 | 15 |
| 24 | 22 | 25 | 28 | 43 | 91 | 183 | 536 | 182 | 41 | 10 | 4.6 | 15 |
| 25 | 23 | 27 | 25 | 45 | 100 | 207 | 500 | 175 | 40 | 10 | 4.6 | 15 |
| 26 | 24 | 29 | 23 | 145 | 284 | 250 | 434 | 163 | 38 | 9.5 | 4.9 | 15 |
| 27 | 24 | 30 | 24 | 100 | 195 | 391 | 398 | 154 | 36 | 9.5 | 5 | 15 |
| 28 | 24 | 29 | 29 | 72 | 189 | 342 | 349 | 148 | 35 | 10 | 5.5 | 15 |
| 29 | 24 | 27 | 29 | 66 | 186 | 309 | 346 | 142 | 36 | 11 | 5.5 | 15 |
| 30 | 24 | 27 | 32 | 62 | - | 323 | 352 | 135 | 39 | 13 | 5.6 | 16 |
| 31 | 23 | - | 30 | 60 | - | 326 | - | 127 | - | 13 | 5 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 779 | 31 | 22 | 25.1 | 1,550 | | | |
| November..... | | | | | 751 | 30 | 22 | 25.0 | 1,480 | | | |
| December..... | | | | | 851 | 33 | 23 | 28.4 | 1,750 | | | |
| Calendar year 1939..... | | | | | 31,853 | 615 | 8 | 87.3 | 63,190 | | | |
| January..... | | | | | 1,821 | 177 | 32 | 58.7 | 3,610 | | | |
| February..... | | | | | 2,895 | 284 | 59 | 89.8 | 5,740 | | | |
| March..... | | | | | 4,976 | 391 | 93 | 160 | 9,870 | | | |
| April..... | | | | | 12,077 | 565 | 204 | 403 | 23,950 | | | |
| May..... | | | | | 7,311 | 363 | 127 | 236 | 14,600 | | | |
| June..... | | | | | 2,114 | 121 | 35 | 70.5 | 4,190 | | | |
| July..... | | | | | 473.0 | 43 | 9.5 | 15.3 | 938 | | | |
| August..... | | | | | 156.1 | 10 | 3.0 | 5.04 | 310 | | | |
| September..... | | | | | 339.0 | 16 | 6.5 | 11.3 | 672 | | | |
| Water year 1939-40..... | | | | | 34,572.1 | 585 | 3.0 | 94.5 | 68,570 | | | |

South Fork of Kern River at Isabella, Calif.

Location.- Water-stage recorder, lat. 35°40', long. 118°28', in NW¼ sec. 20, T. 26 S., R. 33 E., at Isabella, a quarter of a mile upstream from mouth. Datum of gage is 2,484.3 feet above mean sea level.

Drainage area.- 985 square miles.

Records available.- October 1910 to September 1913, January 1929 to September 1940.

Average discharge.- 11 years (1929-40), 87.7 second-feet.

Extremes.- Maximum discharge during year, 550 second-feet probably on Apr. 23 (gage height, 3.67 feet, from recorded range of stage); minimum, 3.5 second-feet Aug. 14. 1929-40: Maximum discharge, 4,100 second-feet Feb. 7, 1937 (gage height, 6.92 feet), from rating curve extended above 1,600 second-feet, verified by velocity-area study; minimum, 0.3 second-foot July 26, 1931.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Many diversions above gage for irrigation; some return flow.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 14 | 12 | 16 | 12 | 76 | 188 | 190 | 278 | 94 | 12 | 10 | 12 |
| 2 | 14 | 13 | 15 | 15 | 90 | 166 | 194 | 273 | 82 | 13 | 9.5 | 16 |
| 3 | 14 | 15 | 15 | 15 | 108 | 157 | 164 | 278 | 67 | 12 | 9.5 | 15 |
| 4 | 14 | 15 | 15 | 17 | 176 | 150 | 155 | 278 | 57 | 12 | 9 | 15 |
| 5 | 14 | 16 | 15 | 19 | 155 | 143 | 164 | 254 | 47 | 12 | 10 | 15 |
| 6 | 14 | 16 | 15 | 17 | 133 | 138 | 162 | 242 | 38 | 13 | 10 | 14 |
| 7 | 14 | 16 | 15 | a18 | 124 | 130 | 166 | 225 | 29 | 14 | 9.5 | 13 |
| 8 | 14 | 16 | 15 | a19 | 116 | 130 | 184 | 216 | 25 | 14 | 8.5 | 13 |
| 9 | 14 | 15 | 15 | a22 | 114 | 130 | 182 | 207 | 23 | 14 | 8 | 10 |
| 10 | 14 | 12 | 15 | a25 | 108 | 130 | 211 | 190 | 23 | 14 | 9.5 | 8 |
| 11 | 14 | 12 | 15 | a70 | 104 | 128 | 234 | 174 | 22 | 12 | 10 | 8 |
| 12 | 14 | 14 | 14 | a100 | 100 | 124 | a290 | 178 | 20 | 14 | 10 | 7.5 |
| 13 | 15 | 15 | 16 | a85 | 98 | 103 | a330 | 186 | 18 | 13 | 9.5 | 9.5 |
| 14 | 14 | 14 | 15 | a70 | 108 | 94 | a360 | 184 | 16 | 14 | 6.5 | 7.5 |
| 15 | 14 | 14 | 16 | a60 | 112 | 86 | a400 | 182 | 16 | 12 | 7.5 | 14 |
| 16 | 14 | 14 | 16 | a55 | 99 | 78 | a440 | 188 | 15 | 13 | 7.5 | 14 |
| 17 | 14 | 14 | 16 | a52 | 98 | 63 | a320 | 211 | 14 | 10 | 6 | 14 |
| 18 | 14 | 14 | 16 | a52 | 100 | 50 | a290 | 230 | 14 | 12 | 6 | 13 |
| 19 | 14 | 14 | 16 | a52 | 102 | 30 | a340 | 234 | 15 | 14 | 6 | 12 |
| 20 | 14 | 14 | 16 | a50 | 94 | 26 | a400 | 227 | 15 | 14 | 6 | 12 |
| 21 | 14 | 14 | 16 | a50 | 94 | 22 | a430 | 205 | 16 | 14 | 6.5 | 12 |
| 22 | 14 | 14 | 16 | a52 | 96 | 22 | a460 | 188 | 15 | 13 | 6.5 | 12 |
| 23 | 14 | 14 | 16 | a52 | 103 | 24 | a490 | 186 | 16 | 14 | 7 | 12 |
| 24 | 12 | 14 | 16 | 54 | 116 | 26 | a460 | 182 | 12 | 11 | 7.5 | 12 |
| 25 | 13 | 14 | 16 | 49 | 118 | 23 | a400 | 180 | 12 | 8.5 | 7.5 | 12 |
| 26 | 13 | 14 | 16 | 77 | 157 | 26 | a360 | 170 | 12 | 8.5 | 8 | 12 |
| 27 | 13 | 14 | 14 | 120 | 218 | 40 | a330 | 163 | 14 | 9.5 | 8 | 13 |
| 28 | 11 | 15 | 12 | 100 | 196 | 155 | a300 | 161 | 16 | 11 | 9 | 13 |
| 29 | 12 | 13 | 11 | 88 | 196 | 154 | a290 | 148 | 16 | 10 | 8.5 | 14 |
| 30 | 12 | 12 | 11 | 73 | - | 147 | a280 | 133 | 14 | 10 | 9.5 | 14 |
| 31 | 11 | - | 12 | 72 | - | 163 | - | 118 | - | 9.5 | 14 | - |
| Month | | | | Second-foot-days. | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 418 | 14 | 11 | 13.5 | 829 | | | | |
| November..... | | | | 423 | 16 | 12 | 14.1 | 839 | | | | |
| December..... | | | | 461 | 16 | 11 | 14.9 | 914 | | | | |
| Calendar year 1939..... | | | | 24,637.0 | 500 | 9.5 | 67.5 | 48,860 | | | | |
| January..... | | | | 1,612 | 120 | 12 | 52.0 | 3,200 | | | | |
| February..... | | | | 3,607 | 218 | 76 | 121 | 6,960 | | | | |
| March..... | | | | 3,046 | 188 | 22 | 98.5 | 6,040 | | | | |
| April..... | | | | 8,946 | 490 | 162 | 298 | 17,740 | | | | |
| May..... | | | | 6,269 | 278 | 118 | 202 | 12,450 | | | | |
| June..... | | | | 793 | 94 | 12 | 26.4 | 1,570 | | | | |
| July..... | | | | 377.0 | 14 | 8.5 | 12.2 | 748 | | | | |
| August..... | | | | 260.5 | 14 | 6 | 8.40 | 517 | | | | |
| September..... | | | | 368.5 | 16 | 7.5 | 12.3 | 731 | | | | |
| Water year 1939-40..... | | | | 26,481.0 | 490 | 6 | 72.4 | 52,520 | | | | |

a No gage-height record; discharge computed on basis of records for station near Onyx.

Tulare Lake in Kings County, Calif.

Location.- Staff gage, lat. 36°03' (revised), long. 119°44', at southwest corner sec. 31, T. 21 S., R. 21 E., about 12 miles southeast of Stratford. Datum of gage is at mean sea level.

Records available.- May 1937 to September 1940. March 1906 to September 1920 (incomplete) at several other sites.

Extremes.- Maximum elevation recorded during year, 190.6 feet May 29 to June 9.

1937-40: Maximum elevation, 195.5 feet, June 5, 1938.

1906-40: Maximum stage probably occurred June 21, 1907 (gage height, 14.0 feet, site and datum then in use); lake dry or practically so during parts of 1906, 1914, 1916, 1919, each year of 1920-22 and 1924-36, and 1937.

Remarks.- Tulare Lake receives water from Kings, Kaweah, and Tule Rivers during high water periods and occasionally from Kern River, Deer Creek, and several small intermittent streams. Its boundaries have been greatly altered in recent years by construction of levees and other reclamation work.

Cooperation.- Gage-height record obtained under supervision of Roy L. May and furnished by Tulare Lake Reclamation District No. 749.

Elevation, in feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 188.2 | 187.7 | 187.4 | 187.1 | 187.5 | 189.0 | 189.2 | 189.3 | 190.6 | 190.0 | 187.4 | 185.1 |
| 2 | 188.2 | 187.7 | 187.4 | 187.1 | 187.5 | 189.0 | 189.2 | 189.3 | 190.6 | 189.9 | 187.3 | 185.1 |
| 3 | 188.2 | 187.7 | 187.4 | 187.1 | 187.5 | 189.0 | 189.3 | 189.3 | 190.6 | 189.9 | 187.2 | 185.1 |
| 4 | 188.1 | 187.6 | 187.4 | 187.1 | 187.6 | 189.1 | 189.3 | 189.3 | 190.6 | 189.8 | 187.2 | 185.0 |
| 5 | 188.1 | 187.6 | 187.4 | 187.1 | 187.6 | 189.2 | 189.4 | 189.3 | 190.6 | 189.8 | 187.0 | 185.0 |
| 6 | 188.1 | 187.6 | 187.4 | 187.1 | 187.7 | 189.2 | 189.4 | 189.3 | 190.6 | 189.7 | 187.0 | 185.0 |
| 7 | 188.1 | 187.6 | 187.3 | 187.1 | 187.7 | 189.3 | 189.4 | 189.3 | 190.6 | 189.7 | 186.9 | 185.0 |
| 8 | 188.1 | 187.6 | 187.3 | 187.1 | 187.7 | 189.3 | 189.4 | 189.3 | 190.6 | 189.6 | 186.8 | 185.0 |
| 9 | 188.1 | 187.6 | 187.3 | 187.1 | 187.7 | 189.4 | 189.4 | 189.3 | 190.6 | 189.6 | 186.7 | 185.0 |
| 10 | 188.1 | 187.6 | 187.2 | 187.1 | 187.7 | 189.4 | 189.4 | 189.3 | 190.5 | 189.5 | 186.6 | 185.0 |
| 11 | 188.1 | 187.5 | 187.2 | 187.2 | 187.8 | 189.4 | 189.4 | 189.4 | 190.5 | 189.4 | 186.5 | 185.0 |
| 12 | 188.1 | 187.5 | 187.2 | 187.2 | 187.8 | 189.4 | 189.4 | 189.4 | 190.5 | 189.3 | 186.4 | 185.0 |
| 13 | 188.0 | 187.5 | 187.2 | 187.2 | 187.8 | 189.4 | 189.4 | 189.5 | 190.5 | 189.3 | 186.3 | 184.9 |
| 14 | 188.0 | 187.5 | 187.2 | 187.2 | 187.8 | 189.4 | 189.4 | 189.6 | 190.5 | 189.2 | 186.2 | 184.9 |
| 15 | 188.0 | 187.5 | 187.2 | 187.2 | 187.8 | 189.4 | 189.4 | 189.7 | 190.5 | 189.1 | 186.1 | 184.9 |
| 16 | 188.0 | 187.5 | 187.2 | 187.2 | 187.8 | 189.4 | 189.4 | 189.8 | 190.4 | 189.1 | 186.0 | 184.9 |
| 17 | 188.0 | 187.5 | 187.2 | 187.3 | 187.8 | 189.4 | 189.4 | 189.9 | 190.4 | 189.0 | 186.0 | 185.0 |
| 18 | 188.0 | 187.5 | 187.2 | 187.3 | 187.8 | 189.4 | 189.4 | 189.9 | 190.4 | 188.9 | 185.9 | 185.0 |
| 19 | 188.0 | 187.5 | 187.1 | 187.3 | 187.9 | 189.4 | 189.4 | 190.0 | 190.3 | 188.7 | 185.8 | 184.8 |
| 20 | 188.0 | 187.4 | 187.2 | 187.3 | 187.9 | 189.4 | 189.4 | 190.1 | 190.3 | 188.6 | 185.8 | 184.9 |
| 21 | 187.9 | 187.4 | 187.1 | 187.3 | 187.9 | 189.3 | 189.4 | 190.2 | 190.3 | 188.6 | 185.7 | 184.8 |
| 22 | 187.9 | 187.4 | 187.1 | 187.3 | 187.9 | 189.3 | 189.4 | 190.2 | 190.3 | 188.5 | 185.6 | 184.8 |
| 23 | 187.9 | 187.4 | 187.1 | 187.3 | 187.9 | 189.3 | 189.3 | 190.2 | 190.3 | 188.4 | 185.5 | 184.7 |
| 24 | 187.9 | 187.4 | 187.1 | 187.3 | 188.0 | 189.3 | 189.3 | 190.2 | 190.2 | 188.2 | 185.4 | 184.7 |
| 25 | 187.9 | 187.4 | 187.1 | 187.3 | 188.0 | 189.3 | 189.3 | 190.3 | 190.2 | 188.2 | 185.4 | 184.7 |
| 26 | 187.8 | 187.4 | 187.1 | 187.3 | 188.2 | 189.2 | 189.3 | 190.4 | 190.2 | 188.0 | 185.3 | 184.6 |
| 27 | 187.8 | 187.4 | 187.1 | 187.3 | 188.3 | 189.2 | 189.3 | 190.4 | 190.2 | 187.9 | 185.3 | 184.6 |
| 28 | 187.8 | 187.4 | 187.1 | 187.4 | 188.6 | 189.2 | 189.3 | 190.5 | 190.1 | 187.8 | 185.3 | 184.5 |
| 29 | 187.8 | 187.4 | 187.1 | 187.4 | 188.9 | 189.2 | 189.3 | 190.6 | 190.1 | 187.7 | 185.2 | 184.5 |
| 30 | 187.8 | 187.4 | 187.1 | 187.4 | - | 189.2 | 189.3 | 190.6 | 190.0 | 187.6 | 185.2 | 184.5 |
| 31 | 187.8 | - | 187.1 | 187.4 | - | 189.2 | - | 190.6 | - | 187.5 | 185.2 | - |

Tule River near Porterville, Calif.

Location.- Water-stage recorder, lat. 36°05', long. 118°55', in NW¼ sec. 25, T. 21 S., R. 28 E., at highway bridge, 1 mile upstream from South Fork and 6 miles east of Porterville. Altitude of gage, about 580 feet (from topographic map).

Drainage area.- 266 square miles.

Records available.- May 1901 to September 1940.

Average discharge.- 39 years, 142 second-feet.

Extremes.- Maximum discharge during year, 7,490 second-feet Jan. 11 (gage height, 9.63 feet); minimum, 1.1 second-feet Aug. 23.

1901-40: Maximum discharge, 12,500 second-feet Feb. 13, 1936 (gage height, 10.55 feet), from rating curve extended above 3,700 second-feet on basis of area-velocity computations; no flow during parts of 1934 and 1935.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Several small diversions above station. Power is developed on Middle Fork and tributaries.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | 2.6 | 12 | 14 | 30 | a300 | 837 | 1,200 | 330 | 200 | 35 | 6 | 2.2 |
| 2 | 5.5 | 12 | 14 | 144 | a350 | 703 | 684 | 368 | 196 | 34 | 5.5 | 2.4 |
| 3 | 15 | 12 | 15 | 305 | a1,230 | 619 | 564 | 379 | 186 | 34 | 5 | 2.4 |
| 4 | 13 | 12 | 14 | 317 | 1,490 | 550 | 514 | 365 | 180 | 33 | 4.7 | 2.7 |
| 5 | 9.5 | 12 | 14 | 217 | 683 | 490 | 471 | 347 | 172 | 32 | 4.9 | 3.1 |
| 6 | 10 | 12 | 16 | 116 | 525 | 455 | 429 | 342 | 163 | 31 | 4.5 | 3.6 |
| 7 | 30 | 12 | 21 | 123 | a450 | 426 | 411 | 332 | 157 | 29 | 4.9 | 3.6 |
| 8 | 32 | 10 | 21 | 301 | a350 | 414 | 390 | 335 | 152 | 29 | 4.2 | 3.8 |
| 9 | 28 | 9.5 | 21 | 246 | a300 | 396 | 388 | 355 | 148 | 27 | 3.6 | 4.3 |
| 10 | 22 | 10 | 22 | 751 | 272 | 371 | 385 | 382 | 143 | 22 | 3.5 | 3.8 |
| 11 | 20 | 10 | 30 | 3,410 | 252 | 347 | 388 | 402 | 130 | 22 | 2.9 | 3.8 |
| 12 | 18 | 10 | 28 | 1,530 | 236 | 318 | 408 | 382 | 123 | 22 | 2.3 | 3.8 |
| 13 | 16 | 10 | 24 | 548 | 216 | 299 | 439 | 362 | 116 | 20 | 1.9 | 3.8 |
| 14 | 15 | 9 | 22 | a340 | 434 | 285 | 455 | 374 | 108 | 20 | 1.9 | 4.3 |
| 15 | 14 | 10 | 21 | a250 | 382 | 279 | 484 | 371 | 98 | a20 | 1.6 | 4.5 |
| 16 | 11 | 11 | 22 | a210 | 292 | 268 | 414 | 358 | 91 | a15 | 1.6 | 5 |
| 17 | 9.5 | 9 | 22 | a190 | 285 | 268 | 365 | 347 | 86 | a15 | 1.6 | 4.5 |
| 18 | 9.5 | 11 | 22 | a170 | 323 | 268 | 360 | 323 | 77 | a15 | 1.6 | 5 |
| 19 | 10 | 10 | 23 | a150 | 268 | 263 | 374 | 304 | 72 | a10 | 1.9 | 5.5 |
| 20 | 9 | 9.5 | 23 | a130 | 254 | 263 | 382 | 301 | 71 | a10 | 2 | 5.5 |
| 21 | 8 | 10 | 23 | 118 | 250 | 270 | 402 | 308 | 64 | 8 | 1.6 | 5 |
| 22 | 7.5 | 11 | 24 | 113 | 274 | 283 | 432 | 308 | 54 | 7.5 | 1.4 | 4.9 |
| 23 | 5.5 | 12 | 24 | 106 | 1,640 | 292 | 432 | 306 | 48 | 8.5 | 1.3 | 4.9 |
| 24 | 2.8 | 12 | 32 | 105 | 749 | 301 | 423 | 306 | 44 | 7 | 1.5 | 5 |
| 25 | 9 | 12 | 32 | 472 | 754 | 313 | 402 | 304 | 41 | 6.5 | 1.9 | 4.9 |
| 26 | 8.5 | 13 | 30 | 1,770 | 2,660 | 337 | 458 | 283 | 41 | 5.5 | 1.9 | 4.9 |
| 27 | 7.5 | 15 | 28 | a620 | 1,110 | 847 | 385 | 268 | 40 | 5.5 | 2.5 | 4.5 |
| 28 | 8 | 15 | 28 | a400 | 869 | 532 | 340 | 257 | 36 | 6 | 2.2 | 5 |
| 29 | 7 | 15 | 29 | a300 | 1,140 | 434 | 328 | 238 | 34 | 6.5 | 2 | 6 |
| 30 | 6 | 15 | 29 | a270 | - | 400 | 313 | 216 | 37 | 6.5 | 2 | 5.5 |
| 31 | 7.5 | - | 30 | a250 | - | 768 | - | 202 | - | 6 | 2 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 376.9 | 32 | 2.6 | 12.2 | 748 | | | | |
| November..... | | | | 343 | 15 | 9 | 11.4 | 680 | | | | |
| December..... | | | | 718 | 32 | 1.4 | 23.2 | 1,420 | | | | |
| Calendar year 1939..... | | | | 27,548.2 | 775 | .2 | 75.5 | 54,650 | | | | |
| January..... | | | | 14,002 | 3,410 | 30 | 452 | 27,770 | | | | |
| February..... | | | | 19,338 | 2,660 | 216 | 632 | 36,370 | | | | |
| March..... | | | | 12,696 | 847 | 263 | 416 | 25,580 | | | | |
| April..... | | | | 13,420 | 1,200 | 313 | 447 | 26,620 | | | | |
| May..... | | | | 10,077 | 402 | 202 | 325 | 19,990 | | | | |
| June..... | | | | 3,108 | 200 | 34 | 104 | 6,160 | | | | |
| July..... | | | | 548.5 | 35 | 5.5 | 17.7 | 1,090 | | | | |
| August..... | | | | 86.3 | 6 | 1.3 | 2.78 | 171 | | | | |
| September..... | | | | 128.2 | 6 | 2.2 | 4.27 | 254 | | | | |
| Water year 1939-40..... | | | | 74,041.9 | 3,410 | 1.3 | 202 | 146,900 | | | | |

Peak discharge.- Jan. 11 (6:30 a.m.) 7,490 sec.-ft.; Jan. 26 (1:30 a.m.) 4,220 sec.-ft.; Feb. 3 (5:30 p.m.) 3,340 sec.-ft.; Feb. 23 (9:30 a.m.) 3,000 sec.-ft.; Feb. 26 (3:30 a.m.) 4,930 sec.-ft.; Mar. 31 (8:30 p.m.) 1,690 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of recorded range of stage and scattered staff-gage readings.

South Fork of Tule River near Success, Calif.

Location.- Water-stage recorder, lat. 36°03', long. 118°51', in NW¼ sec. 4, T. 22 S., R. 29 E., 3 miles southeast of Success and 5 miles upstream from mouth. Altitude of gage, about 750 feet (from topographic map).

Drainage area.- 106 square miles.

Records available.- June 1930 to September 1940.

Average discharge.- 10 years, 42.5 second-feet.

Extremes.- Maximum discharge during year, 2,590 second-feet Jan. 11 (gage height, 6.52 feet); no flow Oct. 1 and Aug. 8 to Sept. 19.

1930-40: Maximum discharge, 3,370 second-feet Feb. 6, 1937 (gage height, 6.36 feet), from rating curve extended above 1,100 second-feet on basis of velocity-area studies; no flow at times in each year except 1938.

Remarks.- Records good. Several ditches divert water above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|------|------|------|-----|------|------|------|-------|
| 1 | 0 | 2.0 | 4.7 | 9 | 102 | 283 | 510 | 96 | 37 | 8 | 0.5 | 0 |
| 2 | 3.4 | 2.0 | 4.7 | 19 | 138 | 245 | 344 | 93 | 36 | 7.5 | .5 | 0 |
| 3 | 6 | 2.2 | 4.4 | 71 | 313 | 218 | 274 | 93 | 37 | 6.5 | .4 | 0 |
| 4 | 3.2 | 2.2 | 3.8 | 63 | 394 | 194 | 262 | 91 | 34 | 5.5 | .4 | 0 |
| 5 | 2.0 | 2.2 | 3.2 | 45 | 229 | 177 | 229 | 91 | 33 | 5 | .3 | 0 |
| 6 | 1.3 | 2.2 | 3.2 | 23 | 203 | 164 | 206 | 90 | 30 | 4.0 | .2 | 0 |
| 7 | 6 | 2.2 | 3.2 | 21 | 182 | 152 | 191 | 86 | 28 | 3.2 | .1 | 0 |
| 8 | 7 | 2.1 | 4.0 | 48 | 142 | 144 | 180 | 83 | 26 | 2.5 | 0 | 0 |
| 9 | 4.2 | 2.2 | 4.4 | 48 | 123 | 139 | 169 | 60 | 25 | 2.0 | 0 | 0 |
| 10 | 3.2 | 2.4 | 4.4 | 231 | 110 | 132 | 162 | 78 | 23 | 1.8 | 0 | 0 |
| 11 | 2.0 | 2.4 | 8 | 1,100 | 102 | 127 | 152 | 77 | 22 | 1.6 | 0 | 0 |
| 12 | 1.2 | 2.4 | 9 | 555 | 93 | 114 | 146 | 75 | 20 | 1.6 | 0 | 0 |
| 13 | .9 | 2.2 | 7 | 208 | 85 | 109 | 138 | 72 | 20 | 1.8 | 0 | 0 |
| 14 | 1.0 | 1.8 | 6.5 | 118 | 136 | 103 | 134 | 69 | 19 | 1.5 | 0 | 0 |
| 15 | 1.2 | 2.0 | 4.2 | 83 | 132 | 96 | 146 | 68 | 18 | 1.5 | 0 | 0 |
| 16 | 1.1 | 1.8 | 4.2 | 65 | 110 | 93 | 138 | 65 | 17 | 1.4 | 0 | 0 |
| 17 | 1.0 | 1.7 | 4.0 | 54 | 116 | 93 | 129 | 64 | 17 | 1.4 | 0 | 0 |
| 18 | 1.2 | 2.2 | 3.8 | 47 | 142 | 91 | 121 | 64 | 14 | 1.5 | 0 | 0 |
| 19 | 1.2 | 2.8 | 4.0 | 42 | 118 | 90 | 119 | 59 | 14 | 1.6 | 0 | 0 |
| 20 | 1.2 | 2.4 | 4.0 | 37 | 109 | 86 | 116 | 56 | 13 | 1.5 | 0 | .1 |
| 21 | 1.2 | 1.6 | 4.2 | 35 | 103 | 85 | 112 | 52 | 12 | 1.3 | 0 | .1 |
| 22 | 1.0 | 1.6 | 4.7 | 33 | 114 | 83 | 112 | 51 | 12 | .9 | 0 | .1 |
| 23 | .7 | 1.7 | 5.5 | 32 | 395 | 82 | 110 | 51 | 10 | .8 | 0 | .2 |
| 24 | .9 | 2.1 | 9 | 31 | 237 | 82 | 109 | 50 | 9.5 | .7 | 0 | .2 |
| 25 | 2.8 | 2.0 | 10 | 150 | 246 | 88 | 109 | 48 | 9 | .6 | 0 | .2 |
| 26 | 3.8 | 2.3 | 8.5 | 470 | 799 | 95 | 148 | 46 | 7.5 | .5 | 0 | .2 |
| 27 | 3.2 | 3.4 | 8 | 203 | 417 | 283 | 129 | 45 | 7.5 | .5 | 0 | .2 |
| 28 | 3.0 | 4.4 | 7.5 | 134 | 311 | 177 | 112 | 44 | 7 | .5 | 0 | .2 |
| 29 | 2.6 | 4.7 | 8.5 | 105 | 338 | 146 | 107 | 42 | 7.5 | .5 | 0 | .2 |
| 30 | 2.2 | 4.7 | 9 | 88 | - | 134 | 102 | 39 | 10 | .5 | 0 | .2 |
| 31 | 1.8 | - | 9.5 | 77 | - | 247 | - | 37 | - | .6 | 0 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 71.5 | 7 | 0 | 2.31 | 142 |
| November..... | 72.1 | 4.7 | 1.6 | 2.40 | 143 |
| December..... | 179.1 | 10 | 3.2 | 5.78 | 355 |
| Calendar year 1939..... | 8,401.8 | 257 | 0 | 23.0 | 16,660 |
| January..... | 4,245 | 1,100 | 9 | 137 | 8,420 |
| February..... | 6,039 | 799 | 85 | 208 | 11,980 |
| March..... | 4,353 | 283 | 82 | 140 | 8,630 |
| April..... | 5,016 | 510 | 102 | 167 | 9,950 |
| May..... | 2,055 | 96 | 37 | 66.3 | 4,080 |
| June..... | 575 | 37 | 7 | 19.2 | 1,140 |
| July..... | 68.8 | 8 | .5 | 2.22 | 136 |
| August..... | 2.4 | .5 | 0 | .08 | 4.8 |
| September..... | 1.9 | .2 | 0 | .06 | 3.8 |
| Water year 1939-40..... | 22,678.8 | 1,100 | 0 | 62.0 | 44,980 |

Peak discharge.- Jan. 11 (7:30 a.m.) 2,590 sec.-ft.; Jan. 26 (2 a.m.) 815 sec.-ft.; Feb. 3 (7 p.m.) 604 sec.-ft.; Feb. 23 (10 a.m.) 622 sec.-ft.; Feb. 26 (4 a.m.) 1,200 sec.-ft.; Apr. 1 (12 m.) 740 sec.-ft.

TULARE LAKE BASIN

Kaweah River near Three Rivers, Calif.

Location.- Water-stage recorder, lat. 36°24', long. 118°57', in SW¼ sec. 33, T. 17 S., R. 23 E., 2½ miles downstream from South Fork and 3 miles southwest of Three Rivers. Altitude of gage, about 620 feet (from topographic map).

Drainage area.- 520 square miles.

Records available.- February 1936 to September 1940. April 1903 to January 1936, at staff-gage site 2 miles upstream.

Average discharge.- 37 years, 560 second-feet.

Extremes.- Maximum discharge during year, 8,510 second-feet Feb. 26 (gage height, 9.56 feet); minimum, 30 second-feet Nov. 21 (gage height, 1.06 feet). 1903-40: Maximum discharge, 33,300 second-feet Dec. 11, 1937 (gage height, 17.0 feet, present datum), from rating curve extended above 6,000 second-feet on basis of velocity-area study; minimum, 8.5 second-feet Sept. 19, 1934.

Remarks.- Records excellent except those for periods of no gage-height record, which are good. Diversions above station for irrigation. Power developed on Middle and East Forks.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|------|-----|-----|-----|-----|-------|-----|-------|
| 1.20 | 43 | 1.9 | 167 | 3.6 | 790 | 5.5 | 2,100 |
| 1.3 | 56 | 2.2 | 244 | 4.0 | 1,020 | 6.0 | 2,600 |
| 1.5 | 85 | 2.6 | 366 | 4.5 | 1,320 | 6.5 | 3,190 |
| 1.7 | 123 | 2.9 | 474 | 5.0 | 1,680 | 7.3 | 4,320 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 48 | 54 | 49 | 59 | 459 | 1,880 | 2,140 | 1,660 | 1,860 | 556 | 103 | 43 |
| 2 | 107 | 53 | 50 | 498 | 494 | 1,540 | 1,700 | 2,030 | 1,810 | 506 | 99 | 43 |
| 3 | 187 | 54 | 49 | 577 | 1,880 | 1,320 | 1,450 | 2,090 | 1,660 | 451 | 94 | 43 |
| 4 | 162 | 56 | 45 | 1,010 | 2,060 | 1,180 | 1,350 | 1,930 | 1,700 | 432 | 89 | 45 |
| 5 | 138 | 55 | 47 | 430 | 978 | 1,070 | 1,250 | 1,850 | 1,560 | 414 | 83 | 49 |
| 6 | 127 | 49 | 47 | 250 | 775 | 1,020 | 1,150 | 1,870 | 1,570 | 368 | 80 | 49 |
| 7 | 222 | 50 | 53 | 338 | 678 | 984 | 1,150 | 1,890 | 1,620 | 356 | 79 | 47 |
| 8 | 200 | 50 | 51 | 760 | 578 | 954 | 1,100 | 2,100 | 1,700 | 330 | 75 | 45 |
| 9 | 187 | 54 | 50 | 587 | 514 | 990 | 1,150 | 2,410 | 1,740 | 302 | 74 | 43 |
| 10 | 167 | 55 | 50 | 1,410 | 478 | 912 | 1,200 | 2,720 | 1,620 | 275 | 72 | 41 |
| 11 | 149 | 55 | 75 | 2,820 | 463 | 823 | 1,300 | 2,760 | 1,620 | 258 | 71 | 41 |
| 12 | 129 | 50 | 79 | 1,750 | 456 | 745 | 1,500 | 2,670 | 1,620 | 259 | 66 | 45 |
| 13 | 125 | 45 | 62 | 400 | 400 | 702 | 1,700 | 2,710 | 1,620 | 225 | 66 | 44 |
| 14 | 111 | 43 | 58 | 502 | 721 | 678 | 1,850 | 2,790 | 1,880 | 210 | 65 | 45 |
| 15 | 98 | 48 | 55 | 393 | 618 | 683 | 1,850 | 2,840 | 1,500 | 200 | 63 | 45 |
| 16 | 89 | 48 | 55 | 343 | 510 | 678 | 1,450 | 2,640 | 1,390 | 192 | 62 | 47 |
| 17 | 82 | 48 | 54 | 311 | 502 | 706 | 1,300 | 2,220 | 1,300 | 192 | 61 | 47 |
| 18 | 75 | 53 | 54 | 290 | 510 | 711 | 1,350 | 1,990 | 1,140 | 190 | 58 | 47 |
| 19 | 71 | 49 | 53 | 266 | 447 | 702 | 1,300 | 2,100 | 1,020 | 172 | 58 | 46 |
| 20 | 68 | 48 | 51 | 252 | 444 | 711 | 1,700 | 2,320 | 872 | 160 | 53 | 48 |
| 21 | 62 | 45 | 51 | 239 | 444 | 780 | 1,900 | 2,580 | 845 | 153 | 51 | 45 |
| 22 | 61 | 49 | 51 | 230 | 498 | 856 | 2,100 | 2,520 | 818 | 146 | 49 | 43 |
| 23 | 58 | 47 | 51 | 222 | 2,630 | 930 | 2,150 | 2,610 | 750 | 140 | 48 | 41 |
| 24 | 58 | 48 | 56 | 225 | 1,170 | 1,000 | 2,200 | 2,800 | 726 | 134 | 46 | 41 |
| 25 | 72 | 47 | 58 | 876 | 1,540 | 1,190 | 2,000 | 2,660 | 697 | 154 | 51 | 41 |
| 26 | 68 | 47 | 55 | 2,230 | 4,310 | 1,150 | 1,850 | 2,370 | 632 | 131 | 51 | 41 |
| 27 | 66 | 45 | 54 | 930 | 2,000 | 2,570 | 1,450 | 2,240 | 587 | 125 | 49 | 41 |
| 28 | 66 | 49 | 56 | 646 | 1,760 | 1,600 | 1,250 | 2,140 | 609 | 121 | 48 | 42 |
| 29 | 62 | 49 | 56 | 543 | 3,000 | 1,300 | 1,200 | 1,950 | 632 | 121 | 48 | 42 |
| 30 | 53 | 50 | 58 | 482 | - | 1,300 | 1,300 | 1,810 | 716 | 117 | 45 | 42 |
| 31 | 55 | - | 58 | 455 | - | 2,440 | - | 1,770 | - | 109 | 43 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 3,223 | 222 | 48 | 104 | 6,390 |
| November..... | 1,489 | 56 | 43 | 49.6 | 2,950 |
| December..... | 1,694 | 79 | 47 | 54.6 | 3,560 |
| Calendar year 1939..... | 116,731 | 1,410 | 31 | 320 | 231,500 |
| January..... | 20,690 | 2,620 | 59 | 667 | 41,040 |
| February..... | 31,297 | 4,310 | 400 | 1,079 | 62,080 |
| March..... | 34,135 | 2,570 | 678 | 1,101 | 67,710 |
| April..... | 46,640 | 2,200 | 1,100 | 1,555 | 92,510 |
| May..... | 71,040 | 2,840 | 1,660 | 2,292 | 140,900 |
| June..... | 37,514 | 1,860 | 587 | 1,250 | 74,410 |
| July..... | 7,467 | 556 | 109 | 241 | 14,310 |
| August..... | 2,002 | 103 | 43 | 64.6 | 3,970 |
| September..... | 1,322 | 49 | 41 | 44.1 | 2,620 |
| Water year 1939-40..... | 258,513 | 4,310 | 41 | 706 | 512,800 |

Peak discharge.- Jan. 10 (10:30 p.m.) 4,340 sec.-ft.; Jan. 25 (12 p.m.) 4,720 sec.-ft.; Feb. 3 (11 p.m.) 4,280 sec.-ft.; Feb. 23 (8 a.m.) 4,370 sec.-ft.; Feb. 26 (3 a.m.) 8,510 sec.-ft.; Mar. 27 (6:30 a.m.) 5,220 sec.-ft.

Note.- No gage-height record Mar. 28-30 and Apr. 2-30; discharge computed on basis of unpublished records for Moley Point, 7 miles downstream.

North Fork of Kaweah River at Kaweah, Calif.

Location.- Water-stage recorder, lat. 36°29', long. 118°55', in SE¼ sec. 34, T. 16 S., R. 28 E., 1½ miles upstream from Mannikin Creek, 1½ miles north of Kaweah, and 3 miles upstream from mouth. Altitude of gage, about 1,080 feet (from topographic map).

Drainage area.- 128 square miles.

Records available.- October 1933 to September 1940. October 1910 to October 1933, at site 1 mile downstream.

Average discharge.- 29 years (1911-40), 96.2 second-feet.

Extremes.- Maximum discharge during year, 2,550 second-feet Feb. 26 (gage height, 6.48 feet); minimum, 4.6 second-feet Sept. 28 (gage height, 1.44 feet).
1910-40: Maximum discharge, 8,290 second-feet Dec. 11, 1937 (gage height, 11.0 feet), from rating curve extended above 4,000 second-feet on basis of velocity-area study; no flow for many days during period July to October 1924.

Remarks.- Records good January to June and fair remainder of year. Several small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | 7 | 8 | 8.5 | 10 | 113 | 570 | 575 | 290 | 115 | 37 | 10 | 6.5 |
| 2 | 14 | 8 | 8.5 | 128 | 151 | 454 | 432 | 314 | 112 | 34 | 10 | 6.5 |
| 3 | 29 | 8 | 8.5 | 123 | 397 | 392 | 390 | 321 | 109 | 32 | 9.5 | 5 |
| 4 | 21 | 8 | 8.5 | 257 | 481 | 346 | 353 | 307 | 102 | 29 | 9 | 6 |
| 5 | 14 | 8 | 8.5 | 112 | 260 | 314 | 324 | 290 | 95 | 27 | 9 | 6 |
| 6 | 14 | 8 | 8.5 | 53 | 210 | 297 | 307 | 287 | 91 | 26 | 8.5 | 6.5 |
| 7 | 34 | 8 | 8.5 | 78 | 184 | 257 | 304 | 278 | 85 | 23 | 8 | 6.5 |
| 8 | 24 | 8 | 9 | 210 | 154 | 284 | 297 | 281 | 80 | 23 | 7.5 | 6 |
| 9 | 18 | 8 | 8.5 | 194 | 137 | 281 | 297 | 287 | 77 | 20 | 7.5 | 6 |
| 10 | 14 | 9 | 7.5 | 366 | 126 | 260 | 304 | 297 | 74 | 19 | 7 | 5.5 |
| 11 | 11 | 8.5 | 14 | 640 | 120 | 236 | 321 | 297 | 71 | 19 | 6.5 | 5 |
| 12 | 10 | 8.5 | 14 | 420 | 113 | 216 | 349 | 284 | 68 | 18 | 6 | 5 |
| 13 | 9.5 | 8.5 | 10 | 205 | 104 | 205 | 388 | 272 | 64 | 18 | 6 | 4.9 |
| 14 | 8.5 | 8 | 9 | 131 | 219 | 200 | 400 | 266 | 60 | 17 | 6 | 5 |
| 15 | 8 | 8.5 | 9 | 101 | 172 | 200 | 404 | 260 | 56 | 17 | 6 | 5 |
| 16 | 8 | 8.5 | 8.5 | 86 | 141 | 202 | 324 | 245 | 54 | 16 | 6 | 5.5 |
| 17 | 8 | 8.5 | 8.5 | 77 | 137 | 208 | 300 | 236 | 52 | 16 | 6 | 5.5 |
| 18 | 7.5 | 8 | 8.5 | 71 | 131 | 210 | 321 | 219 | 50 | 16 | 6 | 6 |
| 19 | 7.5 | 8 | 8.5 | 63 | 119 | 208 | 346 | 205 | 48 | 16 | 6.5 | 6 |
| 20 | 7.5 | 8 | 8.5 | 58 | 119 | 213 | 356 | 197 | 48 | 15 | 6.5 | 6 |
| 21 | 7.5 | 8 | 8.5 | 55 | 119 | 227 | 384 | 197 | 46 | 14 | 6 | 6 |
| 22 | 7.5 | 8 | 8.5 | 52 | 122 | 245 | 376 | 192 | 42 | 14 | 8.5 | 5.5 |
| 23 | 7 | 8 | 8.5 | 50 | 760 | 260 | 376 | 154 | 41 | 14 | 6.5 | 5.5 |
| 24 | 7.5 | 7.5 | 10 | 50 | 335 | 266 | 364 | 182 | 39 | 13 | 7.5 | 5.5 |
| 25 | 10 | 7.5 | 10 | 201 | 472 | 328 | 335 | 172 | 37 | 12 | 8 | 5.5 |
| 26 | 10 | 8 | 9.5 | 564 | 1,270 | 304 | 342 | 163 | 37 | 12 | 8.5 | 5 |
| 27 | 9.5 | 8.5 | 9.5 | 245 | 624 | 826 | 290 | 152 | 35 | 11 | 7 | 5 |
| 28 | 9.5 | 8.5 | 9.5 | 168 | 525 | 432 | 269 | 146 | 34 | 12 | 7.5 | 5 |
| 29 | 9 | 8.5 | 10 | 139 | 928 | 346 | 260 | 135 | 38 | 11 | 6 | 5 |
| 30 | 8.5 | 8.5 | 8.5 | 122 | - | 367 | 266 | 126 | 39 | 11 | 6.5 | 5 |
| 31 | 8.5 | - | 10 | 115 | - | 739 | - | 117 | - | 10 | 6.5 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 369.0 | | 34 | 7 | 11.9 | 732 | | | |
| November..... | | | | 245.0 | | 9 | 7.5 | 8.17 | 486 | | | |
| December..... | | | | 286.5 | | 14 | 7.5 | 9.24 | 568 | | | |
| Calendar year 1939..... | | | | 17,179.9 | | 404 | 1.8 | 47.1 | 34,080 | | | |
| January..... | | | | 5,174 | | 640 | 10 | 167 | 10,260 | | | |
| February..... | | | | 8,730 | | 1,270 | 104 | 301 | 17,320 | | | |
| March..... | | | | 9,925 | | 826 | 200 | 320 | 19,680 | | | |
| April..... | | | | 10,344 | | 575 | 260 | 345 | 20,520 | | | |
| May..... | | | | 7,199 | | 321 | 117 | 232 | 14,280 | | | |
| June..... | | | | 1,902 | | 115 | 34 | 63.4 | 3,770 | | | |
| July..... | | | | 572 | | 37 | 10 | 18.5 | 1,130 | | | |
| August..... | | | | 224.0 | | 10 | 6 | 7.23 | 444 | | | |
| September..... | | | | 167.4 | | 6.5 | 4.9 | 5.58 | 332 | | | |
| Water year 1939-40..... | | | | 45,135.9 | | 1,270 | 4.9 | 123 | 89,520 | | | |

Peak discharge.- Jan. 10 (9:30 p.m.) 1,180 sec.-ft.; Feb. 23 (6 a.m.) 1,270 sec.-ft.; Feb. 26 (2 a.m.) 2,550 sec.-ft.; Feb. 29 (5 a.m.) 1,330 sec.-ft.; Mar. 27 (4:30 a.m.) 1,650 sec.-ft.; Mar. 31 (6 a.m.) 1,280 sec.-ft.

Kings River above North Fork, Calif.

Location.- Water-stage recorder, lat. 36°52', long. 119°07', in N½ sec. 27, T. 12 S., R. 26 E (unsurveyed), 1 mile upstream from North Fork of Kings River and 10 miles south-east of Trimmer. Altitude of gage, about 1,020 feet (from topographic map).

Drainage area.- 956 square miles.

Records available.- October 1931 to September 1940. March 1927 to December 1928, at site half a mile downstream.

Average discharge.- 10 years (1927-28, 1931-40), 1,447 second-feet.

Extremes.- Maximum discharge during year, 9,100 second-feet May 25 (gage height, 6.62 feet); minimum, 102 second-feet Dec. 26 (gage height, 0.61 foot).
1927-28, 1931-40: Maximum discharge, 42,000 second-feet Dec. 11, 1937 (gage height, 12.02 feet), from rating curve extended above 10,000 second-feet on basis of velocity-area studies; minimum, 79 second-feet Oct. 13, 1934 (gage height, 0.54 foot).

Remarks.- Records excellent. No diversions. Small amount of water released occasionally from Hume Lake.

Cooperation.- Gage-height record collected in cooperation with San Joaquin Light & Power Corporation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 246 | 183 | 126 | 130 | 635 | 1,860 | 2,360 | 3,520 | 6,080 | 3,240 | 564 | 220 |
| 2 | 327 | 178 | 130 | 388 | 620 | 1,580 | 1,900 | 4,550 | 6,080 | 2,800 | 537 | 218 |
| 3 | 388 | 173 | 132 | 445 | 995 | 1,400 | 1,700 | 4,710 | 5,900 | 2,500 | 532 | 216 |
| 4 | 364 | 171 | 128 | 676 | 1,160 | 1,280 | 1,560 | 4,310 | 6,020 | 2,400 | 483 | 215 |
| 5 | 380 | 168 | 128 | 324 | 890 | 1,170 | 1,400 | 3,980 | 5,540 | 2,260 | 465 | 213 |
| 6 | 405 | 166 | 126 | 290 | 818 | 1,130 | 1,390 | 4,140 | 5,660 | 2,130 | 435 | 215 |
| 7 | 466 | 166 | 136 | 376 | 773 | 1,130 | 1,380 | 4,310 | 5,660 | 2,060 | 423 | 200 |
| 8 | 430 | 283 | 134 | 650 | 684 | 1,190 | 1,370 | 4,810 | 5,990 | 1,920 | 443 | 190 |
| 9 | 422 | 293 | 134 | 748 | 630 | 1,220 | 1,480 | 5,600 | 6,140 | 1,740 | 516 | 182 |
| 10 | 357 | 286 | 132 | 1,190 | 600 | 1,160 | 1,620 | 6,260 | 6,140 | 1,580 | 512 | 180 |
| 11 | 376 | 173 | 157 | 1,990 | 575 | 1,050 | 1,900 | 6,790 | 6,140 | 1,410 | 408 | 174 |
| 12 | 357 | 164 | 159 | 1,340 | 555 | 946 | 2,200 | 6,590 | 6,330 | 1,320 | 400 | 172 |
| 13 | 338 | 159 | 136 | 877 | 526 | 890 | 2,650 | 6,660 | 6,460 | 1,220 | 397 | 170 |
| 14 | 320 | 155 | 132 | 678 | 684 | 858 | 3,150 | 7,030 | 6,420 | 1,140 | 389 | 170 |
| 15 | 306 | 153 | 132 | 580 | 635 | 858 | 3,240 | 7,440 | 6,110 | 1,090 | 382 | 170 |
| 16 | 290 | 146 | 136 | 526 | 600 | 864 | 2,560 | 7,270 | 5,960 | 1,040 | 367 | 167 |
| 17 | 274 | 146 | 134 | 492 | 620 | 904 | 2,290 | 6,230 | 5,960 | 967 | 348 | 167 |
| 18 | 281 | 144 | 128 | 461 | 625 | 911 | 2,350 | 5,300 | 5,240 | 904 | 350 | 165 |
| 19 | 249 | 144 | 126 | 430 | 575 | 925 | 2,990 | 5,080 | 4,860 | 858 | 316 | 163 |
| 20 | 234 | 142 | 128 | 405 | 570 | 960 | 3,240 | 5,600 | 4,140 | 792 | 306 | 163 |
| 21 | 226 | 138 | 121 | 384 | 560 | 1,040 | 3,560 | 6,460 | 4,040 | 736 | 296 | 167 |
| 22 | 214 | 138 | 117 | 372 | 657 | 1,160 | 3,980 | 6,520 | 4,020 | 706 | 285 | 220 |
| 23 | 209 | 136 | 114 | 353 | 1,650 | 1,290 | 4,240 | 6,790 | 3,580 | 678 | 276 | 192 |
| 24 | 206 | 134 | 123 | 345 | 1,120 | 1,420 | 4,400 | 7,340 | 3,460 | 694 | 266 | 149 |
| 25 | 214 | 134 | 119 | 649 | 1,510 | 1,640 | 4,040 | 7,950 | 3,440 | 754 | 276 | 146 |
| 26 | 203 | 136 | 112 | 1,760 | 2,910 | 1,690 | 3,480 | 6,960 | 3,130 | 754 | 273 | 141 |
| 27 | 203 | 140 | 126 | 1,050 | 2,040 | 2,950 | 2,880 | 6,660 | 2,920 | 700 | 254 | 138 |
| 28 | 206 | 132 | 126 | 825 | 1,840 | 2,140 | 2,570 | 6,660 | 3,150 | 678 | 245 | 138 |
| 29 | 198 | 128 | 128 | 724 | 2,560 | 1,790 | 2,560 | 6,260 | 3,330 | 662 | 237 | 138 |
| 30 | 190 | 126 | 132 | 678 | - | 1,870 | 2,860 | 5,810 | 4,450 | 625 | 229 | 138 |
| 31 | 183 | - | 132 | 656 | - | 2,860 | - | 5,390 | - | 590 | 220 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 9,042 | 466 | 183 | 292 | 17,930 | | |
| November..... | | | | | | 4,935 | 293 | 126 | 164 | 9,790 | | |
| December..... | | | | | | 4,024 | 189 | 112 | 130 | 7,980 | | |
| Calendar year 1939..... | | | | | | 304,746 | 3,890 | 112 | 835 | 604,500 | | |
| January..... | | | | | | 20,852 | 1,990 | 130 | 673 | 41,360 | | |
| February..... | | | | | | 26,617 | 2,910 | 526 | 987 | 56,760 | | |
| March..... | | | | | | 42,116 | 2,950 | 858 | 1,359 | 83,540 | | |
| April..... | | | | | | 77,480 | 4,400 | 1,370 | 2,583 | 153,700 | | |
| May..... | | | | | | 182,860 | 7,530 | 3,520 | 5,899 | 362,700 | | |
| June..... | | | | | | 152,350 | 6,460 | 2,920 | 5,076 | 302,800 | | |
| July..... | | | | | | 40,948 | 3,240 | 890 | 1,321 | 81,220 | | |
| August..... | | | | | | 11,360 | 564 | 220 | 367 | 22,570 | | |
| September..... | | | | | | 5,295 | 220 | 138 | 176 | 10,500 | | |
| Water year 1939-40..... | | | | | | 579,899 | 7,830 | 112 | 1,584 | 1,150,000 | | |

Kings River at Piedra, Calif.

Location.- Water-stage recorder, lat. 36°49'02", long. 119°23'08", in NW¼ sec. 8, T. 13 S., R. 24 E., half a mile downstream from highway bridge at Piedra, 2 miles downstream from Mill Creek, and 12 miles northeast of Sanger. Altitude of gage, about 500 feet (from topographic map).

Drainage area.- 1,694 square miles.

Records available.- September 1895 to September 1940.

Average discharge.- 45 years, 2,311 second-feet.

Extremes.- Maximum discharge during year, 14,800 second-feet Feb. 26 (gage height, 10.51 feet); minimum, 157 second-feet Dec. 27 (gage height, 0.92 foot).

1895-1940: Maximum discharge, 80,000 second-feet Dec. 11, 1937 (gage height, 19.94 feet), from rating curve extended above 30,000 second-feet on basis of velocity-area study; minimum, 67 second-feet Oct. 3, 1924.

Remarks.- Records excellent. Flow slightly regulated by storage on Ten Mile and Mill Flat Creeks, and power plant on north Fork of Kings River.

Cooperation.- Results of nine discharge measurements and assistance in collecting gage-height record furnished by Kings River Water Association.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|--------|
| 0.9 | 154 | 1.6 | 322 | 3.5 | 1,240 | 6.0 | 3,800 |
| 1.0 | 168 | 1.8 | 434 | 4.0 | 1,620 | 7.0 | 5,340 |
| 1.1 | 186 | 2.2 | 560 | 4.5 | 2,050 | 8.0 | 7,250 |
| 1.2 | 205 | 2.6 | 744 | 5.0 | 2,540 | 9.0 | 9,800 |
| 1.4 | 258 | 3.0 | 946 | 5.5 | 3,120 | 9.8 | 12,260 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|--------|-------|-------|------|-------|
| 1 | 302 | 236 | 172 | 192 | 1,190 | 4,400 | 4,650 | 5,750 | 8,260 | 3,800 | 659 | 233 |
| 2 | 332 | 228 | 170 | 258 | 1,230 | 3,520 | 3,700 | 7,410 | 8,410 | 3,180 | 622 | 233 |
| 3 | 659 | 223 | 173 | 1,440 | 2,540 | 2,980 | 3,250 | 7,840 | 7,890 | 2,840 | 591 | 230 |
| 4 | 582 | 220 | 173 | 1,400 | 3,250 | 2,650 | 3,000 | 7,220 | 8,110 | 2,680 | 560 | 230 |
| 5 | 547 | 225 | 172 | 1,090 | 1,920 | 2,420 | 2,760 | 6,580 | 7,300 | 2,540 | 529 | 230 |
| 6 | 556 | 213 | 172 | 618 | 1,620 | 2,300 | 2,580 | 6,800 | 7,330 | 2,410 | 503 | 230 |
| 7 | 730 | 211 | 170 | 560 | 1,550 | 2,240 | 2,650 | 6,960 | 7,290 | 2,310 | 497 | 228 |
| 8 | 696 | 250 | 181 | 1,700 | 1,320 | 2,310 | 2,640 | 7,320 | 7,630 | 2,130 | 478 | 215 |
| 9 | 641 | 332 | 182 | 1,900 | 1,130 | 2,380 | 2,830 | 9,160 | 7,970 | 2,000 | 560 | 205 |
| 10 | 600 | 339 | 188 | 2,830 | 1,110 | 2,230 | 3,170 | 10,600 | 7,630 | 1,800 | 569 | 202 |
| 11 | 551 | 282 | 256 | 6,370 | 1,070 | 2,000 | 3,650 | 11,600 | 7,570 | 1,630 | 508 | 196 |
| 12 | 520 | 213 | 322 | 3,440 | 1,030 | 1,760 | 4,140 | 11,100 | 7,720 | 1,490 | 434 | 192 |
| 13 | 497 | 206 | 223 | 1,950 | 973 | 1,660 | 4,860 | 11,000 | 7,970 | 1,380 | 434 | 190 |
| 14 | 454 | 198 | 184 | 1,340 | 1,520 | 1,590 | 5,480 | 11,500 | 7,640 | 1,250 | 426 | 188 |
| 15 | 426 | 196 | 198 | 1,100 | 1,450 | 1,580 | 5,610 | 12,000 | 7,410 | 1,230 | 418 | 188 |
| 16 | 394 | 192 | 190 | 958 | 1,170 | 1,620 | 4,400 | 11,900 | 7,110 | 1,160 | 406 | 188 |
| 17 | 371 | 188 | 190 | 884 | 1,140 | 1,750 | 3,910 | 10,200 | 7,060 | 1,110 | 390 | 190 |
| 18 | 346 | 188 | 188 | 827 | 1,170 | 1,730 | 4,300 | 8,600 | 6,240 | 1,030 | 371 | 186 |
| 19 | 325 | 186 | 182 | 768 | 1,080 | 1,760 | 5,100 | 8,230 | 5,770 | 979 | 349 | 188 |
| 20 | 308 | 186 | 181 | 710 | 1,040 | 1,910 | 5,410 | 8,930 | 5,040 | 925 | 336 | 186 |
| 21 | 291 | 182 | 179 | 673 | 1,020 | 2,050 | 5,970 | 10,400 | 4,750 | 868 | 319 | 184 |
| 22 | 276 | 181 | 168 | 645 | 1,030 | 2,290 | 6,000 | 10,300 | 4,790 | 822 | 308 | 202 |
| 23 | 267 | 179 | 170 | 618 | 5,110 | 2,560 | 6,780 | 10,200 | 4,330 | 792 | 302 | 225 |
| 24 | 261 | 173 | 168 | 595 | 2,740 | 2,840 | 7,220 | 11,100 | 4,090 | 773 | 298 | 194 |
| 25 | 273 | 175 | 172 | 2,270 | 3,430 | 3,280 | 6,620 | 11,900 | 4,000 | 817 | 285 | 173 |
| 26 | 279 | 175 | 165 | 6,230 | 8,160 | 3,290 | 5,660 | 10,200 | 3,730 | 847 | 295 | 170 |
| 27 | 264 | 179 | 164 | 2,510 | 5,230 | 6,500 | 4,670 | 9,690 | 3,460 | 812 | 285 | 168 |
| 28 | 273 | 182 | 168 | 1,720 | 4,410 | 4,120 | 4,120 | 9,600 | 3,480 | 773 | 270 | 167 |
| 29 | 270 | 175 | 170 | 1,400 | 6,340 | 3,340 | 4,090 | 8,880 | 3,660 | 758 | 261 | 167 |
| 30 | 258 | 173 | 181 | 1,260 | - | 3,330 | 4,620 | 7,990 | 4,820 | 725 | 250 | 167 |
| 31 | 244 | - | 188 | 1,190 | - | 6,940 | - | 7,260 | - | 687 | 241 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 12,783 | 730 | 244 | 412 | 25,350 |
| November..... | 6,286 | 339 | 173 | 210 | 12,470 |
| December..... | 5,760 | 322 | 164 | 186 | 11,420 |
| Calendar year 1939..... | 462,856 | 5,780 | 160 | 1,268 | 918,100 |
| January..... | 49,456 | 6,370 | 192 | 1,595 | 99,090 |
| February..... | 56,033 | 9,160 | 973 | 2,277 | 131,000 |
| March..... | 85,470 | 6,940 | 1,580 | 2,757 | 169,500 |
| April..... | 134,440 | 7,220 | 2,580 | 4,481 | 265,700 |
| May..... | 288,620 | 12,000 | 5,750 | 9,310 | 572,500 |
| June..... | 188,440 | 8,410 | 3,480 | 6,281 | 373,800 |
| July..... | 46,647 | 3,800 | 687 | 1,505 | 92,520 |
| August..... | 12,734 | 659 | 241 | 411 | 25,260 |
| September..... | 5,951 | 233 | 167 | 193 | 11,800 |
| Water year 1939-40..... | 902,620 | 12,000 | 164 | 2,466 | 1,790,000 |

Peak discharge.- Feb. 26 (1 a.m.) 14,800 sec.-ft.; May 25 (5 a.m.) 14,000 sec.-ft.

TULARE LAKE BASIN

North Fork of Kings River near Cliff Camp, Calif.

Location.- Water-stage recorder, lat. 37°00', long. 118°59', in NW¼ sec. 12, T. 11 S., R. 27 E., at Cliff Camp Bridge, 1 mile northwest of Cliff Camp and 2.3 miles downstream from Woodchuck Creek. Altitude of gage, about 8,150 feet (from topographic map).
Drainage area.- 174 square miles.

Records available.- November 1922 to September 1940. August 1921 to November 1922 at site 1 mile upstream.

Average discharge.- 16 years (1921-32, 1933-35, 1937-40), 333 second-feet.

Extremes.- Maximum discharge during year, 4,100 second-feet May 10 (gage height, 11.5 feet); minimum, 2.9 second-feet Dec. 22 (gage height, 2.30 feet).
 1921-40: Maximum discharge, 14,000 second-feet Dec. 11, 1937 (gage height, 18.0 feet, from floodmarks), from rating curve extended above 4,500 second-feet on basis of velocity-area studies and by logarithmic plotting; minimum, 0.6 second-foot Dec. 30, 1930.

Remarks.- Records good except those for period of no gage-height record, which are fair. No diversion above station.

Cooperation.- Water-stage recorder graph and results of 16 discharge measurements furnished by San Joaquin Power Division, Pacific Gas & Electric Co., in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-------|
| 2.4 | 3.6 | 3.4 | 4.5 | 4.8 | 274 | 7.0 | 984 |
| 2.6 | 6.4 | 3.6 | 67 | 5.2 | 378 | 8.0 | 1,390 |
| 2.8 | 10.6 | 3.8 | 91 | 5.6 | 496 | 9.0 | 1,930 |
| 3.0 | 17 | 4.0 | 118 | 6.0 | 622 | 10.0 | 2,650 |
| 3.2 | 26 | 4.4 | 168 | 6.5 | 796 | 10.5 | 3,070 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|------|------|-------|
| 1 | 23 | 18 | 11 | 15 | 91 | 134 | a400 | 1,600 | 1,880 | 321 | 22 | 5.5 |
| 2 | 84 | 17 | 12 | 122 | 85 | 142 | a350 | 1,980 | 1,760 | 246 | 20 | 5.5 |
| 3 | 101 | 17 | 11 | 46 | 92 | 142 | a310 | 1,910 | 1,660 | 208 | 19 | 5.5 |
| 4 | 86 | 16 | 11 | 57 | 90 | 141 | a290 | 1,780 | 1,870 | 180 | 17 | 5.5 |
| 5 | 86 | 16 | 10 | 30 | 85 | 151 | a250 | 1,670 | 1,450 | 162 | 15 | 6 |
| 6 | 91 | 15 | 15 | 28 | 92 | 173 | 264 | 1,750 | 1,490 | 144 | 15 | 6 |
| 7 | 112 | 15 | 14 | 31 | 80 | 202 | 306 | 1,880 | 1,470 | 129 | 14 | 6 |
| 8 | 104 | 15 | 13 | 41 | 73 | 243 | 356 | 2,160 | 1,490 | 115 | 14 | 6 |
| 9 | 92 | 16 | 12 | 40 | 73 | 241 | 466 | 2,530 | 1,400 | 100 | 13 | 5.5 |
| 10 | 80 | 16 | 13 | 40 | 79 | 204 | 600 | 2,860 | 1,340 | 87 | 13 | 5.5 |
| 11 | 73 | 15 | 44 | 65 | 81 | 160 | 707 | 2,860 | 1,370 | 79 | 12 | 4.9 |
| 12 | 66 | 14 | 15 | 64 | 74 | 134 | 889 | 2,790 | 1,400 | 71 | 12 | 4.8 |
| 13 | 57 | 13 | 14 | 60 | 75 | 129 | 1,120 | 2,710 | 1,400 | 65 | 12 | 4.8 |
| 14 | 50 | 13 | 14 | 71 | 80 | 142 | 1,200 | 2,810 | 1,300 | 60 | 11 | 4.9 |
| 15 | 45 | 12 | 15 | 73 | 73 | 165 | 984 | 2,810 | 1,190 | 59 | 11 | 5 |
| 16 | 40 | 12 | 14 | 69 | 72 | 210 | 680 | 2,550 | 1,130 | 55 | 11 | 5 |
| 17 | 34 | 12 | 13 | 67 | 72 | 212 | 700 | 2,250 | 1,020 | 53 | 10 | 5.5 |
| 18 | 30 | 13 | 13 | 65 | 69 | 214 | 995 | 2,190 | 870 | 48 | 9.5 | 5.5 |
| 19 | 27 | 13 | 13 | 60 | 68 | 257 | 1,190 | 2,230 | 742 | 43 | 9.5 | 5.5 |
| 20 | 26 | 12 | 12 | 59 | 72 | 306 | 1,260 | 2,490 | 632 | 40 | 9 | 5.5 |
| 21 | 23 | 12 | 10 | 57 | 73 | 358 | 1,430 | 2,620 | 590 | 36 | 8.5 | 5.5 |
| 22 | 22 | 12 | 8.5 | 56 | 75 | 439 | 1,500 | 2,300 | 542 | 34 | 8 | 5.5 |
| 23 | 21 | 11 | 11 | 54 | 91 | 514 | 1,620 | 2,350 | 466 | 30 | 7.5 | 5.5 |
| 24 | 22 | 11 | 9.5 | 52 | 92 | 558 | 1,600 | 2,590 | 421 | 30 | 7.5 | 5.5 |
| 25 | 23 | 11 | 8.5 | 95 | 95 | 649 | 1,330 | 2,410 | 384 | 30 | 7.5 | 5.5 |
| 26 | 20 | 14 | 11 | 146 | 121 | 593 | 954 | 2,140 | 329 | 30 | 7.5 | 5.5 |
| 27 | 26 | 12 | 11 | 120 | 131 | a520 | 742 | 2,140 | 298 | 30 | 7.5 | 5.5 |
| 28 | 25 | 9.5 | 12 | 105 | 178 | a490 | 717 | 2,000 | 298 | 28 | 7 | 5.5 |
| 29 | 23 | 9.5 | 13 | 98 | 178 | a450 | 862 | 1,800 | 401 | 27 | 6.5 | 5.5 |
| 30 | 22 | 9.5 | 15 | 98 | - | a490 | 1,170 | 1,620 | 589 | 24 | 6 | 6 |
| 31 | 20 | - | 14 | 98 | - | a500 | - | 1,680 | - | 23 | 5.5 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,555 | 112 | 20 | 50.2 | 3,080 |
| November..... | 401.5 | 16 | 9.5 | 13.4 | 796 |
| December..... | 412.5 | 44 | 8.5 | 13.3 | 818 |
| Calendar year 1939..... | 68,627.0 | 1,440 | 4.8 | 188 | 136,100 |
| January..... | 2,084 | 146 | 15 | 67.2 | 4,130 |
| February..... | 2,610 | 178 | 68 | 90.0 | 5,180 |
| March..... | 9,253 | 649 | 129 | 298 | 18,350 |
| April..... | 25,232 | 1,620 | - | 641 | 50,050 |
| May..... | 69,420 | 2,660 | 1,600 | 2,239 | 137,700 |
| June..... | 30,882 | 1,880 | 298 | 1,029 | 61,250 |
| July..... | 2,537 | 321 | 23 | 83.5 | 5,130 |
| August..... | 348.0 | 22 | 5.5 | 11.2 | 690 |
| September..... | 163.9 | 6 | 4.8 | 5.46 | 325 |
| Water year 1939-40..... | 144,948.9 | 2,860 | 4.8 | 396 | 287,500 |

a No gage-height record; discharge computed on basis of records for station below Rancheria Creek.

North Fork of Kings River below Rancheria Creek, Calif.

Location.- Water-stage recorder, lat. 36°56', long. 119°00', in SE¼ sec. 34, T. 11 S., R. 27 E., 1 mile upstream from Balch diversion dam and 1 mile downstream from Rancheria Creek. Altitude of gage, about 4,150 feet (from topographic map).

Drainage area.- 225 square miles.

Records available.- March 1927 to December 1937; January 1939 to September 1940 (revised).

Average discharge.- 10 years (1927-36, 1939-40), 349 second-feet.

Extremes.- Maximum discharge during year, 4,560 second-feet May 10 (gage height, 11.24 feet); minimum, 12 second-feet Dec. 22.
1927-40: Maximum discharge, 21,000 second-feet Dec. 11, 1937 (gage height, about 23 feet, from floodmarks), by computations of peak flow over Balch diversion and after-bay dams, 1 mile and 7 miles respectively, below station; minimum, 5 second-feet Aug. 29, 1931.

Remarks.- Records good except those for period of no gage-height record, which are fair. No diversion above station.

Cooperation.- Water-stage recorder graph and results of 21 discharge measurements furnished by San Joaquin Power Division, Pacific Gas & Electric Co., in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 33 | 27 | 18 | 23 | 151 | 260 | 485 | 1,810 | 2,010 | 346 | 37 | 15 |
| 2 | 113 | 26 | 19 | 205 | 142 | 252 | 405 | 2,330 | 1,890 | 276 | 35 | 15 |
| 3 | 128 | 25 | 19 | 117 | 234 | 242 | 385 | 2,250 | 1,770 | 239 | 33 | 15 |
| 4 | 108 | 24 | 18 | 217 | 194 | 237 | 366 | 1,990 | 1,690 | 211 | 31 | 16 |
| 5 | 101 | 23 | 18 | 74 | 154 | 235 | 338 | 1,930 | 1,520 | 186 | 29 | 16 |
| 6 | 110 | 22 | 19 | 57 | 163 | 260 | 354 | 2,010 | 1,580 | 165 | 29 | 16 |
| 7 | 137 | 22 | 23 | 92 | 143 | 287 | 410 | 2,130 | 1,550 | 156 | 28 | 16 |
| 8 | 127 | 22 | 21 | 166 | 126 | 329 | 449 | 2,500 | 1,580 | 143 | 26 | 16 |
| 9 | 111 | 23 | 21 | 189 | 120 | 331 | 554 | 2,950 | 1,440 | 129 | 26 | 15 |
| 10 | 93 | 23 | 21 | 210 | 123 | 292 | 702 | 3,250 | 1,340 | 114 | 25 | 15 |
| 11 | 96 | 22 | 68 | 295 | 127 | 242 | 830 | 3,350 | 1,380 | 104 | 24 | 14 |
| 12 | 78 | 22 | 30 | 191 | 117 | 202 | 970 | 3,200 | 1,410 | 95 | 23 | 14 |
| 13 | 68 | 20 | 23 | 130 | 113 | 192 | 1,250 | 3,150 | 1,380 | 89 | 23 | 14 |
| 14 | 60 | 20 | 22 | 124 | 130 | 203 | 1,350 | 3,200 | 1,310 | 83 | 22 | 15 |
| 15 | 53 | 20 | 22 | 119 | 119 | 228 | 1,220 | 3,150 | 1,160 | 82 | 22 | 15 |
| 16 | 48 | 19 | 22 | 114 | 112 | 278 | 830 | 2,860 | 1,070 | 76 | 22 | 15 |
| 17 | 43 | 19 | 22 | 106 | 116 | 290 | f730 | 2,500 | 990 | 72 | 20 | 15 |
| 18 | 39 | 19 | 21 | 101 | 111 | 297 | a1,100 | 2,410 | 830 | 67 | 20 | 15 |
| 19 | 36 | 19 | 20 | 91 | 103 | 329 | a1,550 | 2,450 | 770 | 71 | 20 | 16 |
| 20 | 33 | 19 | 20 | 88 | 108 | 391 | a1,500 | 2,690 | 620 | 59 | 19 | 15 |
| 21 | 31 | 18 | 18 | 83 | 112 | 446 | a1,600 | 2,950 | 586 | 55 | 18 | 14 |
| 22 | 30 | 18 | 16 | 81 | 147 | 534 | a1,750 | 2,590 | 540 | 52 | 18 | 14 |
| 23 | 28 | 18 | b16 | 78 | 244 | 623 | a2,000 | 2,640 | 459 | 50 | 18 | 14 |
| 24 | 30 | 18 | b16 | 75 | 174 | 686 | f1,930 | 2,860 | 422 | 48 | 17 | 14 |
| 25 | 34 | 18 | 16 | 196 | 262 | 826 | 1,550 | 2,680 | 398 | 46 | 17 | 14 |
| 26 | 30 | 20 | 19 | 342 | 312 | 914 | 1,150 | 2,370 | 346 | 46 | 17 | 13 |
| 27 | 31 | 21 | 19 | 217 | 293 | 1,370 | 908 | 2,330 | 309 | 46 | 17 | 14 |
| 28 | 34 | 18 | 20 | 172 | 351 | 646 | 850 | 2,210 | 309 | 46 | 17 | 14 |
| 29 | 33 | 16 | 21 | 161 | 409 | 537 | 970 | 1,970 | 336 | 44 | 16 | 14 |
| 30 | 30 | 17 | 23 | 156 | - | 610 | 1,300 | 1,730 | 621 | 41 | 15 | 14 |
| 31 | 29 | - | 23 | 160 | - | 620 | - | 1,730 | - | 38 | 15 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 1,945 | 137 | 28 | 62.7 | 3,860 | | |
| November..... | | | | | | 618 | 27 | 16 | 20.6 | 1,230 | | |
| December..... | | | | | | 674 | 68 | 16 | 21.7 | 1,340 | | |
| Calendar year 1939..... | | | | | | 82,619 | 1,580 | 11 | 226 | 163,900 | | |
| January..... | | | | | | 4,430 | 342 | 23 | 145 | 8,790 | | |
| February..... | | | | | | 5,010 | 409 | 103 | 173 | 9,940 | | |
| March..... | | | | | | 13,079 | 1,370 | 192 | 422 | 25,940 | | |
| April..... | | | | | | 29,596 | 2,000 | 338 | 997 | 58,700 | | |
| May..... | | | | | | 78,170 | 3,350 | 1,730 | 2,522 | 155,000 | | |
| June..... | | | | | | 31,616 | 2,010 | 309 | 1,054 | 62,710 | | |
| July..... | | | | | | 3,275 | 346 | 38 | 106 | 6,500 | | |
| August..... | | | | | | 699 | 37 | 15 | 22.5 | 1,390 | | |
| September..... | | | | | | 442 | 16 | 13 | 14.7 | 877 | | |
| Water year 1939-40..... | | | | | | 169,554 | 3,350 | 13 | 463 | 336,300 | | |

a No gage-height record; discharge computed on basis of records for station at Cliff Camp.

b Stage-discharge relation affected by ice.

f Discharge computed on basis of partly estimated gage-height record.

Los Gatos Creek near Coalinga, Calif.

Location.- Water-stage recorder, lat. $36^{\circ}13'$, long. $120^{\circ}27'$, in SW $\frac{1}{4}$ sec. 4, T. 20 S., R. 14 E., at mouth of canyon, 3 miles downstream from Diaz Creek and $\frac{7}{8}$ miles north-west of Coalinga. Altitude of gage, about 1,000 feet (from topographic map).

Drainage area.- 105 square miles.

Records available.- October 1931 to September 1940.

Extremes.- Maximum discharge recorded during year, 792 second-feet Feb. 25 (gage height, 3.46 feet, well gage), from rating curve extended above 150 second-feet on basis of velocity-area study; minimum recorded, 0.2 second-foot parts of May and June, and July 1 to Sept. 30.

1931-40: Maximum discharge, 4,520 second-feet Feb. 11, 1938 (gage height, 6.23 feet, well gage), from rating curve extended above 150 second-feet on basis of velocity-area and intake-drawdown studies; no flow during parts of nearly every year.

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

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0.3 | | 0.4 | 0.4 | 41 | 57 | 14 | 1.6 | | 0.2 | 0.2 | 0.2 |
| 2 | .3 | | .4 | .4 | 26 | 32 | 9.5 | .3 | | .2 | .2 | .2 |
| 3 | .3 | | .4 | .4 | 179 | 24 | 9 | .2 | | .2 | .2 | .2 |
| 4 | .3 | | .4 | .4 | 43 | 21 | 9 | 1.0 | | .2 | .2 | .2 |
| 5 | .3 | | .4 | .4 | 13 | 19 | 9 | 2.3 | | .2 | .2 | .2 |
| 6 | .3 | | .4 | .4 | 3.6 | 19 | 7 | 1.3 | | .2 | .2 | .2 |
| 7 | .3 | | .4 | | 2 | 16 | 6.5 | 1.4 | | .2 | .2 | .2 |
| 8 | .3 | | .4 | | 2 | 14 | 6 | 1.3 | | .2 | .2 | .2 |
| 9 | .3 | | .4 | | 1 | 13 | 5.5 | 1.0 | | .2 | .2 | .2 |
| 10 | .3 | | .4 | | 1 | 12 | 4.9 | .9 | | .2 | .2 | .2 |
| 11 | .3 | | .4 | | .5 | 11 | 4.6 | .8 | | .2 | .2 | .2 |
| 12 | .3 | | .4 | | 1.5 | 10 | 4.0 | .6 | | .2 | .2 | .2 |
| 13 | .3 | | .4 | | | 9 | 3.6 | .6 | | .2 | .2 | .2 |
| 14 | .3 | | .4 | | | 3 | 3.5 | .6 | | .2 | .2 | .2 |
| 15 | .3 | | .4 | | 3 | 8 | 3.5 | .6 | | .2 | .2 | .2 |
| 16 | .3 | 0.3 | .4 | | 2 | 7.5 | 3.8 | .6 | 0.3 | .2 | .2 | .2 |
| 17 | .3 | | .4 | 1.3 | 3 | 7 | 3.5 | .5 | | .2 | .2 | .2 |
| 18 | .3 | | .4 | .9 | 3 | 6.5 | 3.2 | .5 | | .2 | .2 | .2 |
| 19 | .3 | | .4 | .9 | 2 | 6.5 | 3.2 | .5 | | .2 | .2 | .2 |
| 20 | .3 | | .4 | .8 | 2 | 6.5 | 3.0 | .2 | | .2 | .2 | .2 |
| 21 | .3 | | .4 | .8 | 1.8 | 6 | 2.8 | .2 | | .2 | .2 | .2 |
| 22 | .3 | | .4 | .7 | 2.5 | 5.5 | 2.8 | .2 | | .2 | .2 | .2 |
| 23 | .3 | | .4 | .8 | 63 | 5 | 2.8 | .2 | | .2 | .2 | .2 |
| 24 | .3 | | .4 | .9 | 1.4 | 4.9 | 2.8 | .2 | | .2 | .2 | .2 |
| 25 | .3 | | .4 | .8 | 197 | 4.9 | 3.2 | .2 | | .2 | .2 | .2 |
| 26 | .3 | | .4 | 3.6 | 85 | 4.9 | 4.9 | .2 | | .2 | .2 | .2 |
| 27 | .3 | | .4 | 4.8 | 157 | 6.5 | 4.6 | .2 | | .2 | .2 | .2 |
| 28 | .3 | | .4 | 2.3 | 190 | 6 | 3.5 | .2 | | .2 | .2 | .2 |
| 29 | .3 | | .4 | 1.7 | 208 | 6 | 3.5 | .3 | | .2 | .2 | .2 |
| 30 | .3 | | .4 | 1.5 | | 7 | 2.5 | .6 | | .2 | .2 | .2 |
| 31 | .3 | - | .4 | 9 | | 28 | | .5 | - | .2 | .2 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 9.3 | 0.3 | 0.3 | 0.30 | 18 | | |
| November..... | | | | | | 9.0 | - | - | .3 | 18 | | |
| December..... | | | | | | 12.4 | .4 | .4 | .40 | 25 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | - | - | - | - | - | | |
| February..... | | | | | | 1,237.3 | 208 | .5 | 42.7 | 2,450 | | |
| March..... | | | | | | 592.2 | 57 | 4.9 | 12.7 | 778 | | |
| April..... | | | | | | 149.6 | 14 | 2.5 | 4.99 | 297 | | |
| May..... | | | | | | 19.7 | 2.3 | .2 | .64 | 39 | | |
| June..... | | | | | | 9.0 | - | - | .3 | 18 | | |
| July..... | | | | | | 6.2 | .2 | .2 | .20 | 12 | | |
| August..... | | | | | | 6.2 | .2 | .2 | .20 | 12 | | |
| September..... | | | | | | 6.0 | .2 | .2 | .20 | 12 | | |
| Water year | | | | | | - | - | - | - | - | | |

Peak discharge.- Feb. 3 (1 p.m.) 505 sec.-ft.; Feb. 25 (7 p.m.) 792 sec.-ft.; Feb. 28 (12 m.) 675 sec.-ft.

Note.- No or doubtful gage-height record Oct. 21 to Dec. 2, Jan. 7-16, Feb. 7-20, June 1 to July 9; discharge interpolated or estimated except storm period Jan. 7-16 for which no discharge was determined.

SAN JOAQUIN RIVER MAIN STEM

San Joaquin River above Big Creek, Calif.

Location.- Water-stage recorder, lat. 37°15'00", long. 119°19'10", in NW¼ sec. 11, T. 8 S., R. 24 E., 3 miles upstream from Big Creek. Altitude of gage, about 2,500 feet (from topographic map).

Drainage area.- 1,042 square miles.

Records available.- March 1922 to September 1940.

Average discharge.- 15 years (1925-40, period since diversion began through Ward tunnel), 1,285 second-feet.

Extremes.- Maximum discharge during year, 9,350 second-feet Mar. 27 (gage height, 15.08 feet); minimum, 88 second-feet Dec. 26 (gage height, 6.38 feet).

1922-40: Maximum discharge, 52,500 second-feet Dec. 11, 1937 (gage height, 24.05 feet), from rating curve extended above 14,000 second-feet on basis of velocity-area studies; minimum, 52 second-feet Sept. 24, 25, 1931.

Remarks.- Records good. Flow regulated by large diversions and Florence Lake (p. 181).

Cooperation.- Water-stage recorder graph and results of 13 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 159 | 192 | 108 | 134 | 870 | 1,820 | 3,110 | 3,850 | 5,040 | 2,540 | 308 | 140 |
| 2 | 378 | 180 | 116 | 705 | 770 | 1,550 | 2,460 | 5,020 | 5,140 | 2,410 | 296 | 139 |
| 3 | 558 | 171 | 120 | 846 | 1,080 | 1,420 | 2,180 | 5,230 | 4,630 | 2,060 | 278 | 136 |
| 4 | 450 | 162 | 117 | 979 | 1,320 | 1,260 | 2,040 | 4,740 | 4,770 | 1,950 | 265 | 136 |
| 5 | 469 | 156 | 114 | 574 | 962 | 1,170 | 1,850 | 4,180 | 4,260 | 1,820 | 257 | 138 |
| 6 | 582 | 150 | 112 | 406 | 896 | 1,170 | 1,810 | 4,460 | 4,510 | 1,480 | 250 | 134 |
| 7 | 527 | 142 | 120 | 505 | 880 | 1,240 | 1,970 | 4,460 | 4,650 | 1,620 | 243 | 136 |
| 8 | 534 | 139 | 123 | 1,290 | 740 | 1,410 | 1,930 | 5,160 | 5,140 | 1,340 | 240 | 130 |
| 9 | 503 | 139 | 120 | 1,680 | 676 | 1,520 | 2,160 | 6,210 | 6,960 | 1,110 | 238 | 123 |
| 10 | 428 | 138 | 135 | 1,990 | 644 | 1,380 | 2,460 | 7,150 | 6,870 | 830 | 238 | 120 |
| 11 | 424 | 132 | 243 | 2,180 | 654 | 1,180 | 2,800 | 7,620 | 6,440 | 730 | 238 | 117 |
| 12 | 431 | 130 | 182 | 1,740 | 619 | 1,020 | 3,210 | 7,350 | 6,630 | 676 | 236 | 116 |
| 13 | 424 | 124 | 144 | 1,050 | 578 | 962 | 3,820 | 7,220 | 6,960 | 632 | 236 | 114 |
| 14 | 413 | 124 | 138 | 765 | 685 | 957 | 4,280 | 7,150 | 6,270 | 602 | 234 | 113 |
| 15 | 382 | 120 | 132 | 640 | 649 | 1,010 | 3,960 | 7,130 | 6,270 | 566 | 227 | 113 |
| 16 | 350 | 117 | 154 | 570 | 586 | 1,100 | 2,760 | 6,930 | 6,520 | 582 | 212 | 113 |
| 17 | 299 | 116 | 132 | 530 | 598 | 1,220 | 2,480 | 6,740 | 5,640 | 534 | 201 | 113 |
| 18 | 260 | 116 | 126 | 499 | 632 | 1,230 | 3,010 | 6,290 | 5,800 | 491 | 192 | 112 |
| 19 | 234 | 116 | 124 | 457 | 570 | 1,280 | 3,580 | 5,940 | 4,930 | 465 | 185 | 109 |
| 20 | 214 | 116 | 124 | 431 | 562 | 1,520 | 3,920 | 6,100 | 4,220 | 455 | 175 | 108 |
| 21 | 201 | 113 | 119 | 406 | 562 | 1,670 | 4,260 | 6,930 | 5,890 | 406 | 170 | 105 |
| 22 | 192 | 112 | 105 | 392 | 636 | 1,910 | 4,680 | 6,890 | 5,900 | 389 | 168 | 101 |
| 23 | 185 | 112 | 96 | 382 | 1,540 | 2,200 | 4,880 | 6,740 | 5,330 | 379 | 163 | 99 |
| 24 | 188 | 108 | 109 | 375 | 1,150 | 2,390 | 4,830 | 7,040 | 2,930 | 382 | 167 | 97 |
| 25 | 210 | 106 | 105 | 887 | 1,290 | 2,910 | 4,060 | 7,150 | 5,020 | 438 | 166 | 96 |
| 26 | 216 | 112 | 97 | 2,370 | 1,870 | 3,020 | 3,170 | 5,820 | 2,540 | 424 | 157 | 94 |
| 27 | 212 | 119 | 114 | 1,610 | 2,680 | 6,390 | 2,590 | 5,760 | 2,340 | 389 | 152 | 93 |
| 28 | 243 | 111 | 112 | 1,040 | 2,510 | 3,460 | 2,430 | 5,860 | 2,460 | 375 | 148 | 93 |
| 29 | 243 | 108 | 116 | 896 | 2,750 | 2,770 | 2,510 | 5,230 | 2,420 | 366 | 145 | 93 |
| 30 | 223 | 108 | 120 | 830 | - | 3,770 | 2,890 | 4,500 | 3,710 | 340 | 140 | 94 |
| 31 | 204 | - | 127 | 830 | - | 4,640 | - | 4,070 | - | 321 | 140 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 10,436 | 627 | 159 | 337 | 20,700 |
| November..... | 3,889 | 192 | 106 | 130 | 7,710 |
| December..... | 3,885 | 243 | 96 | 125 | 7,700 |
| Calendar year 1939 | 233,708 | 3,070 | 77 | 640 | 463,500 |
| January..... | 27,866 | 2,370 | 134 | 899 | 55,270 |
| February..... | 29,959 | 2,750 | 562 | 1,033 | 59,420 |
| March..... | 60,549 | 6,390 | 957 | 1,953 | 120,100 |
| April..... | 92,090 | 4,880 | 1,610 | 3,070 | 182,700 |
| May..... | 184,920 | 7,620 | 3,850 | 5,965 | 366,800 |
| June..... | 142,810 | 6,980 | 2,340 | 4,760 | 283,300 |
| July..... | 27,062 | 2,540 | 321 | 873 | 53,680 |
| August..... | 6,443 | 308 | 140 | 208 | 12,780 |
| September..... | 3,425 | 140 | 93 | 114 | 6,790 |
| Water year 1939-40..... | 593,332 | 7,620 | 93 | 1,621 | 1,177,000 |

Peak discharge.- Mar. 27 (3:30 a.m.) 9,350 sec.-ft.; May 11 (1 a.m.) 8,870 sec.-ft.

San Joaquin River below Friant, Calif.

Location.- Water-stage recorder, lat: 36°59'04", long. 119°43'24", in SW $\frac{1}{4}$ sec. 7, T. 11 S., R. 21 E., half a mile west of Friant, $\frac{1}{2}$ miles downstream from Cottonwood Creek, and 2 miles downstream from Friant dam, now under construction. Datum of gage is 294.00 feet above mean sea level.

Drainage area.- 1,675 square miles.

Records available.- October 1938 to September 1940. October 1907 to December 1913 at site $\frac{1}{2}$ miles upstream. December 1913 to September 1938 at site $2\frac{1}{2}$ miles upstream.

Average discharge.- 33 years (1907-40), 2,316 second-feet.

Extremes.- Maximum discharge during year, 13,400 second-feet Mar. 27 (gage height, 12.2 feet); minimum, 38 second-feet July 29 (regulated).

1907-40: Maximum discharge, 77,200 second-feet Dec. 11, 1937 (gage height, 23.8 feet, at former site and datum); minimum, that of July 29, 1940.

Remarks.- Records excellent. Flow regulated by four reservoirs and six power plants above station. See records for Florence Lake, Huntington Lake, and Shaver Lake. Storage in Crane Valley Reservoir was 22,500 acre-feet Sept. 30, 1939, and 25,600 acre-feet Sept. 30, 1940.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-------|-----|-------|------|-------|
| 2.6 | 158 | 3.6 | 530 | 5.5 | 2,000 | 7.5 | 4,420 |
| 2.8 | 212 | 4.0 | 760 | 6.0 | 2,640 | 8.0 | 5,130 |
| 3.0 | 275 | 4.5 | 1,120 | 6.5 | 3,120 | 9.0 | 6,720 |
| 3.3 | 385 | 5.0 | 1,530 | 7.0 | 3,740 | 10.0 | 8,500 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-------------------------|-------|-------|------|-------|------------------|-------|---------|-------|---------|-------|-------|-------|----------------------|--|
| 1 | 640 | 772 | 766 | 345 | 1,620 | 5,370 | 5,960 | 4,500 | 5,420 | 3,800 | 1,500 | 1,090 | | |
| 2 | 536 | 911 | 712 | 485 | 1,640 | 5,620 | 4,500 | 5,630 | 5,900 | 3,430 | 1,470 | 1,230 | | |
| 3 | 1,120 | 1,540 | 658 | 1,790 | 1,990 | 3,260 | 3,820 | 6,220 | 5,500 | 3,190 | 1,470 | 1,360 | | |
| 4 | 968 | 1,220 | 174 | 1,220 | 3,010 | 2,630 | 3,460 | 5,710 | 5,660 | 2,830 | 1,180 | 1,330 | | |
| 5 | 904 | 1,110 | 394 | 1,330 | 2,110 | 2,620 | 3,340 | 4,910 | 5,340 | 2,460 | 1,420 | 1,280 | | |
| 6 | 1,010 | 530 | 590 | 784 | 1,850 | 2,520 | 2,980 | 5,140 | 5,380 | 2,660 | 1,430 | 1,250 | | |
| 7 | 1,300 | 712 | 525 | 712 | 2,080 | 2,520 | 2,750 | 5,440 | 5,580 | 2,400 | 1,420 | 1,320 | | |
| 8 | 855 | 700 | 580 | 1,940 | 1,760 | 2,450 | 2,900 | 5,820 | 6,250 | 2,240 | 1,480 | 1,180 | | |
| 9 | 848 | 820 | 580 | 2,630 | 1,550 | 2,550 | 3,260 | 6,800 | 7,160 | 2,260 | 1,410 | 1,130 | | |
| 10 | 992 | 688 | 558 | 3,780 | 1,490 | 2,460 | 3,380 | 7,800 | 7,060 | 2,100 | 1,460 | 1,340 | | |
| 11 | 890 | 700 | 421 | 6,720 | 1,220 | 2,250 | 3,710 | 8,310 | 7,300 | 1,920 | 1,370 | 1,240 | | |
| 12 | 834 | 652 | 470 | 4,040 | 1,450 | 2,240 | 4,170 | 7,720 | 7,330 | 1,820 | 1,320 | 1,100 | | |
| 13 | 939 | 574 | 505 | 2,520 | 1,300 | 2,180 | 4,590 | 7,760 | 7,330 | 1,680 | 1,410 | 1,100 | | |
| 14 | 862 | 682 | 563 | 1,260 | 1,780 | 1,840 | 4,970 | 7,740 | 7,300 | 1,770 | 1,400 | 992 | | |
| 15 | 730 | 658 | 568 | 1,130 | 1,840 | 1,930 | 4,950 | 7,740 | 7,060 | 1,670 | 1,410 | 754 | | |
| 16 | 778 | 618 | 612 | 1,170 | 1,660 | 2,130 | 4,340 | 7,670 | 6,670 | 1,460 | 1,440 | 778 | | |
| 17 | 760 | 450 | 490 | 960 | 1,610 | 2,050 | 3,680 | 7,280 | 6,940 | 1,440 | 1,260 | 960 | | |
| 18 | 790 | 381 | 558 | 984 | 1,420 | 2,000 | 3,910 | 7,180 | 6,310 | 1,530 | 1,300 | 1,080 | | |
| 19 | 808 | 306 | 552 | 883 | 1,550 | 2,330 | 4,480 | 6,350 | 5,900 | 1,220 | 1,280 | 1,020 | | |
| 20 | 772 | 296 | 430 | 841 | 1,590 | 2,420 | 4,710 | 6,280 | 5,420 | 960 | 1,440 | 1,040 | | |
| 21 | 760 | 345 | 525 | 706 | 1,570 | 2,750 | 4,770 | 7,320 | 4,980 | 718 | 1,340 | 848 | | |
| 22 | 712 | 390 | 624 | 520 | 1,520 | 2,750 | 5,520 | 7,560 | 4,910 | 918 | 1,420 | 694 | | |
| 23 | 712 | 394 | 706 | 876 | 3,050 | 2,980 | 5,790 | 7,250 | 4,110 | 1,560 | 1,420 | 798 | | |
| 24 | 766 | 510 | 530 | 855 | 3,140 | 3,190 | 5,960 | 7,710 | 3,990 | 1,550 | 1,260 | 992 | | |
| 25 | 772 | 706 | 153 | 1,860 | 2,340 | 3,870 | 5,340 | 7,990 | 3,990 | 1,500 | 1,260 | 1,040 | | |
| 26 | 925 | 568 | 252 | 6,960 | 5,110 | 4,170 | 4,690 | 6,580 | 3,780 | 1,570 | 1,360 | 1,160 | | |
| 27 | 790 | 192 | 206 | 3,200 | 6,110 | 8,200 | 3,740 | 5,900 | 3,430 | 1,660 | 1,420 | 1,090 | | |
| 28 | 778 | 530 | 465 | 2,120 | 6,390 | 6,080 | 3,140 | 6,600 | 3,530 | 1,620 | 1,410 | 1,100 | | |
| 29 | 602 | 736 | 515 | 1,670 | 7,340 | 4,690 | 3,180 | 6,400 | 3,460 | 658 | 1,390 | 814 | | |
| 30 | 569 | 742 | 546 | 1,760 | - | 4,110 | 3,680 | 5,120 | 3,920 | 1,530 | 1,360 | 960 | | |
| 31 | 718 | - | 361 | 1,680 | - | 8,810 | - | 4,730 | - | 1,590 | 1,300 | - | | |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | | | | | 25,240 | | 1,300 | | 369 | | 814 | | 50,060 | |
| November..... | | | | | 19,433 | | 1,540 | | 192 | | 648 | | 38,540 | |
| December..... | | | | | 15,589 | | 766 | | 153 | | 503 | | 30,920 | |
| Calendar year 1939..... | | | | | 493,053 | | 3,790 | | 153 | | 1,351 | | 977,900 | |
| January..... | | | | | 57,731 | | 6,960 | | 345 | | 1,862 | | 114,500 | |
| February..... | | | | | 70,990 | | 7,340 | | 1,220 | | 2,448 | | 140,800 | |
| March..... | | | | | 102,870 | | 8,910 | | 1,840 | | 3,322 | | 204,200 | |
| April..... | | | | | 125,870 | | 5,960 | | 2,750 | | 4,189 | | 249,300 | |
| May..... | | | | | 205,160 | | 8,310 | | 4,500 | | 6,618 | | 406,900 | |
| June..... | | | | | 166,910 | | 7,330 | | 3,430 | | 5,564 | | 331,100 | |
| July..... | | | | | 57,714 | | 3,800 | | 658 | | 1,862 | | 114,300 | |
| August..... | | | | | 42,810 | | 1,500 | | 1,180 | | 1,381 | | 84,910 | |
| September..... | | | | | 32,070 | | 1,360 | | 694 | | 1,069 | | 63,610 | |
| Water year 1939-40..... | | | | | 922,287 | | 8,810 | | 153 | | 2,520 | | 1,829,000 | |

San Joaquin River near Newman, Calif.

Location.- Water-stage recorder, lat. 37°21'02", long. 120°58'34", in SW¼ sec. 3, T. 7 S., R. 9 E., at bridge on Hills Ferry road, 300 feet downstream from Merced River and 3½ miles northeast of Newman. Datum of gage is 51.0 feet above datum of Corps of Engineers, U. S. Army.

Drainage area.- 9,990 square miles.

Records available.- April 1912 to September 1940. Prior to Oct. 1, 1937, flow that by-passed station at discharges above about 9,000 second-feet not included in records.

Average discharge.- 28 years, 2,416 second-feet.

Extremes.- Maximum discharge during year, 11,300 second-feet Mar. 7 (gage height, 14.74 feet); minimum, 166 second-feet Nov. 9 (gage height, 0.98 foot).
1912-40: Maximum discharge, 33,000 second-feet Mar. 7, 1938 (gage height, 18.50 feet); minimum, 15 second-feet Aug. 9, 10, 1924.

Remarks.- Records good Oct. 1 to Mar. 7, fair Mar. 8 to Sept. 30. Practically entire flow of river and tributaries diverted during irrigation season, low flows comprise mainly return water.

Discharge, in second-feet, water year October 1929 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|-------|----------------------|-------|------|-------|
| 1 | 304 | 225 | 218 | 500 | 4,270 | 7,540 | 9,020 | 4,430 | 8,470 | 1,900 | 428 | 378 |
| 2 | 302 | 235 | 218 | 562 | 4,550 | 8,690 | 9,820 | 3,830 | 8,120 | 1,720 | 419 | 395 |
| 3 | 297 | 216 | 218 | 617 | 4,940 | 9,480 | 10,500 | 3,170 | 8,100 | 1,630 | 404 | 411 |
| 4 | 284 | 201 | 220 | 659 | 4,890 | 10,300 | 10,900 | 3,240 | 8,200 | 1,560 | 408 | 410 |
| 5 | 276 | 189 | 228 | 653 | 4,850 | 10,800 | 10,800 | 4,310 | 7,980 | 1,540 | 415 | 402 |
| 6 | 268 | 180 | 250 | 644 | 4,830 | 11,100 | 10,500 | 4,870 | 7,620 | 1,470 | 395 | 378 |
| 7 | 265 | 175 | 355 | 686 | 5,010 | 11,200 | 10,200 | 5,120 | 7,000 | 1,360 | 392 | 377 |
| 8 | 272 | 172 | 398 | 844 | 5,240 | 11,000 | 9,220 | 5,550 | 6,260 | 1,160 | 375 | 365 |
| 9 | 263 | 170 | 364 | 1,010 | 5,330 | 10,500 | 7,940 | 5,560 | 5,900 | 962 | 375 | 417 |
| 10 | 235 | 170 | 330 | 1,190 | 5,410 | 9,900 | 6,750 | 5,650 | 5,840 | 858 | 374 | 406 |
| 11 | 220 | 170 | 330 | 1,700 | 5,350 | 9,160 | 5,750 | 5,590 | 5,730 | 770 | 378 | 395 |
| 12 | 223 | 170 | 362 | 2,770 | 5,160 | 8,360 | 5,090 | 5,700 | 5,440 | 680 | 375 | 382 |
| 13 | 211 | 170 | 406 | 3,210 | 4,780 | 7,560 | 5,000 | 6,400 | 5,160 | 620 | 359 | 364 |
| 14 | 199 | 172 | 442 | 3,610 | 4,350 | 6,840 | 5,160 | 6,880 | 5,020 | 608 | 356 | 364 |
| 15 | 199 | 194 | 492 | 3,870 | 4,320 | 6,090 | 5,260 | 7,200 | 5,090 | 602 | 354 | 349 |
| 16 | 189 | 184 | 512 | 4,140 | 4,350 | 5,480 | 5,490 | 7,490 | 5,160 | 572 | 351 | 364 |
| 17 | 189 | 180 | 492 | 4,250 | 4,920 | 5,800 | 5,800 | 7,780 | 5,190 | 562 | 343 | 368 |
| 18 | 211 | 177 | 478 | 4,210 | 4,190 | 4,350 | 5,860 | 8,120 | 5,190 | 550 | a340 | 393 |
| 19 | 211 | 180 | 478 | 3,750 | 4,230 | 3,830 | 5,520 | 8,420 | 5,170 | 1,130 | a340 | 393 |
| 20 | 211 | 180 | 492 | 3,010 | 4,230 | 3,490 | 4,640 | 8,720 | 5,110 | 1,240 | a340 | 385 |
| 21 | 213 | 182 | 506 | 2,440 | 4,150 | 3,270 | 4,080 | 9,000 | 4,980 | 946 | a345 | 393 |
| 22 | 206 | 187 | 512 | 2,090 | 3,940 | 3,040 | 4,390 | 9,200 | 4,860 | 822 | a345 | 388 |
| 23 | 187 | 189 | 509 | 1,880 | 3,350 | 2,560 | 4,630 | 9,200 | 4,750 | 728 | a345 | 411 |
| 24 | 182 | 192 | 526 | 1,730 | 3,170 | 2,300 | 4,840 | 8,470 | 4,600 | 632 | 346 | 380 |
| 25 | 194 | 196 | 548 | 1,620 | 3,260 | 2,300 | 5,300 | 7,930 | 4,240 | 538 | 362 | 380 |
| 26 | 196 | 204 | 545 | 1,520 | 3,400 | 2,570 | 5,650 | 8,530 | 3,670 | 498 | 374 | 372 |
| 27 | 196 | 208 | 545 | 2,040 | 3,930 | 3,680 | 5,980 | 9,180 | 3,180 | 480 | 361 | 375 |
| 28 | 192 | 208 | 562 | 2,450 | 5,320 | 5,110 | 5,520 | 9,250 | 2,800 | 472 | 375 | 388 |
| 29 | 201 | 213 | 559 | 3,020 | 6,440 | 6,560 | 4,810 | 8,940 | 2,480 | 472 | 390 | 390 |
| 30 | 192 | 216 | 542 | 3,510 | - | 7,440 | 4,620 | 8,760 | 2,200 | 456 | 380 | 403 |
| 31 | 204 | - | 506 | 3,920 | - | 8,160 | - | 8,700 | - | 451 | 370 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 7,001 | | 304 | 182 | 226 | 13,890 | | | |
| November..... | | | | 5,705 | | 235 | 170 | 190 | 11,320 | | | |
| December..... | | | | 13,121 | | 562 | 218 | 423 | 26,030 | | | |
| Calendar year 1939..... | | | | 257,006 | | 3,240 | 170 | 704 | 509,700 | | | |
| January..... | | | | 68,106 | | 4,250 | 500 | 2,197 | 135,100 | | | |
| February..... | | | | 131,470 | | 6,440 | 3,170 | 4,533 | 260,800 | | | |
| March..... | | | | 207,580 | | 11,200 | 2,300 | 6,696 | 411,700 | | | |
| April..... | | | | 199,040 | | 10,900 | 4,080 | 6,635 | 394,800 | | | |
| May..... | | | | 214,990 | | 9,250 | 3,170 | 6,935 | 426,400 | | | |
| June..... | | | | 163,510 | | 8,470 | 2,200 | 5,450 | 324,300 | | | |
| July..... | | | | 27,989 | | 1,900 | 451 | 903 | 55,520 | | | |
| August..... | | | | 11,504 | | 428 | 340 | 371 | 22,820 | | | |
| September..... | | | | 11,613 | | 417 | 349 | 387 | 23,030 | | | |
| Water year 1939-40..... | | | | 1,061,628 | | 11,200 | 170 | 2,901 | 2,106,000 | | | |

a No gage-height record; discharge interpolated.

San Joaquin River near Vernalis, Calif.

Location.- Water-stage recorder, lat. 37°40'34", long. 121°15'51", in El Pescadero grant, at Durham Ferry highway bridge, 3 miles downstream from Stanislaus River and 3½ miles northeast of Vernalis, San Joaquin County. Altitude of gage, about 10 feet (from topographic map).

Drainage area.- 14,010 square miles.

Records available.- July 1922 to September 1940 (1922-23 and 1925-29, low-water records only).

Average discharge.- 11 years (1929-40), 4,965 second-feet.

Extremes.- Maximum discharge during year, 29,700 second-feet Apr. 2 (gage height, 25.37 feet); minimum, 972 second-feet Aug. 11.
1922-40: Maximum discharge recorded, 51,200 second-feet Mar. 16, 1938 (gage height, 26.64 feet), including flow through break in levee; maximum gage height, 27.05 feet Feb. 12, 1938, before break in levee; minimum discharge, 184 second-feet Aug. 14, 1931.

Remarks.- Records good. Practically entire flow of all streams in San Joaquin River Basin is diverted during irrigation season, low flows comprise mainly return water.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|--------|--------|
| 1 | 1,600 | 1,490 | 1,380 | 1,650 | 5,260 | 26,100 | 26,800 | 9,950 | 17,900 | 3,650 | 1,190 | hl,400 |
| 2 | 1,670 | 1,640 | 1,370 | 1,670 | 5,530 | 24,800 | 29,400 | 9,520 | 17,200 | 3,560 | 1,160 | al,560 |
| 3 | 1,720 | 1,700 | 1,390 | 1,620 | 5,810 | 22,600 | 27,300 | 9,630 | 16,700 | 3,060 | 1,090 | hl,600 |
| 4 | 1,850 | 1,500 | 1,360 | 1,650 | 6,220 | 20,400 | 24,600 | 10,600 | 16,200 | 3,000 | 1,100 | al,600 |
| 5 | 1,840 | 1,430 | 1,350 | 1,780 | 6,930 | 18,600 | 22,500 | 10,600 | 15,800 | 2,960 | 1,140 | hl,600 |
| 6 | 1,770 | 1,420 | 1,380 | 2,060 | 6,680 | 17,700 | 21,300 | 11,300 | 15,300 | 2,740 | 1,150 | al,610 |
| 7 | 1,720 | 1,400 | 1,470 | 2,130 | 6,510 | 17,100 | 20,200 | 11,200 | 14,200 | 2,580 | 1,120 | hl,620 |
| 8 | 1,680 | 1,420 | 1,530 | 2,200 | 6,930 | 16,800 | 18,900 | 11,100 | 13,300 | 2,430 | 1,130 | al,680 |
| 9 | 1,670 | 1,410 | 1,620 | 2,380 | 7,500 | 16,700 | 17,900 | 11,000 | 12,500 | 2,290 | 1,050 | hl,740 |
| 10 | 1,640 | 1,390 | 1,630 | 3,090 | 7,690 | 16,500 | 17,400 | 11,400 | 11,800 | 2,130 | 996 | al,690 |
| 11 | 1,580 | 1,380 | 1,580 | 4,460 | 7,710 | 16,200 | 14,800 | 12,200 | 11,800 | 1,990 | 1,000 | hl,640 |
| 12 | 1,520 | 1,400 | 1,500 | 6,040 | 7,990 | 15,700 | 15,500 | 13,300 | 11,600 | 1,900 | 1,060 | al,660 |
| 13 | 1,490 | 1,410 | 1,490 | 6,450 | 8,100 | 14,800 | 14,500 | 13,800 | 11,700 | 1,800 | 1,080 | hl,670 |
| 14 | 1,470 | 1,380 | 1,580 | 5,580 | 8,050 | 13,700 | 14,000 | 14,000 | 11,500 | 1,690 | 1,100 | fl,680 |
| 15 | 1,470 | 1,410 | 1,660 | 5,350 | 8,660 | 12,700 | 13,700 | 14,600 | 11,400 | 1,670 | 1,090 | 1,750 |
| 16 | 1,470 | 1,450 | 1,700 | 5,430 | 10,100 | 11,800 | 13,700 | 15,800 | 11,300 | 1,650 | 1,100 | 1,790 |
| 17 | 1,330 | 1,450 | 1,740 | 5,540 | 9,500 | 10,900 | 13,800 | 16,200 | 11,200 | 1,590 | 1,140 | 1,780 |
| 18 | 1,270 | 1,440 | 1,730 | 5,630 | 8,610 | 10,300 | 13,400 | 16,200 | 10,700 | 1,520 | 1,160 | 1,780 |
| 19 | 1,290 | 1,420 | 1,680 | 5,690 | 8,640 | 9,750 | 12,800 | 16,300 | 10,400 | 1,460 | 1,220 | fl,750 |
| 20 | 1,240 | 1,420 | 1,660 | 5,580 | 8,690 | 9,350 | 12,500 | 16,400 | 10,200 | 1,680 | 1,260 | al,740 |
| 21 | 1,220 | 1,410 | 1,710 | 5,170 | 9,260 | 8,840 | 12,400 | 16,200 | 9,480 | 1,990 | 1,220 | fl,730 |
| 22 | 1,260 | 1,420 | 1,740 | 4,680 | 7,860 | 8,490 | 12,000 | 15,900 | 8,100 | 1,900 | 1,250 | 1,750 |
| 23 | 1,260 | 1,430 | 1,760 | 4,320 | 7,500 | 8,110 | 11,700 | 15,900 | 7,470 | 1,720 | 1,250 | 1,760 |
| 24 | 1,260 | 1,420 | 1,720 | 4,100 | 7,630 | 7,760 | 12,000 | 16,000 | 7,110 | 1,580 | 1,270 | 1,780 |
| 25 | 1,270 | 1,410 | 1,670 | 3,990 | 9,820 | 7,780 | 12,500 | 16,200 | 6,500 | 1,490 | 1,290 | 1,750 |
| 26 | 1,360 | 1,410 | 1,650 | 4,020 | 10,900 | 8,050 | 12,800 | 16,300 | 5,940 | 1,350 | 1,420 | 1,710 |
| 27 | 1,420 | 1,410 | 1,630 | 5,420 | 11,200 | 9,660 | 13,000 | 17,200 | 5,220 | 1,320 | 1,380 | 1,670 |
| 28 | 1,440 | 1,410 | 1,620 | 5,600 | 13,800 | 13,400 | 12,700 | 18,100 | 4,690 | 1,310 | 1,320 | 1,730 |
| 29 | 1,440 | 1,410 | 1,620 | 4,970 | 20,700 | 19,100 | 11,800 | 18,600 | 4,210 | 1,380 | al,350 | 1,780 |
| 30 | 1,450 | 1,380 | 1,630 | 4,890 | - | 20,500 | 10,700 | 18,800 | 3,870 | 1,360 | hl,340 | 1,720 |
| 31 | 1,450 | - | 1,640 | 5,000 | - | 20,700 | - | 18,600 | - | 1,270 | al,370 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 46,020 | 1,850 | 1,220 | 1,485 | 81,280 |
| November..... | 43,070 | 1,700 | 1,380 | 1,436 | 85,430 |
| December..... | 49,180 | 1,760 | 1,350 | 1,686 | 97,550 |
| Calendar year 1939..... | 688,144 | 5,550 | 545 | 1,985 | 1,365,000 |
| January..... | 128,060 | 6,450 | 1,620 | 4,131 | 254,000 |
| February..... | 248,580 | 20,700 | 5,260 | 8,572 | 485,100 |
| March..... | 454,890 | 26,100 | 7,760 | 14,670 | 902,300 |
| April..... | 486,800 | 29,400 | 10,700 | 16,220 | 965,200 |
| May..... | 443,300 | 18,800 | 9,520 | 14,300 | 879,300 |
| June..... | 325,490 | 17,900 | 5,870 | 10,850 | 645,600 |
| July..... | 61,840 | 5,660 | 1,270 | 1,995 | 122,700 |
| August..... | 36,766 | 1,420 | 996 | 1,186 | 72,920 |
| September..... | 50,640 | 1,790 | 1,400 | 1,688 | 100,400 |
| Water year 1939-40..... | 2,374,436 | 29,400 | 996 | 6,488 | 4,710,000 |

a No gage-height record; discharge interpolated.

f Fragmentary gage-height record; discharge computed from partly-estimated gage heights.

h Discharge computed from staff-gage reading.

Florence Lake near Big Creek, Calif.

Location.- Water-stage recorder, lat. 37°17', long. 118°58', in SE $\frac{1}{4}$ sec. 36, T. 7 S., R. 27 E., in gatehouse of Ward tunnel intake, near dam on South Fork of San Joaquin River, 16 miles northeast of town of Big Creek. Datum of gage is at mean sea level.

Drainage area.- 171 square miles.

Records available.- November 1925 to September 1940.

Extremes.- Maximum contents during year, 64,700 acre-feet June 30 (elevation, 7,327.8 feet); minimum, 177 acre-feet Jan. 24 (elevation, 7,223.7 feet).
1925-40: Maximum contents, 65,700 acre-feet July 16, 1935 (elevation, 7,328.8 feet); no available storage Oct. 2-4, 1926, Nov. 30 to Dec. 2, 1927.

Remarks.- Lake is formed by multiple-arch dam; storage began in April 1925. Usable capacity, 64,400 acre-feet between elevations 7,220.9 feet (throat of Venturi tube in Ward tunnel intake) and 7,327.5 feet (top of spillway drum gates) above mean sea level. Water is diverted through Ward tunnel to Huntington Lake and used for power development in Big Creek plants. Records show contents at midnight, all of which is available for diversion.

Cooperation.- Record of contents furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|------|------|-------|--------|--------|--------|--------|--------|
| 1 | 61,500 | 62,000 | 58,600 | 12,200 | 211 | 292 | 392 | 1,020 | 48,400 | 64,500 | 63,200 | 41,700 |
| 2 | 61,700 | 62,100 | 58,100 | 10,500 | 207 | 316 | 366 | 1,690 | 51,300 | 64,300 | 62,800 | 40,700 |
| 3 | 61,900 | 62,100 | 57,600 | 8,760 | 212 | 298 | 346 | 2,060 | 53,800 | 64,300 | 62,600 | 39,800 |
| 4 | 62,100 | 62,200 | 56,600 | 6,980 | 211 | 274 | 322 | 2,810 | 56,800 | 64,600 | 62,000 | 39,000 |
| 5 | 62,300 | 62,300 | 55,300 | 5,260 | 212 | 265 | 322 | 4,290 | 57,900 | 64,500 | 61,500 | 37,900 |
| 6 | 62,600 | 62,300 | 53,900 | 3,600 | 210 | 270 | 346 | 5,500 | 59,800 | 64,400 | 60,900 | 36,900 |
| 7 | 62,800 | 62,300 | 52,600 | 2,260 | 204 | 301 | 366 | 5,460 | 61,100 | 64,500 | 60,300 | 36,800 |
| 8 | 63,000 | 62,400 | 51,300 | 1,240 | 196 | 328 | 381 | 5,650 | 61,300 | 64,400 | 59,700 | 34,800 |
| 9 | 63,200 | 62,400 | 49,700 | 770 | 195 | 314 | 424 | 6,340 | 61,400 | 64,300 | 59,100 | 33,800 |
| 10 | 63,100 | 62,500 | 47,700 | 513 | 193 | 282 | 480 | 7,470 | 61,500 | 64,200 | 58,600 | 32,700 |
| 11 | 62,900 | 62,500 | 46,300 | 450 | 189 | 261 | 551 | 8,720 | 61,600 | 64,300 | 58,000 | 31,700 |
| 12 | 62,800 | 62,600 | 45,700 | 335 | 185 | 233 | 643 | 9,780 | 62,700 | 64,400 | 57,400 | 30,700 |
| 13 | 62,700 | 62,600 | 45,100 | 244 | 182 | 223 | 767 | 10,900 | 63,000 | 64,400 | 56,800 | 29,700 |
| 14 | 62,600 | 62,600 | 44,500 | 239 | 183 | 224 | 787 | 12,200 | 63,200 | 64,300 | 56,300 | 28,600 |
| 15 | 62,400 | 62,700 | 43,900 | 232 | 186 | 237 | 665 | 13,600 | 63,000 | 64,300 | 55,700 | 27,600 |
| 16 | 62,200 | 62,700 | 43,100 | 226 | 194 | 261 | 572 | 15,000 | 63,000 | 64,300 | 55,200 | 26,600 |
| 17 | 62,100 | 62,700 | 41,100 | 203 | 187 | 269 | 571 | 15,800 | 63,700 | 64,300 | 54,700 | 25,600 |
| 18 | 62,000 | 62,700 | 39,200 | 206 | 183 | 266 | 635 | 15,500 | 63,500 | 64,300 | 54,100 | 24,600 |
| 19 | 62,000 | 62,800 | 37,300 | 196 | 189 | 269 | 762 | 17,000 | 62,900 | 64,300 | 53,600 | 23,600 |
| 20 | 61,900 | 62,800 | 35,300 | 190 | 186 | 294 | 832 | 18,300 | 62,600 | 64,400 | 52,800 | 22,700 |
| 21 | 61,900 | 62,800 | 33,300 | 186 | 181 | 325 | 929 | 20,500 | 62,400 | 64,400 | 52,000 | 21,700 |
| 22 | 61,900 | 62,900 | 31,400 | 183 | 183 | 362 | 989 | 22,600 | 62,600 | 64,200 | 51,100 | 20,600 |
| 23 | 61,800 | 62,900 | 29,500 | 182 | 196 | 405 | 1,080 | 25,000 | 63,300 | 64,000 | 50,200 | 19,500 |
| 24 | 61,800 | 62,900 | 27,600 | 177 | 196 | 434 | 1,190 | 28,100 | 63,800 | 63,900 | 49,400 | 18,500 |
| 25 | 61,700 | 62,800 | 25,700 | 239 | 213 | 477 | 1,120 | 31,300 | 63,700 | 63,800 | 48,500 | 17,500 |
| 26 | 61,700 | 62,600 | 23,800 | 265 | 223 | 514 | 948 | 34,100 | 63,500 | 63,800 | 47,600 | 16,500 |
| 27 | 61,700 | 61,900 | 21,800 | 254 | 242 | 530 | 787 | 36,200 | 63,400 | 63,800 | 46,700 | 15,400 |
| 28 | 61,800 | 61,100 | 19,900 | 240 | 254 | 436 | 710 | 38,300 | 63,700 | 63,800 | 45,700 | 14,300 |
| 29 | 61,900 | 60,200 | 18,000 | 231 | 222 | 386 | 711 | 40,800 | 64,500 | 63,800 | 44,700 | 13,300 |
| 30 | 61,900 | 59,400 | 16,000 | 227 | - | 379 | 806 | 43,000 | 64,700 | 63,600 | 43,700 | 12,200 |
| 31 | 62,000 | - | 14,100 | 219 | - | 405 | - | 45,300 | - | 63,500 | 42,700 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 7,324.3 | 61,400 | - |
| Oct. 31..... | 7,325.0 | 62,000 | +600 |
| Nov. 30..... | 7,326.2 | 59,400 | -2,600 |
| Dec. 31..... | 7,264.2 | 14,100 | -45,300 |
| Calendar year 1939..... | - | - | -17,200 |
| Jan. 31..... | 7,224.2 | 219 | -13,900 |
| Feb. 29..... | 7,224.3 | 222 | +3 |
| Mar. 31..... | 7,222.2 | 405 | +183 |
| Apr. 30..... | 7,229.4 | 806 | +401 |
| May 31..... | 7,306.6 | 45,300 | +44,500 |
| June 30..... | 7,327.8 | 64,700 | +19,400 |
| July 31..... | 7,326.6 | 63,500 | -1,200 |
| Aug. 31..... | 7,303.5 | 42,700 | -20,800 |
| Sept. 30..... | 7,261.0 | 12,200 | -30,500 |
| Water year 1939-40..... | - | - | -49,200 |

South Fork of San Joaquin River near Florence Lake, Calif.

Location.— Water-stage recorder, lat. 37°16'20", long. 118°57'50", in SE $\frac{1}{4}$ sec. 36, T. 7 S., R. 27 E., just downstream from spillway of Florence Lake dam, 6 miles upstream from Bear Creek. Altitude of gage, about 7,200 feet (from topographic map).

Drainage area.— 171 square miles.

Records available.— December 1921 to September 1940.

Average discharge.— 17 years (1922-31, 1932-40), 274 $\frac{1}{2}$ second-feet, combined flow of South Fork of San Joaquin River and Ward tunnel at intake.

Extremes.— Maximum discharge during year, 4,320 second-feet June 6 (gage height, 15.38 feet); minimum, 0.1 second-foot, Dec. 31, May 2-15, 18-25.

1921-40: Maximum discharge, that of June 6, 1940; practically no flow at times in 1924, 1925, and each year of period 1935-37.

Remarks.— Records good. Flow regulated by Florence Lake (p.) and diversion into Ward tunnel (p.).

Cooperation.— Water-stage recorder graph and results of 21 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|------|-----|-----|------|------|-----|------|-------|
| 7.71 | 0.0 | 8.6 | 11.5 | 9.8 | 190 | 11.5 | 850 |
| 8.0 | .7 | 8.8 | 28 | 10.2 | 286 | 12.0 | 1,140 |
| 8.2 | 1.8 | 9.0 | 54 | 10.6 | 420 | 12.5 | 1,480 |
| 8.4 | 4.4 | 9.4 | 117 | 11.0 | 590 | 13.0 | 1,860 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1 | 1.2 | 1.1 | 1.1 | 0.2 | 1.8 | 0.6 | 0.9 | 0.2 | 0.2 | 207 | 0.8 | 1.2 |
| 2 | 1.2 | 1.1 | 1.0 | .8 | 1.5 | .8 | .9 | .1 | .5 | 71 | .8 | 1.2 |
| 3 | 1.1 | 1.1 | 1.0 | .2 | 1.0 | .8 | .9 | .1 | .8 | 1.9 | .7 | 1.1 |
| 4 | 1.1 | 1.2 | 1.0 | .4 | .9 | .7 | .7 | .1 | .7 | 13 | .7 | 1.1 |
| 5 | 1.1 | 1.2 | .9 | .2 | .8 | .7 | .8 | .1 | .8 | 38 | .7 | 1.1 |
| 6 | 1.4 | 1.2 | .9 | .2 | .5 | .8 | .8 | .1 | 150 | 550 | .7 | 1.1 |
| 7 | 1.3 | 1.2 | .9 | .2 | .4 | .9 | .7 | .1 | 636 | 393 | .7 | 1.1 |
| 8 | 1.3 | 1.2 | .8 | .2 | .4 | 1.0 | .7 | .1 | 1,630 | 221 | .7 | 1.1 |
| 9 | 1.4 | 1.2 | .7 | .2 | .4 | .9 | .8 | .1 | 1,530 | 4.9 | .7 | 1.1 |
| 10 | 1.3 | 1.2 | .6 | .2 | .4 | .7 | .9 | .1 | 1,360 | 1.1 | .6 | 1.1 |
| 11 | 1.3 | 1.2 | .4 | .3 | .4 | .6 | .8 | .1 | 1,090 | 1.0 | .6 | 1.1 |
| 12 | 1.3 | 1.2 | .4 | .2 | .4 | .5 | .9 | .1 | 717 | 1.2 | .6 | 1.1 |
| 13 | 1.3 | 1.2 | .4 | 18 | .4 | .5 | 1.7 | .1 | 1,060 | 1.7 | .6 | 1.1 |
| 14 | 1.3 | 1.2 | .4 | 4.0 | .4 | .6 | 55 | .1 | 1,030 | 2.4 | .6 | 1.1 |
| 15 | 1.3 | 1.2 | .3 | 2.2 | .4 | .6 | 31 | .1 | 1,290 | 2.0 | .6 | 1.1 |
| 16 | 1.3 | 1.2 | .3 | 2.1 | .4 | .8 | 2.3 | .2 | 1,390 | 1.8 | .6 | 1.1 |
| 17 | 1.3 | 1.2 | .3 | 2.0 | .4 | .6 | .7 | .2 | 660 | 1.0 | .5 | 1.1 |
| 18 | 1.2 | 1.2 | .3 | 1.9 | .4 | .6 | .8 | .1 | 1,030 | 1.0 | .5 | 1.1 |
| 19 | 1.2 | 1.2 | .3 | 1.9 | .4 | .7 | 1.9 | .1 | 949 | 2.1 | .7 | 1.1 |
| 20 | 1.2 | 1.2 | .3 | 1.8 | .4 | .7 | .3 | .1 | 513 | 2.0 | .6 | 1.1 |
| 21 | 1.2 | 1.2 | .3 | 1.7 | .4 | .8 | .3 | .1 | 275 | 1.7 | .6 | 1.1 |
| 22 | 1.2 | 1.2 | .3 | 1.7 | .4 | .9 | .3 | .1 | 280 | 1.3 | .5 | 1.1 |
| 23 | 1.2 | 1.2 | .2 | 1.7 | .5 | 1.1 | .2 | .1 | 223 | 1.1 | 1.1 | 1.0 |
| 24 | 1.2 | 1.2 | .2 | 1.7 | .5 | 1.2 | .2 | .1 | 168 | .9 | 1.6 | 1.0 |
| 25 | 1.1 | 1.2 | .2 | 2.8 | .5 | 1.7 | .2 | .1 | 131 | .9 | 1.3 | 1.0 |
| 26 | 1.1 | 1.2 | .2 | 3.1 | .6 | 1.9 | .3 | .2 | .8 | .9 | 1.2 | 1.0 |
| 27 | 1.1 | 1.2 | .2 | 2.2 | .7 | 2.3 | .2 | .2 | .7 | .9 | 1.2 | 1.0 |
| 28 | 1.1 | 1.1 | .2 | 2.1 | .8 | 1.4 | .2 | .2 | .8 | .9 | 1.2 | 1.0 |
| 29 | 1.1 | 1.1 | .2 | 2.0 | .6 | 1.1 | .2 | .2 | 84 | .9 | 1.2 | 1.0 |
| 30 | 1.1 | 1.1 | .2 | 2.0 | - | 1.2 | .2 | .2 | 330 | .9 | 1.2 | .9 |
| 31 | 1.1 | - | .1 | 1.9 | - | 1.0 | - | .3 | - | .9 | 1.2 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 37.6 | 1.4 | 1.1 | 1.21 | 75 |
| November..... | 35.4 | 1.2 | 1.1 | 1.18 | 70 |
| December..... | 14.6 | 1.1 | .1 | .47 | 29 |
| Calendar year 1939..... | 350.9 | 17 | .1 | .96 | 696 |
| January..... | 60.1 | 18 | .2 | 1.94 | 119 |
| February..... | 17.1 | 1.8 | .4 | .59 | 34 |
| March..... | 28.7 | 2.3 | .5 | .93 | 57 |
| April..... | 105.8 | 55 | .2 | 3.53 | 210 |
| May..... | 4.1 | .3 | .1 | .13 | 8.1 |
| June..... | 16,481.3 | 1,530 | .2 | 549 | 32,690 |
| July..... | 1,527.4 | 550 | .9 | 49.3 | 3,030 |
| August..... | 25.3 | 1.6 | .5 | .82 | 50 |
| September..... | 32.3 | 1.2 | .9 | 1.08 | 64 |
| Water year 1939-40..... | 18,369.7 | 1,530 | .1 | 50.2 | 36,440 |

Ward tunnel at intake, Calif.

Location.- Water-stage recorders, concrete control, and venturi meter, lat. 37°17', long. 118°58', in SE¼ sec. 36, T. 7 S., R. 27 E., in gate house at entrance to tunnel. Altitude of gages, about 7,350 feet (from topographic maps).

Records available.- April 1925 to September 1940.

Average discharge.- 14 years (1925-31, 1932-40), 234 second-feet.

Extremes.- Maximum daily discharge during year, 1,110 second-feet June 21; minimum daily, 0.2 second-foot May 5.

1925-40: Maximum daily discharge, 1,990 second-feet Apr. 30, 1926; no flow at times.

Remarks.- Records good. Ward tunnel diverts water from Florence Lake, a reservoir on South Fork of San Joaquin River, to Huntington Lake for use in Big Creek power plants.

Cooperation.- Water-stage recorder graph and rating tables of control and venturi meter furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|-------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 1.4 | 1.5 | 415 | 976 | 94 | 124 | 256 | 484 | 1.2 | 1,060 | 291 | 577 |
| 2 | 1.4 | 1.5 | 303 | 940 | 88 | 173 | 213 | 503 | 66 | 1,030 | 349 | 577 |
| 3 | 1.4 | 1.5 | 264 | 938 | 90 | 170 | 321 | 526 | 425 | 925 | 348 | 536 |
| 4 | 1.4 | 1.4 | 488 | 960 | 91 | 154 | 186 | 209 | 428 | 720 | 360 | 464 |
| 5 | 1.5 | 1.4 | 697 | 885 | 91 | 142 | 173 | | .2 | 432 | 776 | 391 |
| 6 | 1.5 | 1.4 | 693 | 804 | 92 | 139 | 178 | 97 | 436 | 278 | 423 | 556 |
| 7 | 1.5 | 1.4 | 690 | 709 | 86 | 152 | 201 | 660 | 292 | 261 | 437 | 575 |
| 8 | 1.5 | 1.4 | 685 | 593 | 82 | 180 | 204 | 736 | 65 | 440 | 436 | 572 |
| 9 | 43 | 1.4 | 789 | 328 | 80 | 188 | 226 | 754 | 143 | 631 | 434 | 570 |
| 10 | 149 | 1.4 | 1,020 | 234 | 82 | 169 | 256 | 792 | 346 | 568 | 432 | 568 |
| 11 | 149 | 1.4 | 745 | 127 | 78 | 141 | 300 | 834 | 615 | 439 | 430 | 561 |
| 12 | 147 | 1.4 | 323 | 164 | 75 | 116 | 355 | 865 | 721 | 387 | 430 | 557 |
| 13 | 147 | 1.4 | 323 | 117 | 73 | 107 | 427 | 888 | 876 | 398 | 428 | 555 |
| 14 | 147 | 1.4 | 323 | 108 | 73 | 107 | 493 | 915 | 871 | 396 | 428 | 553 |
| 15 | 147 | 1.4 | 323 | 104 | 74 | 115 | 465 | 941 | 682 | 375 | 410 | 549 |
| 16 | 147 | 1.4 | 462 | 102 | 76 | 126 | 371 | 964 | 546 | 328 | 398 | 542 |
| 17 | 147 | 1.4 | 996 | 103 | 80 | 135 | 316 | 982 | 895 | 310 | 396 | 538 |
| 18 | 98 | 1.4 | 983 | 96 | 76 | 133 | 371 | 990 | 713 | 255 | 394 | 534 |
| 19 | 62 | 1.4 | 1,000 | 85 | 70 | 133 | 457 | 997 | 854 | 201 | 392 | 532 |
| 20 | 62 | 1.4 | 1,010 | 79 | 74 | 150 | 476 | 822 | 934 | 201 | 450 | 530 |
| 21 | 62 | 1.4 | 998 | 73 | 74 | 170 | 518 | 536 | 1,110 | 222 | 528 | 538 |
| 22 | 62 | 1.4 | 988 | 71 | 73 | 197 | 570 | 551 | 917 | 266 | 528 | 566 |
| 23 | 62 | 1.4 | 975 | 68 | 79 | 221 | 584 | 427 | 585 | 294 | 528 | 559 |
| 24 | 62 | 26 | 963 | 64 | 88 | 245 | 602 | 267 | 767 | 294 | 524 | 549 |
| 25 | 63 | 135 | 950 | 75 | 90 | 272 | 597 | 278 | 1,020 | 283 | 530 | 540 |
| 26 | 63 | 17 | 1,000 | 124 | 108 | 278 | 532 | 264 | 1,090 | 230 | 549 | 538 |
| 27 | 55 | 329 | 1,020 | 127 | 116 | 344 | 446 | 652 | 994 | 201 | 544 | 566 |
| 28 | 1.5 | 464 | 1,000 | 119 | 130 | 286 | 397 | 587 | 952 | 201 | 568 | 561 |
| 29 | 1.4 | 429 | 974 | 111 | 119 | 236 | 362 | 264 | 953 | 216 | 568 | 555 |
| 30 | 1.4 | 393 | 1,010 | 105 | - | 221 | 394 | 266 | 1,060 | 266 | 579 | 544 |
| 31 | 1.5 | - | 1,000 | 103 | - | 222 | - | 177 | - | 264 | 577 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 1,871.4 | 149 | 1.4 | 60.4 | 3,710 | | |
| November..... | | | | | | 1,825.5 | 464 | 1.4 | 60.8 | 3,620 | | |
| December..... | | | | | | 23,408 | 1,020 | 264 | 755 | 46,430 | | |
| Calendar year 1939..... | | | | | | 79,990.8 | 1,210 | .5 | 219 | 158,700 | | |
| January..... | | | | | | 9,492 | 976 | 64 | 306 | 18,830 | | |
| February..... | | | | | | 2,502 | 130 | 73 | 86.3 | 4,960 | | |
| March..... | | | | | | 5,546 | 344 | 107 | 179 | 11,000 | | |
| April..... | | | | | | 11,097 | 602 | 173 | 370 | 22,010 | | |
| May..... | | | | | | 18,218.2 | 997 | .2 | 568 | 36,140 | | |
| June..... | | | | | | 19,789.2 | 1,110 | 1.2 | 660 | 39,250 | | |
| July..... | | | | | | 12,714 | 1,060 | 201 | 410 | 25,220 | | |
| August..... | | | | | | 14,080 | 579 | 291 | 454 | 27,930 | | |
| September..... | | | | | | 16,534 | 577 | 484 | 551 | 32,790 | | |
| Water year 1939-40..... | | | | | | 137,077.3 | 1,110 | .2 | 375 | 271,900 | | |

Ward tunnel at outlet, Calif.

Location.- Water-stage recorder, lat. 37°16', long. 119°09', in SE¼ sec. 5, T. 8 S., R 26 E., just upstream from tunnel outlet, at east end of Huntington Lake. 6 miles northeast of Big Creek. Altitude of gage, about 7,200 feet (from topographic map).

Records available.- November 1927 to September 1940.

Average discharge.- 12 years (1928-40), 395 second-feet.

Extremes.- Maximum daily discharge during year, 1,700 second-feet May 19; minimum daily, 31 second-feet Nov. 24.
1927-40: Maximum daily discharge, 2,080 second-feet June 21, 1935; minimum daily, 2.8 second-feet May 11, 1938.

Remarks.- Records excellent. Tunnel diverts water from Florence Lake to Huntington Lake. See record for Ward tunnel at intake on preceding page. Between intake and outlet, tunnel receives water diverted from Bear and Mono Creeks and at times from several other small tributaries of South Fork of San Joaquin River.

Cooperation.- Water-stage recorder graph and rating table furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|-------|-------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 75 | 54 | 432 | 1,010 | 168 | 217 | 427 | 1,000 | 672 | 1,110 | 431 | 618 |
| 2 | 105 | 52 | 334 | 984 | 160 | 272 | 378 | 1,130 | 694 | 1,070 | 487 | 610 |
| 3 | 120 | 50 | 290 | 964 | 158 | 263 | 357 | 1,140 | 1,070 | 964 | 476 | 580 |
| 4 | 118 | 50 | 496 | 1,000 | 162 | 245 | 338 | 888 | 1,080 | 724 | 474 | 508 |
| 5 | 138 | 46 | 728 | 933 | 167 | 235 | 314 | 634 | 1,080 | 958 | 504 | 623 |
| 6 | 132 | 45 | 730 | 861 | 170 | 234 | 324 | 681 | 1,080 | 908 | 522 | 618 |
| 7 | 114 | 44 | 724 | 750 | 157 | 255 | 364 | 1,270 | 986 | 867 | 543 | 613 |
| 8 | 126 | 46 | 719 | 648 | 154 | 305 | 361 | 1,390 | 521 | 940 | 540 | 607 |
| 9 | 145 | 44 | 804 | 422 | 152 | 316 | 414 | 1,410 | 240 | 1,110 | 538 | 602 |
| 10 | 253 | 41 | 1,030 | 261 | 155 | 282 | 480 | 1,450 | 322 | 1,000 | 535 | 597 |
| 11 | 252 | 42 | 844 | 191 | 148 | 243 | 567 | 1,500 | 639 | 847 | 533 | 592 |
| 12 | 40 | 341 | 245 | 144 | 207 | 674 | 1,550 | 786 | 759 | 532 | 589 | 588 |
| 13 | 253 | 36 | 344 | 214 | 140 | 201 | 823 | 1,580 | 897 | 741 | 530 | 586 |
| 14 | 250 | 37 | 344 | 207 | 137 | 202 | 939 | 1,610 | 1,010 | 724 | 427 | 583 |
| 15 | 247 | 36 | 344 | 195 | 142 | 216 | 877 | 1,640 | 725 | 681 | 506 | 580 |
| 16 | 242 | 34 | 405 | 182 | 148 | 234 | 688 | 1,660 | 475 | 637 | 484 | 576 |
| 17 | 234 | 35 | 1,020 | 176 | 153 | 246 | 620 | 1,670 | 1,010 | 580 | 474 | 572 |
| 18 | 188 | 34 | 1,010 | 166 | 147 | 244 | 755 | 1,690 | 741 | 520 | 466 | 567 |
| 19 | 144 | 36 | 1,020 | 153 | 136 | 246 | 919 | 1,700 | 886 | 437 | 462 | 564 |
| 20 | 140 | 33 | 1,030 | 142 | 144 | 281 | 969 | 1,550 | 955 | 417 | 503 | 557 |
| 21 | 135 | 33 | 1,010 | 136 | 142 | 320 | 1,060 | 1,170 | 1,160 | 416 | 591 | 567 |
| 22 | 132 | 33 | 1,000 | 132 | 139 | 374 | 1,170 | 1,180 | 966 | 452 | 588 | 599 |
| 23 | 130 | 32 | 990 | 128 | 146 | 425 | 1,170 | 1,100 | 658 | 476 | 581 | 592 |
| 24 | 126 | 31 | 980 | 129 | 161 | 471 | 1,190 | 926 | 737 | 490 | 580 | 583 |
| 25 | 120 | 202 | 967 | 133 | 161 | 516 | 1,140 | 940 | 1,040 | 517 | 588 | 575 |
| 26 | 121 | 40 | 1,010 | 188 | 184 | 496 | 973 | 948 | 1,130 | 449 | 600 | 570 |
| 27 | 119 | 315 | 1,050 | 202 | 199 | 584 | 840 | 1,260 | 1,050 | 383 | 591 | 596 |
| 28 | 69 | 486 | 1,030 | 205 | 224 | 498 | 759 | 1,310 | 988 | 383 | 610 | 591 |
| 29 | 61 | 456 | 1,010 | 196 | 221 | 427 | 728 | 926 | 998 | 385 | 629 | 584 |
| 30 | 58 | 432 | 1,040 | 185 | - | 407 | 793 | 922 | 1,090 | 431 | 623 | 576 |
| 31 | 55 | - | 1,040 | 178 | - | 406 | - | 859 | - | 423 | 618 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 4,656 | 254 | 55 | 150 | 9,240 | | |
| November..... | | | | | | 2,894 | 485 | 31 | 96.5 | 5,740 | | |
| December..... | | | | | | 24,116 | 1,050 | 290 | 778 | 47,830 | | |
| Calendar year 1939..... | | | | | | 138,550 | 1,240 | 28 | 380 | 274,800 | | |
| January..... | | | | | | 11,514 | 1,010 | 128 | 371 | 22,840 | | |
| February..... | | | | | | 4,619 | 224 | 136 | 159 | 9,160 | | |
| March..... | | | | | | 9,868 | 584 | 201 | 318 | 19,570 | | |
| April..... | | | | | | 21,411 | 1,190 | 314 | 714 | 42,470 | | |
| May..... | | | | | | 38,684 | 1,700 | 634 | 1,248 | 76,730 | | |
| June..... | | | | | | 25,686 | 1,160 | 240 | 856 | 50,950 | | |
| July..... | | | | | | 20,799 | 1,110 | 383 | 670 | 41,250 | | |
| August..... | | | | | | 16,666 | 629 | 431 | 538 | 33,060 | | |
| September..... | | | | | | 17,572 | 623 | 508 | 586 | 34,850 | | |
| Water year 1939-40..... | | | | | | 198,485 | 1,700 | 31 | 542 | 393,700 | | |

Bear Creek near Vermilion Valley, Calif.

Location.- Water-stage recorder, lat. 37°20', long. 118°58', in SW $\frac{1}{4}$ sec. 12, T. 7 S., R. 27 E.; 2 miles upstream from mouth and 4 miles by trail south of Vermilion Valley. Altitude of gage, about 7,400 feet (from topographic map).

Drainage area.- 53.5 square miles.

Records available.- November 1921 to September 1940.

Average discharge.- 16 years (1922-30, 1932-40), 82.0 second-feet.

Extremes.- Maximum discharge during year, 922 second-feet June 29 (gage height, 5.97 feet); minimum, 1.8 second-feet Dec. 22.

1921-40: Maximum discharge, 1,530 second-feet July 21, 1936 (gage height, 6.90 feet); minimum recorded, 1.2 second-feet Sept. 29 to Oct. 5, 1924.

Remarks.- Records good except those for periods of ice effect, which are fair. No storage or diversion above station.

Cooperation.- Water-stage recorder graph and results of 17 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|------|-----|-----|-----|-----|
| 3.0 | 3.4 | 4.0 | 9S | 5.0 | 390 |
| 3.2 | 10.0 | 4.2 | 133 | 5.2 | 490 |
| 3.4 | 22.5 | 4.4 | 175 | 5.4 | 595 |
| 3.6 | 41 | 4.6 | 230 | 5.6 | 705 |
| 3.8 | 67 | 4.8 | 302 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 29 | 15 | 6 | 5 | 25 | 35 | 60 | 193 | 470 | 376 | 51 | 16 |
| 2 | 42 | 14 | *6 | 5 | 25 | 35 | 53 | 230 | 465 | 332 | 48 | 16 |
| 3 | 49 | 14 | 6 | 5 | 25 | 35 | 48 | 215 | 470 | 291 | 43 | 15 |
| 4 | 51 | 13 | 6 | 5 | 25 | 33 | 45 | 185 | 490 | 272 | 41 | 13 |
| 5 | 54 | 12 | 6 | 8 | 25 | 33 | 42 | 185 | 445 | 250 | 39 | 13 |
| 6 | 53 | 11 | 6 | 10 | 25 | 36 | 46 | 203 | 460 | 237 | 37 | 13 |
| 7 | 56 | 11 | 6 | 12 | 25 | 45 | 51 | 224 | 460 | 227 | 36 | 12 |
| 8 | 48 | 12 | 6 | 16 | *25 | 54 | 51 | 283 | 520 | 193 | 36 | 12 |
| 9 | 45 | 10 | 6 | 18 | 25 | 51 | 63 | 358 | 515 | 175 | 37 | 11 |
| 10 | 43 | 9.5 | 5 | 18 | 25 | 42 | 79 | 410 | 510 | 157 | 37 | 10 |
| 11 | 42 | 9.5 | 5 | 22 | 20 | 36 | 96 | 440 | 551 | 145 | 37 | 9.5 |
| 12 | 42 | 8 | 5 | 25 | 20 | 37 | 119 | 430 | 606 | 137 | 36 | 9.5 |
| 13 | 40 | 8 | 5 | 30 | 20 | 32 | 141 | 445 | 628 | 126 | 36 | 9.5 |
| 14 | 39 | 8.5 | 5 | *36 | 21 | 30 | 139 | 480 | 584 | 119 | 35 | 9 |
| 15 | 37 | 8 | 5 | 30 | 26 | 34 | 113 | 485 | 568 | 112 | 33 | 9 |
| 16 | 34 | 8 | 5 | 25 | 27 | 36 | 82 | 505 | 634 | 108 | 30 | 9 |
| 17 | 31 | 7 | 5 | 25 | 23 | 36 | 85 | 465 | 644 | 93 | 28 | 9 |
| 18 | 29 | 7 | 5 | 20 | 24 | 36 | 124 | 410 | 568 | 87 | 26 | 8.5 |
| 19 | 28 | 7 | 5 | 20 | 27 | 37 | 147 | 405 | 515 | 80 | 26 | 8.5 |
| 20 | 25 | 6 | 4 | 20 | 27 | 46 | 151 | 450 | 450 | 73 | 24 | 8.5 |
| 21 | 23 | 6 | 4 | 20 | 23 | 54 | 171 | 490 | 480 | 67 | 23 | 8.5 |
| 22 | 22 | 6 | 4 | 20 | 22 | 64 | 180 | 480 | 465 | 66 | 22 | 8 |
| 23 | 21 | 6 | 5 | 20 | 23 | 76 | 178 | 480 | 415 | 61 | 20 | 8 |
| 24 | 20 | 6 | 5 | 20 | 24 | 80 | 178 | 495 | 405 | 68 | 20 | 7.5 |
| 25 | 18 | 5 | 5 | 20 | 22 | 79 | 145 | 540 | 390 | 80 | 24 | 7 |
| 26 | 18 | 5 | 5 | 20 | 28 | 72 | 113 | 495 | 358 | 74 | 21 | 6.6 |
| 27 | 20 | 5 | 5 | 25 | 30 | 73 | 98 | 505 | 345 | 68 | 20 | 6 |
| 28 | 20 | 5 | 5 | 25 | 34 | 60 | 93 | 485 | 381 | 67 | 19 | 5.5 |
| 29 | 18 | 5 | 5 | 25 | 37 | 56 | 93 | 425 | 490 | 63 | 18 | 5.5 |
| 30 | 16 | 5 | 5 | 25 | - | 53 | 115 | 395 | 540 | 59 | 17 | 5.5 |
| 31 | 16 | - | 5 | 25 | - | 60 | - | 410 | - | 56 | 16 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,029 | 56 | 16 | 33.2 | 2,040 |
| November..... | 252.5 | 15 | 5 | 8.42 | 501 |
| December..... | 161 | 6 | 4 | 5.2 | 319 |
| Calendar year 1939..... | 20,281.5 | 336 | 4 | 55.6 | 40,230 |
| January..... | 600 | 36 | 5 | 19.4 | 1,190 |
| February..... | 728 | 37 | 20 | 25.1 | 1,440 |
| March..... | 1,486 | 80 | 30 | 47.9 | 2,950 |
| April..... | 3,099 | 180 | 42 | 103 | 6,150 |
| May..... | 12,191 | 540 | 183 | 393 | 24,180 |
| June..... | 14,822 | 644 | 345 | 494 | 29,400 |
| July..... | 4,324 | 376 | 56 | 139 | 8,680 |
| August..... | 935 | 51 | 16 | 30.2 | 1,850 |
| September..... | 289 | 16 | 5.5 | 9.63 | 573 |
| Water year 1939-40..... | 39,216.5 | 644 | 4 | 109 | 79,170 |

*Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 12, Nov. 17 to Feb. 12, and Mar. 1-4.

Mono Creek near Vermilion Valley, Calif.

Location.- Water-stage recorder, lat. 37°22', long. 118°59', in SW¼ sec. 35, T. 6 S., R. 27 E. (unsurveyed), 1 mile downstream from lower end of Vermilion Valley and 6 miles downstream from North Fork. Altitude of gage, about 7,400 feet (from topographic map).

Drainage area.- 92.0 square miles.

Records available.- November 1921 to September 1940.

Average discharge.- 16 years (1922-30, 1932-40), 140 second-feet.

Extremes.- Maximum discharge during year, 1,130 second-feet May 24 (gage height, 7.66 feet); minimum, 6.5 second-feet Dec. 22.

1921-40: Maximum discharge, 1,760 second-feet June 2, 1938 (gage height, 8.62 feet); minimum, that of Dec. 22, 1939.

Remarks.- Records good except those for periods affected by ice, which are fair. No storage or diversion above station.

Cooperation.- Water-stage recorder graph and results of 21 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|----|-----|-----|-----|-----|-----|-----|
| 4.7 | 11 | 5.1 | 49 | 5.8 | 204 | 6.6 | 540 |
| 4.8 | 17 | 5.2 | 85 | 6.0 | 272 | 6.8 | 640 |
| 4.9 | 25 | 5.4 | 102 | 6.2 | 352 | 7.0 | 745 |
| 5.0 | 36 | 5.6 | 148 | 6.4 | 442 | 7.4 | 970 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 35 | 29 | *18 | 15 | 45 | 55 | 115 | 314 | 778 | 461 | 92 | 35 |
| 2 | 49 | 29 | 17 | 15 | 40 | 55 | 102 | 405 | 806 | 410 | 84 | 35 |
| 3 | 54 | 28 | 16 | *16 | 39 | 55 | 94 | 419 | 784 | 378 | 80 | 33 |
| 4 | 55 | 27 | 15 | 16 | 36 | 50 | 92 | 383 | 806 | 365 | 75 | 32 |
| 5 | 60 | 26 | 14 | 20 | 35 | 48 | 88 | 378 | 745 | 352 | 74 | 29 |
| 6 | 62 | 25 | 13 | 20 | 35 | 45 | 92 | 401 | 767 | 339 | 70 | 30 |
| 7 | 62 | 25 | 13 | 25 | 35 | 45 | 100 | 419 | 767 | 323 | 68 | 28 |
| 8 | 59 | 26 | 13 | 35 | 35 | 55 | 100 | 485 | 538 | 295 | 68 | 28 |
| 9 | 55 | 24 | 12 | 35 | *35 | 60 | 113 | 575 | 835 | 272 | 68 | 26 |
| 10 | 54 | 23 | 12 | 40 | 34 | 55 | 129 | 670 | 835 | 243 | 68 | 25 |
| 11 | 57 | 23 | 12 | 40 | 32 | 52 | 151 | 728 | 872 | 226 | 68 | 23 |
| 12 | 59 | 22 | 12 | 45 | 30 | 50 | 177 | 728 | 934 | 210 | 65 | 23 |
| 13 | 59 | 21 | 12 | 55 | 30 | *50 | 220 | 740 | 934 | 199 | 67 | 23 |
| 14 | 59 | 21 | 12 | 60 | 30 | 55 | 254 | 789 | 866 | 189 | 65 | 23 |
| 15 | 57 | 21 | 12 | 55 | 35 | 55 | 226 | 828 | 828 | 177 | 62 | 23 |
| 16 | 54 | 20 | 12 | 50 | 35 | 60 | 186 | 800 | 888 | 171 | 59 | 23 |
| 17 | 49 | 20 | 12 | 45 | 35 | 65 | 189 | 756 | 899 | 153 | 54 | 23 |
| 18 | 45 | 20 | 12 | 40 | 35 | 65 | 226 | 718 | 789 | 145 | 49 | 23 |
| 19 | 42 | 20 | 12 | 40 | 35 | 70 | 261 | 712 | 715 | 141 | 49 | 22 |
| 20 | 40 | 19 | 12 | 40 | 35 | 77 | 297 | 756 | 635 | 131 | 46 | 21 |
| 21 | 39 | 19 | 12 | 40 | 35 | 90 | 318 | 850 | 670 | 120 | 45 | 21 |
| 22 | 36 | 19 | 12 | 35 | 30 | 104 | 348 | 872 | 660 | 117 | 45 | 20 |
| 23 | 35 | 18 | 12 | 35 | 32 | 120 | 365 | 888 | 575 | 115 | 41 | 21 |
| 24 | 34 | 18 | 12 | 35 | 36 | 129 | 370 | 894 | 540 | 124 | 41 | 20 |
| 25 | 30 | 18 | 12 | 35 | 35 | 141 | 327 | 964 | 510 | 136 | 45 | 19 |
| 26 | 30 | 17 | 12 | 40 | 36 | 134 | 268 | 894 | 466 | 124 | 39 | 19 |
| 27 | 40 | 17 | 12 | 45 | 41 | 143 | 240 | 882 | 452 | 113 | 35 | 19 |
| 28 | 37 | 17 | 13 | 50 | 45 | 126 | 230 | 555 | 490 | 113 | 35 | 18 |
| 29 | 34 | 17 | 13 | 50 | 51 | 117 | 230 | 778 | 550 | 111 | 35 | 18 |
| 30 | 32 | 17 | 14 | 50 | - | 115 | 250 | 718 | 605 | 100 | 34 | 18 |
| 31 | 30 | - | 14 | 65 | - | 111 | - | 685 | - | 96 | 34 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,443 | 62 | 30 | 46.5 | 2,860 |
| November..... | 646 | 29 | 17 | 21.5 | 1,280 |
| December..... | 401 | 18 | 12 | 12.9 | 795 |
| Calendar year 1939..... | 33,237 | 433 | 12 | 91.1 | 65,900 |
| January..... | 1,187 | 65 | 15 | 38.3 | 2,350 |
| February..... | 1,042 | 51 | 30 | 35.9 | 2,070 |
| March..... | 2,455 | 143 | 45 | 79.2 | 4,870 |
| April..... | 6,148 | 370 | 88 | 205 | 12,190 |
| May..... | 21,284 | 964 | 314 | 687 | 42,220 |
| June..... | 21,848 | 934 | 452 | 728 | 43,330 |
| July..... | 6,446 | 461 | 96 | 208 | 12,790 |
| August..... | 1,763 | 92 | 34 | 56.9 | 3,600 |
| September..... | 719 | 35 | 18 | 24.0 | 1,430 |
| Water year 1939-40..... | 65,382 | 964 | 12 | 179 | 129,700 |

*Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 13 to Feb. 2, Feb. 5-9, 11, 12, 15-21, Mar. 1-4, 8-10, 12-17.

Huntington Lake near Big Creek, Calif.

Location.- Water-stage recorder, lat. 37°14', long. 119°13', in SW¼ sec. 14, T. 8 S., R. 25 E., in gate tower of dam 1 on Big Creek and 2 miles northeast of town of Big Creek. Datum of gage is at mean sea level.

Drainage area.- 79.0 square miles.

Records available.- October 1926 to September 1940. 1913 to 1926, summary records only, in Water-Supply Paper 881.

Extremes.- Maximum contents during year, 88,900 acre-feet July 2 (elevation, 6,950.0 feet); minimum, 3,400 acre-feet Nov. 27 (elevation, 6,846.9 feet).
1913-40: Maximum contents, 90,000 acre-feet May 23, 1926 (elevation, 6,950.8 feet); minimum, 1,860 acre-feet Mar. 8, 1935 (elevation, 6,839.0 feet).

Remarks.- Lake is formed by four dams; storage began Apr. 11, 1913. Dams were raised in 1914 and again in 1917. Usable capacity, 88,800 acre-feet between elevations 6,824.4 feet (center line of outlet tunnel) and 6,950 feet (spillway crest at dam 1) above mean sea level. Water is used for power development in Big Creek plants. Records show contents at midnight, all of which is available for release.

Cooperation.- Record of contents furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 34,900 | 23,500 | 3,420 | 33,000 | 46,400 | 37,300 | 44,500 | 51,800 | 82,500 | 88,600 | 87,500 | 87,300 |
| 2 | 34,400 | 22,700 | 3,510 | 34,900 | 46,000 | 38,100 | 44,600 | 52,700 | 82,200 | 88,900 | 87,400 | 87,300 |
| 3 | 33,900 | 21,800 | 4,080 | 36,600 | 46,100 | 38,600 | 44,700 | 53,700 | 82,500 | 88,800 | 87,300 | 87,200 |
| 4 | 33,400 | 20,900 | 4,290 | 38,900 | 46,200 | 38,500 | 44,900 | 54,100 | 84,200 | 88,500 | 87,300 | 87,100 |
| 5 | 33,000 | 20,300 | 4,910 | 40,500 | 45,900 | 38,300 | 45,000 | 54,200 | 85,300 | 88,700 | 87,300 | 87,200 |
| 6 | 32,600 | 19,500 | 5,560 | 41,900 | 45,700 | 38,300 | 45,200 | 54,200 | 85,800 | 88,700 | 87,300 | 87,200 |
| 7 | 32,200 | 18,600 | 6,200 | 43,500 | 45,300 | 38,300 | 45,600 | 55,400 | 86,400 | 88,800 | 87,400 | 87,300 |
| 8 | 32,100 | 17,800 | 6,810 | 44,900 | 44,900 | 38,400 | 45,800 | 57,000 | 86,600 | 88,700 | 87,500 | 87,300 |
| 9 | 31,900 | 16,700 | 7,930 | 45,800 | 44,500 | 38,700 | 46,000 | 59,000 | 86,600 | 88,800 | 87,500 | 87,400 |
| 10 | 31,800 | 15,800 | 10,000 | 46,400 | 44,000 | 39,100 | 46,500 | 61,000 | 86,500 | 88,700 | 87,600 | 87,300 |
| 11 | 31,700 | 15,000 | 11,100 | 46,600 | 43,700 | 39,100 | 47,100 | 63,000 | 86,500 | 88,500 | 87,600 | 87,300 |
| 12 | 31,600 | 14,300 | 11,000 | 47,300 | 43,300 | 38,900 | 48,100 | 65,300 | 86,500 | 88,600 | 87,600 | 87,300 |
| 13 | 31,500 | 13,400 | 10,900 | 47,800 | 42,700 | 38,700 | 49,600 | 67,400 | 86,500 | 88,500 | 87,800 | 87,300 |
| 14 | 31,400 | 12,600 | 10,800 | 48,200 | 42,400 | 38,600 | 51,600 | 69,500 | 86,900 | 88,600 | 87,900 | 87,400 |
| 15 | 31,500 | 11,500 | 10,700 | 48,200 | 41,900 | 38,400 | 52,800 | 71,500 | 86,900 | 88,700 | 87,900 | 87,400 |
| 16 | 31,400 | 10,800 | 10,700 | 48,200 | 41,300 | 38,300 | 52,500 | 73,300 | 86,900 | 88,700 | 87,900 | 87,300 |
| 17 | 31,300 | 9,690 | 12,200 | 48,200 | 40,500 | 38,500 | 51,800 | 74,800 | 87,500 | 88,700 | 87,700 | 87,200 |
| 18 | 30,900 | 8,800 | 13,500 | 48,100 | 40,600 | 38,400 | 50,800 | 76,800 | 87,200 | 88,700 | 87,600 | 87,100 |
| 19 | 30,500 | 8,240 | 14,700 | 48,000 | 40,100 | 38,400 | 50,300 | 78,500 | 87,100 | 88,600 | 87,500 | 87,000 |
| 20 | 30,000 | 7,380 | 15,900 | 48,100 | 39,600 | 38,400 | 50,300 | 80,400 | 87,200 | 88,600 | 87,400 | 86,900 |
| 21 | 29,500 | 6,470 | 17,100 | 48,300 | 39,000 | 38,500 | 50,900 | 81,300 | 87,700 | 88,600 | 87,400 | 86,900 |
| 22 | 29,100 | 5,550 | 18,100 | 48,000 | 38,600 | 38,800 | 51,300 | 82,100 | 88,000 | 88,500 | 87,300 | 87,000 |
| 23 | 28,600 | 4,670 | 19,400 | 47,700 | 38,400 | 39,200 | 51,700 | 82,600 | 88,000 | 88,400 | 87,200 | 87,000 |
| 24 | 28,100 | 3,980 | 21,200 | 47,500 | 38,200 | 40,200 | 52,300 | 83,000 | 87,600 | 88,400 | 87,200 | 87,000 |
| 25 | 27,700 | 3,610 | 23,000 | 47,600 | 38,200 | 40,900 | 52,700 | 83,200 | 87,700 | 88,500 | 87,200 | 86,900 |
| 26 | 27,200 | 3,700 | 24,200 | 48,300 | 38,100 | 41,700 | 52,700 | 83,400 | 88,000 | 88,400 | 87,200 | 86,800 |
| 27 | 26,700 | 3,400 | 25,300 | 48,400 | 38,000 | 42,600 | 52,400 | 83,900 | 87,900 | 88,300 | 87,100 | 86,800 |
| 28 | 26,200 | 3,460 | 26,600 | 48,300 | 37,900 | 43,100 | 52,200 | 84,400 | 88,000 | 88,100 | 87,100 | 86,700 |
| 29 | 26,100 | 3,430 | 27,900 | 47,900 | 37,900 | 43,400 | 51,800 | 83,800 | 88,300 | 87,900 | 87,200 | 86,800 |
| 30 | 25,500 | 3,420 | 29,400 | 47,400 | - | 43,700 | 51,500 | 83,300 | 88,700 | 87,500 | 87,200 | 86,700 |
| 31 | 24,400 | - | 31,100 | 46,800 | - | 44,300 | - | 82,600 | - | 87,600 | 87,200 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 6,905.2 | 35,200 | - |
| Oct. 31..... | 6,892.5 | 24,400 | -10,800 |
| Nov. 30..... | 6,846.9 | 3,420 | -21,000 |
| Dec. 31..... | 6,900.6 | 31,100 | +27,700 |
| Calendar year 1939..... | - | - | -14,600 |
| Jan. 31..... | 6,916.6 | 46,800 | +15,700 |
| Feb. 29..... | 6,908.0 | 37,900 | -8,900 |
| Mar. 31..... | 6,914.3 | 44,300 | +6,400 |
| Apr. 30..... | 6,920.7 | 51,300 | +7,000 |
| May 31..... | 6,945.7 | 82,800 | +31,500 |
| June 30..... | 6,949.9 | 88,700 | +5,900 |
| July 31..... | 6,949.1 | 87,600 | -1,100 |
| Aug. 31..... | 6,948.8 | 87,200 | -400 |
| Sept. 30..... | 6,948.5 | 86,700 | -500 |
| Water year 1939-40..... | - | - | +51,500 |

SAN JOAQUIN RIVER TRIBUTARIES ABOVE FRESNO RIVER

Big Creek below Huntington Lake, Calif.

Location.— Water-stage recorder, lat. $37^{\circ}13'10''$, long. $119^{\circ}12'50''$, in NW $\frac{1}{4}$ sec. 23, T. 8 S., R. 25 E., 800 feet upstream from Grouse Creek and 1,000 feet downstream from Huntington Lake. Altitude of gage, about 6,600 feet (from topographic map).

Drainage area.— 80.0 square miles.

Records available.— June 1925 to September 1940 (records prior to October 1929 cover only periods of spill from Huntington Lake).

Average discharge.— 11 years (1929-40), 1.32 second-feet.

Extremes.— Maximum discharge during year, 16 second-feet July 6 (gage height, 3.43 feet); minimum, 0.2 second-foot Dec. 8, 9, 13-31.

1925-40: Maximum discharge, 2,040 second-feet June 23, 1925 (gage height, 10.3 feet), siphon spillways operating at Huntington Lake; minimum, 0.1 second-foot Sept. 10-13, Oct. 7-18, Dec. 5-16, 1931.

Remarks.— Records fair. Natural flow of Big Creek is regulated at Huntington Lake and during most of year is diverted for power development through Big Creek powerhouse No. 1.

Cooperation.— Water-stage recorder graph and results of 10 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| 2.2 | 0.3 | 2.6 | 1.6 | 3.0 | 5 |
| 2.3 | .5 | 2.7 | 2.1 | 3.1 | 7 |
| 2.4 | .8 | 2.8 | 2.8 | 3.2 | 9.5 |
| 2.5 | 1.2 | 2.9 | 3.8 | 3.3 | 12 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 0.5 | 0.3 | 0.3 | 0.3 | 0.9 | 1.3 | 3.1 | 3.6 | 1.4 | 9 | 0.4 | 0.3 |
| 2 | .8 | .3 | .3 | 3.4 | .6 | 1.2 | 2.8 | 3.8 | 1.4 | 11 | .4 | .3 |
| 3 | .6 | .3 | .3 | .9 | .9 | 1.2 | 2.8 | 3.6 | 1.3 | 10 | .4 | .3 |
| 4 | .4 | .3 | .3 | 1.6 | 1.0 | 1.1 | 2.7 | 3.3 | 1.3 | 2.7 | .4 | .3 |
| 5 | .4 | .3 | .3 | .6 | .9 | 1.2 | 2.5 | 3.1 | 1.2 | 4.5 | .4 | .4 |
| 6 | .7 | .3 | .3 | .6 | .6 | 1.2 | 2.7 | 3.0 | 1.2 | 6 | .4 | .4 |
| 7 | .7 | .3 | .3 | .6 | .7 | 1.4 | 2.7 | 3.0 | 1.2 | 5 | .4 | .3 |
| 8 | .6 | .3 | .2 | .6 | .7 | 1.5 | 2.8 | 2.9 | 1.2 | 3.5 | .4 | .3 |
| 9 | .6 | .3 | .2 | .6 | .7 | 1.6 | 2.9 | 2.8 | 1.1 | 1.7 | .4 | .3 |
| 10 | .6 | .3 | .3 | .6 | .7 | 1.4 | 3.3 | 2.8 | 1.1 | 1.5 | .3 | .3 |
| 11 | .5 | .4 | .4 | 1.1 | .7 | 1.2 | 3.6 | 2.6 | 1.0 | .9 | .3 | .4 |
| 12 | .5 | .5 | .3 | 1.0 | .6 | 1.2 | 4.0 | 2.4 | 1.0 | .8 | .3 | .4 |
| 13 | .4 | .5 | .2 | .8 | .6 | 1.2 | 4.6 | 2.3 | 1.0 | .9 | .3 | .4 |
| 14 | .3 | .5 | .2 | .7 | .6 | 1.2 | 4.9 | 2.3 | 1.0 | .7 | .3 | .4 |
| 15 | .3 | .5 | .2 | .6 | .6 | 1.3 | 4.6 | 2.1 | 1.0 | .9 | .3 | .4 |
| 16 | .3 | .4 | .2 | .5 | .5 | 1.4 | 4.2 | 2.1 | .9 | 2.5 | .4 | .4 |
| 17 | .3 | .3 | .2 | .5 | .5 | 1.5 | 4.2 | 2.0 | .9 | 1.3 | .4 | .4 |
| 18 | .3 | .3 | .2 | .5 | .5 | 1.5 | 4.4 | 2.0 | .9 | 1.1 | .3 | .4 |
| 19 | .3 | .3 | .2 | .4 | .5 | 1.7 | 4.5 | 1.9 | .9 | 1.2 | .3 | .4 |
| 20 | .3 | .3 | .2 | .4 | .5 | 1.9 | 4.5 | 1.8 | .9 | .9 | .3 | .4 |
| 21 | .3 | .3 | .2 | .4 | .5 | 2.0 | 4.8 | 1.8 | .9 | .7 | .3 | .4 |
| 22 | .3 | .3 | .2 | .4 | .5 | 2.2 | 4.8 | 1.8 | .8 | .6 | .3 | .4 |
| 23 | .3 | .3 | .2 | .4 | .6 | 2.4 | 4.6 | 1.7 | .8 | .6 | .3 | .4 |
| 24 | .4 | .3 | .2 | .4 | .7 | 2.7 | 4.6 | 1.7 | .8 | .6 | .3 | .4 |
| 25 | .4 | .3 | .2 | .9 | .9 | 3.6 | 4.4 | 1.7 | .8 | .6 | .3 | .4 |
| 26 | .4 | .3 | .2 | 1.9 | 1.2 | 3.8 | 4.2 | 1.6 | .8 | .5 | .3 | .4 |
| 27 | .4 | .3 | .2 | 1.2 | 1.3 | 6.5 | 3.9 | 1.6 | .8 | .5 | .3 | .4 |
| 28 | .4 | .3 | .2 | 1.0 | 1.6 | 4.2 | 3.5 | 1.6 | .8 | .5 | .3 | .4 |
| 29 | .3 | .3 | .2 | .9 | 1.7 | 3.8 | 3.5 | 1.5 | .8 | .5 | .3 | .4 |
| 30 | .3 | .3 | .2 | .9 | - | 4.0 | 3.5 | 1.5 | .8 | .5 | .3 | .4 |
| 31 | .3 | - | .2 | .9 | - | 3.9 | - | 1.4 | - | .5 | .3 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 13.2 | 0.8 | 0.3 | 0.43 | 26 |
| November..... | 10.0 | .5 | .3 | .33 | 20 |
| December..... | 7.3 | .4 | .2 | .24 | 14 |
| Calendar year 1939..... | 219.5 | 2.7 | .2 | .60 | 433 |
| January..... | 25.8 | 3.4 | .3 | .83 | 51 |
| February..... | 22.9 | 1.7 | .5 | .79 | 45 |
| March..... | 66.3 | 6.5 | 1.1 | 2.14 | 132 |
| April..... | 113.6 | 4.9 | 2.5 | 3.79 | 226 |
| May..... | 71.3 | 3.8 | 1.4 | 2.30 | 141 |
| June..... | 30.0 | 1.4 | .8 | 1.00 | 60 |
| July..... | 72.0 | 11 | .5 | 2.32 | 143 |
| August..... | 10.4 | .4 | .3 | .34 | 21 |
| September..... | 11.2 | .4 | .3 | .37 | 22 |
| Water year 1939-40..... | 454.2 | 11 | .2 | 1.24 | 901 |

Pitman Creek below Tamarack Creek, Calif.

Location.- Water-stage recorder, lat. $37^{\circ}12'$, long. $119^{\circ}12'$, in NW $\frac{1}{4}$ sec. 35, T. 8 S., R. 25 E., 500 feet downstream from Tamarack Creek, 3 miles upstream from mouth, and 3 miles southeast of town of Big Creek. Altitude of gage, about 7,100 feet (from topographic map).

Drainage area.- 22.0 square miles.

Records available.- December 1927 to September 1940.

Average discharge.- 12 years (1928-40), 36.3 second-feet.

Extremes.- Maximum discharge during year, 530 second-feet probably on May 9 (gage height, 5.77 feet); minimum, 0.1 second-foot Aug. 31.
1927-40: Maximum discharge, 2,320 second-feet Dec. 11, 1937 (gage height, 9.65 feet), from rating curve extended above 1,000 second-feet on basis of velocity-area studies; no flow part of Nov. 24, 1930, and during period Oct. 15-18, 1931.

Remarks.- Records good, except those for periods of ice effect and no gage-height record, which are fair. No diversion above station; practically all flow diverted to Huntington-Shaver conduit below station.

Cooperation.- Water-stage recorder graph and results of 12 discharge measurements furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|------|-----|-----|------|-----|----|-----|-----|
| 1.82 | 0.1 | 2.2 | 9.5 | 2.8 | 37 | 4.0 | 135 |
| 1.9 | .5 | 2.3 | 13.5 | 3.0 | 49 | 4.4 | 189 |
| 2.0 | 2.7 | 2.4 | 17.5 | 3.3 | 69 | 4.8 | 260 |
| 2.1 | 6 | 2.6 | 27 | 3.6 | 94 | 5.6 | 474 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 0.5 | 1.2 | 0.3 | | | | b54 | 275 | 110 | 10 | 0.5 | 0.2 |
| 2 | 2.7 | 1.0 | .4 | | | | b46 | 335 | 100 | 9 | .4 | .2 |
| 3 | 2.2 | 1.0 | .3 | | | | b44 | 345 | 87 | 7.5 | .4 | .2 |
| 4 | 1.4 | .8 | .4 | | | | b42 | 300 | 84 | 6.5 | .3 | .2 |
| 5 | 1.0 | .6 | .4 | | | | b40 | 290 | 77 | 5.5 | .3 | .2 |
| 6 | 1.6 | .6 | .5 | | | | b42 | 290 | 75 | 4.7 | .3 | .2 |
| 7 | 2.4 | .6 | .5 | | | | b48 | 300 | 70 | 4.4 | .3 | .2 |
| 8 | 3.4 | .6 | .4 | | | | b50 | 355 | 66 | 3.7 | .3 | .2 |
| 9 | 2.7 | .6 | .4 | | | | b62 | 405 | 61 | 3.4 | .3 | .2 |
| 10 | 2.7 | .5 | b.6 | | | | 84 | 380 | 54 | 3.0 | .3 | .2 |
| 11 | 2.4 | .4 | b3.5 | | | | 107 | 400 | 51 | 2.7 | .3 | .2 |
| 12 | 2.2 | .3 | b1.6 | | | | 133 | 390 | 47 | 2.7 | .3 | .3 |
| 13 | 1.9 | .3 | b1.2 | | | | 170 | 370 | 42 | 2.4 | .2 | .3 |
| 14 | 1.4 | .3 | b1.0 | | | | 170 | 365 | 38 | 2.2 | .2 | .2 |
| 15 | 1.0 | .3 | b.6 | | | | 141 | 299 | 34 | 2.2 | .2 | .3 |
| 16 | .6 | .3 | .8 | b6 | b7 | b35 | 99 | 260 | 30 | 1.9 | .2 | .3 |
| 17 | .6 | .3 | .6 | | | | 109 | 236 | 28 | 1.9 | .2 | .3 |
| 18 | .5 | .3 | .6 | | | | 152 | 240 | 24 | 1.9 | .2 | .3 |
| 19 | .5 | .3 | .6 | | | | 177 | 238 | 22 | 1.6 | .2 | .3 |
| 20 | .4 | .3 | .6 | | | | 197 | 236 | 20 | 1.4 | .2 | .3 |
| 21 | .4 | .3 | .5 | | | | 226 | 240 | 18 | 1.2 | .2 | .2 |
| 22 | .4 | .3 | .5 | | | | 226 | 226 | 16 | 1.2 | .2 | .2 |
| 23 | .4 | .3 | .5 | | | | 244 | 227 | 16 | 1.0 | .2 | .2 |
| 24 | .5 | .3 | .5 | | | | 236 | 224 | 15 | .8 | .2 | .2 |
| 25 | .8 | .3 | .5 | | | | 188 | 191 | 13 | .8 | .2 | .2 |
| 26 | 1.0 | .4 | .5 | | | | 139 | 163 | 12 | .6 | .2 | .2 |
| 27 | 1.2 | .4 | .5 | | | | 108 | 156 | 12 | .6 | .2 | .2 |
| 28 | 1.6 | .3 | .5 | | | | 105 | 147 | 12 | .6 | .2 | .2 |
| 29 | 1.6 | .3 | .8 | | | | 130 | 127 | 12 | .6 | .2 | .2 |
| 30 | 1.6 | .3 | 1.0 | | - | | 190 | 108 | 12 | .5 | .2 | .2 |
| 31 | 1.4 | - | 1.0 | | - | | - | 105 | - | .5 | .1 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 43.2 | 3.4 | 0.4 | 1.39 | 86 |
| November..... | 13.8 | 1.2 | .3 | .46 | 27 |
| December..... | 22.2 | 3.5 | .3 | .72 | 44 |
| Calendar year 1939..... | 6,693.0 | 172 | .1 | 18.9 | 13,670 |
| January..... | 186 | - | - | 6 | 369 |
| February..... | 203 | - | - | 7 | 403 |
| March..... | 1,085 | - | - | 35 | 2,150 |
| April..... | 3,759 | 244 | 40 | 125 | 7,460 |
| May..... | 8,225 | 405 | 105 | 265 | 16,310 |
| June..... | 1,258 | 110 | 12 | 41.9 | 2,500 |
| July..... | 87 | 10 | .5 | 2.81 | 173 |
| August..... | 7.7 | .5 | .1 | .25 | 15 |
| September..... | 6.6 | .5 | .2 | .23 | 13 |
| Water year 1939-40..... | 14,896.7 | 405 | .1 | 40.7 | 29,550 |

b Stage-discharge relation affected by ice.

Note.- No gage-height record Apr. 28 to May 14 and Sept. 16-28; discharge computed on basis of recorded range in stage and records for Huntington-Shaver conduit at outlet.

Shaver Lake near Big Creek, Calif.

Location.- Water-stage recorder, lat. 37°09', long. 119°18', in SE¼ sec. 13, T. 9 S., R. 24 E., at dam on Stevenson Creek and 6 miles southwest of town of Big Creek.

Datum of gage is at mean sea level.

Drainage area.- 29.7 square miles.

Records available.- January 1927 to September 1940.

Extremes.- Maximum contents during year, 135,200 acre-feet June 25, 27, July 5, 8 (elevation, 5,370.0 feet); minimum, 13,400 acre-feet Dec. 27-31 (elevation, 5,286.9 feet).

1927-40: Maximum contents, 135,600 acre-feet July 23, 1936 (elevation, 5,370.1 feet); minimum, 1,130 acre-feet Mar. 16, 1935 (elevation, 5,254.0 feet).

Remarks.- Lake is formed by concrete-arch dam, completed and storage began in January 1927. Usable capacity, 135,300 acre-feet between elevations 5,225 feet (trash-rack foundation) and 5,370 feet (crest of spillway) above mean sea level. Water is received from Huntington Lake and Pitman Creek through Huntington-Shaver conduit and released for power development in Big Creek plants. Records show contents at midnight, all of which is available for release.

Cooperation.- Record of contents furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 1 | 17,100 | 15,200 | 14,200 | 13,500 | 19,400 | 19,300 | 19,400 | 54,300 | 129,800 | 135,100 | 120,700 | 84,800 |
| 2 | 17,200 | 15,200 | 14,200 | 13,800 | 19,200 | 19,600 | 19,600 | 56,800 | 131,800 | 135,100 | 119,600 | 83,700 |
| 3 | 17,200 | 15,200 | 14,200 | 13,900 | 19,600 | 19,800 | 19,800 | 59,700 | 132,900 | 135,000 | 118,400 | 82,800 |
| 4 | 17,200 | 15,200 | 14,300 | 14,200 | 19,300 | 20,000 | 19,600 | 61,000 | 133,000 | 135,100 | 117,400 | 81,500 |
| 5 | 17,300 | 15,200 | 14,300 | 14,300 | 19,700 | 20,100 | 19,400 | 63,500 | 133,200 | 135,200 | 116,200 | 80,600 |
| 6 | 17,400 | 15,200 | 14,300 | 14,400 | 19,700 | 20,100 | 19,600 | 65,400 | 133,900 | 135,000 | 115,000 | 79,400 |
| 7 | 17,400 | 15,200 | 14,300 | 14,600 | 19,600 | 20,100 | 19,900 | 67,300 | 134,500 | 135,100 | 113,800 | 78,400 |
| 8 | 17,400 | 15,000 | 14,300 | 15,000 | 19,400 | 20,100 | 20,000 | 69,400 | 134,500 | 135,200 | 112,700 | 77,600 |
| 9 | 17,500 | 15,000 | 14,300 | 15,800 | 19,200 | 20,200 | 20,100 | 71,500 | 134,700 | 135,100 | 111,500 | 76,600 |
| 10 | 17,200 | 15,000 | 14,400 | 16,200 | 19,200 | 20,400 | 20,200 | 73,600 | 134,600 | 135,100 | 110,300 | 75,600 |
| 11 | 17,100 | 15,100 | 14,500 | 16,900 | 19,200 | 20,300 | 20,400 | 76,600 | 134,400 | 135,000 | 109,100 | 74,600 |
| 12 | 17,100 | 15,100 | 14,500 | 17,200 | 19,100 | 20,100 | 20,600 | 79,700 | 134,500 | 134,500 | 107,900 | 73,900 |
| 13 | 17,000 | 15,100 | 14,500 | 17,300 | 19,900 | 20,000 | 20,900 | 82,300 | 134,900 | 134,200 | 106,700 | 73,100 |
| 14 | 16,900 | 15,100 | 14,500 | 17,400 | 18,800 | 19,500 | 21,400 | 84,800 | 135,100 | 134,200 | 105,500 | 72,700 |
| 15 | 16,900 | 15,100 | 14,500 | 17,500 | 18,600 | 19,500 | 21,900 | 87,400 | 135,100 | 133,500 | 104,300 | 72,600 |
| 16 | 16,800 | 15,100 | 14,500 | 17,600 | 18,300 | 19,500 | 23,100 | 89,900 | 135,100 | 132,900 | 103,100 | 72,100 |
| 17 | 16,700 | 15,100 | 14,500 | 17,700 | 18,300 | 19,600 | 24,700 | 92,500 | 135,100 | 132,200 | 101,900 | 71,600 |
| 18 | 16,600 | 15,100 | 14,600 | 17,800 | 18,300 | 19,200 | 26,800 | 95,200 | 135,100 | 132,000 | 100,800 | 71,000 |
| 19 | 16,400 | 15,100 | 14,600 | 17,800 | 18,000 | 18,800 | 28,900 | 98,300 | 135,100 | 132,000 | 99,600 | 70,500 |
| 20 | 16,300 | 15,100 | 14,600 | 17,900 | 17,600 | 18,400 | 31,300 | 100,700 | 135,100 | 132,000 | 98,400 | 70,000 |
| 21 | 16,200 | 15,100 | 14,600 | 17,900 | 17,200 | 18,000 | 33,800 | 103,300 | 135,000 | 131,900 | 97,200 | 69,800 |
| 22 | 16,200 | 15,100 | 14,200 | 18,000 | 17,700 | 17,700 | 35,900 | 105,700 | 135,000 | 132,200 | 96,100 | 69,700 |
| 23 | 16,000 | 15,100 | 14,100 | 18,000 | 17,500 | 17,700 | 38,000 | 108,100 | 135,100 | 129,900 | 94,900 | 69,200 |
| 24 | 15,900 | 15,100 | 14,100 | 18,100 | 17,600 | 17,600 | 40,100 | 110,700 | 135,100 | 128,900 | 93,800 | 68,500 |
| 25 | 15,800 | 15,200 | 14,100 | 18,600 | 18,100 | 17,400 | 42,000 | 113,400 | 135,200 | 127,700 | 92,700 | 67,800 |
| 26 | 15,300 | 15,200 | 13,800 | 19,000 | 18,300 | 17,300 | 44,000 | 116,300 | 135,100 | 126,600 | 91,500 | 67,000 |
| 27 | 15,200 | 15,200 | 13,400 | 19,100 | 18,600 | 17,800 | 46,200 | 118,700 | 135,200 | 125,700 | 90,400 | 66,500 |
| 28 | 15,300 | 15,000 | 13,400 | 19,300 | 18,900 | 17,900 | 48,400 | 121,000 | 135,100 | 125,100 | 89,200 | 65,900 |
| 29 | 15,300 | 14,700 | 13,400 | 19,400 | 19,100 | 17,900 | 50,300 | 123,300 | 134,700 | 124,200 | 88,100 | 65,500 |
| 30 | 15,300 | 14,300 | 13,400 | 19,400 | - | 18,500 | 52,300 | 125,200 | 135,000 | 123,000 | 86,900 | 64,900 |
| 31 | 15,300 | - | 13,400 | 19,500 | - | 19,200 | - | 128,500 | - | 121,900 | 85,800 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 5,291.9 | 17,000 | - |
| Oct. 31..... | 5,289.6 | 15,300 | -1,700 |
| Nov. 30..... | 5,288.2 | 14,300 | -1,000 |
| Dec. 31..... | 5,286.9 | 13,400 | -900 |
| Calendar year 1939..... | - | - | -48,500 |
| Jan. 31..... | 5,295.0 | 19,500 | +6,100 |
| Feb. 29..... | 5,294.5 | 19,100 | -400 |
| Mar. 31..... | 5,294.6 | 19,200 | +100 |
| Apr. 30..... | 5,324.1 | 52,300 | +33,100 |
| May 31..... | 5,366.7 | 128,300 | +76,000 |
| June 30..... | 5,369.9 | 135,000 | +6,700 |
| July 31..... | 5,365.7 | 121,900 | -13,100 |
| Aug. 31..... | 5,345.2 | 85,900 | -36,100 |
| Sept. 30..... | 5,332.6 | 64,900 | -20,900 |
| Water year 1939-40..... | - | - | +47,900 |

Huntington-Shaver conduit at outlet, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°10', long. 119°14', in SW $\frac{1}{4}$ sec. 10, T. 9 S., R. 25 E., at tunnel outlet, 4 miles south of town of Big Creek. Altitude of gage, about 6,660 feet (from topographic map).

Records available.- October 1928 to September 1940.

Average discharge.- 11 years (1929-40), 161 second-feet.

Extremes.- Maximum daily discharge during year, 1,670 second-feet May 11, 12; minimum, 2.4 second-feet, Dec. 22-23.

1928-40: Maximum daily discharge, 1,700 second-feet June 3, 4, 1938; minimum, 1.5 second-feet Sept. 12-16, 1934.

Remarks.- Records good. Conduit diverts water from Huntington Lake to Shaver Lake, picking up water diverted from Pitman Creek and seepage en route.

Cooperation.- Water-stage recorder graph and results of one discharge measurement furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 2.6 | 3.4 | 2.6 | 3.1 | 8.5 | 16 | 59 | 1,260 | 1,150 | 545 | 3.6 | 2.8 |
| 2 | 4.5 | 3.4 | 2.8 | 34 | 8.5 | 16 | 51 | 1,340 | 1,150 | 522 | 3.4 | 2.8 |
| 3 | 4.2 | 3.2 | 2.6 | 13 | 9 | 15 | 48 | 1,340 | 896 | 458 | 3.4 | 2.8 |
| 4 | 3.6 | 3.2 | 2.6 | 6.5 | 9.5 | 15 | 47 | 1,320 | 502 | 235 | 3.4 | 2.6 |
| 5 | 3.2 | 3.2 | 2.6 | 6 | 9 | 15 | 43 | 1,310 | 499 | 469 | 3.2 | 2.6 |
| 6 | 3.6 | 3.0 | 2.8 | 6.5 | 9 | 16 | 46 | 1,310 | 773 | 398 | 3.2 | 2.6 |
| 7 | 4.2 | 3.0 | 3.0 | 6 | 9 | 17 | 52 | 1,330 | 667 | 338 | 3.2 | 2.6 |
| 8 | 5 | 3.0 | 2.8 | 5.5 | 9 | 20 | 55 | 1,440 | 337 | 455 | 3.2 | 2.6 |
| 9 | 4.8 | 3.0 | 2.6 | 5.5 | 8.5 | 22 | 68 | 1,400 | 264 | 531 | 3.2 | 2.6 |
| 10 | 4.5 | 3.0 | 2.8 | 5 | 8.5 | 21 | 90 | 1,520 | 326 | 502 | 3.2 | 2.6 |
| 11 | 4.2 | 3.0 | 6.5 | 5.5 | 8.5 | 19 | 114 | 1,670 | 329 | 380 | 3.2 | 2.6 |
| 12 | 4.2 | 3.0 | 3.9 | 5.5 | 8.5 | 18 | 141 | 1,670 | 462 | 154 | 3.0 | 2.6 |
| 13 | 3.9 | 2.8 | 5.4 | 5.5 | 8.5 | 17 | 179 | 1,660 | 671 | 230 | 3.0 | 2.6 |
| 14 | 3.6 | 2.8 | 3.0 | 5.5 | 8.5 | 17 | 181 | 1,660 | 573 | 152 | 3.0 | 2.6 |
| 15 | 3.4 | 2.8 | 3.0 | 5.5 | 8.5 | 18 | 343 | 1,660 | 440 | 52 | 3.0 | 2.6 |
| 16 | 3.2 | 2.8 | 3.0 | 5.5 | 8.5 | 20 | 741 | 1,640 | 166 | 170 | 3.0 | 2.6 |
| 17 | 3.2 | 2.8 | 3.0 | 5.5 | 8 | 22 | 951 | 1,640 | 404 | 103 | 3.0 | 2.6 |
| 18 | 3.0 | 2.8 | 2.8 | 5.5 | 8 | 24 | 1,170 | 1,640 | 402 | 12 | 3.0 | a2.6 |
| 19 | 3.0 | 2.8 | 2.8 | 5.5 | 8 | 27 | 1,190 | 1,650 | 447 | 11 | 3.0 | a2.6 |
| 20 | 3.0 | 2.8 | 2.6 | 5.5 | 8 | 34 | 1,220 | 1,660 | 440 | 11 | 3.0 | a2.6 |
| 21 | 2.8 | 2.8 | 2.6 | 5.5 | 8 | 42 | 1,270 | 1,660 | 420 | 11 | 3.0 | 2.6 |
| 22 | 2.8 | 2.8 | 2.4 | 5.5 | 8 | 51 | 1,270 | 1,650 | 417 | 9 | 3.0 | 2.6 |
| 23 | 2.8 | 2.8 | 2.4 | 5.5 | 8.5 | 62 | 1,340 | 1,650 | 237 | 5 | 3.0 | 2.6 |
| 24 | 2.8 | 2.8 | 2.4 | 5.5 | 9 | 70 | 1,330 | 1,650 | 466 | 4.8 | 3.0 | 2.6 |
| 25 | 3.0 | 2.8 | 2.4 | 5.5 | 9 | 94 | 1,200 | 1,640 | 506 | 4.5 | 2.8 | 2.6 |
| 26 | 3.0 | 2.8 | 2.4 | 7.5 | 10 | 98 | 1,140 | 1,640 | 447 | 4.5 | 2.8 | 2.6 |
| 27 | 3.2 | 2.8 | 2.4 | 8.5 | 10 | 136 | 1,110 | 1,630 | 558 | 4.2 | 2.6 | 2.6 |
| 28 | 3.4 | 2.6 | 2.4 | 9 | 12 | 99 | 1,100 | 1,630 | 478 | 3.9 | 2.8 | 2.6 |
| 29 | 3.6 | 2.6 | 2.6 | 9 | 16 | 75 | 1,120 | 1,620 | 295 | 3.6 | 2.8 | 2.8 |
| 30 | 3.9 | 2.6 | 2.8 | 9 | - | 76 | 1,170 | 1,610 | 424 | 3.6 | 2.8 | 2.8 |
| 31 | 3.6 | - | 2.8 | 8.5 | - | 67 | - | 1,470 | - | 3.6 | 2.8 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 109.8 | 5 | 2.6 | 3.54 | 218 | | |
| November..... | | | | | | 87.2 | 3.4 | 2.6 | 2.91 | 173 | | |
| December..... | | | | | | 86.8 | 6.5 | 2.4 | 2.86 | 176 | | |
| Calendar year 1939..... | | | | | | 20,576.2 | 1,180 | 2.4 | 56.1 | 40,820 | | |
| January..... | | | | | | 225.1 | 34 | 3.1 | 7.26 | 446 | | |
| February..... | | | | | | 262.0 | 16 | 8 | 9.03 | 520 | | |
| March..... | | | | | | 1,259 | 136 | 15 | 40.6 | 2,500 | | |
| April..... | | | | | | 18,839 | 1,340 | 43 | 628 | 37,370 | | |
| May..... | | | | | | 47,970 | 1,670 | 1,260 | 1,547 | 95,150 | | |
| June..... | | | | | | 15,146 | 1,150 | 166 | 505 | 30,040 | | |
| July..... | | | | | | 5,785.7 | 545 | 3.6 | 187 | 11,480 | | |
| August..... | | | | | | 94.8 | 3.6 | 2.8 | 3.06 | 168 | | |
| September..... | | | | | | 79.0 | 2.8 | 2.6 | 2.63 | 157 | | |
| Water year 1939-40..... | | | | | | 69,946.4 | 1,670 | 2.4 | 246 | 178,400 | | |

a No gage-height record; discharge interpolated.

Fine Gold Creek near Friant, Calif.

Location.- Water-stage recorder, lat. 37°03', long. 119°39', in NW¼ sec. 14, T. 10 S., R. 21 E., 1,000 feet downstream from Willow Creek, 1½ miles upstream from mouth, and 5½ miles northeast of Friant. Altitude of gage, about 680 feet (from topographic map).

Drainage area.- 89.2 square miles.

Records available.- October 1936 to September 1940.

Extremes.- Maximum discharge during year, 4,550 second-feet Jan. 25 (gage height, 13.53 feet); no flow July 26 to Aug. 3 and Aug. 11 to Sept. 30.
1936-40: Maximum discharge, 10,300 second-feet Mar. 12, 1938 (gage height, 20.4 feet, from floodmarks), from rating curve extended above 6,500 second-feet; no flow at times.

Remarks.- Records fair except those for periods of no or doubtful gage-height record, which are poor. No storage or diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 1 | 2.0 | 2.3 | 4.3 | 56 | 505 | 153 | 25 | 6 | 2.7 | 0 | |
| 2 | 2 | 2.0 | 2.3 | 13 | 69 | 356 | 102 | 22 | 6 | 2.2 | 0 | |
| 3 | 5 | 2.0 | 2.3 | 29 | 290 | 262 | 83 | 20 | 5.5 | 1.9 | 0 | |
| 4 | 2.5 | 2.0 | 2.3 | 45 | 344 | 212 | 75 | 20 | 5 | 1.7 | .3 | |
| 5 | 2 | 2.0 | 2.3 | 23 | 192 | 178 | 68 | 20 | 5 | 1.4 | .2 | |
| 6 | 2 | 2.0 | 2.3 | 13 | 140 | 155 | 64 | 19 | 4.7 | 1.2 | .2 | |
| 7 | 2 | 2.0 | 2.3 | 22 | 133 | 133 | 61 | 18 | 4.7 | 1.1 | .2 | |
| 8 | 1.9 | 2.0 | 2.3 | 222 | 92 | 123 | 57 | 18 | 4.6 | .6 | .1 | |
| 9 | 1.9 | 2.0 | 2.3 | 203 | 80 | 123 | 54 | 17 | 4.4 | .8 | .1 | |
| 10 | 1.8 | 2.0 | 2.4 | 593 | 77 | 112 | 53 | 16 | 4.2 | .7 | .1 | |
| 11 | 1.8 | 2.0 | 10 | 723 | 76 | 104 | 52 | 15 | 4.0 | .5 | 0 | |
| 12 | 1.7 | 2.1 | 7 | 352 | 71 | 95 | 48 | 14 | 3.8 | .5 | 0 | |
| 13 | 1.7 | 2.1 | 5.5 | 123 | 69 | 87 | 46 | 13 | 3.7 | .3 | 0 | |
| 14 | 1.6 | 2.1 | 5 | 70 | 266 | 83 | 45 | 12 | 3.4 | .1 | 0 | |
| 15 | 1.7 | 2.2 | 4.7 | 46 | 174 | 80 | 44 | 11 | 3.3 | .2 | 0 | |
| 16 | 1.6 | 2.2 | 4.4 | 38 | 107 | 76 | 44 | 10 | 3.2 | .3 | 0 | |
| 17 | 1.6 | 2.2 | 4.4 | 33 | 133 | 71 | 43 | 10 | 3.1 | 1.1 | 0 | |
| 18 | 1.6 | 2.2 | 4.4 | 32 | 136 | 68 | 40 | 10 | 3.1 | 1.1 | 0 | |
| 19 | 1.6 | 2.2 | 4.3 | 30 | 90 | 64 | 40 | 10 | 3.1 | 1.0 | 0 | |
| 20 | 1.7 | 2.2 | 4.3 | 28 | 79 | 61 | 38 | 9 | 3.3 | 1.2 | 0 | |
| 21 | 1.8 | 2.2 | 4.4 | 28 | 75 | 58 | 36 | 8 | 3.2 | 1.3 | 0 | |
| 22 | 1.7 | 2.2 | 4.4 | 28 | 77 | 56 | 34 | 8 | 3.1 | .8 | 0 | |
| 23 | 1.6 | 2.2 | 4.4 | 29 | 458 | 53 | 33 | 7.5 | 2.9 | 1.0 | 0 | |
| 24 | 1.7 | 2.2 | 4.5 | 30 | 270 | 52 | 32 | 7 | 2.8 | .7 | 0 | |
| 25 | 2.2 | 2.2 | 4.4 | 749 | 308 | 52 | 32 | 6.5 | 2.6 | .3 | 0 | |
| 26 | 2.2 | 2.3 | 4.4 | 1,260 | 559 | 57 | 51 | 6.5 | 2.6 | 0 | 0 | |
| 27 | 2.2 | 2.4 | 4.3 | 348 | 851 | 306 | 40 | 6 | 2.4 | 0 | 0 | |
| 28 | 2.1 | 2.5 | 4.3 | 186 | 587 | 125 | 32 | 6 | 2.2 | 0 | 0 | |
| 29 | 2.0 | 2.4 | 4.2 | 87 | 793 | 89 | 29 | 6 | 2.6 | 0 | 0 | |
| 30 | 2.0 | 2.3 | 4.1 | 64 | - | 113 | 27 | 6 | 2.9 | 0 | 0 | |
| 31 | 2.0 | - | 4.1 | 55 | - | 335 | - | 5.5 | - | 0 | 0 | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 60.2 | 5 | 1 | 1.94 | 119 | | | |
| November..... | | | | | 64.4 | 2.5 | 2.0 | 2.15 | 128 | | | |
| December..... | | | | | 124.6 | 10 | 2.3 | 4.02 | 247 | | | |
| Calendar year 1939..... | | | | | 3,005.7 | 128 | 0 | 8.23 | 5,960 | | | |
| January..... | | | | | 5,486.3 | 1,260 | 4.3 | 177 | 10,680 | | | |
| February..... | | | | | 6,652 | 851 | 56 | 229 | 13,190 | | | |
| March..... | | | | | 4,244 | 505 | 52 | 137 | 8,420 | | | |
| April..... | | | | | 1,556 | 153 | 27 | 51.9 | 3,090 | | | |
| May..... | | | | | 382.0 | 25 | 5.5 | 12.5 | 756 | | | |
| June..... | | | | | 111.4 | 6 | 2.2 | 3.71 | 221 | | | |
| July..... | | | | | 24.7 | 2.7 | 0 | .80 | 49 | | | |
| August..... | | | | | 1.2 | .3 | 0 | .04 | 2.4 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 18,706.8 | 1,260 | 0 | 51.1 | 37,100 | | | |

Peak discharge.- Jan. 10 (9:30 p.m.) 1,750 sec.-ft.; Jan. 25 (11 p.m.) 4,650 sec.-ft.; Feb. 23 (12 m.) 707 sec.-ft.; Feb. 26 (12:30 a.m.) 1,070 sec.-ft.; Feb. 27 (12:30 p.m.) 1,450 sec.-ft.; Mar. 27 (9 a.m.) 460 sec.-ft.

Note.- Discharge for periods of no gage-height record, Oct. 1-10, Nov. 20 to Dec. 1, Dec. 3-4 and 15, and period of doubtful gage-height record, July 13 to Aug. 10, computed on basis of range of stage, several staff-gage readings and records for Chowchilla River at Buchanan dam site.

Fresno River near Knowles, Calif.

Location.- Water-stage recorder and concrete control, lat. 37°14', long. 119°46', in NW 1/4 sec. 15, T. 8 S., R. 20 E., at Fresno Crossing, 0.1 mile downstream from Bean Gulch and 6 miles northeast of Knowles. Altitude of gage, about 1,140 feet (from topographic map).

Drainage area.- 132 square miles.

Records available.- September 1911 to December 1913, November 1915 to September 1940.

Average discharge.- 25 years (1911-12, 1916-40), 78.5 second-feet.

Extremes.- Maximum discharge during year, 2,200 second-feet Jan. 26 (gage height, 4.48 feet); minimum, 1.8 second-feet Aug. 22 (gage height, 0.93 foot).
1911-13; 1915-40: Maximum discharge, 7,630 second-feet Mar. 12, 1938 (gage height, 8.67 feet); no flow at times in 1919, 1924, 1926, 1928-31, 1933-34.

Remarks.- Records good. Water is diverted into Fresno River Basin above station from San Joaquin and Merced River Basins. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | 11 | 10 | 9 | 18 | 138 | 658 | 429 | 181 | 116 | 28 | 5.5 | 2.7 |
| 2 | 28 | 9.5 | 9 | 45 | 130 | 484 | 365 | 194 | 116 | 26 | 5.5 | 2.8 |
| 3 | 46 | 9.5 | 9 | 104 | 466 | 376 | 336 | 194 | 110 | 23 | 5.5 | 2.8 |
| 4 | 26 | 9.5 | 9 | 129 | 434 | 315 | 300 | 194 | 108 | 22 | 5 | 3.3 |
| 5 | 19 | 10 | 9 | 80 | 238 | 271 | 285 | 190 | 100 | 20 | 5 | 4.3 |
| 6 | 20 | 10 | 9 | 48 | 190 | 243 | 257 | 186 | 97 | 20 | 4.6 | 4.3 |
| 7 | 28 | 10 | 9 | 62 | 177 | 220 | 243 | 181 | 90 | 16 | 4.6 | 4.3 |
| 8 | 22 | 9.5 | 9 | 473 | 138 | 203 | 229 | 181 | 84 | 11 | 4.3 | 4.0 |
| 9 | 18 | 9.5 | 9 | 503 | 120 | 181 | 220 | 177 | 81 | 12 | 4.3 | 3.7 |
| 10 | 17 | 10 | 9.5 | 1,060 | 113 | 169 | 216 | 173 | 76 | 12 | 4.0 | 3.3 |
| 11 | 14 | 9.5 | 24 | 1,110 | 103 | 169 | 207 | 169 | 73 | 12 | 4.0 | 3.0 |
| 12 | 14 | 9 | 19 | 584 | 97 | 152 | 203 | 165 | 68 | 13 | 4.6 | 3.3 |
| 13 | 13 | 9 | 14 | 260 | 90 | 145 | 203 | 160 | 62 | 13 | 5.5 | 3.3 |
| 14 | 12 | 9 | 12 | 161 | 225 | 138 | 198 | 160 | 60 | 13 | 4.0 | 3.7 |
| 15 | 12 | 9 | 12 | 124 | 181 | 127 | 203 | 162 | 57 | 13 | 3.0 | 3.7 |
| 16 | 11 | 9.5 | 11 | 101 | 130 | 123 | 194 | 162 | 55 | 12 | 3.0 | 3.7 |
| 17 | 10 | 10 | 11 | 86 | 145 | 120 | 177 | 152 | 53 | 11 | 3.0 | 4.0 |
| 18 | 9.5 | 10 | 11 | 77 | 148 | 116 | 177 | 148 | 51 | 13 | 3.0 | 4.0 |
| 19 | 9.5 | 10 | 11 | 67 | 127 | 110 | 177 | 148 | 49 | 14 | 2.7 | 4.3 |
| 20 | 9.5 | 10 | 11 | 60 | 110 | 106 | 177 | 148 | 49 | 11 | 2.7 | 4.3 |
| 21 | 9.5 | 10 | 12 | 55 | 110 | 106 | 177 | 148 | 46 | 10 | 2.5 | 4.3 |
| 22 | 9 | 9.5 | 13 | 55 | 113 | 148 | 177 | 146 | 42 | 9 | 2.2 | 3.7 |
| 23 | 8.5 | 9.5 | 14 | 52 | 824 | 156 | 177 | 146 | 40 | 8.5 | 2.2 | 3.7 |
| 24 | 9.5 | 9 | 16 | 50 | 407 | 156 | 173 | 145 | 38 | 8 | 2.5 | 3.7 |
| 25 | 13 | 9 | 15 | 648 | 390 | 169 | 173 | 141 | 36 | 7 | 2.7 | 3.7 |
| 26 | 13 | 9.5 | 14 | 1,310 | 548 | 203 | 225 | 138 | 34 | 6 | 2.8 | 3.7 |
| 27 | 12 | 10 | 15 | 402 | 1,270 | 746 | 190 | 130 | 33 | 5.5 | 2.8 | 3.3 |
| 28 | 12 | 10 | 15 | 243 | 910 | 330 | 173 | 127 | 31 | 6 | 2.7 | 3.3 |
| 29 | 11 | 9.5 | 16 | 186 | 1,170 | 252 | 165 | 123 | 30 | 6 | 2.5 | 3.7 |
| 30 | 10 | 9.5 | 16 | 152 | - | 345 | 156 | 120 | 30 | 6 | 2.5 | 3.7 |
| 31 | 10 | - | 16 | 138 | - | 846 | - | 116 | - | 6 | 2.7 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 467 | | 46 | 8.5 | 15.1 | 926 | | | |
| November..... | | | | 288 | | 10 | 9 | 9.60 | 571 | | | |
| December..... | | | | 387.5 | | 24 | 9 | 12.5 | 769 | | | |
| Calendar year 1939..... | | | | 16,465.6 | | 381 | .6 | 45.1 | 32,660 | | | |
| January..... | | | | 8,433 | | 1,310 | 18 | 272 | 16,730 | | | |
| February..... | | | | 9,241 | | 1,270 | 90 | 319 | 18,350 | | | |
| March..... | | | | 7,862 | | 845 | 106 | 254 | 15,900 | | | |
| April..... | | | | 6,871 | | 429 | 156 | 219 | 13,030 | | | |
| May..... | | | | 4,883 | | 194 | 116 | 158 | 9,690 | | | |
| June..... | | | | 1,913 | | 116 | 30 | 63.8 | 3,790 | | | |
| July..... | | | | 392.0 | | 28 | 5.5 | 12.6 | 778 | | | |
| August..... | | | | 111.9 | | 5.5 | 2.2 | 3.61 | 222 | | | |
| September..... | | | | 109.6 | | 4.3 | 2.7 | 3.65 | 217 | | | |
| Water year 1939-40..... | | | | 40,659.0 | | 1,310 | 2.2 | 111 | 80,640 | | | |

Peak discharge.- Jan. 10 (11 p.m.) 1,960 sec.-ft.; Jan. 26 (2 a.m.) 2,200 sec.-ft.; Feb. 27 (2:30 p.m.) 1,860 sec.-ft.; Feb. 29 (9 a.m.) 1,700 sec.-ft.; Mar. 27 (6 a.m.) 1,260 sec.-ft.; Mar. 31 (3 a.m.) 1,220 sec.-ft.

CHOWCHILLA RIVER BASIN

Chowchilla River at Buchanan dam site, Calif.

Location.— Water-stage recorder, lat. 37°13', long. 120°00', in SW¼ sec. 22, T. 8 S., R. 18 E., 1.4 miles upstream from Raynor Creek and 5 miles west of Raymond. Altitude of gage, about 390 feet (from topographic map).

Drainage area.— 238 square miles.

Records available.— October 1921 to September 1923, October 1930 to September 1940.

Average discharge.— 10 years (1930-40) 121 second-feet.

Extremes.— Maximum discharge during year, 8,750 second-feet Jan. 26 (gage height, 11.58 feet); minimum discharge observed, less than 0.1 second-foot on Sept. 15.

1921-23; 1930-40: Maximum discharge, 15,000 second-feet Mar. 2, 1938 (gage height, 14.4 feet, from floodmarks), from rating curve extended above 5,000 second-feet; no flow for part of each year except 1937, 1938, and 1940.

Remarks.— Records good. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 5.5 | 5 | 7.5 | 11 | 216 | 1,040 | 506 | 96 | 29 | 7 | 0.3 | a0.1 |
| 2 | 27 | 5 | 7.5 | 24 | 266 | 715 | 352 | 92 | 30 | 6 | .3 | a.1 |
| 3 | 70 | 5 | 7.5 | 177 | 520 | 588 | 308 | 87 | 28 | 6 | .3 | a.1 |
| 4 | 29 | 5 | 7.5 | 281 | 990 | a500 | 275 | 87 | 26 | 4.1 | .3 | a.1 |
| 5 | 15 | 5 | 7.5 | 181 | 592 | a450 | 256 | 86 | 24 | 3.3 | .3 | a.1 |
| 6 | 16 | 5 | 7.5 | 82 | 395 | 390 | 231 | 85 | 23 | 2.8 | .3 | a.1 |
| 7 | 15 | 5 | 7 | 80 | 378 | 352 | 218 | 80 | 21 | 2.2 | .3 | a.1 |
| 8 | 13 | 5 | 7 | 754 | 284 | 323 | 202 | 77 | 19 | 1.8 | .3 | a.1 |
| 9 | 10 | 5 | 7 | 1,010 | 237 | 304 | 191 | 75 | 18 | 1.6 | .3 | a.1 |
| 10 | 8 | 5 | 8 | 2,090 | 212 | 277 | 183 | 70 | 17 | 1.2 | .3 | a.1 |
| 11 | 7 | 5 | 30 | 2,370 | 191 | 263 | 174 | 64 | 15 | 1.0 | .3 | a.1 |
| 12 | 6 | 5 | 34 | 1,030 | 172 | 246 | 159 | 61 | 14 | .9 | .3 | a.1 |
| 13 | 5.5 | 5 | 18 | 530 | 155 | 228 | 150 | 58 | 12 | .8 | .2 | a.1 |
| 14 | 5 | 5 | 14 | 263 | 404 | 216 | 142 | 54 | 12 | .9 | .2 | a.1 |
| 15 | 4.5 | 5.5 | 11 | 178 | 379 | 206 | 137 | 51 | 11 | .8 | .2 | a.1 |
| 16 | 4.2 | 5.5 | 10 | 134 | 244 | 197 | 147 | 50 | 10 | .8 | .2 | .1 |
| 17 | 3.9 | 5.5 | 10 | 110 | 263 | 186 | 127 | 49 | 10 | .9 | .2 | .1 |
| 18 | 3.7 | 5.5 | 9.5 | 96 | 304 | 178 | 120 | 50 | 9.5 | .8 | .2 | .1 |
| 19 | 3.8 | 5.5 | 9.5 | 84 | 231 | 167 | 117 | 47 | 9.5 | 1.0 | .2 | .1 |
| 20 | 3.9 | 6 | 9 | 73 | 204 | 159 | 110 | 43 | 9.5 | .9 | .2 | .1 |
| 21 | 3.9 | 5.5 | 9 | 87 | 193 | 153 | 105 | 41 | 9.5 | .8 | .2 | .1 |
| 22 | 3.9 | 5.5 | 9 | 63 | 195 | 147 | 99 | 38 | 8.5 | .7 | .2 | .1 |
| 23 | 3.7 | 5.5 | 9 | 60 | 199 | 139 | 97 | 36 | 7.5 | .6 | .2 | .1 |
| 24 | 4.5 | 5.5 | 9.5 | 57 | 529 | 133 | 95 | 34 | 7 | .4 | .2 | .1 |
| 25 | 5.5 | 5.5 | 9 | 1,260 | 417 | 137 | 96 | 33 | 6 | .4 | .2 | .1 |
| 26 | 7 | 7 | 9 | 3,340 | 695 | 153 | 158 | 32 | 6 | .3 | .2 | .1 |
| 27 | 6.5 | 8 | 9 | 755 | 2,240 | 792 | 160 | 32 | 5.5 | .3 | .2 | .1 |
| 28 | 6.5 | 9 | 9 | 456 | 1,530 | 339 | 119 | 31 | 5 | .3 | .2 | .1 |
| 29 | 6 | 8 | 9 | 299 | 1,890 | 268 | 108 | 30 | 5 | .3 | .2 | .1 |
| 30 | 5.5 | 7.5 | 9 | 242 | - | 310 | 101 | 30 | 6 | .3 | .2 | .1 |
| 31 | 5 | - | 9 | 204 | - | 1,270 | - | 29 | - | .3 | .2 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 314.0 | 70 | 3.7 | 10.1 | 623 | | |
| November..... | | | | | | 170.5 | 9 | 5 | 5.68 | 338 | | |
| December..... | | | | | | 328.5 | 34 | 7 | 10.6 | 652 | | |
| Calendar year 1939..... | | | | | | 11,208.6 | 525 | 0 | 30.7 | 22,240 | | |
| January..... | | | | | | 16,341 | 3,340 | 11 | 527 | 32,410 | | |
| February..... | | | | | | 15,624 | 2,240 | 155 | 539 | 30,990 | | |
| March..... | | | | | | 10,826 | 1,270 | 133 | 349 | 21,470 | | |
| April..... | | | | | | 5,231 | 506 | 95 | 174 | 10,380 | | |
| May..... | | | | | | 1,728 | 96 | 29 | 55.7 | 3,420 | | |
| June..... | | | | | | 413.5 | 30 | 5 | 13.8 | 820 | | |
| July..... | | | | | | 48.5 | 7 | .3 | 1.56 | 96 | | |
| August..... | | | | | | 7.4 | .3 | .2 | .24 | 15 | | |
| September..... | | | | | | 3.0 | .1 | .1 | .10 | 6 | | |
| Water year 1939-40..... | | | | | | 51,033.4 | 3,340 | .1 | 139 | 101,200 | | |

Peak discharge.— Jan. 10 (9:30 p.m.) 4,850 sec.-ft.; Jan. 26 (12:30 a.m.) 8,750 sec.-ft.; Feb. 3 (7:30 p.m.) 2,880 sec.-ft.; Feb. 27 (1 p.m.) 4,090 sec.-ft.; Feb. 29 (11:30 a.m.) 2,770 sec.-ft.; Mar. 31 (10 a.m.) 2,010 sec.-ft.

a No gage-height record; discharge interpolated.

Merced River at Happy Isles Bridge, near Yosemite, Calif.

Location.- Water-stage recorder, lat. $37^{\circ}43'54''$, long. $119^{\circ}33'28''$, at Happy Isles Bridge, 0.4 mile downstream from Illilouette Creek and 1½ miles southeast of Yosemite Lodge in Yosemite National Park, Mariposa County. Altitude of gage, about 4,000 feet (from topographic map).

Drainage area.- 181 square miles.

Records available.- August 1915 to September 1940.

Average discharge.- 25 years, 326 second-feet.

Extremes.- Maximum discharge during year, 2,620 second-feet May 25 (gage height, 6.72 feet); minimum, 4.2 second-feet Sept. 30.

1915-40: Maximum discharge, 10,600 second-feet Dec. 11, 1937 (gage height, 10.4 feet), from rating curve extended above 4,000 second-feet on basis of velocity-area studies; minimum, 1.5 second-feet Sept. 30, 1926.

Remarks.- Records good, except those for periods of no gage-height record, which are fair. Small diversion above station for water supply of Yosemite Valley.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-------|
| 1.3 | 4 | 2.0 | 45 | 2.9 | 209 | 4.4 | 760 |
| 1.4 | 6.5 | 2.2 | 67 | 3.2 | 294 | 5.0 | 1,100 |
| 1.5 | 11 | 2.4 | 99 | 3.5 | 392 | 5.5 | 1,445 |
| 1.7 | 23 | 2.6 | 137 | 3.8 | 502 | 6.5 | 2,360 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|------|------|-------|
| 1 | 57 | 60 | 19 | 19 | 125 | 169 | 446 | 963 | 1,550 | 593 | 92 | a20 |
| 2 | 148 | 54 | 19 | 128 | 115 | 169 | 368 | 1,300 | 1,460 | 556 | 87 | a20 |
| 3 | 214 | 48 | 18 | 78 | 113 | 167 | 332 | 1,380 | 1,430 | 554 | 79 | a20 |
| 4 | 131 | 44 | 18 | 94 | 131 | 155 | 304 | 1,180 | 1,510 | 548 | 72 | a20 |
| 5 | 206 | 41 | 19 | 59 | 115 | 150 | 275 | 1,100 | 1,360 | 487 | 67 | a19 |
| 6 | 191 | 38 | 19 | 51 | 117 | 157 | 270 | 1,180 | 1,490 | 468 | 65 | a18 |
| 7 | 176 | 36 | 19 | 60 | 121 | 161 | 307 | 1,190 | 1,510 | 442 | 62 | a17 |
| 8 | 156 | 34 | 19 | 67 | 112 | 220 | 320 | 1,440 | 1,580 | 399 | 61 | a16 |
| 9 | 141 | 34 | 19 | 79 | 106 | 236 | 355 | 1,740 | 1,600 | 361 | 61 | a14 |
| 10 | 135 | 32 | 21 | a95 | 101 | 214 | 432 | 2,000 | 1,570 | 329 | 61 | a13 |
| 11 | 139 | 31 | 34 | a130 | 103 | 186 | 532 | 2,200 | 1,670 | 288 | 61 | a12 |
| 12 | 150 | 30 | 23 | a118 | 103 | 155 | 671 | 2,200 | 1,750 | 267 | 61 | a11 |
| 13 | 148 | 28 | 23 | a105 | 97 | 148 | 825 | 2,170 | 1,810 | 250 | 62 | 10 |
| 14 | a140 | 25 | 21 | a95 | 96 | 144 | 969 | 2,120 | 1,680 | 239 | 61 | 9.5 |
| 15 | a125 | 24 | 21 | a85 | 97 | 152 | 882 | 2,070 | 1,620 | 222 | 60 | 9.5 |
| 16 | a115 | 23 | 20 | a80 | 87 | 166 | 657 | 2,040 | 1,560 | 214 | 56 | 9.5 |
| 17 | a105 | 22 | 20 | a70 | 96 | 183 | 614 | 1,890 | 1,870 | 199 | 52 | 9.5 |
| 18 | a90 | 22 | 19 | a65 | 90 | 191 | 775 | 1,820 | 1,300 | 173 | a45 | 9 |
| 19 | a75 | 22 | 19 | a65 | 80 | 193 | 915 | 1,740 | 1,140 | 157 | h39 | 9 |
| 20 | a70 | 21 | 19 | a60 | 87 | 214 | 987 | 1,830 | 1,020 | 146 | a56 | 8.5 |
| 21 | a65 | 21 | 16 | a60 | 92 | 261 | 1,080 | 2,070 | 1,130 | 133 | a33 | 7.5 |
| 22 | a60 | 20 | 15 | a60 | 87 | 323 | 1,240 | 2,110 | 1,130 | 121 | a30 | 7.5 |
| 23 | a55 | 19 | 17 | a50 | 99 | 417 | 1,310 | 2,100 | 882 | 117 | a29 | 6.5 |
| 24 | a50 | 19 | 14 | a70 | 119 | 479 | 1,230 | 2,280 | 945 | 119 | a28 | 6 |
| 25 | a55 | 19 | 9.5 | a100 | 108 | 552 | 1,050 | 2,170 | 825 | 148 | a27 | 6 |
| 26 | a60 | 21 | 13 | 212 | 131 | 576 | 805 | 1,690 | 726 | 159 | h26 | 6 |
| 27 | 72 | 19 | 12 | 169 | 144 | 820 | 653 | 1,730 | 666 | 139 | a25 | 5 |
| 28 | 84 | 18 | 14 | 146 | 181 | 597 | 601 | 1,780 | 746 | 127 | a24 | 5 |
| 29 | 87 | 18 | 15 | 153 | 196 | 475 | 609 | 1,600 | 726 | 121 | a23 | 5 |
| 30 | 76 | 19 | 15 | 127 | - | 442 | 680 | 1,540 | 746 | 110 | a21 | 4.8 |
| 31 | 67 | - | 16 | 127 | - | 521 | - | 1,230 | - | 99 | a21 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 3,500 | 214 | 50 | 113 | 6,940 |
| November..... | 862 | 60 | 18 | 28.7 | 1,710 |
| December..... | 563.5 | 34 | 9.5 | 18.2 | 1,120 |
| Calendar year 1939..... | 70,040.0 | 1,070 | 8 | 192 | 138,900 |
| January..... | 2,854 | 212 | 19 | 92.1 | 5,660 |
| February..... | 5,249 | 196 | 80 | 112 | 6,440 |
| March..... | 9,003 | 820 | 144 | 290 | 17,860 |
| April..... | 20,492 | 1,310 | 270 | 683 | 40,650 |
| May..... | 53,553 | 2,280 | 963 | 1,731 | 106,400 |
| June..... | 38,492 | 1,810 | 666 | 1,283 | 76,350 |
| July..... | 8,285 | 593 | 99 | 267 | 16,430 |
| August..... | 1,527 | 92 | 21 | 49.3 | 3,030 |
| September..... | 333.8 | 20 | 4.8 | 11.1 | 662 |
| Water year 1939-40..... | 142,814.3 | 2,280 | 4.8 | 390 | 283,300 |

a No gage-height record; discharge computed on basis of known range of stage and records for stations at Pohono Bridge and Tenaya Creek near Yosemite.

h Discharge computed from staff-gage reading.

Merced River at Pohono Bridge, near Yosemite, Calif.

Location.— Water-stage recorder, lat. 37°43'01", long. 119°39'55", 0.4 mile upstream from Artist Creek and 5 miles downstream from Yosemite Lodge, in Yosemite National Park, Mariposa County. Altitude of gage, about 3,870 feet (from topographic map).

Drainage area.— 321 square miles.

Records available.— November 1916 to September 1940.

Average discharge.— 23 years (1917-40), 563 second-feet.

Extremes.— Maximum discharge during year, 4,750 second-feet May 13 (gage height, 8.45 feet); minimum 22 second-feet September 28-30.

1916-40: Maximum discharge, 22,000 second-feet Dec. 11, 1937 (gage height, 19.1 feet), by computation of flow over diversion dam for Yosemite powerhouse, about 1 mile downstream; minimum, 3.3 second-feet Sept. 29, Oct. 1, 1924.

Remarks.— Records excellent except those for periods of no gage-height record, which are fair. Small diversion above station for Yosemite Valley water supply.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|-------|
| 0.7 | 20 | 1.8 | 159 | 3.6 | 735 | 6.0 | 2,240 |
| .9 | 32 | 2.1 | 221 | 4.0 | 930 | 6.5 | 2,640 |
| 1.1 | 49 | 2.4 | 296 | 4.5 | 1,220 | 7.0 | 3,100 |
| 1.3 | 72 | 2.8 | 420 | 5.0 | 1,520 | 7.5 | 3,620 |
| 1.5 | 103 | 3.2 | 565 | 5.5 | 1,870 | 8.0 | 4,200 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|------|---------|---------|-------|-------|------|------|-------|
| 1 | 74 | 92 | 35 | 31 | 264 | 389 | al, 010 | 2,140 | 2,430 | 744 | 130 | 38 |
| 2 | al80 | 82 | 35 | 324 | 282 | 383 | a850 | 2,790 | 2,300 | 690 | 123 | 38 |
| 3 | a280 | 75 | 34 | a205 | 277 | 357 | a770 | 2,980 | 2,220 | 694 | 114 | 37 |
| 4 | 249 | 69 | 34 | a200 | 282 | 345 | a710 | 2,630 | 2,300 | 668 | 107 | 38 |
| 5 | 282 | 66 | 34 | al70 | 254 | 339 | a620 | 2,350 | 2,110 | 597 | 100 | 37 |
| 6 | 299 | 59 | 34 | al45 | 277 | 342 | a620 | 2,500 | 2,220 | 565 | 95 | 37 |
| 7 | 272 | 56 | 34 | al30 | 249 | 383 | a720 | 2,530 | 2,160 | 537 | 92 | 35 |
| 8 | 226 | 54 | 34 | al65 | 235 | 476 | a740 | 2,970 | 2,220 | 490 | 89 | 34 |
| 9 | 195 | 52 | 34 | a200 | 226 | 511 | a830 | 3,330 | 2,220 | 448 | 87 | 33 |
| 10 | 179 | 50 | 38 | a270 | 228 | 462 | al, 010 | 3,800 | 2,160 | 413 | 86 | 31 |
| 11 | 175 | 49 | 54 | a350 | 228 | 396 | al, 230 | 4,160 | 2,190 | 367 | 87 | 30 |
| 12 | 181 | 47 | 42 | a320 | 217 | 333 | al, 510 | 4,140 | 2,260 | 336 | 87 | 29 |
| 13 | 151 | 44 | 38 | a290 | 210 | 324 | al, 830 | 4,080 | 2,300 | 313 | 87 | 29 |
| 14 | 177 | 43 | 38 | a260 | 219 | 321 | a2, 100 | 3,850 | 2,160 | 299 | 86 | 29 |
| 15 | 167 | 42 | 38 | a240 | 203 | 351 | al, 910 | 3,680 | 2,010 | 280 | 82 | 28 |
| 16 | 153 | 39 | 34 | a205 | 197 | 389 | al, 460 | 3,640 | 1,960 | 266 | 78 | 28 |
| 17 | 136 | 39 | 33 | al195 | 208 | 420 | al, 400 | 3,420 | 2,020 | 249 | 71 | 28 |
| 18 | 119 | 39 | 33 | al185 | 201 | 441 | al, 730 | 3,330 | 1,740 | 223 | 66 | 28 |
| 19 | 107 | 38 | 32 | al170 | 187 | 455 | 2,000 | 3,100 | 1,640 | 203 | 62 | 28 |
| 20 | 95 | 38 | 32 | al170 | 193 | 553 | 2,110 | 3,240 | 1,360 | 189 | 58 | 27 |
| 21 | 86 | 38 | 31 | al160 | 199 | 645 | 2,300 | 3,530 | 1,430 | 175 | 55 | 26 |
| 22 | 78 | 38 | 30 | al155 | 203 | 790 | 2,600 | 3,520 | 1,470 | 163 | 53 | 25 |
| 23 | 74 | 37 | 30 | al150 | 272 | 950 | 2,720 | 3,490 | 1,190 | 157 | 50 | 25 |
| 24 | 71 | 37 | 30 | al145 | 266 | 1,030 | 2,580 | 3,800 | 1,090 | 155 | 48 | 25 |
| 25 | 76 | 36 | 30 | a235 | 264 | 1,390 | 2,240 | 3,590 | 1,070 | 179 | 48 | 24 |
| 26 | 86 | 36 | 29 | a500 | 313 | 1,390 | 1,760 | 2,810 | 945 | 195 | 48 | 24 |
| 27 | 95 | 36 | 29 | 413 | 406 | 1,920 | 1,440 | 2,800 | 855 | 177 | 45 | 23 |
| 28 | 110 | 35 | 29 | 357 | 455 | 1,210 | 1,350 | 2,860 | 915 | 165 | 44 | 22 |
| 29 | 119 | 35 | 30 | 313 | 469 | al, 090 | 1,370 | 2,630 | 915 | 163 | 42 | 22 |
| 30 | 114 | 35 | 30 | 288 | - | al, 070 | 1,550 | 2,500 | 920 | 155 | 40 | 22 |
| 31 | 101 | - | 30 | 274 | - | al, 180 | - | 2,090 | - | 142 | 38 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 4,737 | 299 | 71 | 153 | 9,400 |
| November..... | 1,436 | 92 | 35 | 47.9 | 2,850 |
| December..... | 1,048 | 54 | 29 | 33.8 | 2,080 |
| Calendar year 1939..... | 121,810 | 1,940 | 24 | 334 | 241,600 |
| January..... | 7,215 | 500 | 31 | 233 | 14,310 |
| February..... | 7,454 | 469 | 187 | 257 | 14,780 |
| March..... | 20,635 | 1,920 | 321 | 666 | 40,930 |
| April..... | 45,070 | 2,720 | 620 | 1,502 | 89,390 |
| May..... | 97,960 | 4,160 | 2,090 | 3,160 | 194,300 |
| June..... | 52,680 | 2,430 | 855 | 1,756 | 104,500 |
| July..... | 10,397 | 744 | 142 | 335 | 20,650 |
| August..... | 2,529 | 130 | 38 | 74.1 | 4,550 |
| September..... | 880 | 38 | 22 | 29.3 | 1,750 |
| Water year 1939-40..... | 251,810 | 4,160 | 22 | 688 | 499,500 |

a No gage-height record; discharge computed on basis of records for station at Happy Isles Bridge and Tenya Creek near Yosemite.

Merced River at Kittridge, Calif.

Location.- Water-stage recorder, lat. 37°39', long. 120°11', in sec. 26, T. 3 S., R. 16 E., 0.2 mile downstream from Whites Gulch, a quarter of a mile downstream from Kittridge, and 3 1/4 miles downstream from Bagby. Altitude of gage, about 750 feet (from topographic map).

Drainage area.- 935 square miles.

Records available.- November 1928 to September 1940. November 1922 to November 1928, at site 1 1/4 miles downstream.

Average discharge.- 14 years (1923-27, 1929-30, 1931-40), 1,178 second-feet.

Extremes.- Maximum discharge during year, 13,500 second-feet Feb. 27 (gage height, 13.70 feet); minimum, 41 second-feet Sept. 29.

1922-40: Maximum discharge, 59,000 second-feet Dec. 11, 1937 (gage height, 31.0 feet, from floodmarks); from rating curve extended above 11,000 second-feet on basis of velocity-area studies and of records of storage increase in Lake McClure; minimum, 13 second-feet Oct. 5, 1925.

Remarks.- Records good. No large diversions above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|------|-------|
| 0.5 | 40 | 2.5 | 390 | 4.5 | 1,205 | 8.0 | 4,220 |
| 1.0 | 92 | 3.0 | 544 | 5.0 | 1,500 | 9.0 | 5,470 |
| 1.5 | 164 | 3.5 | 730 | 6.0 | 2,210 | 10.0 | 6,900 |
| 2.0 | 266 | 4.0 | 950 | 7.0 | 3,130 | 11.5 | 9,380 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 129 | 175 | 92 | 101 | 975 | 4,100 | 4,340 | 3,190 | 3,580 | 1,020 | 178 | 59 |
| 2 | 159 | 161 | 92 | 213 | 928 | 2,900 | 3,100 | 4,470 | 3,630 | 869 | 166 | 58 |
| 3 | 500 | 150 | 92 | 1,340 | 2,000 | 2,310 | 2,600 | 4,920 | 3,260 | 846 | 158 | 57 |
| 4 | 433 | 140 | 91 | 1,230 | 2,790 | 1,970 | 2,280 | 4,530 | 3,370 | 833 | 148 | 58 |
| 5 | 396 | 134 | 90 | 846 | 1,750 | 1,730 | 2,040 | 3,790 | 3,070 | 770 | 138 | 65 |
| 6 | 430 | 129 | 88 | 524 | 1,520 | 1,570 | 1,900 | 4,000 | 3,130 | 696 | 132 | 63 |
| 7 | 481 | 122 | 90 | 572 | 1,580 | 1,510 | 1,940 | 4,010 | 3,130 | 673 | 125 | 64 |
| 8 | 401 | 118 | 90 | 2,130 | 1,270 | 1,530 | 1,900 | 4,480 | 3,120 | 627 | 121 | 61 |
| 9 | 349 | 114 | 91 | 3,390 | 1,100 | 1,560 | 1,940 | 5,290 | 3,120 | 562 | 118 | 58 |
| 10 | 314 | 113 | 101 | 4,800 | 990 | 1,470 | 2,120 | 5,960 | 2,990 | 527 | 113 | 56 |
| 11 | 290 | 109 | 242 | 6,630 | 923 | 1,340 | 2,480 | 6,540 | 2,930 | 491 | 112 | 54 |
| 12 | 290 | 108 | 244 | 3,410 | 856 | 1,180 | 2,860 | 6,480 | 3,000 | 433 | 112 | 51 |
| 13 | 293 | 105 | 162 | 1,760 | 792 | 1,100 | 3,350 | 6,460 | 3,020 | 401 | 112 | 50 |
| 14 | 261 | 102 | 134 | 1,170 | 1,240 | 1,060 | 3,870 | 6,160 | 2,890 | 382 | 110 | 50 |
| 15 | 266 | 101 | 121 | 910 | 1,310 | 1,060 | 3,790 | 5,770 | 2,670 | 365 | 109 | 50 |
| 16 | 244 | 98 | 117 | 770 | 1,080 | 1,090 | 2,820 | 5,710 | 2,470 | 344 | 108 | 51 |
| 17 | 280 | 96 | 110 | 669 | 1,100 | 1,130 | 2,500 | 5,300 | 2,570 | 339 | 106 | 50 |
| 18 | 200 | 93 | 108 | 605 | 1,180 | 1,140 | 2,910 | 5,360 | 2,300 | 317 | 101 | 51 |
| 19 | 177 | 92 | 105 | 551 | 1,040 | 1,140 | 3,450 | 4,910 | 1,990 | 290 | 93 | 52 |
| 20 | 162 | 92 | 104 | 510 | 950 | 1,240 | 3,670 | 4,960 | 1,760 | 270 | 90 | 51 |
| 21 | 148 | 92 | 101 | 473 | 896 | 1,380 | 3,940 | 5,540 | 1,740 | 262 | 84 | 51 |
| 22 | 135 | 91 | 98 | 464 | 892 | 1,540 | 4,450 | 5,400 | 1,830 | 237 | 77 | 48 |
| 23 | 128 | 90 | 93 | 439 | 3,140 | 1,790 | 4,700 | 5,380 | 1,560 | 222 | 77 | 47 |
| 24 | 128 | 86 | 92 | 430 | 2,680 | 1,940 | 4,560 | 5,950 | 1,370 | 212 | 74 | 45 |
| 25 | 156 | 91 | 93 | 2,690 | 2,000 | 2,350 | 4,070 | 5,800 | 1,330 | 204 | 70 | 44 |
| 26 | 162 | 114 | 90 | 7,150 | 2,550 | 2,600 | 3,230 | 4,400 | 1,220 | 225 | 70 | 44 |
| 27 | 161 | 121 | 87 | 2,640 | 9,300 | 5,930 | 2,620 | 4,240 | 1,090 | 242 | 68 | 43 |
| 28 | 171 | 108 | 90 | 1,690 | 6,100 | 3,320 | 2,350 | 4,400 | 1,080 | 218 | 68 | 42 |
| 29 | 202 | 97 | 90 | 1,300 | 6,390 | 2,790 | 2,280 | 4,110 | 1,140 | 208 | 65 | 42 |
| 30 | 210 | 93 | 92 | 1,100 | - | 4,600 | 2,420 | 3,620 | 1,120 | 206 | 64 | 43 |
| 31 | 196 | - | 95 | 995 | - | 6,820 | - | 3,080 | - | 194 | 61 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 7,812 | 500 | 128 | 252 | 15,490 |
| November..... | 3,335 | 175 | 86 | 111 | 6,610 |
| December..... | 3,385 | 244 | 87 | 109 | 6,710 |
| Calendar year 1939..... | 222,666 | 3,300 | 31 | 610 | 441,700 |
| January..... | 51,497 | 7,150 | 101 | 1,661 | 102,100 |
| February..... | 59,322 | 9,300 | 792 | 2,046 | 117,700 |
| March..... | 69,090 | 8,820 | 1,060 | 2,229 | 137,000 |
| April..... | 90,470 | 4,700 | 1,900 | 3,016 | 179,400 |
| May..... | 154,230 | 6,640 | 3,080 | 4,976 | 305,900 |
| June..... | 71,480 | 3,630 | 1,060 | 2,383 | 141,800 |
| July..... | 13,476 | 1,020 | 194 | 435 | 26,730 |
| August..... | 3,228 | 178 | 61 | 104 | 6,400 |
| September..... | 1,555 | 64 | 42 | 51.8 | 3,080 |
| Water year 1939-40..... | 528,880 | 9,300 | 42 | 1,445 | 1,049,000 |

Peak discharge.- Jan. 10 (11:30 p.m.) 10,300 sec.-ft.; Jan. 25 (12 p.m.) 12,600 sec.-ft.; Feb. 27 (11 a.m.) 13,500 sec.-ft.; Mar. 27 (7 a.m.) 8,820 sec.-ft.; Mar. 31 (4:30 a.m.) 12,000 sec.-ft.; May 11 (4 a.m.) 7,710 sec.-ft.

MERCED RIVER BASIN

Lake McClure at Exchequer, Calif.

Location.- Indicator in powerhouse, lat. 37°35', long. 120°16', in SW $\frac{1}{4}$ sec. 13, T. 4 S., R. 15 E., at Exchequer Dam on Merced River and 5 miles northeast of Merced Falls. Datum of gage is at mean sea level.

Drainage area.- 1,020 square miles.

Records available.- April 1926 to September 1940.

Extremes.- Maximum contents during year, 285,900 acre-feet June 13 (elevation, 708.7 feet); minimum, 4,000 acre-feet Oct. 1 (elevation, 483.0 feet).
1926-40: Maximum contents, 289,400 acre-feet June 4, 1938 (elevation, 710.0 feet); practically no storage Aug. 28 to Nov. 22, 1926, Sept. 21 to Nov. 16, 1930, Sept. 2 to Nov. 15, 1931, Sept. 15 to Oct. 31, 1934.

Remarks.- Reservoir is formed by concrete gravity-type dam completed in 1926; storage began in April 1926. Capacity, 280,900 acre-feet between elevations 442.6 feet (bottom of sluice valve) and 707.0 feet (top of spillway gates) above mean sea level. Figures herein represent total contents; dead storage, 400 acre-feet, or less. Water passes through power plant at dam and down Merced River to diversion dam of Merced Irrigation District's main canal. Contents are computed from gage height at midnight.

Cooperation.- Gage-height record furnished by Merced Irrigation District in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 4,000 | 16,800 | 20,600 | 25,000 | 147,800 | 234,100 | 261,200 | 248,000 | 283,500 | 271,300 | 187,300 | 102,100 |
| 2 | 4,170 | 17,000 | 20,600 | 25,300 | 147,500 | 238,200 | 268,200 | 253,000 | 283,700 | 269,500 | 184,300 | 99,400 |
| 3 | 5,060 | 17,200 | 20,800 | 28,200 | 149,700 | 240,800 | 264,000 | 256,000 | 283,200 | 267,700 | 181,500 | 96,900 |
| 4 | 5,780 | 17,400 | 20,800 | 30,900 | 153,700 | 242,500 | 250,500 | 256,000 | 282,900 | 265,600 | 178,700 | 94,500 |
| 5 | 6,380 | 17,600 | 20,900 | 32,900 | 155,400 | 243,700 | 247,000 | 255,200 | 282,600 | 263,500 | 175,700 | 92,300 |
| 6 | 7,200 | 17,800 | 21,000 | 34,100 | 156,400 | 243,900 | 244,600 | 255,000 | 283,200 | 261,500 | 172,900 | 90,200 |
| 7 | 8,050 | 18,000 | 21,100 | 35,200 | 157,500 | 244,600 | 244,200 | 254,800 | 284,500 | 259,000 | 170,100 | 88,100 |
| 8 | 8,790 | 18,200 | 21,200 | 40,000 | 157,900 | 245,400 | 244,200 | 255,000 | 285,100 | 256,800 | 167,400 | 86,000 |
| 9 | 9,420 | 18,200 | 21,300 | 48,500 | 158,100 | 246,300 | 244,200 | 257,200 | 285,400 | 254,200 | 164,800 | 84,000 |
| 10 | 9,960 | 18,400 | 21,500 | 60,300 | 157,700 | 246,800 | 244,600 | 261,000 | 285,400 | 251,800 | 162,000 | 81,900 |
| 11 | 10,400 | 18,500 | 21,900 | 77,300 | 157,300 | 246,600 | 245,100 | 264,600 | 285,400 | 249,000 | 159,300 | 79,900 |
| 12 | 10,900 | 18,600 | 22,400 | 85,600 | 156,800 | 246,100 | 245,400 | 266,600 | 285,400 | 246,300 | 156,600 | 77,800 |
| 13 | 11,400 | 18,700 | 22,600 | 89,700 | 155,900 | 245,400 | 245,800 | 269,000 | 285,900 | 245,700 | 153,900 | 75,800 |
| 14 | 11,900 | 18,900 | 22,800 | 92,700 | 157,300 | 245,100 | 246,600 | 270,800 | 285,600 | 244,800 | 151,200 | 73,700 |
| 15 | 12,300 | 19,000 | 23,000 | 94,700 | 158,100 | 244,600 | 246,600 | 271,600 | 285,400 | 237,900 | 148,500 | 71,400 |
| 16 | 12,600 | 19,100 | 23,200 | 96,300 | 158,200 | 244,600 | 243,900 | 272,100 | 285,100 | 235,000 | 146,000 | 69,200 |
| 17 | 13,000 | 19,200 | 23,300 | 97,900 | 158,200 | 244,400 | 241,800 | 271,800 | 285,100 | 232,200 | 143,100 | 67,000 |
| 18 | 13,300 | 19,300 | 23,400 | 99,100 | 158,400 | 244,400 | 241,000 | 272,100 | 284,800 | 229,200 | 140,400 | 64,800 |
| 19 | 13,600 | 19,400 | 23,500 | 100,300 | 158,400 | 244,400 | 243,900 | 271,300 | 284,800 | 226,200 | 137,600 | 62,600 |
| 20 | 13,800 | 19,500 | 23,600 | 101,200 | 158,100 | 244,400 | 246,100 | 270,300 | 283,700 | 223,200 | 134,800 | 60,400 |
| 21 | 14,000 | 19,600 | 23,800 | 102,200 | 159,900 | 244,600 | 246,100 | 270,800 | 283,200 | 220,300 | 132,100 | 58,100 |
| 22 | 14,200 | 19,700 | 23,900 | 103,200 | 161,700 | 245,100 | 247,300 | 273,100 | 283,200 | 217,300 | 129,200 | 56,000 |
| 23 | 14,400 | 19,700 | 24,000 | 103,900 | 168,800 | 246,300 | 248,000 | 277,800 | 282,600 | 214,300 | 126,500 | 54,000 |
| 24 | 14,600 | 19,800 | 24,100 | 104,900 | 174,900 | 247,500 | 247,500 | 282,900 | 281,600 | 212,800 | 123,600 | 51,900 |
| 25 | 14,800 | 19,900 | 24,100 | 114,400 | 179,700 | 248,500 | 246,100 | 284,300 | 280,500 | 208,200 | 120,800 | 49,800 |
| 26 | 15,100 | 20,000 | 24,200 | 131,300 | 183,300 | 248,500 | 244,400 | 282,900 | 279,100 | 205,300 | 118,000 | 47,800 |
| 27 | 15,300 | 20,200 | 24,300 | 137,100 | 203,400 | 252,000 | 243,900 | 282,100 | 277,600 | 202,100 | 115,200 | 45,900 |
| 28 | 15,600 | 20,300 | 24,400 | 140,900 | 215,200 | 250,000 | 244,200 | 282,900 | 276,000 | 199,200 | 112,600 | 43,900 |
| 29 | 15,800 | 20,400 | 24,600 | 143,600 | 227,600 | 247,000 | 244,400 | 283,200 | 274,700 | 196,200 | 109,800 | 41,900 |
| 30 | 16,200 | 20,500 | 24,600 | 146,000 | - | 249,500 | 245,100 | 282,600 | 273,100 | 193,300 | 109,700 | 40,000 |
| 31 | 16,600 | - | 24,800 | 147,800 | - | 261,000 | - | 282,400 | - | 190,100 | 104,600 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|---------------------|-------------------------|---|
| Sept. 30..... | 482.2 | 3,860 | - |
| Oct. 31..... | 526.1 | 16,600 | +12,740 |
| Nov. 30..... | 533.6 | 20,500 | +3,900 |
| Dec. 31..... | 540.7 | 24,800 | +4,300 |
| Calendar year 1939..... | - | - | -154,900 |
| Jan. 31..... | 645.9 | 147,800 | +123,000 |
| Feb. 29..... | 665.4 | 227,600 | +79,800 |
| Mar. 31..... | 699.2 | 261,000 | +33,400 |
| Apr. 30..... | 692.8 | 245,100 | -15,900 |
| May 31..... | 707.4 | 282,400 | +37,300 |
| June 30..... | 705.9 | 273,100 | -9,300 |
| July 31..... | 668.3 | 190,100 | -83,000 |
| Aug. 31..... | 618.5 | 104,600 | -85,500 |
| Sept. 30..... | 561.7 | 40,000 | -64,600 |
| Water year 1939-40..... | - | - | +36,140 |

Merced River at Exchequer, Calif.

Location.- Long distance water-stage transmitter, lat. 37°35', long. 120°17', about on line between secs. 14 and 23, T. 4 S., R. 15 E., at Exchequer, half a mile downstream from Lake McClure, 0.7 mile downstream from Cotton Creek, and 5 miles northeast of Merced Falls; recording receiver at power plant half a mile upstream. Altitude of gage, about 400 feet (from topographic map).

Drainage area - 1,035 square miles.

Records available.- October 1922 to September 1940. November 1915 to October 1922, at site 1 mile upstream.

Average discharge.- 24 years (1916-40), 1,185 second-feet; affected by storage in Lake McClure since Apr. 20, 1926.

Extremes.- Maximum discharge during year, 5,480 second-feet May 12 (gage height, 7.86 feet); minimum, 8 second-feet Jan. 27-30.

1915-40: Maximum discharge observed, about 22,000 second-feet (unregulated) Jan. 17, 1916 (gage height, 20.0 feet, former site and datum), from rating curve extended above 9,000 second-feet; minimum discharge, 5 second-feet Jan. 5, 1935.

Remarks.- Records good October to March; excellent April to September. No large diversions above station. Flow regulated by Lake McClure, (p. 198).

Cooperation.- Assistance in collecting gage-height record and results of four discharge measurements furnished by Merced Irrigation District.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|----|-----|-------|-----|-------|
| -0.5 | 6 | 0.8 | 146 | 4.0 | 1,650 |
| -1 | 13 | 1.1 | 218 | 5.0 | 2,430 |
| +1 | 13 | 1.5 | 334 | 6.0 | 3,320 |
| .3 | 56 | 2.0 | 510 | 7.0 | 4,420 |
| .5 | 88 | 3.0 | 1,015 | 7.8 | 5,400 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 78 | 44 | 51 | 42 | 1,110 | 1,230 | 4,850 | 1,780 | 2,980 | 1,830 | 1,620 | 1,270 |
| 2 | 78 | 44 | 52 | 42 | 1,120 | 1,220 | 4,830 | 2,040 | 3,460 | 1,790 | 1,610 | 1,270 |
| 3 | 74 | 44 | 53 | 41 | 1,130 | 1,200 | 4,820 | 3,490 | 3,430 | 1,760 | 1,580 | 1,240 |
| 4 | 76 | 44 | 53 | 37 | 1,130 | 1,200 | 4,190 | 4,520 | 3,330 | 1,740 | 1,560 | 1,190 |
| 5 | 78 | 44 | 53 | 32 | 1,140 | 1,200 | 3,830 | 4,090 | 3,200 | 1,730 | 1,530 | 1,140 |
| 6 | 66 | 44 | 53 | 31 | 1,150 | 1,200 | 3,030 | 4,090 | 2,670 | 1,760 | 1,520 | 1,090 |
| 7 | 50 | 44 | 53 | 31 | 1,140 | 1,200 | 2,150 | 2,450 | 1,770 | 1,490 | 1,080 | |
| 8 | 44 | 44 | 48 | 32 | 1,200 | 1,200 | 1,930 | 4,350 | 2,720 | 1,780 | 1,470 | 1,030 |
| 9 | 44 | 44 | 46 | 29 | 1,140 | 1,210 | 1,930 | 4,140 | 2,970 | 1,780 | 1,460 | 1,030 |
| 10 | 43 | 44 | 50 | 11 | 1,140 | 1,220 | 1,930 | 4,020 | 2,950 | 1,780 | 1,460 | 1,030 |
| 11 | 43 | 44 | 48 | 21 | 1,140 | 1,520 | 2,250 | 4,680 | 2,880 | 1,780 | 1,460 | 1,030 |
| 12 | 43 | 44 | 47 | 8.5 | 1,140 | 1,500 | 2,790 | 5,360 | 2,810 | 1,780 | 1,460 | 1,030 |
| 13 | 47 | 43 | 47 | 8.5 | 1,140 | 1,480 | 3,080 | 5,340 | 2,870 | 1,780 | 1,460 | 1,030 |
| 14 | 48 | 42 | 48 | 8.5 | 1,150 | 1,190 | 3,420 | 5,320 | 2,900 | 1,780 | 1,460 | |
| 15 | 46 | 43 | 47 | 8.5 | 1,150 | 1,190 | 3,590 | 5,360 | 2,780 | 1,770 | 1,460 | 1,060 |
| 16 | 47 | 41 | 48 | 8.5 | 1,150 | 1,190 | 4,080 | 5,360 | 2,600 | 1,760 | 1,460 | 1,060 |
| 17 | 46 | 41 | 48 | 8.5 | 1,150 | 1,190 | 3,610 | 5,350 | 2,530 | 1,740 | 1,460 | 1,060 |
| 18 | 46 | 42 | 48 | 10 | 1,140 | 1,190 | 3,120 | 5,350 | 2,450 | 1,740 | 1,460 | 1,060 |
| 19 | 46 | 42 | 48 | 19 | 1,140 | 1,190 | 1,930 | 5,340 | 2,250 | 1,750 | 1,460 | 1,060 |
| 20 | 44 | 43 | 48 | 19 | 1,140 | 1,190 | 2,700 | 5,350 | 2,030 | 1,710 | 1,460 | 1,060 |
| 21 | 44 | 46 | 48 | 19 | 34 | 1,190 | 3,820 | 5,240 | 1,870 | 1,700 | 1,450 | 1,050 |
| 22 | 44 | 46 | 48 | 19 | 33 | 1,280 | 3,850 | 4,100 | 1,850 | 1,700 | 1,450 | 1,050 |
| 23 | 44 | 47 | 48 | 20 | 26 | 1,290 | 4,400 | 2,970 | 1,840 | 1,700 | 1,450 | 1,040 |
| 24 | 44 | 47 | 48 | 20 | 11 | 1,360 | 4,830 | 3,320 | 1,830 | 1,700 | 1,450 | 1,000 |
| 25 | 44 | 48 | 48 | 27 | 21 | 1,870 | 4,830 | 5,170 | 1,850 | 1,700 | 1,440 | 993 |
| 26 | 44 | 48 | 48 | 9 | 1,160 | 2,960 | 4,120 | 5,030 | 1,830 | 1,720 | 1,420 | 988 |
| 27 | 44 | 50 | 41 | 8 | 1,210 | 4,640 | 2,610 | 4,440 | 1,830 | 1,690 | 1,420 | 976 |
| 28 | 44 | 50 | 39 | 8 | 1,210 | 4,680 | 2,240 | 3,860 | 1,830 | 1,680 | 1,370 | 954 |
| 29 | 44 | 50 | 41 | 8 | 1,240 | 4,620 | 2,240 | 4,020 | 1,830 | 1,680 | 1,360 | 949 |
| 30 | 44 | 51 | 41 | 8 | - | 4,380 | 2,010 | 3,800 | 1,830 | 1,690 | 1,340 | 949 |
| 31 | 44 | - | 41 | 47 | - | 4,800 | - | 3,080 | - | 1,650 | 1,300 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,574 | 78 | 43 | 50.8 | 3,120 |
| November..... | 1,348 | 51 | 41 | 44.9 | 2,670 |
| December..... | 1,480 | 53 | 39 | 47.7 | 2,940 |
| Calendar year 1939..... | 301,306 | 1,670 | 37 | 825 | 597,600 |
| January..... | 641.0 | 47 | 8 | 20.7 | 1,270 |
| February..... | 27,725 | 1,240 | 11 | 956 | 54,990 |
| March..... | 57,980 | 4,800 | 1,190 | 1,870 | 115,000 |
| April..... | 99,310 | 4,860 | 1,930 | 3,310 | 197,000 |
| May..... | 134,170 | 5,360 | 1,780 | 4,328 | 266,100 |
| June..... | 74,640 | 3,460 | 1,530 | 2,468 | 145,000 |
| July..... | 33,920 | 1,630 | 1,650 | 1,739 | 106,900 |
| August..... | 45,360 | 1,620 | 1,300 | 1,463 | 89,950 |
| September..... | 31,789 | 1,270 | 949 | 1,060 | 63,050 |
| Water year 1939-40..... | 529,927.0 | 5,360 | 8 | 1,448 | 1,051,000 |

MERCED RIVER BASIN

Merced River near Livingston, Calif.

Location.- Water-stage recorder, lat. 37°23'29", long. 120°47'10", in SE¼ sec. 20, T. 6 S., R. 11 E., 3¼ miles west of Livingston and about 10 miles upstream from mouth.

Altitude of gage, 82 feet (from topographic map).

Drainage area.- 1,245 square miles.

Records available.- March 1922 to September 1924, October 1925 to September 1940.

Average discharge.- 15 years (1925-40), 670 second-feet.

Extremes.- Maximum discharge during year, 6,540 second-feet Mar. 31 (gage height, 17.10 feet); minimum, 101 second-feet Nov. 12.

1922-24; 1925-40: Maximum discharge, 11,100 second-feet Feb. 12, 1938 (gage height, 21.44 feet present datum), from rating curve extended above 8,500 second-feet; minimum observed, 18 second-feet Aug. 30, 1924.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Practically entire flow is diverted above station during irrigation season, and return flow enters above. Flow regulated by Lake McClure.

Cooperation.- Water-stage recorder graph furnished by Merced Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 143 | 109 | 114 | 130 | 218 | 1,950 | 5,980 | 1,340 | 1,810 | 311 | 180 | 226 |
| 2 | 142 | 109 | 113 | 136 | 857 | 1,800 | 5,340 | 1,080 | 1,740 | 298 | 186 | 252 |
| 3 | 141 | 108 | 113 | a142 | 1,190 | 1,510 | 5,230 | 1,160 | 2,150 | 237 | 173 | 262 |
| 4 | 139 | 108 | 115 | a148 | 1,710 | 1,450 | 5,210 | 5,500 | 2,060 | 276 | 192 | 254 |
| 5 | 139 | 107 | 118 | 155 | 1,430 | 1,430 | 4,580 | 3,210 | 1,940 | 260 | 190 | 216 |
| 6 | 144 | 106 | 116 | 165 | 1,330 | 1,410 | 4,190 | 2,990 | 1,780 | 220 | 182 | 178 |
| 7 | 144 | 104 | 114 | 174 | 1,450 | 1,390 | 3,430 | 2,960 | 1,310 | 228 | 175 | 178 |
| 8 | 141 | 104 | 115 | 191 | 1,380 | 1,390 | 2,650 | 2,950 | 1,080 | 216 | 175 | 210 |
| 9 | 134 | 103 | 115 | 206 | 1,320 | 1,380 | 2,320 | 2,930 | 1,260 | 204 | 176 | 199 |
| 10 | 125 | 106 | 115 | 615 | 1,300 | 1,390 | 2,300 | 2,820 | 1,480 | 200 | 173 | 186 |
| 11 | 125 | 104 | 121 | 1,340 | 1,320 | 1,480 | 2,160 | 2,750 | 1,500 | 204 | 188 | 160 |
| 12 | 120 | 102 | 131 | 1,540 | 1,300 | 1,650 | 2,340 | 3,320 | 1,380 | 178 | 180 | 155 |
| 13 | 119 | 108 | 136 | 618 | 1,290 | 1,640 | 2,800 | 3,790 | 1,290 | a200 | 166 | 149 |
| 14 | 114 | 107 | 137 | 384 | 1,370 | 1,580 | 2,980 | 3,840 | 1,330 | a200 | 173 | 153 |
| 15 | 115 | 106 | 134 | 304 | 2,220 | 1,380 | 3,220 | 3,840 | 1,310 | a220 | 175 | 158 |
| 16 | 109 | 107 | 134 | 256 | 1,510 | 1,360 | 3,490 | 3,950 | 1,230 | a230 | 176 | 194 |
| 17 | 109 | 108 | 132 | 228 | 1,390 | 1,350 | 3,560 | 3,870 | 1,110 | a240 | 180 | 173 |
| 18 | 109 | 109 | 132 | 204 | 1,420 | 1,350 | 3,150 | 3,840 | 1,050 | a260 | 178 | 148 |
| 19 | 109 | 109 | 132 | 186 | 1,450 | 1,360 | 2,550 | 3,840 | 949 | a250 | 206 | 151 |
| 20 | 107 | 110 | 132 | 174 | 1,360 | 1,320 | 1,690 | 3,860 | 772 | a240 | 198 | 162 |
| 21 | 106 | 112 | 128 | 166 | 1,340 | 1,150 | 2,120 | 3,820 | 615 | a230 | 196 | 155 |
| 22 | 104 | 110 | 124 | 159 | 629 | 1,120 | 2,920 | 3,720 | 479 | a220 | 175 | 190 |
| 23 | 106 | 112 | 127 | 155 | 396 | 1,140 | 2,940 | 3,840 | 414 | 234 | 176 | 192 |
| 24 | 106 | 114 | 128 | 156 | 523 | 1,110 | 3,340 | 1,690 | 372 | 204 | 178 | 176 |
| 25 | 107 | 118 | 128 | 159 | 379 | 1,090 | 3,660 | 2,160 | 324 | 186 | 204 | 175 |
| 26 | 106 | 115 | 128 | 570 | 462 | 1,470 | 3,840 | 3,490 | 311 | 204 | 220 | 158 |
| 27 | 108 | 115 | 130 | 536 | 1,530 | 3,010 | 3,270 | 3,490 | 298 | 220 | 208 | 171 |
| 28 | 109 | 114 | 130 | 313 | 2,350 | 4,440 | 2,080 | 2,980 | 287 | 244 | 210 | 186 |
| 29 | 112 | 114 | 130 | 216 | 1,590 | 4,680 | 1,620 | 2,610 | 295 | 254 | 194 | 186 |
| 30 | 113 | 114 | 130 | 215 | - | 4,670 | 1,550 | 2,650 | 317 | 234 | 184 | 194 |
| 31 | 110 | - | 130 | 196 | - | 5,460 | - | 2,390 | - | 214 | 198 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 3,713 | 144 | 104 | 120 | 7,360 |
| November..... | 3,272 | 118 | 102 | 109 | 6,490 |
| December..... | 3,881 | 137 | 113 | 125 | 7,700 |
| Calendar year 1939..... | 107,454 | 1,590 | 102 | 294 | 213,100 |
| January..... | 10,167 | 1,540 | 130 | 328 | 20,170 |
| February..... | 36,294 | 2,350 | 218 | 1,252 | 71,990 |
| March..... | 56,660 | 5,460 | 1,090 | 1,892 | 116,400 |
| April..... | 96,510 | 5,980 | 1,550 | 3,217 | 191,400 |
| May..... | 92,560 | 3,870 | 1,060 | 2,986 | 183,600 |
| June..... | 32,243 | 2,150 | 287 | 1,075 | 63,950 |
| July..... | 7,166 | 311 | 178 | 231 | 14,210 |
| August..... | 5,765 | 220 | 166 | 186 | 11,430 |
| September..... | 5,516 | 254 | 148 | 184 | 10,940 |
| Water year 1939-40..... | 355,747 | 5,980 | 102 | 972 | 705,600 |

a No gage-height record; discharge for Jan. 3, 4, interpolated; that for July 13-22 computed on basis of recorded range of stage and weather records at Merced.

Tenaya Creek near Yosemite, Calif.

Location.- Water-stage recorder, lat. 37°44'33", long. 119°33'25", in Yosemite National Park, at bridge, 0.7 mile upstream from mouth and 1.9 miles east of Yosemite Lodge, Mariposa County. Altitude of gage, about 4,000 feet (from topographic map).

Drainage area.- 47 square miles.

Records available.- July 1904 to June 1909, January 1912 to September 1940.

Average discharge.- 27 years (1913-40), 103 second-feet.

Extremes.- Maximum discharge during year, 985 second-feet May 12 (gage height, 4.89 feet); minimum, 0.9 second-feet Sept. 29, 30.
1904-9, 1912-40: Maximum discharge, 5,550 second-feet Dec. 11, 1937 (gage height, 10.0 feet), from rating curve extended above 2,000 second-feet on basis of velocity-area studies; minimum, 0.6 second-foot Dec. 18-22, 1929.

Remarks.- Records good. No diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 1.6 | 10 | 3.0 | 2.8 | 49 | 85 | 152 | 436 | 419 | 59 | 2.9 | 1.5 |
| 2 | 7 | 9.5 | 2.8 | 56 | 47 | 79 | 124 | 585 | 396 | 58 | 2.8 | 1.5 |
| 3 | 21 | 9 | 2.8 | 43 | 52 | 71 | 110 | 612 | 385 | 50 | 2.6 | 1.5 |
| 4 | 29 | 8 | 2.7 | 44 | 52 | 68 | 106 | 547 | 380 | 46 | 2.6 | 1.5 |
| 5 | 34 | 7.5 | 2.7 | 34 | 52 | 62 | 90 | 479 | 358 | 40 | 2.6 | 1.5 |
| 6 | 35 | 7 | 2.7 | 30 | 56 | 62 | 92 | 513 | 358 | 36 | 2.5 | 1.4 |
| 7 | 38 | 6.5 | 2.7 | 29 | 50 | 66 | 108 | 535 | 342 | 31 | 2.4 | 1.3 |
| 8 | 31 | 6.5 | 2.5 | 35 | 47 | 77 | 108 | 612 | 342 | 28 | 2.4 | 1.3 |
| 9 | 24 | 6 | 2.5 | 41 | 45 | 84 | 130 | 672 | 331 | 26 | 2.4 | 1.3 |
| 10 | 20 | 6 | 2.5 | 54 | 45 | 76 | 166 | 724 | 318 | 23 | 2.4 | 1.3 |
| 11 | 18 | 5.5 | 2.7 | 85 | 44 | 65 | 214 | 740 | 311 | 21 | 2.2 | 1.3 |
| 12 | 16 | 5.5 | 2.7 | 80 | 42 | 58 | 268 | 756 | 303 | 18 | 2.2 | 1.2 |
| 13 | 14 | 5 | 2.5 | 64 | 39 | 52 | 351 | 740 | 292 | 16 | 2.2 | 1.2 |
| 14 | 13 | 5 | 2.5 | 56 | 39 | 52 | 403 | 688 | 275 | 14 | 2.1 | 1.2 |
| 15 | 11 | 4.9 | 2.5 | 48 | 38 | 56 | 358 | 672 | 245 | 13 | 2.1 | 1.2 |
| 16 | 9.5 | 4.6 | 2.7 | 43 | 39 | 58 | 247 | 664 | 231 | 12 | 2.1 | 1.2 |
| 17 | 8 | 4.3 | 2.7 | 40 | 39 | 66 | 242 | 648 | 219 | 11 | 2.1 | 1.1 |
| 18 | 7 | 4.3 | 2.7 | 38 | 39 | 66 | 328 | 624 | 194 | 10 | 2.0 | 1.2 |
| 19 | 6 | 4.1 | 2.7 | 35 | 38 | 73 | 369 | 582 | 169 | 9 | 2.0 | 1.2 |
| 20 | 5 | 3.8 | 2.7 | 34 | 38 | 92 | 414 | 608 | 154 | 8.5 | 2.0 | 1.2 |
| 21 | 4.9 | 3.6 | 2.7 | 32 | 39 | 110 | 472 | 640 | 144 | 8 | 2.0 | 1.1 |
| 22 | 4.3 | 3.5 | 2.7 | 32 | 38 | 139 | 509 | 624 | 138 | 7.5 | 2.0 | 1.0 |
| 23 | 4.1 | 3.5 | 2.7 | 31 | 48 | 178 | 532 | 648 | 132 | 7 | 2.0 | 1.0 |
| 24 | 4.3 | 3.3 | 2.7 | 31 | 50 | 190 | 509 | 692 | 117 | 6.5 | 1.9 | 1.0 |
| 25 | 6 | 3.3 | 2.7 | 48 | 53 | 286 | 428 | 624 | 117 | 5.5 | 1.9 | 1.0 |
| 26 | 11 | 3.2 | 2.5 | 108 | 61 | 280 | 315 | 518 | 106 | 4.8 | 1.8 | 1.0 |
| 27 | 14 | 3.2 | 2.5 | 85 | 82 | 302 | 345 | 511 | 92 | 4.6 | 1.8 | 1.0 |
| 28 | 16 | 3.2 | 2.5 | 71 | 98 | 205 | 222 | 508 | 80 | 4.2 | 1.6 | 1.0 |
| 29 | 16 | 3.0 | 2.7 | 61 | 94 | 174 | 229 | 474 | 72 | 3.9 | 1.6 | .9 |
| 30 | 14 | 3.0 | 2.7 | 56 | - | 193 | 286 | 424 | 65 | 3.6 | 1.6 | .9 |
| 31 | 12 | - | 2.7 | 52 | - | 186 | - | 396 | - | 3.2 | 1.6 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 454.7 | 38 | 1.6 | 14.7 | 902 | | |
| November..... | | | | | | 155.8 | 10 | 3.0 | 5.19 | 309 | | |
| December..... | | | | | | 82.4 | 3.0 | 2.5 | 2.66 | 163 | | |
| Calendar year 1939..... | | | | | | 19,991.0 | 370 | 1.5 | 54.8 | 39,680 | | |
| January..... | | | | | | 1,498.8 | 108 | 2.8 | 48.3 | 2,970 | | |
| February..... | | | | | | 1,453 | 98 | 38 | 50.1 | 2,880 | | |
| March..... | | | | | | 3,613 | 302 | 52 | 117 | 7,170 | | |
| April..... | | | | | | 8,147 | 532 | 90 | 272 | 16,160 | | |
| May..... | | | | | | 18,496 | 756 | 396 | 597 | 36,680 | | |
| June..... | | | | | | 7,085 | 419 | 65 | 236 | 14,050 | | |
| July..... | | | | | | 583.3 | 59 | 3.2 | 19.0 | 1,170 | | |
| August..... | | | | | | 68.4 | 2.9 | 1.6 | 2.14 | 132 | | |
| September..... | | | | | | 36.0 | 1.5 | .9 | 1.20 | 71 | | |
| Water year 1939-40..... | | | | | | 41,676.4 | 756 | .9 | 114 | 82,670 | | |

ORESTIMBA CREEK BASIN

Orestimba Creek near Newman, Calif.

Location.- Water-stage recorder, lat. 37°19'09", long. 121°07'14", in NW¼ sec. 20, T. 7 S., R. 8 E., at highway bridge, 3 miles downstream from Oso Creek and 5 miles west of Newman. Altitude of gage, about 190 feet (from topographic map).

Drainage area.- 129 square miles.

Records available.- January 1932 to September 1940.

Extremes.- Maximum discharge during year, 3,040 second-feet Feb. 27 (gage height, 4.90 feet); no flow for several months.

1932-40: Maximum discharge, 3,440 second-feet Feb. 8, 1932 (gage height, 5.15 feet), from rating curve extended above 500 second-feet on basis of slope-area computations; no flow for several months in each year.

Remarks.- Records good except those for periods of no gage-height record, which are fair. No large diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | | a0 | 58 | 341 | 113 | 5 | | | | |
| 2 | | | | a10 | 62 | 189 | 70 | 4.5 | | | | |
| 3 | | | | a20 | 187 | 130 | 50 | 3.5 | | | | |
| 4 | | | | a15 | 188 | 97 | 42 | 3.0 | | | | |
| 5 | | | | a10 | 92 | 78 | 36 | 3.0 | | | | |
| 6 | | | | a0 | 60 | 64 | 30 | 2.5 | | | | |
| 7 | | | | a0 | 43 | 55 | 26 | 1.9 | | | | |
| 8 | | | | a50 | 32 | 48 | 24 | 1.3 | | | | |
| 9 | | | | a200 | 24 | 43 | 21 | .9 | | | | |
| 10 | | | | a450 | 20 | 38 | 19 | .8 | | | | |
| 11 | | | | a500 | 16 | 37 | 17 | .5 | | | | |
| 12 | | | | a300 | 12 | 33 | 16 | .3 | | | | |
| 13 | | | | a120 | 11 | 30 | 15 | .2 | | | | |
| 14 | | | | a50 | 27 | 28 | 14 | .1 | | | | |
| 15 | | | | a20 | 32 | 26 | 13 | .1 | | | | |
| 16 | | | | 7 | 19 | 26 | 12 | .1 | | | | |
| 17 | | | | 4.5 | 21 | 24 | 11 | .1 | | | | |
| 18 | | | | 2.8 | 31 | 22 | 10 | .1 | | | | |
| 19 | | | | 1.7 | 21 | 21 | 10 | .1 | | | | |
| 20 | | | | .8 | 17 | 19 | 9.5 | .1 | | | | |
| 21 | | | | .4 | 16 | 18 | 8.5 | .1 | | | | |
| 22 | | | | .2 | 13 | 17 | 8 | .1 | | | | |
| 23 | | | | 0 | 52 | 16 | 8 | .1 | | | | |
| 24 | | | | 0 | 39 | 15 | 8 | .1 | | | | |
| 25 | | | | 2.9 | 100 | 16 | 9 | .1 | | | | |
| 26 | | | | 288 | 263 | 16 | 15 | .1 | | | | |
| 27 | | | | 138 | 740 | 31 | 13 | .1 | | | | |
| 28 | | | | 64 | 1,240 | 23 | 10 | .1 | | | | |
| 29 | | | | 43 | 910 | 26 | 8.5 | .1 | | | | |
| 30 | | | | 31 | - | 90 | 7 | .1 | | | | |
| 31 | | | | 32 | - | 183 | - | .1 | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| December..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Calendar year 1939..... | | | | 135.3 | 50 | 0 | .37 | 269 | | | | |
| January..... | | | | 2,361.3 | 500 | 0 | 76.2 | 4,680 | | | | |
| February..... | | | | 4,351 | 1,240 | 11 | 150 | 8,630 | | | | |
| March..... | | | | 1,799 | 341 | 15 | 58.0 | 3,570 | | | | |
| April..... | | | | 653.5 | 113 | 7 | 21.8 | 1,300 | | | | |
| May..... | | | | 29.1 | 5 | .1 | .94 | 58 | | | | |
| June..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| July..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| August..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| September..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Water year 1939-40..... | | | | 9,193.9 | 1,240 | 0 | 25.1 | 18,240 | | | | |

Peak discharge.- Probably Jan. 11, 698 sec.-ft.; Jan. 26 (2:30 a.m.) 356 sec.-ft.; Feb. 3, (5 p.m.) 487 sec.-ft.; Feb. 27 (5:30 p.m.) 3,040 sec.-ft.; Mar. 30 (8 p.m.) 240 sec.-ft.
 a No gage-height record; discharge computed on basis of precipitation records and records for Chowchilla River at Buchanan dam site.

Hetch Hetchy Reservoir at Hetch Hetchy, Calif.

Location.— Water-stage recorder, lat. 37°57', long. 119°47', in sec. 16, T. 1 N., R. 20 E., at O'Shaughnessy Dam on Tuolumne River at Hetch Hetchy in Yosemite National Park, 1½ miles downstream from Falls Creek. Datum of gage is at mean sea level.

Drainage area.— 460 square miles.

Records available.— May 1923 to September 1940 (1923-30, gage heights only).

Extremes.— Maximum contents during year, 348,800 acre-feet May 25 (elevation, 3,800.1 feet); minimum, 27,400 acre-feet Jan. 1 (elevation, 3,565.5 feet).

1923-40: Maximum contents, 352,500 acre-feet June 4, 1938 (elevation, 3,802.0 feet); no contents Jan. 5 to Mar. 9, 1939, Jan. 5-18, Jan. 21 to Feb. 13, 1930, Jan. 22 to Mar. 18, 1931.

Remarks.— Reservoir is formed by concrete gravity-type dam, completed to crest elevation 3,725.5 feet in 1923 and raised to 3,812.0 feet in 1937; storage began Apr. 6, 1923. Total usable capacity, 340,400 acre-feet between elevations 3,512.0 feet (somewhat above bottom outlet) and 3,795.8 feet (spillway crest elevation) above mean sea level. Water flows down Tuolumne River 15 miles to Early intake, where part is diverted through Hetch Hetchy aqueduct to Mokcasin Creek power plant. At Mokcasin Creek diversion dam, water re-enters Hetch Hetchy aqueduct and flows into Crystal Springs Reservoir, which supplies city of San Francisco. Surplus water is spilled into Don Pedro Reservoir at Red Mountain Bar. Hetch Hetchy Reservoir is main storage unit of Hetch Hetchy water-supply system for San Francisco. Records show contents at midnight, all of which is available for release.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|---------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 1 | 106,200 | 86,400 | 60,300 | 27,400 | 38,100 | 46,700 | 79,600 | 145,200 | 347,400 | 343,200 | 328,400 | 291,800 |
| 2 | 106,400 | 85,700 | 59,400 | 29,000 | 38,000 | 47,200 | 80,700 | 153,900 | 347,000 | 343,400 | 325,300 | 290,200 |
| 3 | 106,500 | 85,000 | 58,400 | 29,400 | 38,200 | 47,600 | 81,500 | 150,100 | 347,200 | 343,400 | 324,500 | 288,200 |
| 4 | 106,200 | 84,200 | 57,400 | 30,100 | 38,600 | 47,900 | 82,100 | 155,400 | 347,400 | 343,200 | 323,000 | 286,400 |
| 5 | 105,800 | 83,500 | 56,600 | 30,000 | 38,900 | 48,000 | 82,500 | 169,500 | 347,400 | 343,000 | 322,100 | 284,300 |
| 6 | 105,500 | 82,500 | 55,600 | 29,700 | 39,300 | 48,300 | 82,900 | 175,800 | 347,600 | 343,000 | 320,900 | 282,300 |
| 7 | 105,200 | 82,200 | 54,700 | 29,500 | 39,500 | 48,700 | 83,400 | 178,800 | 347,600 | 342,800 | 320,000 | 280,400 |
| 8 | 104,600 | 81,500 | 53,800 | 29,900 | 39,500 | 49,200 | 84,000 | 185,200 | 347,600 | 342,800 | 318,500 | 278,400 |
| 9 | 104,100 | 80,700 | 52,800 | 30,600 | 39,400 | 49,800 | 84,900 | 193,700 | 347,800 | 342,400 | 317,900 | 276,400 |
| 10 | 103,500 | 79,900 | 51,800 | 32,600 | 39,500 | 50,000 | 85,200 | 203,900 | 347,600 | 342,200 | 317,000 | 274,400 |
| 11 | 102,600 | 79,000 | 50,800 | 35,000 | 39,200 | 50,200 | 87,800 | 215,200 | 347,800 | 341,800 | 315,800 | 272,500 |
| 12 | 101,800 | 78,200 | 50,000 | 36,400 | 39,100 | 50,100 | 90,100 | 226,200 | 348,000 | 341,400 | 314,900 | 270,500 |
| 13 | 101,000 | 77,300 | 49,100 | 36,600 | 38,600 | 49,900 | 93,100 | 237,500 | 348,000 | 340,800 | 313,900 | 268,700 |
| 14 | 100,200 | 76,300 | 48,100 | 36,700 | 38,800 | 49,800 | 96,800 | 248,100 | 347,800 | 340,300 | 312,800 | 267,100 |
| 15 | 99,400 | 75,400 | 47,000 | 36,500 | 38,600 | 49,800 | 100,100 | 258,000 | 347,400 | 339,500 | 311,700 | 265,400 |
| 16 | 98,600 | 74,500 | 45,800 | 36,300 | 38,400 | 49,700 | 102,400 | 268,000 | 347,400 | 338,900 | 310,800 | 263,600 |
| 17 | 97,400 | 73,500 | 44,800 | 35,900 | 38,200 | 49,800 | 103,900 | 277,600 | 347,400 | 337,900 | 309,600 | 261,900 |
| 18 | 96,500 | 72,600 | 43,600 | 35,500 | 38,000 | 49,800 | 106,100 | 286,500 | 346,800 | 337,200 | 308,300 | 260,100 |
| 19 | 95,600 | 71,600 | 42,600 | 35,000 | 37,600 | 49,900 | 109,100 | 294,400 | 346,300 | 336,400 | 307,200 | 258,200 |
| 20 | 94,700 | 70,600 | 41,500 | 34,500 | 37,400 | 50,400 | 112,600 | 303,100 | 346,100 | 335,000 | 306,100 | 256,400 |
| 21 | 93,800 | 69,700 | 40,300 | 34,000 | 37,000 | 51,000 | 116,500 | 313,800 | 346,300 | 335,200 | 305,000 | 254,700 |
| 22 | 93,100 | 68,700 | 39,200 | 33,000 | 36,000 | 52,000 | 121,400 | 324,700 | 345,700 | 334,500 | 303,800 | 253,000 |
| 23 | 92,300 | 67,900 | 38,000 | 32,900 | 36,000 | 53,400 | 126,900 | 336,200 | 345,100 | 333,700 | 302,600 | 251,200 |
| 24 | 91,300 | 66,800 | 36,800 | 32,300 | 35,500 | 55,100 | 131,800 | 347,000 | 344,900 | 332,900 | 301,400 | 249,300 |
| 25 | 90,700 | 65,900 | 35,700 | 33,300 | 38,900 | 58,200 | 135,700 | 348,800 | 343,700 | 332,400 | 300,300 | 247,600 |
| 26 | 90,100 | 65,000 | 34,200 | 36,500 | 39,800 | 63,300 | 138,200 | 348,200 | 341,400 | 331,600 | 299,200 | 245,900 |
| 27 | 89,400 | 64,100 | 33,000 | 37,400 | 42,400 | 68,100 | 140,300 | 348,200 | 340,600 | 330,800 | 297,900 | 244,200 |
| 28 | 88,900 | 63,200 | 31,800 | 37,600 | 44,500 | 74,400 | 141,700 | 348,400 | 339,300 | 329,900 | 296,800 | 242,500 |
| 29 | 88,400 | 62,200 | 30,500 | 38,100 | 45,900 | 77,400 | 143,000 | 348,000 | 340,400 | 329,300 | 295,700 | 240,600 |
| 30 | 87,900 | 61,300 | 29,500 | 38,100 | - | 75,300 | 144,700 | 347,200 | 342,200 | 328,300 | 294,400 | 238,900 |
| 31 | 87,000 | - | 28,400 | 38,100 | - | 78,100 | - | 346,800 | - | 327,400 | 293,300 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 3,648.7 | 106,700 | - |
| Oct. 31..... | 3,630.5 | 87,000 | -19,700 |
| Nov. 30..... | 3,604.1 | 61,300 | -25,700 |
| Dec. 31..... | 3,566.8 | 28,400 | -32,900 |
| Calendar year 1939..... | - | - | -164,500 |
| Jan. 31..... | 3,578.4 | 38,100 | +9,700 |
| Feb. 29..... | 3,587.2 | 45,800 | +7,700 |
| Mar. 31..... | 3,621.6 | 78,100 | +32,300 |
| Apr. 30..... | 3,678.9 | 144,700 | +66,600 |
| May 31..... | 3,799.1 | 348,800 | +202,100 |
| June 30..... | 3,796.7 | 342,200 | -4,600 |
| July 31..... | 3,789.0 | 337,400 | -14,800 |
| Aug. 31..... | 3,770.8 | 293,300 | -34,100 |
| Sept. 30..... | 3,740.0 | 238,900 | -54,400 |
| Water year 1939-40..... | - | - | +132,200 |

TUOLUMNE RIVER BASIN

Tuolumne River near Hetch Hetchy, Calif.

Location.- Water-stage recorder, lat. 37°56', long. 119°48', in SE $\frac{1}{4}$ sec. 17, T. 1 N., R. 20 E., in Yosemite National Park, about a mile downstream from O'Shaughnessy Dam at Hetch Hetchy and 2.5 miles downstream from Falls Creek. Altitude of gage, about 3,450 feet (from topographic map).

Drainage area.- 462 square miles.

Records available.- December 1914 to September 1940.

Average discharge.- 25 years (1915-40), 937 second-feet.

Extremes.- Maximum discharge during year, 6,200 second-feet May 25 (gage height, 11.43 feet); minimum, 3.4 second-feet (regulated) Dec. 8.
1915-40: Maximum discharge, 12,000 second-feet June 16, 1929 (gage height, 13.58 feet), reservoir full and spilling; minimum, 1.2 second-feet (regulated) Jan. 18, 1931.

Remarks.- Records excellent except those for period of doubtful or no gage-height record, which are good. No diversions. Flow regulated by Hetch Hetchy Reservoir (p. 203).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|------|-------|
| 3.3 | 188 | 5.0 | 480 | 10.0 | 3,570 |
| 3.6 | 230 | 6.0 | 730 | 11.3 | 5,910 |
| 4.0 | 292 | 7.0 | 1,090 | | |
| 4.6 | 380 | 8.0 | 1,640 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|-------|------|-------|
| 1 | 510 | 524 | 557 | 585 | 530 | 250 | 388 | 682 | 4,350 | 1,060 | 709 | 721 |
| 2 | 484 | 540 | 535 | 486 | 530 | 400 | 386 | 685 | 4,440 | 1,260 | 640 | 942 |
| 3 | 472 | 548 | 518 | 554 | 510 | 400 | 386 | 691 | 4,270 | 1,290 | 640 | 1,050 |
| 4 | 682 | 545 | 528 | 496 | 440 | 400 | 438 | 697 | 4,600 | 1,240 | 640 | 1,040 |
| 5 | 706 | 550 | 533 | 476 | 430 | 400 | 470 | 703 | 4,490 | 1,130 | 638 | 1,030 |
| 6 | 745 | 496 | 543 | 480 | 450 | 420 | 468 | 709 | 4,620 | 1,030 | 638 | 1,030 |
| 7 | 757 | 500 | 512 | 470 | 460 | 450 | 478 | 712 | 4,690 | 970 | 635 | 1,030 |
| 8 | 733 | 513 | 528 | 440 | 480 | 460 | 476 | 718 | 4,780 | 878 | 635 | 1,020 |
| 9 | 712 | 506 | 550 | 410 | 490 | 460 | 472 | 727 | 4,780 | 797 | 632 | 994 |
| 10 | d710 | 528 | 570 | 290 | 490 | 490 | 488 | 736 | 4,710 | 760 | 632 | 994 |
| 11 | d720 | 536 | 570 | 210 | 490 | 500 | 515 | 748 | 4,910 | 769 | 632 | 1,010 |
| 12 | d740 | 526 | 514 | 440 | 470 | 524 | 524 | 760 | 5,130 | 766 | 632 | 1,010 |
| 13 | d750 | 524 | 515 | 500 | 470 | 522 | 534 | 748 | 5,290 | 775 | 630 | 966 |
| 14 | d750 | 530 | 571 | 470 | 480 | 522 | 536 | 745 | 5,090 | 766 | 630 | 950 |
| 15 | d730 | 547 | 621 | 450 | 480 | 520 | 528 | 760 | 4,840 | 760 | 643 | 946 |
| 16 | d720 | 544 | 635 | 490 | 500 | 520 | 510 | 776 | 4,390 | 760 | 652 | 942 |
| 17 | d710 | 544 | 620 | 540 | 500 | 552 | 628 | 765 | 4,690 | 760 | 652 | 942 |
| 18 | d690 | 536 | 608 | 560 | 500 | 520 | 736 | 771 | 4,350 | 760 | 649 | 938 |
| 19 | d640 | 537 | 602 | 560 | 500 | 520 | 718 | 906 | 3,710 | 646 | 649 | 934 |
| 20 | d620 | 542 | 598 | 550 | 500 | 534 | 724 | 765 | 3,220 | 572 | 649 | 930 |
| 21 | d620 | 544 | 602 | 560 | 520 | 542 | 715 | 742 | 3,320 | 590 | 646 | 926 |
| 22 | d620 | 539 | 613 | 570 | 520 | 545 | 718 | 751 | 3,250 | 598 | 646 | 926 |
| 23 | d610 | 536 | 670 | 560 | 360 | 548 | 724 | 766 | 2,690 | 598 | 643 | 923 |
| 24 | d600 | 545 | 643 | 560 | 480 | 550 | 733 | 1,410 | 2,410 | 598 | 643 | 920 |
| 25 | 518 | 538 | 640 | 520 | 490 | 534 | 739 | 5,670 | 2,890 | 598 | 643 | 912 |
| 26 | 538 | 522 | 643 | 380 | 420 | 522 | 733 | 5,550 | 3,070 | 598 | 640 | 909 |
| 27 | 550 | 512 | 667 | 530 | 200 | 470 | 733 | 5,170 | 2,090 | 598 | 638 | 909 |
| 28 | 552 | 524 | 665 | 520 | 220 | 434 | 706 | 5,470 | 2,400 | 598 | 638 | 906 |
| 29 | 540 | 534 | 667 | 500 | 240 | 436 | 685 | 5,450 | 1,120 | 595 | 635 | 906 |
| 30 | 540 | 550 | 608 | 520 | - | 377 | 679 | 4,850 | 961 | 595 | 635 | 898 |
| 31 | 632 | - | 649 | 530 | - | 303 | - | 4,030 | - | 635 | 632 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 19,901 | 757 | 472 | 642 | 39,470 |
| November..... | 15,939 | 550 | 496 | 551 | 31,610 |
| December..... | 18,320 | 685 | 512 | 591 | 36,340 |
| Calendar year 1939..... | 293,503 | 2,970 | 445 | 804 | 582,200 |
| January..... | 15,207 | 585 | 210 | 491 | 30,160 |
| February..... | 13,150 | 530 | 200 | 453 | 26,080 |
| March..... | 14,627 | 550 | 250 | 472 | 29,010 |
| April..... | 17,568 | 739 | 368 | 586 | 34,650 |
| May..... | 64,663 | 5,670 | 682 | 1,763 | 108,400 |
| June..... | 115,561 | 5,290 | 961 | 3,652 | 229,200 |
| July..... | 24,350 | 1,290 | 572 | 765 | 48,300 |
| August..... | 19,896 | 709 | 630 | 642 | 39,460 |
| September..... | 28,554 | 1,050 | 721 | 952 | 56,640 |
| Water year 1939-40..... | 357,726 | 5,670 | 200 | 977 | 709,500 |

d Doubtful gage-height record; discharge computed on basis of records of release from O'Shaughnessy Dam.

Note.- No gage-height record Jan. 11 to Mar. 11; discharge computed on basis of records of release from O'Shaughnessy Dam.

Don Pedro Reservoir near La Grange, Calif.

Location.- Staff gage, lat. 37°42'46", long. 120°24'14", in SW $\frac{1}{4}$ sec. 35, T. 2 S., R. 14 E., at Don Pedro Dam on Tuolumne River, 1 mile downstream from Rogers Creek and 5.5 miles upstream from La Grange. Datum of gage is at mean sea level.

Drainage area.- 1,539 square miles.

Records available.- October 1924 to September 1940 (1924-30, gage heights only).

Extremes.- Maximum contents during year, 291,500 acre-feet June 29 (elevation, 605.9 feet); minimum, 72,500 acre-feet Jan. 1, 2 (elevation, 516.1 feet).
1924-40: Maximum contents, 292,100 acre-feet June 13, 1937 (elevation, 606.1 feet); minimum, 29,200 acre-feet Sept. 1-3, 5, 1934; minimum elevation, 475.0 feet, Sept. 1, 2, 1934.

Remarks.- Reservoir is formed by concrete gravity-type dam, completed about Jan. 1, 1923; storage began Nov. 14, 1922. Total usable capacity, 260,000 acre-feet between elevations 476 feet (mutually agreed-upon minimum) and 605.55 feet (top of drum-type spillway gates) above mean sea level. Figures herein show total contents at 8 a.m., of which 30,000 acre-feet (mutually agreed-upon minimum) is not available for release. Water passes through power plant at dam and down Tuolumne River to La Grange Dam, 4 miles downstream, where it is diverted into Turlock and Modesto canals for irrigation. This reservoir is operated jointly by Turlock and Modesto Irrigation Districts.

Cooperation.- Records furnished by Turlock and Modesto Irrigation Districts.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 88,800 | 79,500 | 74,700 | 72,500 | 226,300 | 270,400 | 272,600 | 265,500 | 268,900 | 290,200 | 245,400 | 168,700 |
| 2 | 87,200 | 79,600 | 74,700 | 72,500 | 229,200 | 268,600 | 269,500 | 266,700 | 269,200 | 289,900 | 243,600 | 166,700 |
| 3 | 88,000 | 79,600 | 74,700 | 78,300 | 232,100 | 267,000 | 267,900 | 267,900 | 268,600 | 289,900 | 241,600 | 163,100 |
| 4 | 88,800 | 79,600 | 74,700 | 81,600 | 238,900 | 266,400 | 267,300 | 267,900 | 268,600 | 289,600 | 239,200 | 161,400 |
| 5 | 89,200 | 79,600 | 74,700 | 84,700 | 243,900 | 266,100 | 267,000 | 267,300 | 269,500 | 288,600 | 236,200 | 159,900 |
| 6 | 89,500 | 79,000 | 74,600 | 88,300 | 248,100 | 265,800 | 266,400 | 266,400 | 270,100 | 288,300 | 234,200 | 158,200 |
| 7 | 90,400 | 79,000 | 74,400 | 90,000 | 253,900 | 265,500 | 266,100 | 266,400 | 272,300 | 287,600 | 232,400 | 156,200 |
| 8 | 91,000 | 79,000 | 74,300 | 92,200 | 258,400 | 265,300 | 265,900 | 266,100 | 273,800 | 286,700 | 230,400 | 154,000 |
| 9 | 90,700 | 79,000 | 74,100 | 100,100 | 261,100 | 265,500 | 266,100 | 267,300 | 276,000 | 285,800 | 228,300 | 152,300 |
| 10 | 90,700 | 78,900 | 73,700 | 113,900 | 263,600 | 265,800 | 266,100 | 267,900 | 276,300 | 284,500 | 226,300 | 150,800 |
| 11 | 90,900 | 78,700 | 72,900 | 131,900 | 264,500 | 265,500 | 266,100 | 268,900 | 276,300 | 283,300 | 224,000 | 149,900 |
| 12 | 90,700 | 78,300 | 74,700 | 146,000 | 264,500 | 265,500 | 266,400 | 268,900 | 276,300 | 281,700 | 221,100 | 147,400 |
| 13 | 90,500 | 77,700 | 75,200 | 154,700 | 264,200 | 265,100 | 266,700 | 268,900 | 277,000 | 280,400 | 219,100 | 145,500 |
| 14 | 90,000 | 77,400 | 75,700 | 158,200 | 264,800 | 264,500 | 267,000 | 267,900 | 277,300 | 278,500 | 216,900 | 143,800 |
| 15 | 89,500 | 77,300 | 75,800 | 160,700 | 265,800 | 263,900 | 267,000 | 267,300 | 277,300 | 277,000 | 214,500 | 141,500 |
| 16 | 88,300 | 77,100 | 75,800 | 162,600 | 264,800 | 263,900 | 267,000 | 267,300 | 276,700 | 275,400 | 211,900 | 139,600 |
| 17 | 87,400 | 77,000 | 75,800 | 164,900 | 264,500 | 263,900 | 266,400 | 267,300 | 275,700 | 274,200 | 209,400 | 137,700 |
| 18 | 87,000 | 76,900 | 75,500 | 166,200 | 264,800 | 263,900 | 266,400 | 267,300 | 276,000 | 272,600 | 207,100 | 135,600 |
| 19 | 86,500 | 76,700 | 75,400 | 167,400 | 264,800 | 264,300 | 266,700 | 267,000 | 275,400 | 271,000 | 204,300 | 133,700 |
| 20 | 85,800 | 76,700 | 75,400 | 168,700 | 264,500 | 264,200 | 267,000 | 266,700 | 274,500 | 269,500 | 201,900 | 131,900 |
| 21 | 84,600 | 76,700 | 75,400 | 170,000 | 264,200 | 264,500 | 267,000 | 266,400 | 276,300 | 267,600 | 199,500 | 129,800 |
| 22 | 84,000 | 76,500 | 75,200 | 171,000 | 264,200 | 264,500 | 267,000 | 266,700 | 278,200 | 265,800 | 197,100 | 127,500 |
| 23 | 82,500 | 76,200 | 75,100 | 172,300 | 264,500 | 264,800 | 267,300 | 267,000 | 280,700 | 263,900 | 194,600 | 125,500 |
| 24 | 81,400 | 75,400 | 74,700 | 173,600 | 268,600 | 265,500 | 267,600 | 267,000 | 282,600 | 261,800 | 191,900 | 123,400 |
| 25 | 81,100 | 75,100 | 74,400 | 174,300 | 267,000 | 265,800 | 267,300 | 268,600 | 283,300 | 259,600 | 189,200 | 121,400 |
| 26 | 80,700 | 74,800 | 74,400 | 190,000 | 267,000 | 267,000 | 267,000 | 270,700 | 285,800 | 257,800 | 185,800 | 119,300 |
| 27 | 80,200 | 74,700 | 74,300 | 205,400 | 270,700 | 276,300 | 268,400 | 270,100 | 288,600 | 255,000 | 183,300 | 116,900 |
| 28 | 80,100 | 74,600 | 74,000 | 212,800 | 274,800 | 270,700 | 265,500 | 270,100 | 289,600 | 253,800 | 180,300 | 114,700 |
| 29 | 79,900 | 74,600 | 73,900 | 216,500 | 273,500 | 268,600 | 264,800 | 270,100 | 291,500 | 252,000 | 177,500 | 112,600 |
| 30 | 79,600 | 74,700 | 73,700 | 220,500 | - | 271,000 | 265,100 | 270,100 | 290,800 | 249,900 | 174,600 | 111,600 |
| 31 | 79,500 | - | 73,400 | 223,400 | - | 280,700 | - | 269,500 | - | 247,800 | 172,000 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|---------------------|-------------------------|---|
| Sept. 30..... | 527.8 | 90,400 | |
| Oct. 31..... | 520.9 | 79,500 | -10,900 |
| Nov. 30..... | 517.7 | 74,700 | -4,800 |
| Dec. 31..... | 516.7 | 73,400 | -1,300 |
| Calendar year 1939..... | - | - | -53,000 |
| Jan. 31..... | 583.5 | 223,400 | +160,000 |
| Feb. 29..... | 600.2 | 273,500 | +50,100 |
| Mar. 31..... | 602.5 | 280,700 | +7,200 |
| Apr. 30..... | 597.5 | 265,100 | -15,600 |
| May 30..... | 598.9 | 269,500 | +4,400 |
| June 30..... | 605.7 | 290,800 | +21,300 |
| July 31..... | 591.8 | 247,800 | -43,000 |
| Aug. 31..... | 564.8 | 172,000 | -75,800 |
| Sept. 30..... | 539.1 | 111,600 | -60,400 |
| Water year 1939-40..... | - | - | +21,200 |

Tuolumne River above La Grange Dam, near La Grange, Calif.

Location.— Water-stage recorder, lat. 37°42'35", long. 120°24'45", in NE¼ sec. 3, T. 3 S., R. 14 E., half a mile downstream from Don Pedro Dam, 3½ miles upstream from La Grange Dam, and 5 miles upstream from La Grange. Altitude of gage, 330 feet (from topographic map).

Drainage area.— 1,540 square miles.

Records available.— March 1915 to September 1940. August 1895 to September 1917 at La Grange Dam, 3½ miles downstream; records equivalent if flow of Yosemite Power Co. canal (abandoned in 1926) and Modesto and Turlock canals is added to flow at La Grange Dam.

Average discharge.— 45 years (1895-1940) using 1895-1916 records of combined flow of river and canals, and including Hetch Hetchy diversion to San Francisco, 2,558 second-feet.

Extremes.— Maximum discharge during year, 29,200 second-feet Mar. 31 (gage height, 27.2 feet); minimum, 39 second-feet (regulated) Dec. 7.

1895-1940: Maximum discharge, 60,300 second-feet (not regulated) Jan. 31, 1911 (gage height, 16.45 feet at site at La Grange Dam from graph constructed on basis of frequent gage readings), from rating curve extended above 18,000 second-feet; minimum, about 0.5 second-foot (regulated) many days in October and November 1931.

Remarks.— Records excellent. A small amount of water diverted above station for irrigation. Diversion through Hetch Hetchy aqueduct to San Francisco began Oct. 19, 1934; for present year it amounted to an average of 45 second-feet. Flow regulated by Don Pedro Reservoir (p. 205), Hetch Hetchy Reservoir (p. 203), and Lake Eleanor (p. 209).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1 | 1,250 | 924 | 878 | 608 | 783 | 8,250 | 11,200 | 3,590 | 7,450 | 1,850 | 1,870 | 1,990 |
| 2 | 1,070 | 864 | 858 | 692 | 795 | 5,930 | 7,310 | 4,580 | 7,330 | 1,840 | 1,880 | 1,990 |
| 3 | 1,060 | 870 | 761 | 694 | 773 | 4,590 | 5,710 | 5,700 | 7,100 | 1,820 | 1,900 | 2,040 |
| 4 | 1,050 | 868 | 887 | 668 | 686 | 3,970 | 5,060 | 5,590 | 7,080 | 1,780 | 1,830 | 2,010 |
| 5 | 1,100 | 766 | 880 | 545 | 787 | 3,570 | 4,440 | 4,700 | 6,880 | 1,810 | 1,870 | 2,030 |
| 6 | 1,090 | 903 | 864 | 550 | 808 | 3,220 | 3,900 | 4,100 | 6,490 | 1,830 | 1,880 | 2,060 |
| 7 | 1,080 | 894 | 864 | 473 | 773 | 3,070 | 3,420 | 4,240 | 6,490 | 1,760 | 1,900 | 2,050 |
| 8 | 976 | 919 | 858 | 565 | 760 | 3,060 | 3,520 | 4,510 | 6,350 | 1,830 | 1,900 | 1,960 |
| 9 | 1,100 | 898 | 862 | 557 | 788 | 3,130 | 3,560 | 5,080 | 6,640 | 1,820 | 1,930 | 2,030 |
| 10 | 1,090 | 914 | 754 | 556 | 1,350 | 2,860 | 3,570 | 5,700 | 7,020 | 1,830 | 1,910 | 2,040 |
| 11 | 1,100 | 851 | 878 | 664 | 1,700 | 2,790 | 3,760 | 6,200 | 6,980 | 1,810 | 1,890 | 2,060 |
| 12 | 1,090 | 798 | 870 | 660 | 1,800 | 2,690 | 4,040 | 6,290 | 7,010 | 1,810 | 1,920 | 2,060 |
| 13 | 1,090 | 938 | 865 | 660 | 1,900 | 2,490 | 4,410 | 6,600 | 7,260 | 1,800 | 1,930 | 2,070 |
| 14 | 1,100 | 942 | 862 | 558 | 2,900 | 2,280 | 4,690 | 6,090 | 7,480 | 1,740 | 1,940 | 2,040 |
| 15 | 1,140 | 910 | 840 | 684 | 3,110 | 2,210 | 4,920 | 5,630 | 7,380 | 1,800 | 1,950 | 1,960 |
| 16 | 1,220 | 911 | 848 | 695 | 2,510 | 2,200 | 4,580 | 5,440 | 6,940 | 1,790 | 1,970 | 2,050 |
| 17 | 1,220 | 901 | 748 | 670 | 2,290 | 2,120 | 3,860 | 5,680 | 6,640 | 1,770 | 1,950 | 2,090 |
| 18 | 1,160 | 893 | 848 | 672 | 2,550 | 2,230 | 3,950 | 5,700 | 6,700 | 1,790 | 1,890 | 2,080 |
| 19 | 1,180 | 759 | 880 | 672 | 2,340 | 2,360 | 4,380 | 5,050 | 6,290 | 1,800 | 1,970 | 2,080 |
| 20 | 1,200 | 906 | 851 | 650 | 2,080 | 2,340 | 4,690 | 4,860 | 4,580 | 1,790 | 1,990 | 2,090 |
| 21 | 1,180 | 922 | 862 | 528 | 1,940 | 2,460 | 4,610 | 4,620 | 3,820 | 1,740 | 2,000 | 2,060 |
| 22 | 1,000 | 928 | 881 | 656 | 1,890 | 2,640 | 4,940 | 4,890 | 3,750 | 1,780 | 2,000 | 1,970 |
| 23 | 1,190 | 767 | 896 | 654 | 3,480 | 2,930 | 5,400 | 4,940 | 2,930 | 1,790 | 2,000 | 2,060 |
| 24 | 1,080 | 874 | 790 | 634 | 5,680 | 2,980 | 5,420 | 5,180 | 2,860 | 1,760 | 2,000 | 2,100 |
| 25 | 1,010 | 921 | 726 | 637 | 4,150 | 3,870 | 5,010 | 7,060 | 2,830 | 1,800 | 1,950 | 2,110 |
| 26 | 978 | 798 | 843 | 591 | 4,650 | 5,310 | 4,470 | 9,020 | 2,830 | 1,700 | 2,020 | 2,120 |
| 27 | 1,010 | 956 | 906 | 564 | 13,000 | 14,700 | 3,780 | 8,660 | 2,670 | 1,830 | 2,080 | 2,200 |
| 28 | 976 | 931 | 900 | 682 | 15,900 | 9,050 | 3,040 | 8,620 | 1,900 | 1,760 | 2,110 | 2,110 |
| 29 | 851 | 848 | 948 | 777 | 12,500 | 6,900 | 2,870 | 8,710 | 2,680 | 1,830 | 2,100 | 1,860 |
| 30 | 950 | 870 | 789 | - | - | 12,100 | 3,050 | 7,990 | 2,000 | 1,840 | 2,080 | 1,850 |
| 31 | 938 | - | 814 | 786 | - | 23,300 | - | 7,190 | - | 1,870 | 2,100 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 33,539 | 1,250 | 851 | 1,082 | 66,520 |
| November..... | 26,483 | 956 | 759 | 853 | 52,800 |
| December..... | 26,450 | 948 | 726 | 853 | 52,460 |
| Calendar year 1939..... | 555,097 | 5,270 | 604 | 1,521 | 1,101,000 |
| January..... | 19,791 | 789 | 473 | 638 | 39,250 |
| February..... | 94,673 | 15,900 | 686 | 3,265 | 187,800 |
| March..... | 151,690 | 23,300 | 2,120 | 4,893 | 300,900 |
| April..... | 137,540 | 11,200 | 2,870 | 4,565 | 275,800 |
| May..... | 182,010 | 9,020 | 5,390 | 5,871 | 361,000 |
| June..... | 164,360 | 7,450 | 1,900 | 5,479 | 326,000 |
| July..... | 55,780 | 1,870 | 1,700 | 1,799 | 110,600 |
| August..... | 60,720 | 2,110 | 1,830 | 1,959 | 120,400 |
| September..... | 60,200 | 2,120 | 1,360 | 2,007 | 119,400 |
| Water year 1939-40..... | 1,013,236 | 23,300 | 473 | 2,768 | 2,010,000 |

Note.— Discharge for periods June 24-28 and June 30 to Aug. 18 is sum of flow in Turlock and Modesto canals.

Falls Creek near Hetch Hetchy, Calif.

Location.— Water-stage recorder, lat. $37^{\circ}58'$, long. $119^{\circ}46'$, in NE $\frac{1}{4}$ sec. 3, T. 1 N., R. 20 E., in Yosemite National Park, a quarter of a mile upstream from Wampara Falls, 1 mile upstream from mouth, and 2 miles northeast of Hetch Hetchy. Altitude of gage, about 5,600 feet.

Drainage area.— 45.2 square miles.

Records available.— November 1915 to September 1940.

Average discharge.— 24 years (1916-40), 136 second-feet.

Extremes.— Maximum discharge during year, 1,440 second-feet Mar. 26 (gage height, 6.22 feet); minimum, 0.1 second-foot Sept. 25-30.

1915-40: Maximum discharge, 6,300 second-feet Dec. 11, 1937 (gage height, 8.90 feet), from rating curve extended above 1,250 second-feet on basis of velocity-area studies; no flow at times during summers of several years.

Remarks. Records good. No diversions.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1.2 | 0.1 | 1.8 | 0.8 | 2.8 | 24 | 4.5 | 409 |
| 1.3 | .1 | 1.9 | 1.5 | 3.0 | 41 | 4.8 | 521 |
| 1.4 | .1 | 2.0 | 2.2 | 3.3 | 85 | 5.1 | 655 |
| 1.5 | .2 | 2.2 | 4.0 | 3.6 | 145 | 5.4 | 820 |
| 1.6 | .3 | 2.4 | 8 | 3.9 | 218 | 5.6 | 955 |
| 1.7 | .4 | 2.6 | 15 | 4.2 | 307 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 36 | 35 | 5 | 23 | 89 | 98 | 156 | 298 | 655 | 197 | 13 | 1.2 |
| 2 | 130 | 29 | 5.5 | 442 | 80 | 95 | 123 | 529 | 655 | 175 | 11 | 1.1 |
| 3 | 115 | 25 | 5.5 | 342 | 103 | 89 | 109 | 645 | 645 | 161 | 9.5 | .9 |
| 4 | 96 | 22 | 5.5 | 292 | 96 | 80 | 98 | 592 | 700 | 147 | 8.5 | .9 |
| 5 | 111 | 20 | 5.5 | 123 | .82 | 78 | 87 | 384 | 655 | 127 | 7.5 | .8 |
| 6 | 138 | 18 | 5.5 | 82 | 101 | 87 | 96 | 366 | 700 | 113 | 7 | .8 |
| 7 | 132 | 16 | | 85 | 82 | 105 | 121 | 441 | 695 | 103 | 7 | .7 |
| 8 | 113 | 15 | 6.5 | 111 | 68 | 123 | 125 | 535 | 665 | 90 | 7 | .6 |
| 9 | 94 | 15 | 7 | 107 | 60 | 130 | 147 | 670 | 670 | 82 | 6.5 | .6 |
| 10 | 82 | 14 | 11 | 147 | 64 | 117 | 185 | 772 | 655 | 75 | 6 | .5 |
| 11 | 82 | 13 | 24 | 232 | 65 | 90 | 235 | 885 | 716 | 64 | 5.5 | .4 |
| 12 | 85 | 11 | 21 | 163 | 58 | 75 | 298 | 920 | 732 | 58 | 5 | .4 |
| 13 | 78 | 10 | 17 | 107 | 53 | 66 | 363 | 913 | 732 | 52 | 4.8 | .4 |
| 14 | 70 | 9.5 | 14 | 82 | 58 | 71 | 427 | 826 | 749 | 47 | 4.6 | .3 |
| 15 | 59 | 9 | 12 | 73 | 59 | 83 | 427 | 760 | 744 | 42 | 4.4 | .3 |
| 16 | 49 | 8 | 11 | 71 | 58 | 94 | 301 | 738 | 610 | 41 | 4.0 | .3 |
| 17 | 40 | 7.5 | 10 | 70 | 54 | 96 | 258 | 878 | 700 | 39 | 3.8 | .3 |
| 18 | 33 | 7 | 9.5 | 62 | 56 | 98 | 298 | 732 | 640 | 34 | 3.4 | .3 |
| 19 | 28 | 6.5 | 9.5 | 58 | 56 | 92 | 373 | 690 | 561 | 30 | 3.0 | .2 |
| 20 | 24 | 6 | 9.5 | 53 | 56 | 141 | 420 | 680 | 475 | 28 | 2.8 | .2 |
| 21 | 22 | 6 | 9 | 51 | 53 | 163 | 453 | 778 | 625 | 25 | 2.5 | .2 |
| 22 | 19 | 5.5 | 7.5 | 49 | 60 | 195 | 517 | 808 | 491 | 23 | 2.3 | .2 |
| 23 | 17 | 5.5 | 7 | 47 | 187 | 229 | 579 | 796 | 359 | 22 | 2.1 | .2 |
| 24 | 18 | 5 | 7 | 43 | 94 | 252 | 553 | 913 | 336 | 20 | 2.0 | .2 |
| 25 | 31 | 5.5 | 6.5 | 178 | 111 | 427 | 464 | 927 | 346 | 20 | 1.8 | .1 |
| 26 | 34 | 7 | 6.5 | 409 | 130 | 676 | 323 | 690 | 285 | 20 | 1.8 | .1 |
| 27 | 43 | 6.5 | 6.5 | 210 | 193 | 646 | 218 | 675 | 243 | 18 | 1.8 | .1 |
| 28 | 62 | 6 | 6.5 | 150 | 170 | 307 | 180 | 749 | 255 | 17 | 1.8 | .1 |
| 29 | 65 | 5.5 | 7 | 119 | 119 | 295 | 173 | 735 | 224 | 16 | 1.7 | .1 |
| 30 | 54 | 5.5 | 11 | 101 | - | 313 | 180 | 645 | 213 | 15 | 1.5 | .1 |
| 31 | 43 | - | 15 | 96 | - | 226 | - | 549 | - | 15 | 1.4 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 2,003 | 138 | 17 | 64.6 | 3,970 |
| November..... | 354.5 | 35 | 5 | 11.8 | 703 |
| December..... | 280.0 | 24 | 5 | 9.35 | 575 |
| Calendar year 1939..... | 31,208.9 | 516 | 0 | 85.5 | 61,880 |
| January..... | 4,178 | 442 | 23 | 135 | 8,290 |
| February..... | 2,615 | 193 | 53 | 86.7 | 4,990 |
| March..... | 5,630 | 676 | 66 | 162 | 11,170 |
| April..... | 8,297 | 579 | 87 | 276 | 16,440 |
| May..... | 21,520 | 927 | 298 | 694 | 42,680 |
| June..... | 16,661 | 749 | 213 | 555 | 33,050 |
| July..... | 1,916 | 197 | 15 | 61.8 | 3,800 |
| August..... | 145.0 | 13 | 1.4 | 4.68 | 288 |
| September..... | 12.6 | 1.2 | .1 | .42 | 25 |
| Water year 1939-40..... | 63,512.1 | 927 | .1 | 174 | 126,000 |

Peak discharge.— Jan. 2 (6 p.m.) 760 sec.-ft.; Jan. 26 (9 a.m.) 502 sec.-ft.; Mar. 26 (11 p.m.) 1,440 sec.-ft.; May 25 (8 a.m.) 1,080 sec.-ft.

TUOLUMNE RIVER BASIN

Cherry Creek near Hetch Hetchy, Calif.

Location.- Water-stage recorder, lat. 38°00', long. 119°54', in SW $\frac{1}{4}$ sec. 28, T. 2 N., R. 19 E., 2 $\frac{1}{2}$ miles northwest of Lake Eleanor Dam, 4 miles upstream from Eleanor Creek, and 7 $\frac{1}{2}$ miles northwest of Hetch Hetchy. Altitude of gage, about 4,500 feet.

Drainage area.- 111 square miles.

Records available.- April 1910 to September 1940.

Average discharge.- 30 years, 358 second-feet.

Extremes.- Maximum discharge during year, 5,200 second-feet Mar. 26 (gage height, 10.40 feet); minimum, 3.4 second-feet Sept. 4, 10, 13, 14. Minimum gage height, 1.04 feet Aug. 22-24 and Sept. 29-30.

1910-40: Maximum discharge, 18,100 second-feet Dec. 11, 1937 (gage height, 25.1 feet, from floodmarks), from rating curve extended above 4,000 second-feet on basis of velocity-area studies; no flow Sept. 6-12, 1910.

Remarks.- Records excellent except those for August and September which are good. No diversions above station. Release from small reservoirs increases normal summer flow.

Rating table, water year 1939-40 except periods of backwater (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 25 to Sept. 30)

| | | | | | | | | | |
|-----|----|-----|-----|-----|-------|-----|-------|------|-------|
| 0.9 | 2 | 1.9 | 84 | 3.5 | 662 | 5.5 | 1,655 | 9.0 | 4,120 |
| 1.1 | 7 | 2.3 | 188 | 4.0 | 885 | 6.0 | 1,950 | 10.4 | 5,200 |
| 1.3 | 18 | 2.7 | 342 | 4.5 | 1,130 | 7.0 | 2,630 | | |
| 1.6 | 41 | 3.1 | 502 | 5.0 | 1,380 | 8.0 | 3,370 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|------|-------|-------|-------|-------|------|------|-------|
| 1 | 209 | 76 | 45 | 163 | 254 | 346 | 540 | 1,300 | 1,870 | 306 | 16 | 3.8 |
| 2 | 786 | 61 | 43 | 2,270 | 224 | 306 | 402 | 1,990 | 1,500 | 282 | 15 | 3.5 |
| 3 | 530 | 53 | 38 | 656 | 362 | 270 | 358 | 1,900 | 1,460 | 258 | 14 | 3.5 |
| 4 | 562 | 46 | 34 | 612 | 314 | 247 | 326 | 1,540 | 1,540 | 232 | 14 | 3.4 |
| 5 | 346 | 41 | 31 | 306 | 258 | 243 | 282 | 975 | 1,470 | 195 | 13 | 3.6 |
| 6 | 554 | 36 | 40 | 232 | 342 | 266 | 310 | 1,100 | 1,620 | 169 | 11 | 4.6 |
| 7 | 410 | 33 | 56 | 311 | 243 | 318 | 402 | 1,520 | 1,520 | 142 | 10 | 4.2 |
| 8 | 278 | 30 | 45 | 598 | 195 | 386 | 390 | 1,670 | 1,430 | 126 | 10 | 3.8 |
| 9 | 202 | 30 | 45 | 626 | 182 | 398 | 478 | 2,000 | 1,440 | 109 | 9.5 | 3.5 |
| 10 | 159 | 29 | 474 | 578 | 195 | 338 | 622 | 2,300 | 1,460 | 96 | 8.5 | 3.4 |
| 11 | 142 | 26 | 428 | 777 | 195 | 270 | 777 | 2,490 | 1,500 | 84 | 8 | 3.5 |
| 12 | 134 | 24 | 150 | 506 | 166 | 217 | 950 | 2,550 | 1,480 | 76 | 7.5 | 3.5 |
| 13 | 126 | 23 | 100 | 282 | 156 | 199 | 1,160 | 2,450 | 1,450 | 67 | 6.5 | 3.4 |
| 14 | 114 | 22 | 76 | 217 | 172 | 213 | 1,260 | 2,160 | 1,460 | 60 | 6.5 | 3.4 |
| 15 | 96 | 21 | 64 | 192 | 182 | 247 | 1,060 | 2,020 | 1,340 | 53 | 6.5 | 3.5 |
| 16 | 82 | 20 | 56 | 178 | 166 | 266 | 715 | 2,070 | 1,210 | 48 | 6 | 3.5 |
| 17 | 70 | 19 | 49 | 172 | 162 | 282 | 708 | 2,420 | 1,340 | 47 | 5.5 | 3.8 |
| 18 | 59 | 18 | 47 | 172 | 162 | 294 | 955 | 1,960 | 1,160 | 45 | 5.5 | 4.9 |
| 19 | 51 | 17 | 46 | 162 | 156 | 338 | 1,140 | 1,770 | 1,020 | 39 | 5.5 | 5.5 |
| 20 | 45 | 17 | 45 | 156 | 162 | 426 | 1,180 | 1,890 | 894 | 36 | 5.5 | 5.5 |
| 21 | 39 | 17 | 37 | 156 | 172 | 494 | 1,240 | 2,160 | 1,050 | 32 | 5.0 | 5.0 |
| 22 | 35 | 16 | 25 | 153 | 188 | 598 | 1,420 | 1,980 | 890 | 29 | 4.9 | 4.6 |
| 23 | 31 | 16 | 31 | 145 | 542 | 715 | 1,570 | 2,050 | 845 | 26 | 4.9 | 4.6 |
| 24 | 39 | 15 | 30 | 142 | 282 | 786 | 1,450 | 2,330 | 654 | 24 | 4.9 | 4.2 |
| 25 | 136 | 34 | 28 | 468 | 366 | 1,500 | 1,100 | 2,060 | 658 | 22 | 4.9 | 3.8 |
| 26 | 106 | 159 | 31 | 1,260 | 445 | 2,150 | 732 | 1,690 | 514 | 20 | 4.6 | 3.6 |
| 27 | 126 | 79 | 28 | 638 | 845 | 1,830 | 518 | 1,680 | 458 | 18 | 4.6 | 3.8 |
| 28 | 156 | 53 | 29 | 402 | 884 | 780 | 474 | 1,840 | 502 | 17 | 4.6 | 3.8 |
| 29 | 139 | 51 | 79 | 322 | 476 | 1,070 | 510 | 1,690 | 426 | 16 | 4.2 | 3.5 |
| 30 | 111 | 39 | 92 | 274 | - | 1,710 | 688 | 1,420 | 350 | 15 | 4.2 | 3.5 |
| 31 | 90 | - | 82 | 266 | - | 865 | - | 1,430 | - | 16 | 4.2 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------|------------------|---------|---------|-------|----------------------|
| October | 5,763 | 786 | 31 | 186 | 11,430 |
| November | 1,121 | 159 | 15 | 37.4 | 2,220 |
| December | 2,405 | 474 | 26 | 77.6 | 4,770 |
| Calendar year 1939 | 79,467.1 | 1,200 | 2.4 | 218 | 157,600 |
| January | 13,592 | 2,270 | 142 | 438 | 26,960 |
| February | 8,448 | 884 | 156 | 291 | 16,760 |
| March | 18,368 | 2,150 | 199 | 593 | 36,430 |
| April | 23,715 | 1,570 | 282 | 790 | 47,040 |
| May | 58,205 | 2,550 | 975 | 1,878 | 115,400 |
| June | 34,312 | 1,870 | 350 | 1,144 | 65,060 |
| July | 2,695 | 306 | 15 | 86.9 | 5,550 |
| August | 235 | 16 | 4.2 | 7.58 | 466 |
| September | 118.6 | 5.5 | 3.4 | 3.95 | 235 |
| Water year 1939-40 | 168,977.6 | 2,550 | 3.4 | 462 | 335,100 |

Peak discharge.- Jan. 2 (4 p.m.) 4,400 sec.-ft.; Jan. 26 (6 p.m.) 1,620 sec.-ft.; Mar. 26 (11 p.m.) 5,200 sec.-ft.; Mar. 30 (3 p.m.) 2,460 sec.-ft.; May 12 (10 p.m.) 3,370 sec.-ft.

Lake Eleanor near Hetch Hetchy, Calif.

Location.- Water-stage recorder, lat. 37°58', long. 119°53', in NW¼ sec. 3, T. 1 N., R. 19 E., at dam on Eleanor Creek, 1.7 miles upstream from Miguel Creek and 5½ miles northwest of Hetch Hetchy. Datum of gage is at mean sea level.

Drainage area.- 79 square miles.

Records available.- October 1919 to September 1940 (1919-30, gage heights only).

Extremes.- Maximum contents during year, 28,800 acre-feet June 12 (elevation, 4,661.1 feet); minimum, 2,850 acre-feet Dec. 27-29 (elevation, 4,627.4 feet).
1919-40: Maximum contents, 29,400 acre-feet Mar. 25, 1928 (elevation, 4,661.7 feet); no usable contents Nov. 28 to Dec. 20, 1921, Feb. 21 to Mar. 3, Nov. 21 to Dec. 10, 1929, Dec. 18-24, 1930.

Remarks.- Reservoir is formed by multiple-arch dam completed in 1918; storage began June 23, 1918. Usable capacity, 27,500 acre-feet between elevations 4,620.9 feet (natural outlet of old lake) and 4,660.0 feet (top of 5-foot flashboards) above mean sea level. Figures given herein represent total contents at midnight, of which 350 acre-feet is not available for release. Water is released down Eleanor Creek and ultimately used for power development and domestic supply as part of Hetch Hetchy system of city of San Francisco.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 9,890 | 12,700 | 5,240 | 3,000 | 25,800 | 26,000 | 26,400 | 26,400 | 27,400 | 28,600 | 24,600 | 18,700 |
| 2 | 10,400 | 12,500 | 4,960 | 6,480 | 25,700 | 25,900 | 26,200 | 26,800 | 27,400 | 28,700 | 24,500 | 18,500 |
| 3 | 10,800 | 12,400 | 4,680 | 7,900 | 26,000 | 25,800 | 26,100 | 26,700 | 27,400 | 28,600 | 24,400 | 18,200 |
| 4 | 11,100 | 12,100 | 4,400 | 9,550 | 26,000 | 25,800 | 26,000 | 26,500 | 27,400 | 28,600 | 24,200 | 18,100 |
| 5 | 11,400 | 12,000 | 4,110 | 10,100 | 25,800 | 25,800 | 26,000 | 26,500 | 27,400 | 28,700 | 24,000 | 17,900 |
| 6 | 11,800 | 11,700 | 3,820 | 10,500 | 25,900 | 25,800 | 25,900 | 26,300 | 27,400 | 28,700 | 23,800 | 17,700 |
| 7 | 12,200 | 11,500 | 3,480 | 11,100 | 25,800 | 25,900 | 25,900 | 26,300 | 27,400 | 28,700 | 23,600 | 17,500 |
| 8 | 12,500 | 11,200 | 3,140 | 12,000 | 25,800 | 25,900 | 26,000 | 26,500 | 27,400 | 28,700 | 23,400 | 17,400 |
| 9 | 12,800 | 10,900 | 2,710 | 13,000 | 25,700 | 25,900 | 26,000 | 26,700 | 27,500 | 28,700 | 23,300 | 17,100 |
| 10 | 12,900 | 10,700 | 3,050 | 14,200 | 25,700 | 25,800 | 26,100 | 26,900 | 27,700 | 28,700 | 23,200 | 16,800 |
| 11 | 13,100 | 10,400 | 3,440 | 15,600 | 25,700 | 25,800 | 26,200 | 27,000 | 28,500 | 28,600 | 23,000 | 16,500 |
| 12 | 13,200 | 10,200 | 3,630 | 16,600 | 25,600 | 26,000 | 26,400 | 27,000 | 28,500 | 28,600 | 22,700 | 16,200 |
| 13 | 13,300 | 9,890 | 3,770 | 17,200 | 25,600 | 25,600 | 26,600 | 26,900 | 28,700 | 28,600 | 22,500 | 15,900 |
| 14 | 13,400 | 9,620 | 3,820 | 17,500 | 25,700 | 25,600 | 26,700 | 26,800 | 28,700 | 28,400 | 22,300 | 15,600 |
| 15 | 13,500 | 9,340 | 3,820 | 17,900 | 25,700 | 25,600 | 26,400 | 26,700 | 28,700 | 28,200 | 22,100 | 15,300 |
| 16 | 13,600 | 9,060 | 3,770 | 18,100 | 25,600 | 25,600 | 26,200 | 26,700 | 28,700 | 28,000 | 21,900 | 15,000 |
| 17 | 13,600 | 8,790 | 3,680 | 18,400 | 25,600 | 25,700 | 26,100 | 26,800 | 28,700 | 27,800 | 21,700 | 14,700 |
| 18 | 13,600 | 8,510 | 3,580 | 18,600 | 25,600 | 25,700 | 26,300 | 26,700 | 28,600 | 27,700 | 21,500 | 14,300 |
| 19 | 13,600 | 8,170 | 3,440 | 19,800 | 25,600 | 25,800 | 26,300 | 26,500 | 28,600 | 27,500 | 21,400 | 14,100 |
| 20 | 13,600 | 7,900 | 3,290 | 19,100 | 25,600 | 25,900 | 26,500 | 27,200 | 28,600 | 27,500 | 21,200 | 13,900 |
| 21 | 13,400 | 7,550 | 3,140 | 19,400 | 25,600 | 26,000 | 26,600 | 27,800 | 28,600 | 27,200 | 20,900 | 13,600 |
| 22 | 13,300 | 7,210 | 3,140 | 19,600 | 25,700 | 26,000 | 26,700 | 27,800 | 28,700 | 27,000 | 20,700 | 13,300 |
| 23 | 13,200 | 6,880 | 3,050 | 19,700 | 26,100 | 26,100 | 26,700 | 27,800 | 28,700 | 26,800 | 20,500 | 13,000 |
| 24 | 13,200 | 6,600 | 3,000 | 19,900 | 26,000 | 26,200 | 26,600 | 27,900 | 28,700 | 26,500 | 20,500 | 12,800 |
| 25 | 13,000 | 6,310 | 2,950 | 21,000 | 26,000 | 26,900 | 26,500 | 27,500 | 28,600 | 26,300 | 20,100 | 12,400 |
| 26 | 12,900 | 6,260 | 2,900 | 23,400 | 26,100 | 28,200 | 26,100 | 27,600 | 28,600 | 26,000 | 19,900 | 12,000 |
| 27 | 12,800 | 6,200 | 2,850 | 24,800 | 26,500 | 27,500 | 26,000 | 27,600 | 28,600 | 25,800 | 19,700 | 11,700 |
| 28 | 12,800 | 6,030 | 2,850 | 25,600 | 26,500 | 26,800 | 26,000 | 27,500 | 28,600 | 25,500 | 19,600 | 11,400 |
| 29 | 12,800 | 5,800 | 2,850 | 25,800 | 26,200 | 27,100 | 26,000 | 27,500 | 28,600 | 25,200 | 19,400 | 11,200 |
| 30 | 12,700 | 5,520 | 2,900 | 25,800 | - | 27,300 | 26,000 | 27,400 | 28,600 | 24,900 | 19,200 | 10,800 |
| 31 | 12,700 | - | 2,900 | 25,800 | - | 26,800 | - | 27,400 | - | 24,700 | 18,900 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 4,639.6 | 10,100 | - |
| Oct. 31..... | 4,642.9 | 12,700 | +2,600 |
| Nov. 30..... | 4,632.5 | 5,520 | -7,180 |
| Dec. 31..... | 4,627.5 | 2,900 | -2,620 |
| Calendar year 1939..... | - | - | -10,300 |
| Jan. 31..... | 4,657.8 | 25,800 | +22,900 |
| Feb. 29..... | 4,658.3 | 26,200 | +400 |
| Mar. 31..... | 4,658.9 | 26,800 | +600 |
| Apr. 30..... | 4,658.1 | 26,000 | -800 |
| May 31..... | 4,659.6 | 27,400 | +1,400 |
| June 30..... | 4,660.9 | 28,600 | +1,200 |
| July 31..... | 4,656.7 | 24,700 | -3,900 |
| Aug. 31..... | 4,650.3 | 18,900 | -5,800 |
| Sept. 30..... | 4,640.6 | 10,800 | -8,100 |
| Water year 1939-40..... | - | - | +700 |

Eleanor Creek near Hetch Hetchy, Calif.

Location.- Water-stage recorder, lat. 37°58', long. 119°53', in SW¼ sec. 3, T. 1 N., R. 19 E., in Yosemite National Park, 0.6 mile downstream from Lake Eleanor Dam, 1.1 miles upstream from Miguel Creek, and 5½ miles northwest of Hetch Hetchy. Altitude of gage, about 4,600 feet.

Drainage area.- 80 square miles.

Records available.- November 1915 to September 1940. June to October 1901 and November 1909 to November 1915, at site 1 mile upstream.

Average discharge.- 30 years (1910-40), 216 second-feet.

Extremes.- Maximum discharge during year, 3,300 second-feet Mar. 27 (gage height, 7.87 feet); minimum, 1.5 second-feet (regulated) Dec. 11 (gage height, 1.06 feet).
1909-40: Maximum discharge, 10,500 second-feet Dec. 11, 1937 (gage height, 13.95 feet), from rating curve extended above 1,500 second-feet on basis of velocity-area studies; no flow Sept. 8-14, 1910, Oct. 15-21, 1930, Nov. 19, 22, 23, 1931, Dec. 6, 1933.

Remarks.- Records good. No diversions. Flow regulated by Lake Eleanor (see p. 209).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|----|-----|-----|-----|-----|
| 1.2 | 2.8 | 1.7 | 13 | 2.6 | 73 | 3.6 | 295 |
| 1.3 | 4.0 | 1.9 | 21 | 2.8 | 99 | 3.8 | 365 |
| 1.4 | 5.5 | 2.0 | 26 | 3.0 | 133 | 4.0 | 435 |
| 1.5 | 7.5 | 2.2 | 38 | 3.2 | 178 | 4.4 | 590 |
| 1.6 | 10 | 2.4 | 53 | 3.4 | 232 | 4.7 | 720 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|------|-------|------|------|------|-------|
| 1 | 135 | 72 | 141 | a17 | 285 | 474 | 745 | 534 | 466 | 107 | 37 | 92 |
| 2 | 94 | 89 | 144 | a7.5 | 262 | 376 | 558 | 815 | 482 | 99 | 73 | 92 |
| 3 | 2.2 | 110 | 141 | a3.4 | 295 | 316 | 449 | 990 | 463 | 93 | 75 | 92 |
| 4 | 2.2 | 128 | 141 | | 372 | 278 | 393 | 918 | 463 | 89 | 79 | 92 |
| 5 | 2.1 | 133 | 141 | | 323 | 259 | 351 | 716 | 442 | 52 | 79 | 92 |
| 6 | 2.2 | 133 | 141 | | 312 | 250 | 323 | 652 | 446 | 26 | 79 | 92 |
| 7 | 2.3 | 139 | 144 | | 316 | 265 | 344 | 670 | 463 | 36 | 81 | 92 |
| 8 | 2.1 | 141 | 144 | | 259 | 312 | 365 | 735 | 446 | 42 | 84 | 92 |
| 9 | 2.0 | 141 | 139 | | 210 | 344 | 396 | 845 | 435 | 43 | 83 | 120 |
| 10 | 1.8 | 144 | 70 | | 186 | 334 | 449 | 978 | 322 | 37 | 81 | 148 |
| 11 | 1.7 | 141 | 9.5 | | 178 | 292 | 546 | 1,110 | 21 | 43 | 81 | 148 |
| 12 | 1.7 | 141 | 8.5 | a4.0 | 168 | 244 | 630 | 1,140 | 249 | 62 | 81 | 146 |
| 13 | 1.7 | 139 | 24 | | 156 | 210 | 750 | 1,110 | 446 | 72 | 80 | 146 |
| 14 | 1.7 | 146 | 24 | | 191 | 191 | 860 | 996 | 442 | 77 | 81 | 144 |
| 15 | 1.7 | 150 | 36 | | 191 | 199 | 855 | 912 | 442 | 86 | 86 | 144 |
| 16 | 1.7 | 152 | 56 | | 166 | 218 | 652 | 860 | 396 | 86 | 86 | 144 |
| 17 | 1.7 | 154 | 69 | | 171 | 244 | 542 | 990 | 392 | 95 | 85 | 144 |
| 18 | 8 | 154 | 72 | | 171 | 265 | 578 | 882 | 376 | 99 | 85 | 141 |
| 19 | 53 | 156 | 72 | | 152 | 278 | 684 | 765 | 348 | 102 | 85 | 141 |
| 20 | 53 | 159 | 72 | | 144 | 326 | 745 | 394 | 295 | 113 | 86 | 141 |
| 21 | 53 | 159 | 71 | 3.0 | 141 | 372 | 770 | 474 | 215 | 113 | 86 | 141 |
| 22 | 53 | 161 | 46 | 3.0 | 154 | 428 | 835 | 730 | 241 | 117 | 88 | 144 |
| 23 | 50 | 159 | 39 | 3.2 | 410 | 510 | 912 | 730 | 212 | 126 | 89 | 146 |
| 24 | 70 | 161 | 39 | 7 | 452 | 562 | 865 | 770 | 164 | 126 | 89 | 146 |
| 25 | 117 | 161 | a39 | 13 | 376 | 916 | 750 | 775 | 173 | 124 | 91 | 146 |
| 26 | 80 | 74 | a39 | 9 | 435 | 1,380 | 606 | 662 | 166 | 129 | 91 | 146 |
| 27 | 98 | 49 | a25 | 4.9 | 643 | 2,600 | 482 | 594 | 150 | 137 | 91 | 148 |
| 28 | 98 | 99 | a17 | 140 | 789 | 1,250 | 410 | 582 | 105 | 137 | 91 | 150 |
| 29 | 73 | 124 | a17 | 215 | 686 | 944 | 390 | 570 | 101 | 137 | 92 | 150 |
| 30 | 54 | 133 | a17 | 282 | - | 1,380 | 414 | 534 | 112 | 141 | 93 | 150 |
| 31 | 30 | - | a17 | 288 | - | 1,170 | - | 466 | - | 114 | 93 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,138.8 | 135 | 1.7 | 36.7 | 2,260 |
| November..... | 4,002 | 161 | 49 | 133 | 7,940 |
| December..... | 2,155.0 | 144 | 8.5 | 69.5 | 4,270 |
| Calendar year 1939..... | 46,281.7 | 720 | 1.7 | 127 | 91,790 |
| January..... | 1,064.0 | 288 | 3.0 | 34.3 | 2,110 |
| February..... | 8,594 | 789 | 141 | 296 | 17,050 |
| March..... | 17,187 | 2,600 | 191 | 554 | 34,090 |
| April..... | 17,649 | 912 | 323 | 588 | 35,010 |
| May..... | 23,889 | 1,140 | 384 | 771 | 47,380 |
| June..... | 9,464 | 492 | 21 | 315 | 18,770 |
| July..... | 2,860 | 141 | 26 | 92.3 | 5,670 |
| August..... | 2,581 | 93 | 37 | 63.5 | 5,120 |
| September..... | 3,910 | 150 | 92 | 130 | 7,760 |
| Water year 1939-40..... | 94,493.8 | 2,600 | 1.7 | 258 | 187,400 |

Peak discharge.- Mar. 27 (4 a.m.) 3,300 sec.-ft.; Mar. 30 (8 p.m.) 1,530 sec.-ft.; May 12 (5:30 a.m.) 1,210 sec.-ft.

a No gage-height record; discharge computed on basis of record of release from Lake Eleanor.

South Fork of Tuolumne River near Oakland Recreation Camp, Calif.

Location.- Water-stage recorder, lat. 37°49', long. 120°00', in SE¼ sec. 29, T. 1 S., R. 18 E., 75 feet downstream from highway bridge on Big Oak Flat road, half a mile southwest of Oakland Recreation Camp, and 0.6 mile upstream from confluence with Middle Tuolumne River. Altitude of gage, about 2,800 feet (from topographic map).

Drainage area.- 87.6 square miles.

Records available.- March 1923 to September 1940.

Average discharge.- 17 years, 81.4 second-feet.

Extremes.- Maximum discharge during year, 1,460 second-feet Mar. 30 (gage height, 5.65 feet); minimum, 8 second-feet Dec. 22.

1923-40: Maximum discharge, 6,950 second-feet Dec. 11, 1937 (gage height, 10.00 feet), from rating curve extended above 1,000 second-feet on basis of velocity-area studies; minimum, 0.3 second-foot Aug. 23, 1934.

Remarks.- Records good. No diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 14 | 16 | 14 | 16 | 102 | 479 | 591 | 266 | 124 | 32 | 17 | 12 |
| 2 | 33 | 15 | 14 | 109 | 94 | 364 | 447 | 322 | 110 | 31 | 16 | 12 |
| 3 | 35 | 14 | 14 | 95 | 245 | 305 | 379 | 312 | 102 | 30 | 16 | 12 |
| 4 | 22 | 14 | 14 | 167 | 249 | 263 | 340 | 295 | 98 | 29 | 16 | 14 |
| 5 | 21 | 14 | 14 | 74 | 176 | 235 | 308 | 243 | 92 | 28 | 16 | 13 |
| 6 | 27 | 14 | 14 | 50 | 189 | 214 | 288 | 252 | 91 | 27 | 16 | 13 |
| 7 | 31 | 14 | 14 | 76 | 174 | 204 | 279 | 249 | 88 | 26 | 15 | 12 |
| 8 | 24 | 14 | 14 | 324 | 140 | 202 | 266 | 279 | 81 | 25 | 15 | 12 |
| 9 | 20 | 14 | 14 | 478 | 123 | 194 | 260 | 312 | 77 | 24 | 15 | 12 |
| 10 | 18 | 14 | 18 | 549 | 111 | 180 | 272 | 336 | 73 | 24 | 14 | 12 |
| 11 | 17 | 14 | 47 | 527 | 105 | 170 | 295 | 340 | 68 | 24 | 14 | 12 |
| 12 | 16 | 13 | 24 | 402 | 96 | 155 | 322 | 353 | 64 | 23 | 14 | 12 |
| 13 | 15 | 13 | 19 | 196 | 92 | 146 | 344 | 305 | 60 | 23 | 13 | 12 |
| 14 | 14 | 13 | 17 | 129 | 113 | 140 | 358 | 279 | 56 | 23 | 13 | 12 |
| 15 | 14 | 13 | 16 | 98 | 104 | 138 | 336 | 260 | 53 | 23 | 13 | 12 |
| 16 | 14 | 13 | 16 | 83 | 96 | 138 | 266 | 260 | 50 | 22 | 13 | 12 |
| 17 | 13 | 13 | 15 | 74 | 108 | 140 | 252 | 279 | 47 | 22 | 14 | 13 |
| 18 | 13 | 13 | 15 | 66 | 108 | 142 | 288 | 243 | 45 | 22 | 13 | 13 |
| 19 | 13 | 13 | 14 | 61 | 96 | 138 | 305 | 221 | 43 | 22 | 13 | 13 |
| 20 | 13 | 13 | 14 | 58 | 83 | 148 | 305 | 227 | 43 | 22 | 13 | 12 |
| 21 | 12 | 13 | 14 | 54 | 93 | 157 | 322 | 221 | 41 | 21 | 12 | 12 |
| 22 | 12 | 13 | 13 | 53 | 124 | 173 | 340 | 204 | 39 | 21 | 12 | 12 |
| 23 | 12 | 13 | 15 | 51 | 444 | 190 | 356 | 219 | 38 | 20 | 12 | 12 |
| 24 | 14 | 13 | 14 | 50 | 318 | 194 | 316 | 209 | 36 | 19 | 12 | 11 |
| 25 | 18 | 15 | 13 | 169 | 265 | 246 | 288 | 180 | 35 | 19 | 13 | 11 |
| 26 | 17 | 31 | 14 | 481 | 327 | 335 | 252 | 150 | 34 | 18 | 13 | 11 |
| 27 | 16 | 19 | 14 | 251 | 1,030 | 796 | 221 | 150 | 33 | 18 | 12 | 11 |
| 28 | 17 | 16 | 14 | 164 | 807 | 426 | 209 | 144 | 32 | 18 | 12 | 11 |
| 29 | 19 | 15 | 15 | 131 | 715 | 394 | 197 | 131 | 33 | 18 | 12 | 12 |
| 30 | 18 | 14 | 15 | 111 | - | 870 | 204 | 122 | 35 | 18 | 12 | 12 |
| 31 | 16 | - | 15 | 104 | - | 979 | - | 113 | - | 17 | 12 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 558 | 35 | 12 | 18.0 | 1,110 | | | |
| November..... | | | | | 436 | 31 | 13 | 14.5 | 865 | | | |
| December..... | | | | | 497 | 47 | 13 | 16.0 | 986 | | | |
| Calendar year 1939..... | | | | | 17,372 | 285 | 6.5 | 47.6 | 34,460 | | | |
| January..... | | | | | 5,251 | 549 | 16 | 169 | 10,420 | | | |
| February..... | | | | | 6,737 | 1,030 | 92 | 232 | 13,360 | | | |
| March..... | | | | | 8,855 | 979 | 138 | 286 | 17,560 | | | |
| April..... | | | | | 9,186 | 591 | 197 | 306 | 18,220 | | | |
| May..... | | | | | 7,456 | 340 | 113 | 241 | 14,790 | | | |
| June..... | | | | | 1,821 | 124 | 32 | 60.7 | 3,610 | | | |
| July..... | | | | | 709 | 32 | 17 | 22.9 | 1,410 | | | |
| August..... | | | | | 423 | 17 | 12 | 13.6 | 839 | | | |
| September..... | | | | | 352 | 14 | 11 | 12.1 | 718 | | | |
| Water year 1939-40..... | | | | | 42,291 | 1,030 | 11 | 116 | 83,890 | | | |

Peak discharge.- Jan. 9 (6:30 p.m.) 801 sec.-ft.; Jan. 10 (8 p.m.) 891 sec.-ft.; Jan. 25 (12 p.m.) 660 sec.-ft.; Feb. 27 (8 a.m.) 1,320 sec.-ft.; Mar. 27 (2 a.m.) 1,350 sec.-ft.; Mar. 30 (9:30 p.m.) 1,460 sec.-ft.

Middle Tuolumne River near Buck Meadows, Calif.

Location.- Water-stage recorder, lat. 37°50', long. 120°00', in NW¼ sec. 28, T. 1 S., R. 18 E., half a mile upstream from confluence with South Fork of Tuolumne River and 4 miles east of Buck Meadows. Altitude of gage, about 2,800 feet (from topographic map).

Drainage area.- 71.0 square miles.

Records available.- November 1916 to September 1940.

Average discharge.- 23 years (1917-40), 67.6 second-feet.

Extremes.- Maximum discharge during year, 890 second-feet Mar. 30 (gage height, 6.17 feet); minimum, 0.5 second-foot (regulated) Sept. 30 (gage height, 0.50 foot).

1917-40: Maximum discharge, 2,910 second-feet Dec. 11, 1937 (gage height, 10.4 feet, from floodmarks), from rating curve extended above 1,000 second-feet on basis of velocity-area studies; no flow Sept. 4-14, 1924, Aug. 12 to Oct. 5, 1931, Sept. 11-17, 1934.

Remarks.- Records good. Small diversion above gage for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 3.3 | h6.5 | 4.3 | 5.5 | 41 | 182 | 304 | 289 | 198 | 22 | 4.3 | 1.9 |
| 2 | 8.5 | h6 | 4.4 | 26 | 39 | 140 | 237 | 368 | 180 | 20 | 4.1 | 1.9 |
| 3 | 15 | h5.5 | 4.5 | 58 | 81 | 115 | 206 | 373 | 160 | 18 | 3.9 | 2.7 |
| 4 | 10 | 5 | 4.3 | 66 | 85 | 100 | 185 | 356 | 157 | 17 | 3.9 | 2.2 |
| 5 | 8 | 4.8 | 4.2 | 32 | 62 | 92 | 169 | 307 | 140 | 16 | 3.5 | 2.2 |
| 6 | 11 | 4.7 | 4.2 | 22 | 66 | 87 | 160 | 327 | 140 | 15 | 3.5 | 2.5 |
| 7 | 12 | 4.5 | 4.6 | 31 | 60 | 85 | 162 | 322 | 132 | 14 | 3.4 | 2.7 |
| 8 | 13 | 4.5 | 4.4 | 115 | 48 | 89 | 157 | 363 | 119 | 13 | 3.3 | 2.5 |
| 9 | 8.5 | 4.4 | 4.6 | 192 | 44 | 87 | 160 | 409 | 112 | 12 | 3.0 | 2.4 |
| 10 | 7.5 | 4.4 | 6 | 225 | 41 | 83 | 173 | 447 | 99 | 11 | 3.0 | 2.4 |
| 11 | 6.5 | 4.3 | 15 | 202 | 39 | 76 | 189 | 472 | 91 | 10 | 3.0 | 1.6 |
| 12 | 6 | 4.2 | 12 | 131 | 36 | 67 | 217 | 477 | 82 | 10 | 2.8 | 1.7 |
| 13 | 6 | 4.1 | 8 | 63 | 35 | 66 | 251 | 450 | 73 | 9.5 | 2.4 | 1.7 |
| 14 | 5.5 | 4.0 | 7 | 42 | 51 | 64 | 278 | 425 | 65 | 9 | 2.5 | 1.8 |
| 15 | 5 | 4.0 | 6 | 32 | 46 | 65 | 272 | 399 | 58 | 8.5 | 2.5 | 2.0 |
| 16 | 4.6 | 4.0 | 6 | 28 | 39 | 66 | 217 | 409 | 51 | 8.5 | 2.5 | 2.2 |
| 17 | 4.3 | 3.6 | 5.5 | 26 | 51 | 69 | 202 | 464 | 48 | 8 | 2.6 | 2.2 |
| 18 | 4.1 | 3.8 | 5.5 | 24 | 46 | 71 | 237 | 387 | 44 | 8 | 2.4 | 2.4 |
| 19 | 4.0 | 4.0 | 5.5 | 22 | 39 | 71 | 272 | 361 | 40 | 8 | 2.4 | 2.5 |
| 20 | 3.9 | 4.1 | 5 | 22 | 40 | 77 | 282 | 375 | 40 | 8 | 2.4 | 2.4 |
| 21 | 3.7 | 4.0 | 4.7 | 19 | 40 | 83 | 304 | 373 | 36 | 7.5 | 2.2 | 2.4 |
| 22 | 3.6 | 4.0 | 4.1 | 20 | 47 | 95 | 334 | 331 | 34 | 7 | 2.1 | 2.2 |
| 23 | 3.5 | 4.1 | 4.8 | 19 | 163 | 102 | 345 | 345 | 30 | 6.5 | 2.2 | 2.2 |
| 24 | 4.5 | 4.1 | 4.8 | 18 | 118 | 113 | 334 | 361 | 28 | 6 | 2.4 | 2.1 |
| 25 | 7 | 4.7 | 3.9 | 87 | 94 | 154 | 304 | 304 | 26 | 5.5 | 2.1 | 2.0 |
| 26 | 6.5 | 9.5 | 4.4 | 199 | 124 | 244 | 257 | 257 | 24 | 5 | 1.8 | 2.1 |
| 27 | h6 | 7 | 4.3 | 108 | 415 | 522 | 223 | 259 | 23 | 4.8 | 2.0 | 2.2 |
| 28 | h5.5 | 5 | 5 | 66 | 534 | 283 | 211 | 247 | 22 | 4.7 | 2.1 | 2.4 |
| 29 | a5.5 | 4.5 | 4.8 | 52 | 354 | 262 | 206 | 229 | 22 | 4.6 | 2.0 | 2.4 |
| 30 | h5.5 | 4.3 | 5 | 44 | - | 556 | 225 | 206 | 24 | 4.5 | 2.0 | 1.6 |
| 31 | h8 | - | 5.5 | 41 | - | 531 | - | 182 | - | 4.5 | 1.9 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 203.0 | 15 | 3.3 | 6.55 | 403 | | | |
| November..... | | | | | 141.6 | 9.5 | 3.6 | 4.72 | 281 | | | |
| December..... | | | | | 172.3 | 15 | 3.9 | 5.56 | 342 | | | |
| Calendar year 1939..... | | | | | 11,924.8 | 210 | .6 | 32.7 | 23,650 | | | |
| January..... | | | | | 2,037.5 | 225 | 5.5 | 65.7 | 4,040 | | | |
| February..... | | | | | 2,879 | 534 | 35 | 99.2 | 5,710 | | | |
| March..... | | | | | 4,694 | 556 | 64 | 151 | 9,310 | | | |
| April..... | | | | | 7,073 | 345 | 157 | 256 | 14,030 | | | |
| May..... | | | | | 10,872 | 477 | 182 | 351 | 21,560 | | | |
| June..... | | | | | 2,298 | 198 | 22 | 76.6 | 4,560 | | | |
| July..... | | | | | 306.1 | 22 | 4.5 | 9.87 | 607 | | | |
| August..... | | | | | 84.2 | 4.3 | 1.8 | 2.72 | 167 | | | |
| September..... | | | | | 65.5 | 2.7 | 1.6 | 2.18 | 130 | | | |
| Water year 1939-40..... | | | | | 30,825.2 | 556 | 1.6 | 34.2 | 61,140 | | | |

Peak discharge.- Jan. 10 (5:30 p.m.) 472 sec.-ft.; Feb. 27 (6 a.m.) 623 sec.-ft.; Feb. 28 (10:30 p.m.) 850 sec.-ft.; Mar. 27 (3 a.m.) 805 sec.-ft.; Mar. 30 (6 p.m.) 890 sec.-ft.; May 16 (11:30 p.m.) 698 sec.-ft.

a No gage-height record; discharge interpolated.

b Discharge computed from staff-gage reading.

Woods Creek near Jacksonville, Calif.

Location.- Water-stage recorder, lat. 37°51', long. 120°24', in SW $\frac{1}{4}$ sec. 12, T. 1 S., R. 14 E., $\frac{1}{4}$ miles upstream from mouth and $\frac{1}{4}$ miles northwest of Jacksonville. Altitude of gage, about 645 feet (from topographic map).

Drainage area.- 98.4 square miles.

Records available.- October 1925 to September 1940.

Average discharge.- 15 years, 59.6 second-feet.

Extremes.- Maximum discharge during year, 5,500 second-feet Mar. 31 (gage height, 8.80 feet); no flow Oct. 1-3.

1925-40: Maximum discharge, 13,500 second-feet Feb. 9, 1938 (gage height, 10.5 feet), from rating curve extended above 1,000 second-feet on basis of velocity-area studies; no flow at times during summers in period 1929-36, and in 1939 and 1940.

Remarks.- Records fair. At times small amounts of water from Stanislaus River Basin are spilled into Woods Creek above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 0 | 4.3 | 3.6 | 8.5 | 83 | 390 | 492 | 36 | 11 | 5 | 0.8 | 0.4 |
| 2 | 0 | 3.8 | 3.5 | 28 | 97 | 258 | 324 | 33 | 11 | 3.4 | 0.8 | 0.5 |
| 3 | 0 | 3.2 | 3.6 | 55 | 362 | 207 | 157 | 31 | 9.5 | 2.5 | .9 | .5 |
| 4 | 2.0 | 2.7 | 4.3 | 189 | 466 | 168 | 234 | 35 | 9.5 | 1.8 | .7 | .4 |
| 5 | 1.5 | 2.7 | 4.2 | 91 | 182 | 139 | 168 | 40 | 8.5 | 1.6 | .7 | .5 |
| 6 | | 2.7 | 4.2 | 64 | 303 | 118 | 145 | 33 | 7.5 | 1.3 | .6 | .7 |
| 7 | 1 | 2.7 | 4.3 | 57 | 240 | 107 | 131 | 29 | 6.5 | 1.2 | .5 | .5 |
| 8 | 1 | 2.9 | 4.7 | 345 | 141 | 112 | 118 | 27 | 5.5 | 1.3 | .5 | .4 |
| 9 | 1 | 3.2 | 4.3 | 1,150 | 93 | 88 | 107 | 25 | 5 | 1.2 | .4 | .3 |
| 10 | 1 | 3.0 | 5 | 910 | 79 | 79 | 91 | 24 | 4.5 | 1.2 | .4 | .3 |
| 11 | 1 | 3.0 | 17 | 865 | 62 | 79 | 78 | 22 | 4.5 | 1.2 | .4 | .4 |
| 12 | 1 | 2.6 | 13 | 459 | 64 | 69 | 69 | 22 | 3.9 | 1.0 | .4 | .5 |
| 13 | 1 | 3.0 | 8 | 218 | 69 | 67 | 67 | 19 | 3.2 | 1.0 | .4 | .5 |
| 14 | 1 | 2.3 | 6 | 98 | 476 | 41 | 42 | 18 | 2.7 | 1.0 | .4 | .5 |
| 15 | 1 | 2.3 | 5.5 | 61 | 282 | 44 | 57 | 15 | 1.8 | 1.0 | .4 | .5 |
| 16 | 1 | 2.3 | 5.5 | 48 | 125 | 70 | 43 | 14 | 7.5 | 1.0 | .5 | .5 |
| 17 | 1 | 2.9 | 6 | 46 | 218 | 57 | 36 | 12 | 9 | 1.0 | .5 | .6 |
| 18 | 1 | 3.2 | 6 | 41 | 273 | 50 | 48 | 11 | 10 | 1.3 | .5 | .6 |
| 19 | 1 | 3.3 | 6 | 32 | 141 | 45 | 53 | 9.5 | 10 | 1.8 | .5 | .8 |
| 20 | 1.1 | 3.3 | 6 | 33 | 112 | 42 | 50 | 9 | 11 | 1.6 | .5 | .9 |
| 21 | 1.1 | 3.5 | 5.5 | 59 | 103 | 33 | 46 | 9 | 12 | 1.2 | .4 | 1.0 |
| 22 | 1.1 | 3.2 | 5 | 41 | 116 | 31 | 44 | 8.5 | 11 | 1.1 | .4 | 1.1 |
| 23 | 1.1 | 2.6 | 5.5 | 32 | 728 | 30 | 41 | 7.5 | 10 | 1.0 | .4 | 1.2 |
| 24 | 1.7 | 2.5 | 6 | 24 | 340 | 31 | 37 | 8 | 9 | 1.0 | .4 | 1.2 |
| 25 | 2.6 | 2.5 | 6.5 | 1,150 | 198 | 55 | 42 | 8.5 | 11 | 1.0 | .4 | 1.2 |
| 26 | 4.5 | 3.5 | 6 | 1,260 | 342 | 344 | 74 | 8.5 | 21 | .9 | .6 | 1.2 |
| 27 | 3.6 | 6 | 6 | 343 | 3,270 | 1,260 | 57 | 6.5 | 43 | .9 | .6 | 1.2 |
| 28 | 2.6 | 4.3 | 6.5 | 141 | 1,260 | 279 | 45 | 7.5 | 40 | .9 | .6 | 2.1 |
| 29 | 1.9 | 4.2 | 6 | 94 | 906 | 408 | 42 | 8.5 | 19 | .9 | .5 | 1.6 |
| 30 | 2.6 | 4.0 | 7 | 82 | - | 2,200 | 39 | 9 | 8.5 | .8 | .5 | 1.4 |
| 31 | 2.6 | - | 7 | 114 | - | 2,500 | - | 10 | - | .8 | - | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 43.9 | 4.5 | 0 | 1.42 | 87 | | | | |
| November..... | | | | 95.7 | 6 | 2.3 | 3.19 | 190 | | | | |
| December..... | | | | 187.7 | 17 | 3.5 | 6.05 | 372 | | | | |
| Calendar year 1939..... | | | | 6,910.2 | 311 | 0 | 18.9 | 13,700 | | | | |
| January..... | | | | 8,138.5 | 1,260 | 8.5 | 263 | 16,140 | | | | |
| February..... | | | | 11,101 | 3,270 | 62 | 383 | 22,020 | | | | |
| March..... | | | | 9,401 | 2,500 | 30 | 303 | 18,650 | | | | |
| April..... | | | | 2,977 | 492 | 36 | 99.2 | 5,900 | | | | |
| May..... | | | | 558.0 | 40 | 7.5 | 18.0 | 1,110 | | | | |
| June..... | | | | 326.6 | 43 | 1.8 | 10.9 | 648 | | | | |
| July..... | | | | 42.9 | 5 | .8 | 1.38 | 86 | | | | |
| August..... | | | | 16.1 | 9 | .4 | .52 | 32 | | | | |
| September..... | | | | 23.5 | 2.1 | .3 | .78 | 47 | | | | |
| Water year 1939-40..... | | | | 32,911.9 | 3,270 | 0 | 89.9 | 65,280 | | | | |

Peak discharge.- Jan. 9 (3:30 p.m.) 2,900 sec.-ft.; Jan. 25 (8 p.m.) 4,420 sec.-ft.; Feb. 4 (10 p.m.) 1,150 sec.-ft.; Feb. 27 (10 a.m.) 5,080 sec.-ft.; Mar. 27 (2:30 a.m.) 3,230 sec.-ft.; Mar. 31 (3 a.m.) 5,500 sec.-ft.

Note.- Discharge for period of no gage-height record, Oct. 4-19, computed on basis of one estimate of flow and recorded range of stage.

Modesto canal near La Grange, Calif.

Location.- Water-stage recorder, lat. 37°40'04", long. 120°27'26", in SW $\frac{1}{4}$ sec. 17, T. 3 S., R. 14 E., a half a mile northeast of La Grange and about a mile downstream from intake at La Grange Dam on Tuolumne River. Datum of gage is 272.4 feet above mean sea level.

Records available.- April 1903 to September 1940.

Average discharge.- 37 years, 342 second-feet.

Extremes.- Maximum daily discharge during year, 1,560 second-feet June 15, 17, 18; no flow at times.
1903-40: Maximum daily discharge, 1,820 second-feet July 1, 1935; no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are fair. Canal diverts water from right bank of Tuolumne River at La Grange Dam for irrigation in Modesto and Waterford irrigation districts.

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

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 548 | 313 | 0 | 228 | 225 | 3 | 365 | 1,070 | 1,040 | 570 | 826 | 688 |
| 2 | 371 | 263 | 2 | 235 | 72 | 3 | 384 | 1,090 | 1,040 | 548 | 800 | 717 |
| 3 | 324 | 262 | 2 | 236 | 3 | 3 | 383 | 1,080 | 1,040 | 540 | 795 | 730 |
| 4 | 325 | 268 | 0 | 240 | 3 | 3 | 382 | 1,080 | 1,030 | 538 | 790 | 728 |
| 5 | 322 | 204 | 0 | 194 | 3 | 3 | 383 | 1,070 | 1,030 | 534 | 783 | 723 |
| 6 | 314 | 267 | 0 | 238 | 5 | 3 | 386 | 1,070 | 1,030 | 534 | 764 | 688 |
| 7 | 322 | 190 | 0 | 232 | 4 | 3 | 384 | 1,080 | 1,040 | 534 | 761 | 642 |
| 8 | 306 | 265 | 0 | 244 | 4 | 3 | 386 | 1,080 | 1,160 | 532 | 749 | 612 |
| 9 | 308 | 269 | 2 | 248 | 4 | 3 | 386 | 958 | 1,430 | 528 | 744 | 584 |
| 10 | 308 | 270 | 2 | 258 | 3 | 3 | 386 | 896 | 1,390 | 568 | 742 | 578 |
| 11 | 292 | 269 | 0 | 227 | 3 | 119 | 386 | 901 | 1,340 | 594 | 740 | 580 |
| 12 | 281 | 261 | 0 | 200 | 3 | 190 | 389 | 901 | 1,350 | 594 | 761 | 580 |
| 13 | 276 | 134 | 0 | 162 | 3 | 193 | 390 | 901 | 1,350 | 588 | 776 | 582 |
| 14 | 277 | 5 | 0 | 110 | 3 | 192 | 388 | 899 | 1,470 | 588 | 780 | 560 |
| 15 | 284 | 0 | 0 | 165 | 3 | 192 | 383 | 894 | 1,560 | 582 | 771 | 540 |
| 16 | 277 | 0 | 0 | 203 | 3 | 192 | 390 | 894 | 1,550 | 582 | 768 | 540 |
| 17 | 272 | 0 | 0 | 194 | 3 | 192 | 392 | 868 | 1,560 | 582 | 761 | 536 |
| 18 | 272 | 5 | 0 | 156 | 3 | 190 | 396 | 894 | 1,560 | 580 | 740 | 536 |
| 19 | 287 | 5 | 0 | 192 | 3 | 181 | 398 | 891 | 1,330 | 590 | 715 | 546 |
| 20 | 271 | 0 | 4 | 173 | 3 | 190 | 398 | 891 | 1,200 | 580 | 699 | 548 |
| 21 | 284 | 0 | 0 | 66 | 3 | 182 | 502 | 894 | 1,180 | 580 | 719 | 546 |
| 22 | 272 | 0 | 0 | 174 | 3 | 530 | 620 | 899 | 1,170 | 574 | 740 | 554 |
| 23 | 281 | 0 | 2 | 168 | 3 | 701 | 588 | 904 | 1,140 | 572 | 744 | 564 |
| 24 | 209 | 0 | 11 | 151 | 4 | 704 | 850 | 904 | 1,120 | 572 | 726 | 566 |
| 25 | 266 | 0 | 136 | 216 | 4 | 699 | 1,040 | 914 | 1,100 | 580 | 693 | 566 |
| 26 | 268 | 5 | 219 | 141 | 3 | 693 | 1,030 | 927 | 992 | 701 | 693 | 566 |
| 27 | 270 | 0 | 237 | 114 | 4 | 704 | 1,040 | 925 | 871 | 732 | 671 | 566 |
| 28 | 271 | 0 | 238 | 147 | 4 | 468 | 1,030 | 964 | 518 | 728 | 640 | 564 |
| 29 | 268 | 0 | 241 | 224 | 3 | 398 | 1,050 | 1,030 | 616 | 728 | 653 | 564 |
| 30 | 264 | 0 | 237 | 224 | - | 390 | 1,070 | 1,040 | 686 | 819 | 690 | 568 |
| 31 | 329 | - | 236 | 225 | - | 353 | - | 1,040 | - | 836 | 693 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 9,219 | 548 | 209 | 297 | 18,290 | | |
| November..... | | | | | | 3,255 | 313 | 0 | 108 | 6,460 | | |
| December..... | | | | | | 1,569 | 241 | 0 | 50.6 | 3,110 | | |
| Calendar year 1939..... | | | | | | 161,217 | 1,470 | 0 | 442 | 319,800 | | |
| January..... | | | | | | 5,985 | 258 | 66 | 193 | 11,870 | | |
| February..... | | | | | | 387 | 225 | 3 | 13.3 | 768 | | |
| March..... | | | | | | 7,693 | 704 | 3 | 248 | 15,260 | | |
| April..... | | | | | | 16,557 | 1,070 | 365 | 562 | 32,840 | | |
| May..... | | | | | | 29,849 | 1,090 | 868 | 963 | 59,200 | | |
| June..... | | | | | | 34,893 | 1,560 | 518 | 1,163 | 69,210 | | |
| July..... | | | | | | 18,698 | 836 | 528 | 603 | 37,090 | | |
| August..... | | | | | | 22,927 | 826 | 640 | 740 | 45,480 | | |
| September..... | | | | | | 17,862 | 730 | 536 | 595 | 35,430 | | |
| Water year 1939-40..... | | | | | | 168,894 | 1,560 | 0 | 461 | 335,000 | | |

Note.- No gage-height record Nov. 14 to Dec. 23, Feb. 3 to Mar. 10; record of discharge furnished by Modesto Irrigation District.

Turlock canal near La Grange, Calif.

Location.— Water-stage recorder and concrete control, lat. 37°40'00", long. 120°26'25", near north line of NW¼ sec. 21, T. 3 S., R. 14 E., 2,400 feet downstream from intake at La Grange Dam and 1.2 miles east of La Grange. Altitude of gage, about 265 feet (from topographic map).

Records available.— October 1898 to September 1940.

Average discharge.— 42 years, 471 second-feet.

Extremes.— Maximum daily discharge during year, 2,060 second-feet June 16-19; minimum daily, 3.3 second-feet Nov. 12.

1898-1940: Maximum daily discharge, 2,110 second-feet May 2, 1939; no diversion for irrigation during some periods of each year. Previous to 1939, unmeasured small discharge during winter, called zero.

Remarks.— Records excellent except those for very low stages, which are good. Canal diverts water from left bank of Tuolumne River at La Grange Dam for irrigation in Turlock irrigation district and to supply town of La Grange. During fall and winter some unmeasured flow is diverted from canal at tunnel 0.3 mile above gage, passed through La Grange power plant and returned to river.

Cooperation.— Gage-height record furnished by Turlock Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|-------|-------|-------|-------|
| 1 | 72 | 13 | 302 | 4.9 | 523 | 7.5 | 154 | 1,430 | 1,690 | 1,260 | 1,040 | 801 |
| 2 | 155 | 11 | 280 | 9.5 | 676 | 9 | 159 | 557 | 1,710 | 1,290 | 1,080 | 798 |
| 3 | 152 | 11 | 182 | 9 | 753 | 8 | 271 | 965 | 1,700 | 1,280 | 1,100 | 780 |
| 4 | 150 | 10 | 332 | 8.5 | 655 | 7.5 | 372 | 1,600 | 1,710 | 1,240 | 1,040 | 672 |
| 5 | 168 | 8.5 | 344 | 8.5 | 592 | 7 | 506 | 1,580 | 1,700 | 1,280 | 1,090 | 734 |
| 6 | 183 | 8.5 | 318 | 7.5 | 521 | 7.5 | 632 | 1,610 | 1,760 | 1,300 | 1,120 | 774 |
| 7 | 178 | 134 | 360 | 4.4 | 224 | 7.5 | 624 | 1,600 | 1,820 | 1,230 | 1,140 | 844 |
| 8 | 45 | 52 | 320 | 5.5 | 219 | 22 | 624 | 1,620 | 1,820 | 1,500 | 1,150 | 740 |
| 9 | 203 | 41 | 308 | 15 | 219 | 32 | 624 | 1,660 | 1,810 | 1,290 | 1,190 | 892 |
| 10 | 192 | 40 | 256 | 6 | 235 | 32 | 624 | 1,640 | 1,880 | 1,260 | 1,170 | 886 |
| 11 | 196 | 9 | 367 | 5 | 227 | 155 | 621 | 1,620 | 1,920 | 1,220 | 1,150 | 924 |
| 12 | 193 | 3.3 | 311 | 5 | 211 | 221 | 618 | 1,600 | 1,950 | 1,220 | 1,160 | 934 |
| 13 | 199 | 167 | 297 | 8 | 211 | 234 | 727 | 1,600 | 2,000 | 1,210 | 1,150 | 958 |
| 14 | 212 | 353 | 303 | 7 | 230 | 350 | 817 | 1,590 | 2,030 | 1,150 | 1,160 | 914 |
| 15 | 532 | 315 | 287 | 7 | 235 | 512 | 1,110 | 1,560 | 2,060 | 1,220 | 1,180 | 806 |
| 16 | 615 | 319 | 277 | 8 | 230 | 551 | 1,200 | 1,600 | 2,060 | 1,210 | 1,200 | 928 |
| 17 | 631 | 313 | 181 | 8 | 227 | 512 | 1,300 | 1,620 | 2,060 | 1,190 | 1,190 | 972 |
| 18 | 586 | 296 | 314 | 7 | 227 | 500 | 1,380 | 1,610 | 2,060 | 1,210 | 1,150 | 966 |
| 19 | 580 | 188 | 312 | 8 | 315 | 506 | 1,560 | 1,600 | 2,060 | 1,220 | 1,040 | 960 |
| 20 | 593 | 338 | 297 | 8 | 367 | 593 | 1,630 | 1,590 | 1,980 | 1,210 | 1,070 | 957 |
| 21 | 551 | 344 | 308 | 6 | 373 | 688 | 1,590 | 1,590 | 1,940 | 1,160 | 1,090 | 916 |
| 22 | 414 | 346 | 316 | 5.5 | 373 | 685 | 1,660 | 1,610 | 1,920 | 1,210 | 1,070 | 778 |
| 23 | 555 | 193 | 312 | 5.5 | 274 | 710 | 1,710 | 1,600 | 1,810 | 1,220 | 1,080 | 882 |
| 24 | 325 | 297 | 208 | 4.8 | 180 | 730 | 1,700 | 1,590 | 1,740 | 1,220 | 1,100 | 942 |
| 25 | 137 | 342 | 28 | 5.5 | 74 | 744 | 1,690 | 1,620 | 1,730 | 1,220 | 1,050 | 953 |
| 26 | 163 | 210 | 56 | 6 | 74 | 719 | 1,690 | 1,620 | 1,840 | 1,000 | 1,160 | 975 |
| 27 | 164 | 376 | 77 | 7 | 39 | 741 | 1,680 | 1,610 | 1,800 | 1,100 | 1,210 | 958 |
| 28 | 93 | 341 | 90 | 589 | 638 | 9.5 | 1,680 | 1,620 | 1,380 | 1,030 | 1,260 | 964 |
| 29 | 24 | 315 | 150 | 508 | 6 | 601 | 1,600 | 1,700 | 1,980 | 1,100 | 1,260 | 484 |
| 30 | 82 | 302 | 97 | 521 | - | 335 | 1,400 | 1,710 | 1,310 | 1,020 | 1,050 | 444 |
| 31 | 9.5 | - | 8.5 | 530 | - | 161 | - | 1,680 | - | 1,030 | 910 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 8,357.5 | 631 | 9.5 | 270 | 16,580 | | | | |
| November..... | | | | 5,696.3 | 376 | 3.3 | 180 | 11,300 | | | | |
| December..... | | | | 7,578.5 | 367 | 8.5 | 244 | 15,030 | | | | |
| Calendar year 1939..... | | | | 266,487.8 | 2,110 | 3.3 | 730 | 528,600 | | | | |
| January..... | | | | 2,338.1 | 589 | 4.4 | 75.4 | 4,640 | | | | |
| February..... | | | | 8,304.5 | 753 | 6 | 286 | 16,470 | | | | |
| March..... | | | | 11,006.0 | 744 | 7 | 355 | 21,830 | | | | |
| April..... | | | | 31,855 | 1,710 | 154 | 1,062 | 63,180 | | | | |
| May..... | | | | 48,202 | 1,710 | 557 | 1,555 | 95,610 | | | | |
| June..... | | | | 55,230 | 2,060 | 1,310 | 1,841 | 109,500 | | | | |
| July..... | | | | 37,100 | 1,300 | 1,000 | 1,197 | 73,690 | | | | |
| August..... | | | | 34,810 | 1,260 | 910 | 1,123 | 69,040 | | | | |
| September..... | | | | 25,516 | 975 | 444 | 851 | 50,610 | | | | |
| Water year 1939-40..... | | | | 275,991.9 | 2,060 | 3.3 | 754 | 547,400 | | | | |

Middle Fork of Stanislaus River at Kennedy Meadows, Calif.

Location.- Water-stage recorder, lat. 38°18', long. 119°45', in NE¼ sec. 11, T. 5 N., R. 20 E., at upper end of Kennedy Meadows, 1 mile upstream from Deadman Creek and 2 miles downstream from Relief Reservoir. Altitude of gage, about 6,450 feet (from topographic map).

Drainage area.- 49.5 square miles.

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 880 second-feet May 25 (gage height, 5.60 feet); minimum, 15 second-feet Nov. 16-21.
1938-40: Maximum discharge, that of May 25, 1940; minimum, 11 second-feet Jan. 5, 1939.

Remarks.- Records good except those for period of doubtful gage-height record, and those affected by ice, which are fair. Flow regulated by Relief Reservoir (capacity, 15,000 acre-feet); no diversions.

Cooperation.- Water-stage recorder graph and results of four discharge measurements furnished by the Pacific Gas & Electric Co., in connection with a Federal Power Commission project.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|----|-----|-----|-----|-----|
| 1.2 | 14 | 2.3 | 59 | 3.8 | 251 |
| 1.4 | 19 | 2.6 | 81 | 4.1 | 322 |
| 1.6 | 25 | 2.9 | 111 | 4.4 | 412 |
| 1.8 | 33 | 3.2 | 150 | 5.0 | 628 |
| 2.0 | 42 | 3.5 | 198 | 5.6 | 880 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 31 | 191 | 21 | 20 | 40 | 30 | 52 | 113 | 628 | 270 | 57 | 167 |
| 2 | 42 | 193 | 20 | 104 | 36 | 31 | 44 | 170 | 601 | 264 | 52 | 165 |
| 3 | 40 | 205 | 19 | 60 | 35 | 32 | 40 | 191 | 560 | 266 | 50 | 165 |
| 4 | 39 | 201 | 18 | 52 | 38 | 34 | 38 | 167 | 586 | 253 | 51 | 170 |
| 5 | 38 | 198 | 18 | 40 | 36 | 34 | 35 | 142 | 590 | 224 | 52 | 176 |
| 6 | 40 | 208 | 20 | 36 | 35 | 36 | 35 | 137 | 502 | 208 | 50 | 173 |
| 7 | 35 | 215 | 20 | 34 | 33 | 44 | 38 | 150 | 439 | 205 | 49 | 171 |
| 8 | 33 | 212 | 19 | 31 | 33 | 54 | 39 | 181 | 523 | 191 | 48 | 170 |
| 9 | 31 | d210 | 19 | 31 | 31 | 56 | 43 | 220 | 566 | 183 | 46 | 168 |
| 10 | 31 | d210 | 27 | 35 | 31 | 51 | 52 | 259 | 624 | 170 | 46 | 188 |
| 11 | 31 | d205 | 29 | 40 | 31 | 46 | 63 | 284 | 668 | 153 | 45 | 220 |
| 12 | 42 | d205 | 22 | 35 | 31 | 42 | 80 | 306 | 680 | 146 | 44 | 219 |
| 13 | 75 | d200 | 21 | 34 | 30 | 40 | 109 | 432 | 692 | 132 | 43 | 217 |
| 14 | 110 | 137 | 20 | 33 | 29 | 40 | 132 | 680 | 716 | 126 | 40 | 215 |
| 15 | 162 | 16 | 20 | 32 | 29 | 42 | 124 | 660 | 668 | 128 | 36 | 213 |
| 16 | 181 | 15 | 20 | 30 | 29 | 44 | 101 | 676 | 636 | 131 | 34 | 212 |
| 17 | 178 | 15 | 19 | 30 | 29 | 46 | 96 | 763 | 692 | 119 | 33 | 213 |
| 18 | 175 | 15 | 19 | 30 | 29 | 48 | 110 | 664 | 538 | 109 | 31 | 219 |
| 19 | 173 | 15 | 18 | 30 | 29 | 54 | 127 | 613 | 415 | 100 | 29 | 213 |
| 20 | 178 | 15 | 18 | 29 | 29 | 65 | 139 | 725 | 406 | 87 | 28 | 210 |
| 21 | 186 | 15 | 17 | 28 | 29 | 75 | 150 | 784 | 487 | 84 | 28 | 206 |
| 22 | 183 | 155 | 17 | 28 | 28 | 89 | 168 | 771 | 505 | 86 | 27 | 205 |
| 23 | 190 | 210 | 17 | 28 | 28 | 111 | 179 | 750 | 446 | 83 | 25 | 201 |
| 24 | 198 | 205 | 17 | 27 | 28 | 122 | 170 | 827 | 419 | 86 | 25 | 198 |
| 25 | 196 | 201 | 17 | 38 | 29 | 188 | 143 | 796 | 377 | 86 | 26 | 195 |
| 26 | 195 | 215 | 17 | 75 | 29 | 195 | 117 | 664 | 347 | 81 | 94 | 201 |
| 27 | 196 | 249 | 17 | 58 | 29 | 210 | 98 | 620 | 299 | 74 | 168 | 206 |
| 28 | 196 | 306 | 17 | 46 | 29 | 104 | 87 | 680 | 289 | 75 | 168 | 203 |
| 29 | 193 | 273 | 17 | 43 | 29 | 65 | 82 | 662 | 304 | 72 | 168 | 231 |
| 30 | 191 | 25 | 17 | 40 | - | 75 | 87 | 556 | 282 | 67 | 168 | 259 |
| 31 | 191 | - | 17 | 38 | - | 62 | - | 480 | - | 60 | 168 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 3,780 | 198 | 31 | 122 | 7,500 |
| November..... | 4,715 | 306 | 15 | 157 | 9,350 |
| December..... | 594 | 29 | 17 | 19.2 | 1,180 |
| Calendar year 1939..... | 28,368 | 377 | 15 | 77.7 | 56,270 |
| January..... | 1,215 | 104 | 20 | 39.2 | 2,410 |
| February..... | 901 | 40 | 28 | 31.1 | 1,790 |
| March..... | 2,165 | 210 | 30 | 70.0 | 4,290 |
| April..... | 2,778 | 179 | 35 | 92.6 | 5,510 |
| May..... | 15,113 | 827 | 113 | 488 | 29,980 |
| June..... | 15,505 | 716 | 282 | 517 | 30,750 |
| July..... | 4,319 | 270 | 60 | 139 | 8,670 |
| August..... | 1,930 | 168 | 25 | 62.3 | 3,830 |
| September..... | 5,966 | 269 | 165 | 199 | 11,830 |
| Water year 1939-40..... | 58,981 | 827 | 15 | 161 | 117,000 |

Peak discharge.- May 25 (1 a.m.) 88 sec.-ft.

d Doubtful gage-height record; discharge computed on basis of interpolated gage-height graph.

Note.- Stage-discharge relation affected by ice Dec. 22 to Jan. 1, Jan. 10-19, Feb. 10 to Mar. 3.

Middle Fork of Stanislaus River at Sand Bar Flat, near Avery, Calif.

Location.- Water-stage recorder, lat. 36°11', long. 120°09', in sec. 19, T. 4 N., R. 17 E., about a mile upstream from diversion dam of Pacific Gas & Electric Co. at Sand Bar Flat and 11 miles southeast of Avery. Altitude of gage, about 2,650 feet (from topographic map).

Drainage area.- 318 square miles.

Records available.- September 1905 to September 1940.

Average discharge.- 34 years (1905-8, 1909-39), 683 second-feet.

Extremes.- Maximum discharge during year, 4,690 second-feet Mar. 27 (gage height, 10.6 feet); minimum, 68 second-feet Nov. 22.

1905-40: Maximum discharge recorded, 26,500 second-feet Dec. 11, 1937 (gage height, 21.0 feet, from floodmarks), from rating curve extended above 6,000 second-feet on basis of velocity-area studies; minimum discharge, 30 second-feet Aug. 24, 1924.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow regulated by Relief Reservoir (capacity, 15,800 acre-feet). Water diverted by Philadelphia canal from South Fork of Stanislaus River through Spring Gap powerhouse into Middle Fork above station (see p. 222).

Cooperation.- Water-stage recorder graph and results of four discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-------|------|-------|
| 2.9 | 68 | 3.6 | 158 | 4.8 | 426 | 6.5 | 1,080 | 8.5 | 2,410 |
| 3.0 | 79 | 3.8 | 190 | 5.2 | 548 | 7.0 | 1,340 | 9.0 | 2,560 |
| 3.2 | 104 | 4.0 | 228 | 5.6 | 685 | 7.5 | 1,650 | 9.5 | 3,350 |
| 3.4 | 130 | 4.4 | 318 | 6.0 | 840 | 8.0 | 2,000 | 10.6 | 4,690 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 105 | 354 | 152 | 145 | 601 | 1,100 | 2,080 | 1,820 | 2,280 | 760 | 215 | 282 |
| 2 | 232 | 347 | 140 | 569 | 570 | 990 | 1,700 | 2,480 | 2,150 | 748 | 209 | 282 |
| 3 | 203 | 354 | 137 | 687 | 654 | 876 | 1,500 | 2,580 | 1,950 | 736 | 203 | 284 |
| 4 | 161 | 357 | 133 | 666 | 760 | 812 | 1,370 | 2,390 | 2,020 | 713 | 200 | 287 |
| 5 | 178 | 352 | 130 | 444 | 671 | 780 | 1,250 | 1,880 | 1,970 | 650 | 196 | 296 |
| 6 | 226 | 344 | 129 | 347 | 740 | 772 | 1,190 | 1,900 | 2,010 | 615 | 196 | 299 |
| 7 | 234 | 365 | 136 | 321 | 702 | 850 | 1,220 | 2,030 | 1,840 | 598 | 196 | 296 |
| 8 | 194 | 367 | 134 | 456 | 618 | 930 | 1,210 | 2,370 | 1,680 | 574 | 198 | 292 |
| 9 | 185 | 365 | 131 | 564 | 574 | 930 | 1,230 | 2,720 | 1,920 | 548 | 190 | 292 |
| 10 | 182 | 357 | 136 | 584 | 558 | 850 | 1,320 | 3,200 | 2,000 | 519 | 185 | 289 |
| 11 | 200 | 352 | 170 | 585 | 545 | 800 | 1,470 | 3,490 | 2,140 | 495 | 180 | 318 |
| 12 | 211 | 349 | 161 | 930 | 510 | 700 | 1,680 | 3,560 | 2,160 | 465 | 173 | 344 |
| 13 | 224 | 339 | 143 | 584 | 495 | 700 | 1,990 | 3,560 | 2,130 | 404 | 172 | 344 |
| 14 | 252 | 336 | 141 | 474 | 510 | 670 | 2,200 | 3,640 | 2,140 | 401 | 166 | 341 |
| 15 | 289 | 242 | 138 | 409 | 480 | 685 | 1,950 | 3,400 | 2,070 | 390 | 164 | 336 |
| 16 | 339 | 96 | 138 | 381 | 459 | 699 | 1,500 | 3,330 | 1,820 | 404 | 161 | 336 |
| 17 | 347 | 75 | 136 | 360 | 480 | 706 | 1,500 | 3,750 | 1,960 | 392 | 157 | 341 |
| 18 | 356 | 76 | 134 | 349 | 459 | 720 | 1,800 | 3,300 | 1,790 | 365 | 152 | 349 |
| 19 | 277 | 76 | 134 | 328 | 435 | 720 | 2,100 | 3,060 | 1,460 | 352 | 148 | 347 |
| 20 | 263 | 76 | 133 | 323 | 438 | 800 | 2,100 | 3,160 | 1,300 | 326 | 145 | 341 |
| 21 | 296 | 75 | 131 | 306 | 450 | 950 | 2,200 | 3,390 | 1,410 | 304 | 143 | 341 |
| 22 | 351 | 72 | 120 | 304 | 459 | 1,080 | 2,350 | 3,350 | 1,390 | 292 | 144 | 336 |
| 23 | 334 | 236 | 121 | 299 | 840 | 1,200 | 2,500 | 3,300 | 1,190 | 284 | 145 | 334 |
| 24 | 354 | 326 | 135 | 289 | 824 | 1,500 | 2,460 | 3,540 | 1,160 | 277 | 147 | 325 |
| 25 | 362 | 344 | 121 | 357 | 720 | 2,000 | 2,260 | 3,530 | 1,120 | 280 | 151 | 326 |
| 26 | 354 | 352 | 121 | 1,560 | 828 | 3,600 | 1,770 | 2,820 | 1,000 | 270 | 155 | 321 |
| 27 | 373 | 367 | 133 | 1,210 | 1,410 | 3,800 | 1,500 | 2,610 | 950 | 259 | 224 | 326 |
| 28 | 390 | 420 | 127 | 796 | 1,700 | 2,300 | 1,410 | 2,600 | 912 | 252 | 287 | 328 |
| 29 | 381 | 462 | 133 | 682 | 1,400 | 2,700 | 1,350 | 2,450 | 903 | 246 | 287 | 328 |
| 30 | 370 | 324 | 151 | 629 | - | 3,160 | 1,370 | 2,180 | 808 | 232 | 287 | 384 |
| 31 | 362 | - | 147 | 594 | - | 2,770 | - | 1,950 | - | 220 | 287 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 8,545 | 390 | 105 | 276 | 16,950 |
| November..... | 8,560 | 462 | 72 | 285 | 16,980 |
| December..... | 4,224 | 170 | 120 | 136 | 8,350 |
| Calendar year 1939..... | 142,242 | 1,670 | 72 | 390 | 282,100 |
| January..... | 17,162 | 1,560 | 145 | 554 | 34,040 |
| February..... | 19,890 | 1,700 | 435 | 686 | 39,450 |
| March..... | 40,950 | 3,800 | 670 | 1,321 | 81,220 |
| April..... | 51,520 | 2,500 | 1,190 | 1,717 | 102,200 |
| May..... | 89,140 | 3,750 | 1,820 | 2,875 | 176,800 |
| June..... | 49,803 | 2,260 | 808 | 1,660 | 96,780 |
| July..... | 13,371 | 760 | 220 | 451 | 26,520 |
| August..... | 5,865 | 287 | 143 | 159 | 11,630 |
| September..... | 9,650 | 354 | 252 | 322 | 19,140 |
| Water year 1939-40..... | 318,680 | 3,800 | 72 | 871 | 632,100 |

Peak discharge.- Mar. 27, 4,690 sec.-ft.; May 12 (11:30 p.m.) 4,470 sec.-ft.

Note.- No gage-height record Mar. 7-14, 18-29, Apr. 14-23; discharge computed on basis of records for North Fork of Stanislaus River near Avery.

Melones Reservoir at Melones Dam, Calif.

Location.— Staff gage and reference point, lat. 37°57'15", long. 120°30'45", near center of sec. 11, T. 1 N., R. 13 E., at Melones Dam on Stanislaus River, 0.1 mile downstream from Bear Creek. Datum of gage is at mean sea level.

Drainage area.— 897 square miles.

Records available.— June 1927 to September 1940.

Extremes.— Maximum contents observed during year, 112,600 acre-feet June 9-24 (elevation, 735.0 feet); minimum observed, 6,830 acre-feet Dec. 22 (elevation, 629.2 feet).
1927-40: Maximum contents, 114,800 acre-feet June 8, 1936 (elevation, 736.2 feet); minimum, 5,820 acre-feet Oct. 12, 1929 (elevation, 625.7 feet).

Remarks.— Reservoir is formed by concrete overflow dam; storage began Aug. 21, 1926; dam completed in December 1926. Capacity for power development 1 mile below dam is 106,100 acre-feet between elevations 628.0 feet (minimum operating level) and 735.0 feet (top of drum-type spillway gates) above mean sea level; usable capacity for irrigation, 110,000 acre-feet between elevations 610.0 feet (floor of outlet tunnel) and 735.0 feet above mean sea level. Figures given herein represent total contents at 7 a.m., of which 2,630 acre-feet is not available for release. Released water flows down Stanislaus River to Goodwin dam, where it is diverted into Oakdale and South San Joaquin canals for irrigation.

Cooperation.— Record of contents furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|--------|
| 1 | 7,560 | 9,150 | 11,500 | 9,110 | 76,800 | 96,200 | 103,300 | 101,400 | 102,800 | 109,800 | 68,000 | 17,200 |
| 2 | 7,450 | 9,260 | 11,800 | 9,720 | 77,400 | 95,300 | 105,100 | 102,800 | 103,600 | 109,100 | 66,400 | 16,000 |
| 3 | 7,450 | 9,380 | 11,900 | 14,200 | 78,600 | 95,000 | 105,800 | 106,400 | 104,000 | 108,600 | 64,600 | 14,600 |
| 4 | 7,850 | 9,340 | 12,100 | 16,400 | 82,700 | 94,500 | 105,300 | 107,100 | 102,800 | 107,600 | 62,800 | 13,400 |
| 5 | 7,910 | 9,300 | 11,800 | 18,300 | 88,900 | 94,100 | 104,400 | 106,700 | 102,800 | 106,900 | 61,100 | 12,400 |
| 6 | 8,020 | 9,190 | 11,400 | 19,600 | 89,400 | 94,000 | 103,500 | 105,600 | 105,800 | 106,000 | 59,600 | 11,700 |
| 7 | 7,980 | 9,110 | 10,800 | 19,400 | 93,000 | 94,000 | 104,400 | 104,400 | 108,200 | 105,100 | 57,600 | 11,000 |
| 8 | 8,150 | 9,040 | 10,500 | 19,900 | 93,600 | 93,800 | 105,100 | 104,400 | 110,900 | 104,000 | 55,500 | 10,400 |
| 9 | 8,190 | 9,000 | 9,870 | 23,600 | 93,300 | 94,000 | 103,300 | 105,600 | 112,600 | 102,800 | 54,500 | 9,570 |
| 10 | 8,190 | 9,000 | 10,000 | 31,900 | 93,300 | 94,100 | 102,600 | 105,600 | 112,600 | 101,800 | 52,300 | 9,300 |
| 11 | 8,020 | 8,970 | 10,500 | 38,500 | 93,100 | 94,000 | 102,400 | 106,200 | 112,600 | 100,400 | 50,600 | 9,110 |
| 12 | 7,880 | 8,890 | 10,400 | 45,500 | 93,000 | 93,500 | 102,800 | 112,600 | 112,600 | 99,200 | 48,700 | 8,890 |
| 13 | 7,740 | 8,790 | 10,200 | 50,400 | 92,700 | 93,300 | 103,500 | 112,600 | 112,600 | 97,800 | 47,000 | 8,860 |
| 14 | 7,520 | 8,640 | 9,870 | 52,000 | 93,000 | 93,100 | 105,300 | 112,600 | 112,600 | 96,500 | 45,100 | 8,750 |
| 15 | 7,680 | 8,530 | 9,410 | 52,700 | 93,300 | 93,100 | 106,700 | 110,800 | 112,600 | 95,000 | 43,500 | 8,680 |
| 16 | 7,810 | 8,190 | 9,000 | 52,900 | 92,800 | 93,100 | 105,600 | 109,700 | 112,600 | 93,600 | 41,800 | 8,570 |
| 17 | 7,890 | 7,610 | 8,930 | 53,000 | 92,800 | 93,100 | 103,800 | 109,100 | 112,600 | 92,200 | 40,100 | 8,500 |
| 18 | 7,810 | 7,260 | 8,750 | 52,700 | 93,100 | 93,100 | 103,100 | 109,300 | 112,600 | 90,700 | 38,400 | 8,430 |
| 19 | 7,880 | 7,290 | 8,250 | 52,300 | 93,300 | 93,300 | 103,800 | 108,600 | 112,600 | 89,100 | 36,600 | 8,350 |
| 20 | 8,050 | 7,360 | 7,780 | 51,900 | 92,800 | 93,300 | 104,900 | 108,000 | 112,600 | 87,700 | 35,000 | 8,350 |
| 21 | 7,980 | 7,360 | 7,550 | 51,400 | 92,700 | 93,600 | 105,600 | 107,500 | 112,600 | 86,300 | 33,300 | 8,350 |
| 22 | 7,910 | 7,420 | 8,830 | 50,700 | 92,700 | 94,100 | 106,200 | 108,000 | 112,600 | 84,700 | 31,600 | 8,430 |
| 23 | 7,910 | 7,590 | 7,490 | 50,100 | 93,500 | 94,600 | 107,100 | 108,000 | 112,600 | 83,200 | 29,800 | 8,350 |
| 24 | 7,850 | 7,740 | 7,280 | 49,500 | 95,300 | 95,000 | 107,500 | 107,800 | 112,600 | 81,500 | 28,300 | 8,250 |
| 25 | 7,980 | 8,050 | 7,880 | 48,900 | 94,500 | 95,500 | 107,100 | 108,200 | 112,400 | 79,900 | 26,500 | 8,220 |
| 26 | 8,190 | 8,860 | 8,250 | 54,900 | 94,500 | 96,700 | 106,000 | 107,600 | 112,100 | 78,300 | 24,800 | 8,080 |
| 27 | 8,320 | 9,410 | 8,320 | 65,100 | 97,200 | 104,600 | 104,600 | 107,100 | 111,700 | 76,900 | 23,200 | 8,080 |
| 28 | 8,500 | 10,000 | 8,430 | 70,100 | 98,400 | 101,600 | 103,500 | 105,600 | 111,100 | 75,100 | 21,900 | 8,020 |
| 29 | 8,750 | 10,600 | 8,460 | 72,300 | 97,800 | 99,700 | 103,000 | 105,100 | 110,800 | 73,300 | 20,600 | 7,950 |
| 30 | 8,890 | 11,300 | 8,610 | 74,100 | - | 101,900 | 102,100 | 104,400 | 111,400 | 71,600 | 19,400 | 7,950 |
| 31 | 9,000 | - | 8,890 | 75,400 | - | 108,700 | - | 104,000 | - | 70,000 | 18,500 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 632.3 | 7,810 | - |
| Oct. 31..... | 635.7 | 9,000 | +1,190 |
| Nov. 30..... | 641.5 | 11,300 | +2,300 |
| Dec. 31..... | 635.4 | 8,890 | -2,410 |
| Calendar year 1939..... | - | - | -13,500 |
| Jan. 31..... | 712.2 | 75,400 | +66,500 |
| Feb. 29..... | 726.7 | 97,800 | +22,400 |
| Mar. 31..... | 732.9 | 108,700 | +10,900 |
| Apr. 30..... | 729.2 | 102,100 | -6,600 |
| May 31..... | 730.3 | 104,000 | +1,900 |
| June 30..... | 734.3 | 111,400 | +7,400 |
| July 31..... | 733.4 | 70,000 | -41,400 |
| Aug. 31..... | 654.9 | 18,300 | -51,700 |
| Sept. 30..... | 632.7 | 7,950 | -10,350 |
| Water year 1939-40..... | - | - | +140 |

Stanislaus River below Melones powerhouse, Calif.

Location.— Water-stage recorder, lat. 37°56'50", long. 120°31'45", near line between secs. 10 and 15, T. 1 N., R. 13 E., 300 feet downstream from powerhouse, half a mile upstream from Bear Gulch, and 1 mile downstream from Melones Dam. Altitude of gage, about 500 feet (from topographic map).

Drainage area.— 898 square miles.

Records available.— January 1931 to September 1940.

Extremes.— Maximum discharge during year, 22,800 second-feet Mar. 31 (gage height, 17.6 feet); minimum, 4 second-feet Dec. 29.

1931-40: Maximum discharge, that of Mar. 31, 1940; minimum, about 1 second-foot Feb. 6, 1933, Dec. 9, 1937.

Remarks.— Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Melones Reservoir (p. 218), several smaller reservoirs, and diversions above station.

Cooperation.— Water-stage recorder graph and results of five discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1 | 214 | 350 | 127 | 64 | 1,020 | 5,630 | 7,720 | 3,340 | 3,470 | 1,240 | 1,140 | 914 |
| 2 | 211 | 352 | 172 | 249 | 1,020 | 3,900 | 4,630 | 4,060 | 3,510 | 1,200 | 1,140 | 906 |
| 3 | 217 | 420 | 40 | 490 | 1,040 | 3,300 | 4,630 | 5,200 | 4,090 | 1,200 | 1,140 | 898 |
| 4 | 214 | 438 | 373 | 800 | 821 | 2,250 | 4,300 | 5,560 | 3,390 | 1,200 | 1,140 | 810 |
| 5 | 218 | 438 | 428 | 792 | 1,030 | 2,500 | 3,800 | 4,680 | 2,150 | 1,200 | 1,130 | 706 |
| 6 | 252 | 430 | 443 | 873 | 1,040 | 2,100 | 3,530 | 4,740 | 1,800 | 1,190 | 1,130 | 685 |
| 7 | 261 | 426 | 448 | 880 | 1,700 | 2,300 | 1,690 | 4,280 | 1,850 | 1,190 | 1,130 | 678 |
| 8 | 258 | 428 | 447 | 855 | 2,100 | 2,300 | 4,180 | 4,400 | 1,820 | 1,180 | 1,130 | 664 |
| 9 | 256 | 421 | 109 | 914 | 1,890 | 2,200 | 3,870 | 5,310 | 2,730 | 1,180 | 1,120 | 535 |
| 10 | 293 | 425 | 48 | 943 | 1,700 | 2,350 | 3,500 | 6,510 | 2,840 | 1,180 | 1,120 | 424 |
| 11 | 286 | 427 | 443 | 970 | 1,570 | 2,280 | 3,570 | 5,540 | 3,150 | 1,180 | 1,120 | 424 |
| 12 | 294 | 432 | 443 | 976 | 1,440 | 1,880 | 3,870 | 4,000 | 3,090 | 1,180 | 1,080 | 424 |
| 13 | 299 | 429 | 454 | 970 | 1,340 | 1,760 | 4,000 | 7,550 | 3,110 | 1,180 | 1,060 | 418 |
| 14 | 298 | 436 | 448 | 975 | 1,660 | 1,580 | 4,450 | 8,310 | 3,100 | 1,180 | 1,060 | 407 |
| 15 | 295 | 432 | 432 | 1,010 | 1,700 | 1,590 | 5,330 | 7,200 | 3,110 | 1,180 | 1,060 | 407 |
| 16 | 294 | 434 | 398 | 1,000 | 1,460 | 1,770 | 4,790 | 6,450 | 2,730 | 1,180 | 1,060 | 407 |
| 17 | 335 | 280 | 161 | 1,000 | 1,410 | 1,640 | 4,050 | 6,400 | 2,650 | 1,170 | 1,060 | 407 |
| 18 | 350 | 111 | 444 | 1,000 | 1,340 | 1,780 | 3,940 | 6,420 | 2,600 | 1,170 | 1,060 | 407 |
| 19 | 352 | 116 | 443 | 1,000 | 1,700 | 1,690 | 4,160 | 5,680 | 2,190 | 1,170 | 1,060 | 390 |
| 20 | 352 | 120 | 422 | 975 | 1,420 | 1,710 | 4,630 | 5,780 | 1,870 | 1,170 | 1,060 | 373 |
| 21 | 344 | 132 | 422 | 975 | 1,280 | 1,890 | 4,790 | 5,800 | 1,750 | 1,160 | 1,060 | 373 |
| 22 | 343 | 127 | 44 | 975 | 2,090 | 2,090 | 5,100 | 5,970 | 1,780 | 1,160 | 1,060 | 379 |
| 23 | 357 | 119 | 90 | 975 | 2,370 | 2,470 | 5,450 | 5,850 | 1,750 | 1,160 | 1,060 | 384 |
| 24 | 350 | 131 | 10 | 955 | 3,760 | 2,800 | 5,550 | 5,920 | 1,630 | 1,160 | 1,020 | 384 |
| 25 | 358 | 169 | 10 | 950 | 2,820 | 3,650 | 5,300 | 5,970 | 1,540 | 1,150 | 1,010 | 379 |
| 26 | 356 | 208 | 177 | 990 | 3,190 | 5,230 | 4,460 | 5,020 | 1,460 | 1,150 | 1,000 | 379 |
| 27 | 364 | 165 | 149 | 965 | 10,400 | 14,000 | 3,850 | 5,330 | 1,420 | 1,160 | 946 | 379 |
| 28 | 366 | 172 | 159 | 980 | 10,900 | 7,570 | 3,220 | 4,780 | 1,340 | 1,150 | 922 | 379 |
| 29 | 356 | 167 | 149 | 1,000 | 8,710 | 6,370 | 3,410 | 4,550 | 1,260 | 1,150 | 914 | 379 |
| 30 | 356 | 285 | 95 | 1,000 | - | 11,600 | 3,400 | 3,760 | 1,260 | 1,140 | 914 | 418 |
| 31 | 358 | - | 110 | 1,020 | - | 17,300 | - | 4,020 | - | 1,140 | 914 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 9,463 | 366 | 211 | 305 | 18,770 |
| November..... | 9,020 | 438 | 111 | 301 | 17,890 |
| December..... | 8,138 | 454 | 10 | 283 | 16,140 |
| Calendar year 1939 | 255,424 | 2,880 | 10 | 700 | 506,600 |
| January..... | 27,491 | 1,020 | 64 | 887 | 54,530 |
| February..... | 72,736 | 10,900 | 821 | 2,508 | 144,300 |
| March..... | 121,480 | 17,300 | 1,580 | 3,919 | 241,000 |
| April..... | 128,950 | 7,720 | 1,690 | 4,298 | 255,800 |
| May..... | 168,393 | 8,310 | 3,340 | 5,432 | 334,000 |
| June..... | 70,450 | 4,090 | 1,260 | 2,348 | 139,700 |
| July..... | 36,400 | 1,240 | 1,140 | 1,174 | 72,200 |
| August..... | 32,790 | 1,140 | 914 | 1,058 | 66,040 |
| September..... | 15,117 | 914 | 373 | 504 | 29,980 |
| Water year 1939-40 | 700,425 | 17,300 | 10 | 1,914 | 1,389,000 |

Note.— No gage-height record Jan. 13 to Feb. 2, Mar. 2-8, Apr. 3-9; discharge computed on basis of flow through Melones power plant and unpublished record of flow above power plant.

North Fork of Stanislaus River near Avery, Calif.

Location.— Water-stage recorder, lat. 38°14', long. 120°17', in sec. 35, T. 5 N., R. 15 E., 700 feet upstream from intake of Utica Mining Co.'s canal, 3½ miles upstream from Beaver Creek, and 5 miles northeast of Avery. Altitude of gage, about 3,400 feet (from topographic map).

Drainage area.— 163 square miles.

Records available.— July 1914 to September 1922, November 1923 to September 1940.

Average discharge.— 19 years (1914-22, 1929-40), 410 second-feet.

Extremes.— Maximum discharge during year, 7,880 second-feet Mar. 26 (gage height, 9.82 feet); minimum, 26 second-feet Dec. 25 (gage height, 0.85 foot).

1914-22, 1928-40: Maximum discharge, 17,700 second-feet Dec. 11, 1937 (gage height, 14.1 feet, from floodmarks), from rating curve extended above 3,400 second-feet on basis of AWD studies; minimum, 5.5 second-feet Dec. 6, 7, 1929.

Remarks.— Records good. Flow regulated by three reservoirs above station and diversion from Beaver Creek.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|----|-----|-----|-----|-------|-----|-------|
| 1.0 | 34 | 1.8 | 102 | 3.5 | 470 | 5.5 | 1,650 |
| 1.2 | 47 | 2.0 | 125 | 4.0 | 655 | 6.0 | 2,140 |
| 1.4 | 63 | 2.6 | 224 | 4.5 | 900 | 7.0 | 3,340 |
| 1.6 | 82 | 3.0 | 318 | 5.0 | 1,250 | 8.0 | 4,800 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 77 | 65 | 47 | 80 | 451 | 757 | 1,570 | 1,830 | 1,070 | 96 | 52 | 41 |
| 2 | 92 | 63 | 48 | 1,190 | 406 | 679 | 1,200 | 2,680 | 918 | 94 | 51 | 52 |
| 3 | 79 | 60 | 46 | 442 | 533 | 591 | 1,060 | 2,550 | 780 | 67 | 51 | 60 |
| 4 | 42 | 56 | 47 | 594 | 569 | 530 | 930 | 2,250 | 770 | 81 | 51 | 61 |
| 5 | 38 | 51 | 46 | 285 | 451 | 522 | 820 | 1,510 | 736 | 75 | 49 | 53 |
| 6 | 42 | 46 | 49 | 204 | 599 | 522 | 795 | 1,500 | 760 | 68 | 49 | 48 |
| 7 | 123 | 45 | 51 | 196 | 540 | 583 | 924 | 1,680 | 691 | 61 | 48 | 46 |
| 8 | 62 | 49 | 53 | 435 | 412 | 704 | 924 | 2,060 | 664 | 57 | 47 | 46 |
| 9 | 56 | 49 | 52 | 536 | 364 | 736 | 1,060 | 2,390 | 595 | 52 | 48 | 46 |
| 10 | 48 | 51 | 53 | 484 | 361 | 619 | 1,250 | 2,600 | 568 | 49 | 49 | 46 |
| 11 | 44 | 50 | 141 | 630 | 367 | 516 | 1,470 | 2,770 | 593 | 53 | 49 | 45 |
| 12 | 42 | 48 | 111 | 756 | 332 | 441 | 1,720 | 2,700 | 558 | 49 | 48 | 43 |
| 13 | 41 | 46 | 81 | 389 | 310 | 422 | 2,020 | 2,570 | 530 | 47 | 46 | 39 |
| 14 | 55 | 46 | 80 | 305 | 326 | 416 | 2,180 | 2,300 | 505 | 48 | 46 | 40 |
| 15 | 54 | 49 | 65 | 256 | 300 | 457 | 1,920 | 2,150 | 470 | 62 | 44 | 39 |
| 16 | 53 | 48 | 61 | 237 | 278 | 494 | 1,290 | 2,060 | 397 | 61 | 47 | 40 |
| 17 | 53 | 47 | 58 | 224 | 282 | 522 | 1,310 | 2,180 | 397 | 59 | 49 | 40 |
| 18 | 53 | 47 | 56 | 220 | 273 | 558 | 1,740 | 1,930 | 361 | 54 | 47 | 42 |
| 19 | 52 | 48 | 56 | 208 | 259 | 554 | 2,020 | 1,740 | 308 | 53 | 46 | 46 |
| 20 | 52 | 49 | 55 | 200 | 261 | 709 | 2,010 | 1,800 | 256 | 53 | 44 | 49 |
| 21 | 50 | 49 | 53 | 193 | 268 | 795 | 2,120 | 1,900 | 247 | 52 | 43 | 37 |
| 22 | 54 | 49 | 45 | 191 | 280 | 942 | 2,350 | 1,840 | 224 | 51 | 43 | 36 |
| 23 | 58 | 49 | 52 | 185 | 631 | 1,120 | 2,420 | 1,770 | 163 | 50 | 44 | 39 |
| 24 | 61 | 48 | 46 | 180 | 536 | 1,160 | 2,240 | 1,790 | 163 | 49 | 43 | 44 |
| 25 | 76 | 49 | 37 | 320 | 491 | 2,070 | 1,820 | 1,630 | 154 | 49 | 40 | 44 |
| 26 | 80 | 67 | 47 | 1,470 | 662 | 3,540 | 1,270 | 1,360 | 135 | 50 | 36 | 43 |
| 27 | 78 | 61 | 40 | 884 | 1,460 | 3,830 | 1,060 | 1,190 | 120 | 52 | 34 | 43 |
| 28 | 80 | 57 | 41 | 558 | 1,730 | 1,750 | 1,020 | 1,170 | 113 | 55 | 45 | 43 |
| 29 | 77 | 49 | 47 | 467 | 1,130 | 2,210 | 1,060 | 1,090 | 110 | 55 | 39 | 43 |
| 30 | 72 | 53 | 73 | 444 | - | 4,740 | 1,180 | 979 | 104 | 54 | 34 | 43 |
| 31 | 68 | - | 65 | 428 | - | 2,370 | - | 856 | - | 53 | 38 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,912 | 123 | 38 | 61.7 | 3,790 |
| November..... | 1,544 | 67 | 45 | 51.5 | 3,060 |
| December..... | 1,804 | 141 | 37 | 58.2 | 3,580 |
| Calendar year 1939..... | 72,978 | 1,410 | 33 | 200 | 144,800 |
| January..... | 13,390 | 1,470 | 80 | 432 | 26,560 |
| February..... | 14,861 | 1,730 | 259 | 512 | 29,480 |
| March..... | 35,858 | 4,740 | 416 | 1,157 | 71,120 |
| April..... | 44,743 | 2,420 | 795 | 1,491 | 88,750 |
| May..... | 58,804 | 2,770 | 856 | 1,897 | 116,800 |
| June..... | 13,470 | 1,070 | 104 | 449 | 26,720 |
| July..... | 1,829 | 96 | 47 | 59.0 | 3,630 |
| August..... | 1,402 | 52 | 34 | 45.2 | 2,780 |
| September..... | 1,337 | 61 | 36 | 44.6 | 2,650 |
| Water year 1939-40..... | 190,954 | 4,740 | 34 | 522 | 378,700 |

Peak discharge.— Mar. 26 (11:30 p.m.) 7,880 sec.-ft.; Mar. 30 (1 p.m.) 6,300 sec.-ft.; May 2 (10 p.m.) 5,790 sec.-ft.

Note.— Discharge computed from once-daily staff-gage readings Oct. 3-18, Nov. 22 to Dec. 18.

South Fork of Stanislaus River at Strawberry, Calif.

Location.— Water-stage recorder, lat. $38^{\circ}12'$, long. $120^{\circ}01'$, in SW $\frac{1}{4}$ sec. 16, T. 4 N., R. 18 E., a quarter of a mile upstream from highway bridge at Strawberry and half a mile downstream from Herring Creek. Altitude of gage, about 5,350 feet (from topographic map).

Drainage area.— 45.5 square miles.

Records available.— August 1938 to September 1940. October 1911 to January 1917, at site 1 mile downstream.

Extremes.— Maximum discharge during year, 1,150 second-feet May 12 (gage height, 5.32 feet); minimum, 3.2 second-feet Nov. 18–22.
1911–17, 1938–40: Maximum discharge observed, 1,450 second-feet June 8, 1915 (gage height, 5.4 feet, site and datum then in use); minimum discharge, 2.8 second-feet Sept. 24, 1939.

Remarks.— Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Strawberry Reservoir.

Cooperation.— Water-stage recorder graph and results of five discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939–40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-------|
| 1.3 | 4.0 | 2.0 | 55 | 3.0 | 200 | 4.0 | 465 |
| 1.4 | 8 | 2.2 | 76 | 3.2 | 244 | 4.4 | 635 |
| 1.5 | 13 | 2.4 | 99 | 3.4 | 290 | 4.8 | 845 |
| 1.6 | 20 | 2.6 | 126 | 3.6 | 340 | 5.4 | 1,200 |
| 1.8 | 36 | 2.8 | 160 | 3.8 | 398 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-----|------|------|------|-------|
| 1 | 27 | 64 | 60 | 60 | 47 | 32 | 85 | 427 | 762 | 66 | 54 | 55 |
| 2 | 30 | 63 | 60 | 133 | 49 | 31 | all 5 | 705 | 599 | 63 | 53 | 55 |
| 3 | 10 | a61 | 60 | 44 | 55 | 40 | 115 | 715 | 554 | 59 | 53 | 55 |
| 4 | 9.5 | 59 | 60 | 46 | 55 | 48 | 82 | 660 | 558 | 54 | 54 | 55 |
| 5 | 20 | 59 | 60 | 53 | 54 | 49 | 69 | 362 | 541 | 55 | 54 | 55 |
| 6 | 29 | 59 | 61 | 54 | 40 | 50 | 92 | 348 | 590 | 60 | 53 | 55 |
| 7 | 26 | 60 | 61 | 55 | 38 | 52 | 126 | 424 | 561 | 57 | 53 | 55 |
| 8 | 26 | 60 | 61 | 55 | 53 | 56 | 126 | 590 | 558 | 53 | 53 | 55 |
| 9 | 33 | 60 | 61 | 55 | 52 | 59 | 139 | 752 | 568 | 61 | 52 | 55 |
| 10 | 49 | 59 | 63 | 35 | 52 | 56 | 174 | 872 | 594 | 51 | 51 | 55 |
| 11 | 63 | 59 | 67 | 38 | 52 | 52 | 237 | 960 | 568 | 52 | 50 | 54 |
| 12 | 68 | 59 | 63 | 56 | 51 | 49 | 295 | 972 | 545 | 46 | 50 | 54 |
| 13 | 67 | 59 | 61 | 52 | 50 | 48 | 365 | 930 | 529 | 30 | 51 | a54 |
| 14 | 66 | 58 | 60 | 52 | 50 | 50 | 440 | 862 | 545 | 42 | 51 | a54 |
| 15 | 65 | 46 | 60 | 52 | 49 | 53 | 420 | 784 | 448 | 50 | 52 | a54 |
| 16 | 64 | 3.4 | 60 | 59 | 49 | 54 | 266 | 774 | 392 | 53 | 53 | a53 |
| 17 | 63 | 3.4 | 60 | 59 | 51 | 54 | 248 | 966 | 338 | 53 | 53 | a53 |
| 18 | 50 | 3.2 | 60 | 60 | 50 | 55 | 315 | 845 | 253 | 52 | 53 | h53 |
| 19 | 7 | 3.2 | 60 | 59 | 50 | 56 | 414 | 740 | 164 | 52 | 53 | 55 |
| 20 | 7 | 3.2 | 59 | 59 | 49 | 63 | 434 | 784 | 244 | 53 | 53 | 58 |
| 21 | 42 | 3.2 | 58 | 55 | b47 | 70 | 481 | 918 | 295 | 53 | 53 | 58 |
| 22 | 56 | 3.2 | 58 | 54 | b45 | 70 | 370 | 878 | 240 | 53 | 53 | 58 |
| 23 | 57 | 58 | 58 | 55 | b43 | 73 | 454 | 845 | 150 | 53 | 53 | 58 |
| 24 | 59 | 55 | 58 | 55 | b41 | 82 | 481 | 949 | 176 | 52 | 53 | 58 |
| 25 | 60 | 60 | 58 | 55 | b40 | 142 | 465 | 862 | 158 | 52 | 54 | 58 |
| 26 | 61 | 60 | 58 | 63 | b38 | 165 | 322 | 710 | 128 | 53 | 54 | 58 |
| 27 | 62 | 60 | 58 | 46 | b37 | 183 | 226 | 675 | 120 | 53 | 54 | 58 |
| 28 | 64 | 60 | 58 | 47 | b35 | 95 | 196 | 680 | 120 | 53 | 55 | 58 |
| 29 | 65 | 60 | 58 | 52 | b34 | 94 | 186 | 622 | 106 | 54 | 55 | 58 |
| 30 | 65 | 60 | 59 | 60 | - | 123 | 240 | 384 | 79 | 54 | 55 | 58 |
| 31 | 65 | - | 59 | 49 | - | 102 | - | 414 | - | 54 | 55 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,434.5 | 68 | 7 | 46.3 | 2,850 |
| November..... | 1,368.8 | 64 | 3.2 | 45.3 | 2,700 |
| December..... | 1,857 | 87 | 58 | 59.9 | 3,680 |
| Calendar year 1939..... | 24,553.3 | 387 | 3.0 | 67.3 | 48,710 |
| January..... | 1,716 | 133 | 35 | 55.4 | 3,400 |
| February..... | 1,356 | 55 | 34 | 46.8 | 2,690 |
| March..... | 2,211 | 183 | 31 | 71.3 | 4,390 |
| April..... | 7,978 | 481 | 69 | 266 | 15,820 |
| May..... | 22,408 | 972 | 348 | 723 | 44,450 |
| June..... | 11,543 | 762 | 79 | 385 | 22,900 |
| July..... | 1,636 | 66 | 30 | 52.8 | 3,240 |
| August..... | 1,643 | 55 | 50 | 53.0 | 3,260 |
| September..... | 1,672 | 58 | 53 | 55.7 | 3,320 |
| Water year 1939–40..... | 56,813.3 | 972 | 3.2 | 155 | 112,700 |

a No gage-height record; discharge interpolated or based on records of regulation at Strawberry Reservoir.

b Stage-discharge relation affected by ice.

h Discharge computed from staff-gage reading.

STANISLAUS RIVER BASIN

Philadelphia canal near Strawberry, Calif.

Location.- Water-stage recorder and concrete control, lat. 38°11', long. 120°03', in sec. 30, T. 4 N., R. 18 E., about 250 feet downstream from diversion dam on South Fork of Stanislaus River and 3 miles southwest of Strawberry post office. Altitude of gage, about 4,800 feet (from topographic map).

Records available.- October 1939 to September 1940.

Extremes.- Maximum daily discharge during year, 60 second-feet Sept. 21-30; no flow Oct. 3, 4, 20, May 28 to June 8.

Remarks.- Records good. Canal diverts water from right bank of South Fork of Stanislaus River for power development in Spring Gap power plant of Pacific Gas and Electric Co.; tailrace empties into Middle Fork of Stanislaus River above station at Sand Bar Flat.

Cooperation.- Water-stage recorder record and results of several discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|------|---------|------|------|-----|----------------------|------|------|-------|
| 1 | a21 | 56 | 56 | 57 | 57 | b36 | 48 | 57 | 0 | 42 | 52 | 53 |
| 2 | a5 | 56 | 56 | 57 | 57 | b37 | 51 | 54 | 0 | 55 | 52 | 53 |
| 3 | a0 | 56 | 56 | 43 | 59 | b46 | 52 | 54 | 0 | 54 | 52 | 53 |
| 4 | a0 | 56 | 56 | 46 | 58 | 56 | 48 | 51 | 0 | 52 | 52 | 54 |
| 5 | a5 | 56 | 56 | 49 | 57 | 56 | 49 | 48 | 0 | 50 | 52 | 55 |
| 6 | a20 | 56 | 56 | 57 | 51 | 57 | 56 | 51 | 0 | 55 | 52 | 55 |
| 7 | a20 | 56 | 56 | 57 | 46 | 58 | 55 | 52 | 0 | 52 | 52 | 55 |
| 8 | a20 | 56 | 56 | 57 | 59 | 58 | 53 | 52 | 0 | 50 | 51 | 55 |
| 9 | a24 | 56 | 56 | 56 | 59 | 57 | 56 | 51 | 19 | 49 | 51 | 55 |
| 10 | 32 | 56 | 57 | 55 | 59 | 58 | 56 | 52 | 42 | 50 | 50 | 55 |
| 11 | 49 | 56 | 58 | 49 | 58 | 58 | 56 | 47 | 54 | 51 | 48 | 55 |
| 12 | 55 | 56 | 57 | 58 | 58 | 56 | 55 | 48 | 58 | 48 | 48 | 54 |
| 13 | 56 | 56 | 56 | 56 | 57 | 56 | 54 | 52 | 58 | 27 | 48 | 54 |
| 14 | 57 | 56 | 56 | 56 | 57 | 57 | 55 | 49 | 53 | 40 | 48 | 54 |
| 15 | 57 | 54 | 56 | 57 | 57 | 58 | 54 | 48 | 54 | 47 | 50 | 54 |
| 16 | 58 | 4.0 | 56 | 57 | 57 | 57 | 54 | 51 | 53 | 52 | 50 | 54 |
| 17 | 59 | 1.3 | 57 | 57 | b56 | 57 | 57 | 51 | 56 | 51 | 50 | 54 |
| 18 | 51 | 1.2 | 57 | 57 | b55 | 57 | 57 | 50 | 58 | 51 | 50 | 54 |
| 19 | 3.0 | 2.7 | 57 | 57 | b54 | 57 | 54 | 50 | 55 | 52 | 50 | 56 |
| 20 | 0 | 3.9 | 56 | 57 | b53 | 57 | 53 | 52 | 58 | 52 | 50 | 59 |
| 21 | 30 | 3.9 | 56 | 56 | *b53 | 57 | 56 | 53 | 58 | 52 | 50 | 60 |
| 22 | 49 | 3.9 | 56 | 56 | b51 | 56 | 57 | 51 | 55 | 52 | 50 | 60 |
| 23 | 54 | 30 | 57 | 57 | b49 | 56 | 56 | 51 | 54 | 52 | 50 | 60 |
| 24 | 55 | 54 | 56 | 57 | b47 | 57 | 55 | 51 | 54 | 52 | 50 | 60 |
| 25 | 54 | 57 | 56 | 57 | b45 | 57 | 56 | 51 | 55 | 52 | 51 | 60 |
| 26 | 54 | 56 | 56 | 59 | b44 | 55 | 54 | 50 | 55 | 52 | 51 | 60 |
| 27 | 56 | 56 | 56 | 56 | b43 | 52 | 54 | 19 | 54 | 52 | 52 | 60 |
| 28 | 57 | 56 | 56 | 52 | b41 | 53 | 56 | 0 | 54 | 52 | 54 | 60 |
| 29 | 57 | 56 | 56 | 57 | b40 | 52 | 56 | 0 | 54 | 52 | 53 | 60 |
| 30 | 56 | 56 | 57 | 57 | - | 48 | 57 | 0 | 17 | 51 | 53 | 60 |
| 31 | 56 | - | 57 | 57 | - | 46 | - | 0 | - | 52 | 53 | - |
| Month | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | |
| October..... | 1,171.0 | | 59 | | 0 | | 37.8 | | 2,320 | | | |
| November..... | 1,279.9 | | 57 | | 1.2 | | 42.7 | | 2,540 | | | |
| December..... | 1,746 | | 58 | | 56 | | 56.3 | | 3,460 | | | |
| Calendar year | - | | - | | - | | - | | - | | | |
| January..... | 1,716 | | 59 | | 43 | | 55.4 | | 3,400 | | | |
| February..... | 1,537 | | 59 | | 40 | | 53.0 | | 3,050 | | | |
| March..... | 1,679 | | 58 | | 37 | | 54.2 | | 3,330 | | | |
| April..... | 1,629 | | 57 | | 48 | | 54.3 | | 3,230 | | | |
| May..... | 1,349 | | 57 | | 0 | | 43.5 | | 2,680 | | | |
| June..... | 1,128 | | 58 | | 0 | | 37.6 | | 2,240 | | | |
| July..... | 1,551 | | 55 | | 27 | | 50.0 | | 3,080 | | | |
| August..... | 1,575 | | 54 | | 48 | | 50.8 | | 3,120 | | | |
| September..... | 1,691 | | 60 | | 53 | | 56.4 | | 3,350 | | | |
| Water year 1939-40..... | 18,051.9 | | 60 | | 0 | | 49.3 | | 35,800 | | | |

*Winter discharge measurement made on this day.

a No gage-height record; discharge furnished by Pacific Gas & Electric Co.

b Stage-discharge relation affected by ice.

Tulumne canal near Long Barn, Calif.

Location.— Water-stage recorder and concrete control, lat. 38°05', long. 120°11', in sec. 25, T. 3 N., R. 16 E., 200 feet downstream from intake, 250 feet downstream from Lyons Reservoir on South Fork of Stanislaus River, 2 miles west of Long Barn, and 14 miles northeast of Sonora. Altitude of gage, about 4,100 feet (from topographic map).

Records available.— October 1937 to September 1940.

Extremes.— Maximum daily discharge during year, 51 second-feet Feb. 11; minimum daily, 3.2 second-feet May 21.

1937-40: Maximum daily discharge, 54 second-feet June 26, 27, July 1, 1938; no flow at times.

Remarks.— Records excellent. Canal diverts water from left bank of South Fork of Stanislaus River for power and domestic supply in vicinity of Sonora.

Cooperation.— Water-stage recorder graph and results of two discharge measurements furnished by the Pacific Gas & Electric Co., under general supervision of the Geological Survey in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 14 | 12 | 10 | 8 | 11 | 15 | 13 | 12 | 36 | 37 | 20 | 27 |
| 2 | 14 | 12 | 8.5 | 8 | 11 | 15 | 13 | 13 | 36 | 23 | 21 | 28 |
| 3 | 15 | 12 | 8 | 9 | 11 | 15 | 13 | 13 | 36 | 22 | 22 | 27 |
| 4 | 12 | 12 | 8 | 8.5 | 11 | 15 | 13 | 13 | 36 | 22 | 22 | 27 |
| 5 | 12 | 12 | 8 | 10 | 11 | 15 | 13 | 12 | 36 | 22 | 22 | 27 |
| 6 | 12 | 12 | 9.5 | 14 | 11 | 14 | 13 | 12 | 37 | 22 | 23 | 26 |
| 7 | 12 | 12 | 8.5 | 14 | 11 | 15 | 13 | 13 | 37 | 22 | 24 | 25 |
| 8 | 12 | 12 | 8 | 11 | 20 | 15 | 13 | 13 | 37 | 22 | 24 | 25 |
| 9 | 12 | 12 | 8 | 11 | 32 | 15 | 12 | 13 | 36 | 22 | 24 | 24 |
| 10 | 12 | 12 | 8 | 12 | 46 | 15 | 11 | 13 | 36 | 22 | 24 | 23 |
| 11 | 12 | 12 | 8 | 11 | 51 | 15 | 11 | 13 | 37 | 21 | 24 | 22 |
| 12 | 12 | 12 | 8 | 10 | 50 | 15 | 11 | 14 | 37 | 21 | 25 | 20 |
| 13 | 12 | 12 | 8 | 10 | 46 | 15 | 11 | 13 | 38 | 22 | 26 | 19 |
| 14 | 12 | 12 | 8 | 10 | 16 | 25 | 12 | 13 | 38 | 22 | 26 | 19 |
| 15 | 12 | 12 | 8 | 11 | 15 | 31 | 12 | 13 | 40 | 22 | 26 | 19 |
| 16 | 12 | 12 | 8 | 11 | 15 | 31 | 11 | 13 | 41 | 22 | 26 | 18 |
| 17 | 12 | 12 | 8 | 11 | 18 | 30 | 11 | 13 | 40 | 16 | 26 | 18 |
| 18 | 12 | 11 | 8 | 11 | 20 | 31 | 11 | 13 | 40 | 21 | 26 | 18 |
| 19 | 12 | 11 | 8 | 11 | 23 | 30 | 11 | 13 | 40 | 20 | 26 | 18 |
| 20 | 12 | 11 | 8 | 11 | 32 | 32 | 11 | 3.2 | 41 | 20 | 27 | 18 |
| 21 | 12 | 11 | 8 | 11 | 31 | 32 | 12 | 4.7 | 41 | 20 | 27 | 18 |
| 22 | 12 | 11 | 8 | 11 | 31 | 19 | 9 | 13 | 40 | 20 | 27 | 18 |
| 23 | 12 | 11 | 8 | 11 | 32 | 14 | 8.5 | 13 | 40 | 20 | 28 | 18 |
| 24 | 12 | 11 | 8 | 11 | 31 | 14 | 8.5 | 13 | 40 | 20 | 27 | 18 |
| 25 | 12 | 11 | 8 | 11 | 31 | 13 | 8.5 | 13 | 40 | 20 | 28 | 18 |
| 26 | 12 | 11 | 8 | 11 | 31 | 13 | 8 | 13 | 41 | 20 | 28 | 18 |
| 27 | 12 | 11 | 8 | 11 | 34 | 14 | 8.5 | 13 | 42 | 20 | 27 | 17 |
| 28 | 12 | 10 | 8 | 11 | 31 | 13 | 8.5 | 13 | 42 | 20 | 27 | 17 |
| 29 | 12 | 10 | 8 | 11 | 22 | 13 | 10 | 17 | 42 | 16 | 27 | 17 |
| 30 | 12 | 10 | 8 | 11 | - | 13 | 11 | 30 | 42 | 20 | 27 | 17 |
| 31 | 12 | - | 8 | 11 | - | 13 | - | 35 | - | 20 | 27 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 377 | 14 | 12 | 12.2 | 748 | | | |
| November..... | | | | | 344 | 12 | 10 | 11.5 | 682 | | | |
| December..... | | | | | 252.5 | 10 | 8 | 8.15 | 501 | | | |
| Calendar year 1939..... | | | | | 6,249.0 | 38 | 0 | 17.1 | 12,410 | | | |
| January..... | | | | | 333.5 | 14 | 8 | 10.8 | 661 | | | |
| February..... | | | | | 735 | 51 | 11 | 25.3 | 1,460 | | | |
| March..... | | | | | 575 | 32 | 13 | 18.5 | 1,140 | | | |
| April..... | | | | | 331.5 | 13 | 8 | 11.0 | 658 | | | |
| May..... | | | | | 425.9 | 35 | 3.2 | 15.7 | 845 | | | |
| June..... | | | | | 1,165 | 42 | 36 | 38.8 | 2,310 | | | |
| July..... | | | | | 659 | 37 | 16 | 21.3 | 1,310 | | | |
| August..... | | | | | 784 | 28 | 20 | 25.3 | 1,560 | | | |
| September..... | | | | | 624 | 28 | 17 | 20.8 | 1,240 | | | |
| Water year 1939-40..... | | | | | 6,606.4 | 51 | 3.2 | 18.1 | 13,120 | | | |

South San Joaquin canal near Knights Ferry, Calif.

Location.- Water-stage recorder, lat. 37°51'20", long. 120°38'15", in sec. 15, T. 1 S., R. 12 E., three-quarters of a mile downstream from head gate at Goodwin Dam on Stanislaus River and 4 miles upstream from Knights Ferry. Altitude of gage, 345 feet (from topographic map).

Records available.- May 1914 to September 1940.

Average discharge.- 21 years (1914-30, 1931-32, 1936-40), 353 second-feet.

Extremes.- Maximum daily discharge during year, 1,010 second-feet June 19, 20, 22, 23, 27; no flow Dec. 25, Jan. 11 to Mar. 20, Apr. 1, 2, 4-7.

1914-40: Maximum daily discharge, 1,070 second-feet July 1-3, 1921; no flow at times in each year.

Remarks.- Records good. Canal diverts water from right bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale and South San Joaquin irrigation districts.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|------|-------|------|------|-------|
| 1 | 154 | 234 | 208 | 77 | | 0 | 0 | 747 | 951 | 834 | 765 | 584 |
| 2 | 150 | 232 | 84 | 64 | | 0 | 0 | 780 | 959 | 802 | 763 | 580 |
| 3 | 147 | 240 | 103 | 188 | | 0 | 3 | 826 | 954 | 802 | 766 | 579 |
| 4 | 155 | 247 | 46 | 204 | | 0 | 0 | 845 | 940 | 802 | 765 | 516 |
| 5 | 166 | 259 | 130 | 201 | | 0 | 0 | 848 | 945 | 798 | 762 | 437 |
| 6 | 172 | 264 | 182 | 201 | | 0 | 0 | h842 | 948 | 794 | 762 | 425 |
| 7 | 212 | 262 | 182 | 206 | | 0 | 0 | h858 | 950 | 789 | 760 | 423 |
| 8 | 199 | 259 | 184 | 221 | | 0 | 149 | h858 | 960 | 781 | 760 | 418 |
| 9 | 202 | 233 | 160 | 245 | | 0 | 271 | h890 | 960 | 781 | 758 | 338 |
| 10 | 215 | 234 | 104 | 89 | | 0 | 270 | h890 | 945 | 781 | 767 | 213 |
| 11 | 229 | 286 | 111 | 0 | | 0 | 271 | h660 | 962 | 779 | 755 | 244 |
| 12 | 215 | 348 | 184 | 0 | | 0 | 130 | 439 | 962 | 781 | 762 | 236 |
| 13 | 214 | 354 | 182 | 0 | | 0 | 319 | 911 | 962 | 779 | 699 | 232 |
| 14 | 216 | 357 | 181 | 0 | | 0 | 664 | 986 | 989 | 778 | 701 | 226 |
| 15 | 214 | 354 | 181 | 0 | | 0 | 802 | 981 | 984 | 762 | 701 | 224 |
| 16 | 218 | 353 | 181 | 0 | | 0 | 868 | 983 | 997 | 771 | 699 | 224 |
| 17 | 227 | 323 | 188 | 0 | | 0 | 911 | 989 | 1,000 | 774 | 699 | 223 |
| 18 | 254 | 125 | 172 | 0 | | 0 | 949 | 991 | 1,000 | 771 | 698 | 201 |
| 19 | 242 | 59 | 192 | 0 | | 0 | 992 | 984 | 1,010 | 766 | 690 | 176 |
| 20 | 250 | 55 | 182 | 0 | | 0 | 991 | 975 | 1,010 | 766 | 686 | 159 |
| 21 | 264 | 57 | 182 | 0 | | 162 | 994 | 984 | 1,000 | 765 | 688 | 157 |
| 22 | 258 | 59 | 166 | 0 | | 369 | 992 | 991 | 1,010 | 765 | 685 | 156 |
| 23 | 256 | 64 | 58 | 0 | | 488 | 997 | 989 | 1,010 | 770 | 677 | 157 |
| 24 | 259 | 66 | 53 | 0 | | 712 | 1,000 | 984 | 1,000 | 771 | 662 | 157 |
| 25 | 259 | 78 | 0 | 0 | | 762 | 970 | 975 | 1,000 | 771 | 652 | 157 |
| 26 | 256 | 142 | 9.5 | 0 | | 747 | 802 | 973 | 1,000 | 768 | 648 | 157 |
| 27 | 258 | 142 | 128 | 0 | | 735 | 756 | 950 | 1,010 | 770 | 616 | 213 |
| 28 | 266 | 126 | 118 | 0 | | 690 | 748 | 901 | 962 | 770 | 588 | 243 |
| 29 | 268 | 124 | 115 | 0 | | 681 | 748 | 893 | 845 | 768 | 586 | 243 |
| 30 | 207 | 143 | 109 | 0 | | 443 | 750 | 893 | 845 | 762 | 586 | 244 |
| 31 | 219 | - | 72 | 0 | | 51 | - | 903 | - | 762 | 585 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 6,811 | 268 | 147 | 220 | 13,610 |
| November..... | 6,077 | 357 | 55 | 203 | 12,050 |
| December..... | 4,107.5 | 208 | 0 | 132 | 8,150 |
| Calendar year 1939..... | 132,043.4 | 949 | 0 | 362 | 261,900 |
| January..... | 1,696 | 245 | 0 | 54.7 | 3,360 |
| February..... | 0 | 0 | 0 | 0 | 0 |
| March..... | 5,840 | 762 | 0 | 198 | 11,580 |
| April..... | 16,347 | 1,000 | 0 | 545 | 32,420 |
| May..... | 27,699 | 991 | 439 | 894 | 54,940 |
| June..... | 29,068 | 1,010 | 845 | 969 | 57,660 |
| July..... | 24,133 | 834 | 762 | 778 | 47,870 |
| August..... | 21,650 | 768 | 585 | 698 | 42,940 |
| September..... | 8,541 | 584 | 156 | 285 | 16,940 |
| Water year 1939-40..... | 151,969.5 | 1,010 | 0 | 415 | 301,400 |

h Discharge computed from staff-gage readings.

Oakdale canal near Knights Ferry, Calif.

Location.- Water-stage recorder, lat. 37°51'30", long. 120°38'00", in SE¼ sec. 10, T. 1 S., R. 12 E., half a mile downstream from head gate at Goodwin Dam on Stanislaus River and 4 miles upstream from Knights Ferry. Altitude of gage, about 350 feet (from topographic map).

Records available.- May 1914 to September 1940.

Average discharge.- 22 years (1914-32, 1936-40), 99.3 second-feet.

Extremes.- Maximum daily discharge during year, 385 second-feet June 14, 21, 22; no flow Nov. 19 to Mar. 23, Mar. 27 to Apr. 8.
1914-40: Maximum daily discharge, 402 second-feet July 30, 1938; no flow during periods in each year.

Remarks.- Records good. Canal diverts water from left bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale Irrigation district.

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

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 66 | 109 | | | | 0 | 0 | 340 | 379 | 382 | 364 | 303 |
| 2 | 66 | 108 | | | | 0 | 0 | 363 | 379 | 382 | 365 | 302 |
| 3 | 64 | 114 | | | | 0 | 0 | 364 | 379 | 381 | 366 | 300 |
| 4 | 65 | 124 | | | | 0 | 0 | 366 | 379 | 383 | 364 | 274 |
| 5 | 64 | 125 | | | | 0 | 0 | 364 | 378 | 382 | 364 | 256 |
| 6 | 71 | 120 | | | | 0 | 0 | 363 | 379 | 382 | 364 | 226 |
| 7 | 73 | 129 | | | | 0 | 0 | 362 | 379 | 381 | 364 | 224 |
| 8 | 69 | 140 | | | | 0 | 0 | 362 | 382 | 384 | 364 | 222 |
| 9 | 69 | 152 | | | | 0 | 41 | 364 | 381 | 385 | 365 | 195 |
| 10 | 74 | 153 | | | | 0 | 98 | 361 | 383 | 382 | 365 | 157 |
| 11 | 85 | 96 | | | | 0 | 139 | 364 | 382 | 382 | 363 | 161 |
| 12 | 90 | 31 | | | | 0 | 220 | 152 | 381 | 382 | 355 | 166 |
| 13 | 94 | 27 | | | | 0 | 264 | 379 | 384 | 381 | 350 | 171 |
| 14 | 94 | 29 | | | | 0 | 299 | 379 | 385 | 378 | 347 | 174 |
| 15 | 94 | 29 | | | | 0 | 319 | 378 | 380 | 377 | 346 | 174 |
| 16 | 96 | 29 | | | | 0 | 321 | 376 | 379 | 377 | 345 | 174 |
| 17 | 108 | 22 | | | | 0 | 343 | 381 | 381 | 376 | 344 | 173 |
| 18 | 118 | 8 | | | | 0 | 343 | 379 | 383 | 374 | 343 | 193 |
| 19 | 116 | 0 | | | | 0 | 346 | 378 | 384 | 373 | 340 | 213 |
| 20 | 117 | 0 | | | | 0 | 354 | 377 | 384 | 376 | 339 | 215 |
| 21 | 117 | 0 | | | | 0 | 352 | 381 | 385 | 377 | 340 | 215 |
| 22 | 110 | 0 | | | | 0 | 352 | 382 | 385 | 372 | 339 | 217 |
| 23 | 110 | 0 | | | | 0 | 352 | 380 | 382 | 370 | 326 | 222 |
| 24 | 112 | 0 | | | | 22 | 357 | 381 | 384 | 369 | 325 | 222 |
| 25 | 113 | 0 | | | | 58 | 351 | 382 | 382 | 368 | 325 | 222 |
| 26 | 112 | 0 | | | | 23 | 311 | 381 | 382 | 368 | 322 | 221 |
| 27 | 114 | 0 | | | | 0 | 313 | 376 | 382 | 368 | 308 | 158 |
| 28 | 108 | 0 | | | | 0 | 296 | 378 | 381 | 368 | 305 | 123 |
| 29 | 108 | 0 | | | | 0 | 296 | 377 | 380 | 366 | 304 | 125 |
| 30 | 106 | 0 | | | | 0 | 316 | 376 | 381 | 366 | 304 | 132 |
| 31 | 112 | - | | | | 0 | - | 378 | - | 365 | 304 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 2,914 | 118 | 64 | 94.0 | 5,780 | | |
| November..... | | | | | | 1,545 | 153 | 0 | 51.5 | 3,060 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 49,874 | 377 | 0 | 137 | 98,920 | | |
| January..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| February..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| March..... | | | | | | 103 | 58 | 0 | 3.32 | 204 | | |
| April..... | | | | | | 6,373 | 357 | 0 | 212 | 12,640 | | |
| May..... | | | | | | 11,324 | 382 | 152 | 365 | 22,460 | | |
| June..... | | | | | | 11,445 | 385 | 378 | 382 | 22,700 | | |
| July..... | | | | | | 11,655 | 384 | 365 | 376 | 23,120 | | |
| August..... | | | | | | 10,615 | 366 | 304 | 342 | 21,050 | | |
| September..... | | | | | | 6,130 | 303 | 123 | 204 | 12,160 | | |
| Water year 1939-40..... | | | | | | 62,104 | 385 | 0 | 170 | 123,200 | | |

Calaveras River at Jenny Lind, Calif.

Location.- Water-stage recorder, lat. 38°05', long. 120°52', in SW $\frac{1}{4}$ sec. 22, T. 3 N., R. 10 E., at bridge on Milton road, a quarter of a mile south of Jenny Lind and $6\frac{1}{2}$ miles downstream from Cosgrove Creek. Altitude of gage, about 220 feet.

Drainage area.- 395 square miles.

Records available.- January 1907 to September 1940.

Average discharge.- 31 years (1908-23, 1924-40), 260 second-feet.

Extremes.- Maximum discharge during year, 5,990 second-feet Mar. 31 (gage height, 8.01 feet); no flow Oct. 1 to Dec. 4 and Sept. 4-30.

1907-40: Maximum discharge observed, about 69,600 second-feet Jan. 31, 1911 (stage was reported higher about midnight); no flow during late summer of periods 1913-15, 1917-22, 1924-40.

Remarks.- Records good. Flow partly regulated by Hogan Reservoir at Stockton flood-control dam, by small reservoir on North Fork of Calaveras River, by diversion from North Fork into Mokelumne River Basin, and by diversion from North Fork of Stanislaus River into Calaveras River above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|-------|-------|-------|-------|-----|------|------|------|-------|
| 1 | | | 0 | 16 | 251 | 4,160 | 5,050 | 136 | 50 | 8.5 | 1.2 | 0.8 |
| 2 | | | 0 | 21 | 224 | 3,200 | 3,500 | 129 | 54 | 8.5 | 1.9 | .3 |
| 3 | | | 0 | 147 | 289 | 2,320 | 2,750 | 125 | 54 | 7 | 2.0 | .2 |
| 4 | | | 0 | 410 | 848 | 1,110 | 1,650 | 118 | 53 | 7.5 | 2.0 | 0 |
| 5 | | 4.3 | 529 | 634 | 630 | 805 | 121 | 49 | 14 | 1.9 | 0 | 0 |
| 6 | | | 6 | 216 | 473 | 501 | 595 | 125 | 44 | 9.5 | 1.8 | 0 |
| 7 | | 1.8 | 178 | 521 | 414 | 507 | 116 | 41 | 6 | 1.7 | 0 | 0 |
| 8 | | .8 | 938 | 416 | 362 | 450 | 110 | 35 | 7 | 1.6 | 0 | 0 |
| 9 | | .5 | 2,490 | 314 | 322 | 404 | 104 | 31 | 7 | 3.0 | 0 | 0 |
| 10 | | 2.5 | 2,580 | 262 | 294 | 357 | 99 | 27 | 6 | 1.5 | 0 | 0 |
| 11 | | | 12 | 2,680 | 227 | 272 | 322 | 93 | 26 | 5.5 | 1.3 | 0 |
| 12 | | | 15 | 2,190 | 204 | 255 | 298 | 65 | 27 | 5.5 | 1.3 | 0 |
| 13 | | | 30 | 1,130 | 184 | 235 | 272 | 94 | 25 | 5 | 1.2 | 0 |
| 14 | | | 33 | 467 | 563 | 219 | 255 | 82 | 25 | 4.9 | .7 | 0 |
| 15 | | | 30 | 261 | 752 | 206 | 238 | 78 | 27 | 4.7 | .2 | 0 |
| 16 | | | 29 | 208 | 438 | 203 | 238 | 78 | 24 | 4.7 | .2 | 0 |
| 17 | | | 26 | 170 | 438 | 222 | 219 | 76 | 25 | 4.5 | .9 | 0 |
| 18 | | | 23 | 144 | 608 | 194 | 204 | 74 | 20 | 17 | 1.1 | 0 |
| 19 | | | 21 | 122 | 433 | 175 | 193 | 71 | 16 | 25 | 1.2 | 0 |
| 20 | | | 20 | 113 | 323 | 160 | 184 | 67 | 14 | 25 | 1.2 | 0 |
| 21 | | | 18 | 102 | 273 | 149 | 176 | 64 | 18 | 24 | 1.2 | 0 |
| 22 | | | 17 | 98 | 248 | 146 | 168 | 60 | 18 | 23 | 1.2 | 0 |
| 23 | | | 17 | 90 | 590 | 133 | 160 | 56 | 16 | 23 | 1.2 | 0 |
| 24 | | | 17 | 84 | 1,180 | 126 | 155 | 56 | 12 | 23 | 1.2 | 0 |
| 25 | | | 16 | 321 | 908 | 184 | 150 | 56 | 12 | 22 | 1.2 | 0 |
| 26 | | | 15 | 2,850 | 1,140 | 278 | 160 | 56 | 12 | 21 | 1.1 | 0 |
| 27 | | | 15 | 2,490 | 3,850 | 2,320 | 196 | 53 | 10 | 20 | 1.1 | 0 |
| 28 | | | 15 | 1,220 | 5,500 | 1,920 | 176 | 50 | 8.5 | 8 | 1.0 | 0 |
| 29 | | | 14 | 509 | 5,390 | 1,160 | 155 | 46 | 9 | 3.4 | 1.0 | 0 |
| 30 | | | 14 | 332 | - | 1,950 | 146 | 44 | 9 | 1.9 | .7 | 0 |
| 31 | | | 14 | 262 | - | 5,730 | - | 47 | - | 1.3 | .6 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 0 | 0 | 0 | 0 | 0 |
| November..... | 0 | 0 | 0 | 0 | 0 |
| December..... | 426.9 | 33 | 0 | 13.8 | 847 |
| Calendar year 1939..... | 14,346.9 | 968 | 0 | 39.3 | 28,450 |
| January..... | 23,388 | 2,850 | 16 | 754 | 46,390 |
| February..... | 27,481 | 5,500 | 194 | 948 | 54,510 |
| March..... | 29,550 | 5,730 | 126 | 953 | 68,610 |
| April..... | 20,113 | 5,050 | 146 | 670 | 39,890 |
| May..... | 2,559 | 138 | 44 | 82.5 | 5,080 |
| June..... | 789.5 | 56 | 8.5 | 26.3 | 1,570 |
| July..... | 353.4 | 25 | 1.3 | 11.4 | 701 |
| August..... | 39.4 | 3 | .2 | 1.27 | 78 |
| September..... | 1.3 | .8 | 0 | .43 | 2.6 |
| Water year 1939-40..... | 104,701.5 | 5,730 | 0 | 286 | 207,700 |

Peak discharge.- Jan. 4 (11 p.m.) 780 sec.-ft.; Feb. 15 (1 to 3 a.m.) 915 sec.-ft.; Mar. 27 (1 p.m.) 2,600 sec.-ft.; Mar. 31 (11:30 a.m.) 5,990 sec.-ft.

Cosgrove Creek near Valley Springs, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}09'$, long. $120^{\circ}50'$, in SE $\frac{1}{4}$ sec. 35, T. 4 N., R. 10 E., 0.4 mile upstream from mouth and 2.5 miles south of Valley Springs. Altitude of gage, about 580 feet.

Drainage area.- 20.6 square miles.

Records available.- October 1929 to September 1940.

Average discharge.- 11 years, 7.86 second-feet.

Extremes.- Maximum discharge during year, 1,330 second-feet Mar. 31 (gage height, 6.04 feet); no flow for several months.

1929-40: Maximum discharge, 2,600 second-feet Feb. 22, 1936 (gage height, 7.80 feet), from rating curve extended above 1,000 second-feet on basis of velocity-area studies; no flow for several months each year.

Remarks.- Records good. No diversions above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| 1.9 | 0 | 2.4 | 6.0 | 3.2 | 85 |
| 2.0 | .2 | 2.5 | 9.8 | 3.5 | 142 |
| 2.1 | .6 | 2.6 | 15 | 3.8 | 215 |
| 2.2 | 1.5 | 2.8 | 31 | 4.2 | 338 |
| 2.3 | 3.3 | 3.0 | 55 | 4.6 | 510 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | 0 | 11 | 36 | 39 | 1.2 | 0.1 | | | |
| 2 | | | | .3 | 8 | 22 | 16 | 1.0 | .1 | | | |
| 3 | | | | .3 | 47 | 14 | 13 | .9 | 0 | | | |
| 4 | | | | 16 | 18 | 11 | 16 | .8 | 0 | | | |
| 5 | | | | 2.4 | 12 | 9 | 9.5 | .7 | 0 | | | |
| 6 | | | | 9.5 | 23 | 7.5 | 8 | .6 | 0 | | | |
| 7 | | | | 36 | 16 | 6 | 7 | .6 | 0 | | | |
| 8 | | | | 94 | 9 | 5.5 | 6 | .5 | 0 | | | |
| 9 | | | | 174 | 7 | 4.6 | 5.5 | .4 | 0 | | | |
| 10 | | | | 175 | 5.5 | 4.1 | 4.9 | .4 | 0 | | | |
| 11 | | | | 124 | 4.6 | 3.8 | 4.4 | .3 | 0 | | | |
| 12 | | | | 57 | 3.8 | 3.3 | 3.8 | .2 | 0 | | | |
| 13 | | | | 18 | 3.6 | 2.9 | 3.6 | .2 | 0 | | | |
| 14 | | | | 11 | 94 | 2.8 | 3.1 | .2 | 0 | | | |
| 15 | | | | 7 | 24 | 2.6 | 2.9 | .2 | 0 | | | |
| 16 | | | | 5.5 | 11 | 2.6 | 2.8 | .2 | 0 | | | |
| 17 | | | | 4.4 | 62 | 2.4 | 2.4 | .1 | 0 | | | |
| 18 | | | | 3.8 | 30 | 2.2 | 2.2 | .1 | 0 | | | |
| 19 | | | | 3.1 | 12 | 2.0 | 2.2 | .1 | 0 | | | |
| 20 | | | | 2.8 | 9 | 1.9 | 2.0 | .1 | 0 | | | |
| 21 | | | | 2.4 | 7.5 | 1.9 | 1.9 | .1 | 0 | | | |
| 22 | | | | 2.2 | 7.5 | 1.9 | 1.5 | .1 | 0 | | | |
| 23 | | | | 2.0 | 153 | 1.7 | 1.5 | .1 | 0 | | | |
| 24 | | | | 1.9 | 48 | 1.9 | 1.4 | .1 | 0 | | | |
| 25 | | | | 224 | 115 | 4.1 | 1.5 | .1 | 0 | | | |
| 26 | | | | 139 | 129 | 58 | 2.4 | .1 | 0 | | | |
| 27 | | | | 32 | 378 | 75 | 2.6 | 0 | 0 | | | |
| 28 | | | | 14 | 164 | 22 | 2.0 | 0 | 0 | | | |
| 29 | | | | 10 | 128 | 30 | 1.7 | 0 | 0 | | | |
| 30 | | | | 8 | - | 335 | 1.4 | 0 | 0 | | | |
| 31 | | | | 8.5 | - | 548 | - | .1 | - | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | | | | | | 483.1 | 63 | 0 | 1.32 | 959 | | |
| January..... | | | | | | 1,188.1 | 224 | 0 | 36.3 | 2,360 | | |
| February..... | | | | | | 1,538.5 | 378 | 3.6 | 53.1 | 3,050 | | |
| March..... | | | | | | 1,025.7 | 348 | 1.7 | 33.1 | 2,030 | | |
| April..... | | | | | | 174.2 | 39 | 1.4 | 5.81 | 346 | | |
| May..... | | | | | | 9.5 | 1.2 | 0 | .31 | 19 | | |
| June..... | | | | | | .2 | .1 | 0 | .01 | .4 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | | | | | | 3,936.2 | 378 | 0 | 10.8 | 7,810 | | |

Peak discharge.- Jan. 10 (5 p.m.) 506 sec.-ft.; Jan. 25 (8 p.m.) 888 sec.-ft.; Feb. 27 (4 a.m.) 842 sec.-ft.; Feb. 28 (9:30 a.m.) 640 sec.-ft.; Mar. 26 (10:30 p.m.) 447 sec.-ft.; Mar. 31 (1:30 a.m.) 1,330 sec.-ft.

MOKELUMNE RIVER BASIN

Salt Springs Reservoir near West Point, Calif.

Location.— Staff gage, lat. $38^{\circ}30'$, long. $120^{\circ}12'$, in $SE\frac{1}{4}$ sec. 33, T. 8 N., R. 16 E., at Salt Springs Dam on North Fork of Mokelumne River, 2 miles upstream from Cold Creek and 18 miles northeast of town of West Point. Datum of gage is 3,700 feet above mean sea level; gage readings have been reduced to elevations above mean sea level.

Drainage area.— 160 square miles.

Records available.— March 1931 to September 1940.

Extremes.— Maximum contents observed during year, 130,800 acre-feet June 1 (elevation, 3,948.3 feet); minimum observed, 32,500 acre-feet Jan. 1 (elevation, 3,813.4 feet). 1931-40: Maximum contents, 130,800 acre-feet June 25, 1938, and June 1, 1940 (elevation, 3,948.3 feet); no contents Jan. 30 to Feb. 5, Feb. 18-26, 1932, Mar. 1-25, 1933.

Remarks.— Reservoir is formed by concrete-faced rock-fill dam, completed in 1931, storage began in March 1931. Capacity, 129,500 acre-feet between elevations 3,707.25 feet (powerhouse intake) and 3,947.0 feet (crest of spillway) above mean sea level. Additional storage of 1,860 acre-feet is available for release to river through outlet drain at elevation 3,667.75 feet. Water is released through powerhouse just below dam and discharged into Tiger Creek powerhouse conduit. Figures given herein show contents available, at 3 p.m., for release through power plant intake.

Cooperation.— Record of contents furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 1 | 86,000 | 73,000 | 55,700 | 32,500 | 53,300 | 65,000 | 85,900 | 100,400 | 130,800 | 126,900 | 111,700 | 84,200 |
| 2 | 86,100 | 72,500 | 55,000 | 33,900 | 53,800 | 65,600 | 84,900 | 103,900 | 130,500 | 126,100 | 110,900 | 83,900 |
| 3 | 86,000 | 72,100 | 54,500 | 36,200 | 54,300 | 66,800 | 83,900 | 108,200 | 130,300 | 125,500 | 110,500 | 83,200 |
| 4 | 85,600 | 71,500 | 53,900 | 37,300 | 55,200 | 66,800 | 83,400 | 111,400 | 130,400 | 124,800 | 109,800 | 82,100 |
| 5 | 85,300 | 70,900 | 53,500 | 37,800 | 55,800 | 67,300 | 83,100 | 111,300 | 130,500 | 124,000 | 109,400 | 81,000 |
| 6 | 85,000 | 70,300 | 52,500 | 37,900 | 56,500 | 68,000 | 83,000 | 110,700 | 130,500 | 123,300 | 108,400 | 79,900 |
| 7 | 84,900 | 69,800 | 52,000 | 38,200 | 57,200 | 68,700 | 83,000 | 111,400 | 130,500 | 122,500 | 107,400 | 78,900 |
| 8 | 84,500 | 69,200 | 51,000 | 38,900 | 57,800 | 69,600 | 83,100 | 113,000 | 130,500 | 121,600 | 106,400 | 77,900 |
| 9 | 84,000 | 68,700 | 50,700 | 39,900 | 58,100 | 70,600 | 83,200 | 114,700 | 130,500 | 120,700 | 105,300 | 76,800 |
| 10 | 83,500 | 68,100 | 49,500 | 40,800 | 58,600 | 71,400 | 83,600 | 116,300 | 130,500 | 119,700 | 104,400 | 75,700 |
| 11 | 83,100 | 67,500 | 48,700 | 42,300 | 59,000 | 71,800 | 84,300 | 118,000 | 130,500 | 119,300 | 103,700 | 74,600 |
| 12 | 82,600 | 67,000 | 47,900 | 44,100 | 59,300 | 71,700 | 85,200 | 119,900 | 130,500 | 119,000 | 102,900 | 73,500 |
| 13 | 82,200 | 66,400 | 47,200 | 44,800 | 59,500 | 71,400 | 86,700 | 120,800 | 130,400 | 118,900 | 101,800 | 72,500 |
| 14 | 81,700 | 65,800 | 46,300 | 45,200 | 59,600 | 70,700 | 89,000 | 120,100 | 130,400 | 118,800 | 100,700 | 71,400 |
| 15 | 81,200 | 65,200 | 45,500 | 45,500 | 59,300 | 70,200 | 90,600 | 120,100 | 130,400 | 119,100 | 99,700 | 70,300 |
| 16 | 80,700 | 64,700 | 44,600 | 45,600 | 59,000 | 69,700 | 92,000 | 120,200 | 130,200 | 119,200 | 98,600 | 69,400 |
| 17 | 80,200 | 64,000 | 43,700 | 45,800 | 58,600 | 69,500 | 92,500 | 120,900 | 130,200 | 119,300 | 97,500 | 68,400 |
| 18 | 79,600 | 63,500 | 42,800 | 45,900 | 59,000 | 69,000 | 95,500 | 121,000 | 130,100 | 119,400 | 97,200 | 67,500 |
| 19 | 79,100 | 62,800 | 41,900 | 45,900 | 59,000 | 69,000 | 93,700 | 121,000 | 129,900 | 119,300 | 96,700 | 66,500 |
| 20 | 78,500 | 62,300 | 41,100 | 45,900 | 58,600 | 69,500 | 97,400 | 121,400 | 129,600 | 119,100 | 95,600 | 65,200 |
| 21 | 78,000 | 61,700 | 40,200 | 45,800 | 58,400 | 70,100 | 99,200 | 123,500 | 129,700 | 118,900 | 94,400 | 64,200 |
| 22 | 77,700 | 61,000 | 39,300 | 45,800 | 58,200 | 70,900 | 98,700 | 126,400 | 129,600 | 118,800 | 93,400 | 63,900 |
| 23 | 77,100 | 60,400 | 38,500 | 45,800 | 58,500 | 71,900 | 99,600 | 128,200 | 129,400 | 118,300 | 92,300 | 62,900 |
| 24 | 76,700 | 59,800 | 37,600 | 45,800 | 58,900 | 73,200 | 100,600 | 129,800 | 129,500 | 117,700 | 91,200 | 61,900 |
| 25 | 76,200 | 59,200 | 36,900 | 45,900 | 59,400 | 75,300 | 100,800 | 130,200 | 129,100 | 117,100 | 90,200 | 60,900 |
| 26 | 75,600 | 58,600 | 36,000 | 48,100 | 59,700 | 77,500 | 100,200 | 130,100 | 128,700 | 116,400 | 89,600 | 59,700 |
| 27 | 75,400 | 58,100 | 35,200 | 50,100 | 61,600 | 83,000 | 99,500 | 130,100 | 128,500 | 115,700 | 88,600 | 58,600 |
| 28 | 74,900 | 57,400 | 34,300 | 51,000 | 63,500 | 84,300 | 99,100 | 130,300 | 128,000 | 115,000 | 87,500 | 57,600 |
| 29 | 74,300 | 56,900 | 33,500 | 51,800 | 64,600 | 84,000 | 98,700 | 130,500 | 127,600 | 114,300 | 86,400 | 56,900 |
| 30 | 73,900 | 56,300 | 33,000 | 52,300 | - | 84,800 | 99,200 | 130,400 | 127,000 | 113,400 | 85,300 | 55,800 |
| 31 | 73,500 | - | 32,600 | 52,800 | - | 86,000 | - | 130,500 | - | 112,800 | 84,500 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 3,896.8 | 86,400 | - |
| Oct. 31..... | 3,879.9 | 73,500 | -12,900 |
| Nov. 30..... | 3,855.2 | 56,300 | -17,200 |
| Dec. 31..... | 3,813.6 | 32,600 | -23,700 |
| Calendar year 1939..... | - | - | +14,600 |
| Jan. 31..... | 3,849.8 | 52,800 | +20,200 |
| Feb. 29..... | 3,867.5 | 64,600 | +11,800 |
| Mar. 31..... | 3,896.3 | 86,000 | +21,400 |
| Apr. 30..... | 3,912.7 | 99,200 | +13,200 |
| May 31..... | 3,948.0 | 130,500 | +31,300 |
| June 30..... | 3,944.3 | 127,000 | -3,500 |
| July 31..... | 3,928.3 | 119,600 | -14,400 |
| Aug. 31..... | 3,894.4 | 84,500 | -28,100 |
| Sept. 30..... | 3,854.5 | 55,800 | -28,700 |
| Water year 1939-40..... | - | - | -30,600 |

North Fork of Mokelumne River below Salt Springs Dam, Calif.

Location.- Water-stage recorder, lat. 38°29', long. 120°13', in SW¼ sec. 33 T. 8 N., R. 16 E., 0.3 mile downstream from Salt Springs Dam and 1.7 miles upstream from Cold Creek. Altitude of gage, about 3,600 feet.

Drainage area.- 160 square miles.

Records available.- September 1926 to September 1940.

Average discharge.- 13 years (1927-40) 403 second-feet, combined flow of North Fork of Mokelumne River and Tiger Creek powerhouse conduit.

Extremes.- Maximum discharge during year, 3,160 second-feet May 13 (gage height, 7.5 feet); minimum, 1.3 second-feet Dec. 22-31.
1926-40: Maximum discharge, 8,740 second-feet Mar. 25, 1928 (gage height, 13.62 feet), from rating curve extended above 4,000 second-feet; minimum, 0.2 second-foot Mar. 31, 1931.

Remarks.- Records good. Flow regulated by Salt Springs Reservoir (p. 228), and diversion in Tiger Creek powerhouse conduit (p. 234).

Cooperation.- Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|------|-----|-----|----|-----|-----|-----|-----|-----|-------|
| -0.6 | 0.9 | 0.2 | 22 | 1.0 | 90 | 2.4 | 400 | 4.0 | 1,040 |
| -1.4 | 2.7 | .4 | 35 | 1.2 | 116 | 2.8 | 536 | 4.5 | 1,280 |
| -2 | 7 | .6 | 50 | 1.6 | 184 | 3.2 | 690 | 5.5 | 1,800 |
| 0 | 13 | .8 | 68 | 2.0 | 280 | 3.6 | 860 | 6.5 | 2,450 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|-------|-------|-------|------|------|-------|
| 1 | 8 | 6 | 2.0 | 1.4 | 3.2 | 271 | 1,120 | 65 | 1,730 | 10 | 8 | 4.8 |
| 2 | 8.5 | 5.5 | 2.0 | 3.2 | 3.1 | 34 | 1,360 | 68 | 1,380 | 10 | 8 | 4.5 |
| 3 | 7.5 | 5 | 2.0 | 2.3 | 4.1 | 19 | 918 | 71 | 1,200 | 10 | 8 | 4.3 |
| 4 | 7 | 5 | 2.0 | 6 | 5 | 133 | 618 | 424 | 1,260 | 10 | 8 | 4.3 |
| 5 | 7 | 5 | 2.0 | 3.4 | 5 | 6 | 654 | 1,000 | 1,160 | 10 | 7.5 | 4.1 |
| 6 | 7.5 | 5 | 1.9 | 2.7 | 5 | 5 | 511 | 894 | 1,280 | 12 | 7.5 | 4.1 |
| 7 | 7.5 | 5 | 1.9 | 6 | 5 | 5 | 514 | 561 | 1,220 | 12 | 7.5 | 4.0 |
| 8 | 7 | 5 | 1.7 | 11 | 4.3 | 4.8 | 536 | 723 | 1,080 | 10 | 7.5 | 4.0 |
| 9 | 7 | 5 | 1.7 | 12 | 4.0 | 4.3 | 543 | 1,410 | 910 | 9.5 | 7.5 | 4.0 |
| 10 | 7 | 5 | 2.0 | 11 | 3.8 | 4.1 | 529 | 2,090 | 932 | 9 | 7.5 | 3.6 |
| 11 | 7 | 4.8 | 2.0 | 9.5 | 3.6 | 251 | 580 | 2,240 | 972 | 9 | 7.5 | 3.4 |
| 12 | 7 | 4.8 | 1.9 | 7.5 | 3.6 | 390 | 583 | 2,420 | 882 | 9 | 7 | 3.2 |
| 13 | 6.5 | 4.8 | 1.7 | 4.8 | 3.8 | 473 | 511 | 2,380 | 838 | 9.5 | 7 | 3.2 |
| 14 | 7 | 4.8 | 1.7 | 4.3 | 133 | 558 | 507 | 2,380 | 815 | 10 | 7 | 3.1 |
| 15 | 6.5 | 4.8 | 1.6 | 4.0 | 176 | 558 | 568 | 1,980 | 722 | 9 | 7 | 3.1 |
| 16 | 6.5 | 4.5 | 1.6 | 3.4 | 174 | 561 | 558 | 2,100 | 610 | 9 | 7 | 3.1 |
| 17 | 6.5 | 4.5 | 1.6 | 3.1 | 174 | 561 | 561 | 2,070 | 630 | 9 | 6.5 | 2.9 |
| 18 | 6.5 | 4.3 | 1.6 | 2.7 | 4.1 | 366 | 565 | 2,080 | 493 | 9 | 6.5 | 2.7 |
| 19 | 6.5 | 4.1 | 1.6 | 2.5 | 168 | 198 | 572 | 2,080 | 341 | 9 | 6 | 2.5 |
| 20 | 6 | 4.1 | 1.5 | 2.3 | 129 | 167 | 466 | 1,680 | 206 | 9 | 6 | 2.5 |
| 21 | 6 | 4.1 | 1.4 | 2.3 | 167 | 185 | 1,140 | 1,180 | 188 | 9 | 6 | 2.3 |
| 22 | 6 | 4.0 | 1.3 | 2.3 | 38 | 173 | 1,620 | 1,040 | 123 | 9 | 6 | 2.3 |
| 23 | 6 | 4.0 | 1.3 | 2.2 | 296 | 156 | 1,150 | 1,740 | 51 | 9 | 6 | 2.3 |
| 24 | 6 | 3.8 | 1.3 | 2.0 | 279 | 189 | 1,030 | 1,660 | 12 | 9 | 6 | 2.3 |
| 25 | 6 | 4.1 | 1.3 | 4.1 | 104 | 192 | 1,030 | 2,170 | 11 | 9 | 5.5 | 2.2 |
| 26 | 6 | 3.8 | 1.3 | 8 | 254 | 200 | 851 | 1,900 | 11 | 9 | 5 | 2.2 |
| 27 | 5.5 | 3.4 | 1.3 | 5.5 | 163 | 288 | 587 | 1,580 | 11 | 8.5 | 5 | 2.1 |
| 28 | 5.5 | 2.3 | 1.3 | 4.3 | 180 | 834 | 507 | 1,540 | 11 | 8.5 | 5 | 2.1 |
| 29 | 5.5 | 2.2 | 1.3 | 4.1 | 291 | 1,250 | 237 | 1,530 | 12 | 8 | 5 | 2.0 |
| 30 | 6 | 2.5 | 1.3 | 4.0 | - | 1,340 | 60 | 1,300 | 13 | 8 | 5 | 1.9 |
| 31 | 6 | - | 1.3 | 3.4 | - | 995 | - | 1,330 | - | 8 | 4.8 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 204.5 | 8.5 | 5.5 | 6.60 | 408 |
| November..... | 131.2 | 6 | 2.2 | 4.37 | 260 |
| December..... | 50.4 | 2.0 | 1.3 | 1.63 | 100 |
| Calendar year 1939..... | 2,666.8 | 170 | .6 | 7.31 | 5,290 |
| January..... | 145.3 | 12 | 1.4 | 4.69 | 288 |
| February..... | 2,783.6 | 296 | 3.1 | 96.0 | 5,520 |
| March..... | 10,371.2 | 1,340 | 4.1 | 335 | 20,570 |
| April..... | 20,986 | 1,620 | 60 | 700 | 41,630 |
| May..... | 45,586 | 2,420 | 65 | 1,471 | 90,420 |
| June..... | 19,104 | 1,730 | 11 | 637 | 37,890 |
| July..... | 289.0 | 12 | 8 | 9.32 | 573 |
| August..... | 203.8 | 8 | 4.8 | 6.57 | 404 |
| September..... | 93.1 | 4.8 | 1.9 | 3.10 | 185 |
| Water year 1939-40..... | 99,948.1 | 2,420 | 1.3 | 273 | 198,200 |

MOKELUMNE RIVER BASIN

Mokelumne River near Mokelumne Hill, Calif.

Location.- Water-stage recorder, lat. 38°18'40", long. 120°43'10" in sec. 1, T. 5 N., R. 11 E., at highway bridge, 1.2 miles northwest of Mokelumne Hill and 8 miles downstream from confluence of North and South Forks. Altitude of gage, about 650 feet.

Drainage area.- 538 square miles.

Records available.- November 1927 to September 1940.

Average discharge.- 12 years (1928-40), 805 second-feet.

Extremes.- Maximum discharge during year, 13,000 second-feet Mar. 31 (gage height, 12.50 feet); minimum, 63 second-feet Aug. 13 (gage height, 1.50 feet).

1927-40: Maximum discharge, 23,300 second-feet Mar. 25, 1928 (gage height, 16.10 feet), from rating curve extended above 10,200 second-feet on basis of velocity-area studies; minimum, 14 second-feet Oct. 27, 1929.

Remarks.- Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Salt Springs Reservoir, several smaller reservoirs, three power plants, and several diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 227 | 328 | 347 | 321 | 861 | 3,030 | 5,190 | 1,670 | 3,200 | 491 | 590 | 308 |
| 2 | 218 | 336 | 351 | 616 | 837 | 2,310 | 4,560 | 2,370 | 2,740 | 545 | 585 | 186 |
| 3 | 319 | 370 | 281 | 1,300 | 958 | 1,740 | 3,630 | 2,490 | 2,380 | 585 | 486 | 253 |
| 4 | 359 | 307 | 351 | 1,050 | 1,080 | 1,920 | 3,030 | 2,250 | 2,450 | 486 | 286 | 570 |
| 5 | 340 | 252 | 349 | 696 | 1,160 | 1,540 | 2,600 | 2,440 | 2,280 | 550 | 283 | 555 |
| 6 | 314 | 315 | 501 | 611 | 1,130 | 1,290 | 2,160 | 2,500 | 2,410 | 565 | 464 | 555 |
| 7 | 378 | 347 | 398 | 423 | 1,240 | 1,130 | 2,040 | 2,140 | 2,380 | a480 | 595 | 560 |
| 8 | 303 | 326 | 456 | 1,230 | 1,140 | 1,090 | 2,040 | 2,310 | a620 | 649 | 555 | |
| 9 | 355 | 351 | 483 | 1,320 | a933 | 1,010 | 1,980 | 3,060 | 1,840 | a725 | 580 | 545 |
| 10 | 390 | 343 | 515 | 1,360 | a878 | 1,030 | 1,980 | 3,700 | 1,820 | a500 | 427 | 560 |
| 11 | 355 | 359 | 596 | 1,810 | a637 | 990 | 2,100 | 4,130 | 1,920 | 595 | 343 | 560 |
| 12 | 362 | 206 | 596 | 2,040 | a690 | 1,220 | 2,110 | 4,100 | 1,830 | 580 | 359 | 570 |
| 13 | 328 | 289 | 565 | 990 | a822 | 1,150 | 2,160 | 4,560 | 1,670 | 535 | 600 | 560 |
| 14 | 321 | 351 | 570 | 785 | 971 | 1,260 | 2,220 | 4,740 | 1,620 | 500 | 580 | 560 |
| 15 | 218 | 398 | 544 | 623 | 984 | 1,200 | 2,310 | 4,180 | 1,520 | 600 | 560 | 477 |
| 16 | 310 | 336 | 580 | 618 | 933 | 1,320 | 1,860 | 4,080 | 1,300 | 610 | 555 | 472 |
| 17 | 496 | 336 | 435 | 607 | 975 | 1,240 | 1,690 | 3,810 | 1,350 | 660 | 550 | 565 |
| 18 | 332 | 312 | 530 | 650 | 867 | 1,180 | 1,860 | 3,810 | 1,280 | 590 | 327 | 555 |
| 19 | 296 | 321 | 554 | 634 | 701 | 997 | 2,050 | 3,630 | 1,130 | 575 | 208 | 555 |
| 20 | 343 | 406 | 554 | 588 | 897 | 885 | 2,010 | 3,510 | 914 | 555 | 523 | 586 |
| 21 | 233 | 359 | 506 | 461 | 1,020 | 854 | 2,240 | 3,210 | 793 | 402 | 580 | 530 |
| 22 | 227 | 359 | 530 | 560 | 771 | 903 | 3,640 | 2,730 | 751 | 545 | 560 | 350 |
| 23 | 234 | 268 | 534 | 575 | 1,670 | 964 | 3,210 | 3,470 | 590 | 535 | 560 | 290 |
| 24 | 321 | 362 | 492 | 539 | 2,050 | 861 | 3,160 | 3,550 | 710 | 600 | 585 | 605 |
| 25 | 386 | 382 | 483 | 864 | 1,350 | 1,250 | 3,010 | 3,900 | 644 | 580 | 520 | 560 |
| 26 | 343 | 317 | 492 | 2,620 | 1,520 | 3,190 | 2,580 | 3,550 | 627 | 605 | 330 | 545 |
| 27 | 355 | 366 | 501 | 2,060 | 5,290 | 6,210 | 2,200 | 3,130 | 627 | 590 | 505 | 555 |
| 28 | 343 | 374 | 534 | 1,150 | 5,470 | 3,350 | 1,840 | 3,080 | 638 | 463 | 565 | 423 |
| 29 | 194 | 406 | 580 | 1,090 | 4,670 | 4,090 | 1,740 | 3,000 | 595 | 590 | 560 | 463 |
| 30 | 343 | 355 | 549 | 939 | - | 7,990 | 1,440 | 2,720 | 535 | 575 | 540 | 535 |
| 31 | 382 | - | 452 | 867 | - | 8,750 | - | 2,450 | - | 560 | 467 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 9,925 | 496 | 194 | 320 | 19,690 | | |
| November..... | | | | | | 10,137 | 406 | 206 | 338 | 20,110 | | |
| December..... | | | | | | 15,207 | 596 | 281 | 491 | 30,160 | | |
| Calendar year 1939..... | | | | | | 149,064 | 1,230 | 74 | 408 | 295,700 | | |
| January..... | | | | | | 30,493 | 2,620 | 321 | 984 | 60,480 | | |
| February..... | | | | | | 42,558 | 5,470 | 637 | 1,468 | 84,410 | | |
| March..... | | | | | | 65,924 | 8,750 | 864 | 2,127 | 130,800 | | |
| April..... | | | | | | 74,720 | 5,190 | 1,440 | 2,491 | 148,200 | | |
| May..... | | | | | | 100,320 | 4,740 | 1,670 | 3,235 | 199,000 | | |
| June..... | | | | | | 44,654 | 3,200 | 535 | 1,468 | 88,570 | | |
| July..... | | | | | | 17,462 | 725 | 402 | 564 | 34,680 | | |
| August..... | | | | | | 15,342 | 649 | 208 | 496 | 30,450 | | |
| September..... | | | | | | 14,942 | 605 | 186 | 498 | 29,640 | | |
| Water year 1939-40..... | | | | | | 441,704 | 8,750 | 186 | 1,207 | 876,200 | | |

Peak discharge.- Jan. 26 (9:30 p.m.) 3,380 sec.-ft.; Feb. 23 (11 p.m.) 3,100 sec.-ft.; Feb. 27 (10:30 p.m.) 7,340 sec.-ft.; Mar. 27 (2 a.m.) 11,100 sec.-ft.; Mar. 31 (2 a.m.) 13,000 sec.-ft.; May 14 (2 a.m.) 5,300 sec.-ft.

a No gage-height record; discharge computed on basis of records for Fardee Reservoir.

Mokelumne River at Lancha Plana, Calif.

Location.— Water-stage recorder, lat. 38°13'25", long. 120°53'20", in SW¼ sec. 4, T. 4 N., R. 10 E., 1 mile east of Lancha Plana, 3 miles downstream from Pardee Dam, and 5 miles upstream from Camanche Creek. Datum of gage is 158.95 feet above mean sea level (bench mark of East Bay Municipal Utility District).

Drainage area.— 584 square miles.

Records available.— June 1926 to September 1940.

Average discharge.— 11 years (1929-40, since start of East Bay aqueduct diversion), 766 second-feet.

Extremes.— Maximum discharge during year, 5,270 second-feet Mar. 30 (gage height, 8.57 feet); minimum, 39 second-feet (regulated) Dec. 11.

1926-40: Maximum discharge, 27,300 second-feet Mar. 25, 1928 (gage height, 19.65 feet), from rating curve extended above 15,500 second-feet on basis of velocity-area studies; minimum, 5.5 second-feet Nov. 21, 1929.

Remarks.— Records excellent. Flow regulated by Pardee and Salt Springs Reservoirs, several smaller reservoirs, four hydroelectric plants, and several diversions above station. East Bay Municipal Utility District aqueduct is largest diversion not returned to river above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|-------|-------|-------|------|------|-------|
| 1 | 177 | 427 | 247 | 45 | 410 | 819 | 5,060 | 1,410 | 2,970 | 534 | 530 | 382 |
| 2 | 420 | 452 | 227 | 235 | 628 | 1,160 | 5,050 | 2,170 | 2,920 | 550 | 512 | 393 |
| 3 | 423 | 576 | 43 | 236 | 633 | 1,670 | 5,040 | 2,510 | 2,440 | 620 | 520 | 530 |
| 4 | 576 | 576 | 224 | 250 | 628 | 1,790 | 4,770 | 2,510 | 2,140 | 351 | 331 | 640 |
| 5 | 434 | 376 | 222 | 380 | 623 | 1,770 | 4,110 | 2,120 | 2,130 | 511 | 520 | 640 |
| 6 | 428 | 481 | 228 | 185 | 623 | 1,760 | 3,020 | 1,720 | 2,420 | 532 | 630 | 640 |
| 7 | 427 | 571 | 221 | 141 | 628 | 1,760 | 2,180 | 640 | 2,240 | 345 | 630 | 640 |
| 8 | 182 | 571 | 222 | 338 | 628 | 1,760 | 1,960 | 832 | 2,110 | 518 | 630 | 355 |
| 9 | 412 | 571 | 82 | 263 | 628 | 1,670 | 1,980 | 1,520 | 1,920 | 620 | 630 | 496 |
| 10 | 459 | 571 | 45 | 256 | 628 | 1,270 | 1,970 | 2,690 | 1,640 | 620 | 611 | 606 |
| 11 | 576 | 567 | 212 | 405 | 628 | 1,160 | 1,930 | 3,120 | 1,720 | 620 | 321 | 630 |
| 12 | 432 | 567 | 254 | 438 | 628 | 1,160 | 2,170 | 3,340 | 1,760 | 620 | 488 | 592 |
| 13 | 371 | 346 | 284 | 387 | 633 | 1,040 | 2,450 | 3,390 | 1,700 | 620 | 525 | 587 |
| 14 | 349 | 562 | 254 | 421 | 658 | 843 | 2,460 | 4,040 | 1,620 | 334 | 520 | 554 |
| 15 | 153 | 562 | 218 | 494 | 638 | 837 | 2,450 | 3,550 | 1,560 | 502 | 517 | 372 |
| 16 | 381 | 567 | 223 | 599 | 628 | 849 | 2,440 | 3,230 | 1,280 | 499 | 517 | 530 |
| 17 | 374 | 494 | 43 | 608 | 674 | 861 | 2,100 | 3,240 | 1,080 | 493 | 472 | 554 |
| 18 | 368 | 51 | 224 | 608 | 648 | 849 | 1,620 | 3,570 | 1,320 | 496 | 324 | 564 |
| 19 | 369 | 63 | 229 | 608 | 638 | 843 | 1,850 | 3,450 | 1,100 | 504 | 529 | 563 |
| 20 | 367 | 307 | 231 | 608 | 638 | 855 | 2,200 | 3,670 | 774 | 455 | 535 | 630 |
| 21 | 366 | 295 | 335 | 458 | 638 | 754 | 2,090 | 3,330 | 670 | 317 | 559 | 645 |
| 22 | 191 | 301 | 207 | 491 | 638 | 648 | 2,610 | 2,520 | 686 | 532 | 545 | 416 |
| 23 | 366 | 62 | 232 | 608 | 648 | 658 | 3,690 | 2,960 | 611 | 532 | 538 | 544 |
| 24 | 402 | 127 | 46 | 608 | 643 | 668 | 3,490 | 3,810 | 457 | 528 | 530 | 555 |
| 25 | 421 | 56 | 45 | 608 | 684 | 658 | 3,290 | 3,660 | 575 | 519 | 362 | 541 |
| 26 | 427 | 52 | 328 | 413 | 700 | 684 | 3,050 | 3,380 | 563 | 532 | 525 | 556 |
| 27 | 420 | 484 | 210 | 54 | 777 | 846 | 2,140 | 3,010 | 534 | 528 | 527 | 557 |
| 28 | 429 | 562 | 224 | 120 | 721 | 1,520 | 1,870 | 2,820 | 536 | 375 | 524 | 543 |
| 29 | 169 | 442 | 118 | 326 | 700 | 2,470 | 1,590 | 2,790 | 510 | 523 | 529 | 466 |
| 30 | 373 | 383 | 43 | 242 | - | 4,590 | 1,410 | 2,770 | 381 | 503 | 518 | 529 |
| 31 | 270 | - | 121 | 276 | - | 4,840 | - | 2,240 | - | 504 | 490 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 11,512 | 576 | 153 | 371 | 22,830 |
| November..... | 12,022 | 576 | 51 | 401 | 23,850 |
| December..... | 5,852 | 335 | 43 | 189 | 11,610 |
| Calendar year 1939..... | 173,445 | 671 | 43 | 475 | 344,000 |
| January..... | 11,712 | 608 | 48 | 378 | 23,230 |
| February..... | 18,617 | 777 | 410 | 642 | 36,930 |
| March..... | 43,062 | 4,840 | 648 | 1,399 | 85,410 |
| April..... | 82,240 | 5,060 | 1,410 | 2,741 | 163,100 |
| May..... | 85,812 | 4,040 | 640 | 2,768 | 170,200 |
| June..... | 42,387 | 2,970 | 381 | 1,413 | 84,070 |
| July..... | 15,717 | 620 | 317 | 507 | 31,170 |
| August..... | 15,939 | 630 | 321 | 514 | 31,610 |
| September..... | 16,260 | 645 | 355 | 542 | 32,250 |
| Water year 1939-40..... | 361,132 | 5,060 | 43 | 987 | 716,300 |

MOKELUMNE RIVER BASIN

Mokelumne River near Clements, Calif.

Location.— Water-stage recorder, lat. $38^{\circ}12'25''$, long. $121^{\circ}05'20''$, in NW $\frac{1}{4}$ sec. 15, T. 4 N., R. 8 E., 700 feet upstream from highway bridge, 1 mile north of Clements, and 3 miles downstream from Murphy Creek. Altitude of gage, about 80 feet.

Drainage area.— 630 square miles.

Records available.— October 1904 to September 1940.

Average discharge.— 24 years (1904-28), 1,110 second-feet; 11 years (1929-40, since start of East Bay aqueduct diversion), 772 second-feet.

Extremes.— Maximum discharge during year, 6,760 second-feet Mar. 31 (gage height, 12.82 feet); minimum, 41 second-feet Dec. 11.

1904-40: Maximum discharge, 25,600 second-feet Mar. 25, 1928 (gage height, 22.45 feet at site and datum then in use), from rating curve extended above 4,600 second-feet and verified by comparison with records for Mokelumne River at Lancha Plana; no flow July 9, Aug. 15, 20-23, 1924.

Remarks.— Records excellent except those for period of no gage-height record, which are good. Diversions and storage above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 268 | 379 | 249 | a138 | 372 | 846 | 4,980 | 1,440 | 2,780 | 501 | 509 | 390 |
| 2 | 296 | 442 | 226 | a98 | 627 | 1,090 | 5,200 | 2,010 | 3,020 | 558 | 505 | 354 |
| 3 | 427 | 563 | 185 | a259 | 719 | 1,630 | 5,180 | 2,520 | 2,480 | 628 | 513 | 490 |
| 4 | 574 | 567 | 95 | 276 | 654 | 1,790 | 5,000 | 2,450 | 2,250 | 415 | 412 | 632 |
| 5 | 445 | 456 | 215 | 342 | 646 | 1,790 | 4,400 | 2,160 | 2,130 | 434 | 445 | 636 |
| 6 | 423 | 383 | 221 | 253 | 670 | 1,780 | 3,260 | 2,060 | 2,350 | 532 | 632 | 636 |
| 7 | 429 | 563 | 223 | 211 | 668 | 1,780 | 2,350 | 700 | 2,370 | 416 | 632 | 636 |
| 8 | 308 | 563 | 214 | 354 | 646 | 1,780 | 2,050 | 806 | 2,160 | 457 | 628 | 409 |
| 9 | 284 | 563 | 186 | 604 | 642 | 1,760 | 2,030 | 1,260 | 2,020 | 628 | 628 | 429 |
| 10 | 378 | 567 | 83 | 406 | 642 | 1,380 | 2,030 | 2,590 | 1,730 | 632 | 628 | 608 |
| 11 | 567 | 567 | 82 | 482 | 639 | 1,210 | 1,990 | 3,020 | 1,740 | 628 | 399 | 628 |
| 12 | 429 | 570 | 244 | 486 | 639 | 1,200 | 2,120 | 3,350 | 1,820 | 632 | 426 | 596 |
| 13 | 404 | 437 | 284 | 404 | 662 | 1,150 | 2,470 | 3,350 | 1,770 | 632 | 482 | 586 |
| 14 | 362 | 484 | 285 | 423 | 870 | 870 | 2,480 | 3,910 | 1,680 | 426 | 505 | 570 |
| 15 | 228 | 567 | 215 | 484 | 674 | 860 | 2,470 | 3,790 | 1,640 | 437 | 505 | 404 |
| 16 | 269 | 563 | 225 | 604 | 650 | 865 | 2,470 | 3,190 | 1,410 | 505 | 497 | 486 |
| 17 | 368 | 567 | 181 | 620 | 826 | 870 | 2,270 | 3,300 | 1,090 | 493 | 446 | 573 |
| 18 | 375 | 171 | 105 | 616 | 715 | 865 | 1,920 | 3,420 | 1,370 | 500 | 381 | 554 |
| 19 | 337 | 56 | 224 | 620 | 674 | 860 | 1,890 | 3,480 | 1,200 | 516 | 442 | 551 |
| 20 | 355 | 158 | 226 | 616 | 658 | 865 | 2,170 | 3,630 | 880 | 495 | 532 | 628 |
| 21 | 358 | 318 | 318 | 458 | 654 | 807 | 2,240 | 3,400 | 692 | 339 | 562 | 644 |
| 22 | 236 | 287 | 231 | 492 | 654 | 666 | 2,390 | 2,780 | 720 | 449 | 554 | 437 |
| 23 | 315 | 227 | 232 | 612 | 690 | 666 | 3,560 | 2,630 | 672 | 528 | 528 | 509 |
| 24 | 359 | 69 | 184 | 612 | 674 | 690 | 3,630 | 3,890 | 458 | 532 | 520 | 554 |
| 25 | 408 | 155 | 57 | 698 | 955 | 682 | 3,330 | 3,490 | 570 | 532 | 399 | 547 |
| 26 | 425 | 63 | 190 | 639 | 965 | 732 | 3,240 | 3,530 | 581 | 516 | 475 | 547 |
| 27 | 413 | 331 | 237 | 265 | 1,630 | 866 | 2,280 | 3,060 | 547 | 535 | 513 | 551 |
| 28 | 418 | 563 | a214 | 86 | 1,070 | 1,460 | 1,970 | 2,830 | 532 | 414 | 513 | 539 |
| 29 | 285 | 531 | a179 | 272 | 950 | 2,150 | 1,750 | 2,760 | 513 | 497 | 505 | 480 |
| 30 | 290 | 359 | a128 | 277 | - | 4,750 | 1,510 | 2,800 | 404 | 505 | 516 | 516 |
| 31 | 264 | - | a57 | 276 | - | 5,700 | - | 2,390 | - | 503 | 490 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 11,315 | 574 | 228 | 365 | 22,440 | | | |
| November..... | | | | | 12,079 | 570 | 63 | 403 | 23,960 | | | |
| December..... | | | | | 5,995 | 318 | 57 | 193 | 11,890 | | | |
| Calendar year 1939..... | | | | | 173,594 | 812 | 57 | 476 | 344,300 | | | |
| January..... | | | | | 12,985 | 698 | 86 | 419 | 25,760 | | | |
| February..... | | | | | 21,525 | 1,630 | 372 | 742 | 42,690 | | | |
| March..... | | | | | 44,410 | 5,700 | 666 | 1,433 | 89,090 | | | |
| April..... | | | | | 84,660 | 5,200 | 1,510 | 2,822 | 167,900 | | | |
| May..... | | | | | 85,936 | 3,910 | 700 | 2,772 | 170,500 | | | |
| June..... | | | | | 43,579 | 3,020 | 404 | 1,455 | 86,440 | | | |
| July..... | | | | | 15,815 | 632 | 339 | 510 | 31,370 | | | |
| August..... | | | | | 15,712 | 632 | 381 | 507 | 31,160 | | | |
| September..... | | | | | 16,119 | 644 | 354 | 537 | 31,970 | | | |
| Water year 1939-40..... | | | | | 370,130 | 5,700 | 57 | 1,011 | 734,200 | | | |

a No gage-height record; discharge computed on basis of records for station at Lancha Plana.

Mokelumne River at Woodbridge, Calif.

Location.- Water-stage recorder, lat. 38°09'30", long. 121°18'10", in NE¼ sec. 34, T. 4 N., R. 6 E., at Woodbridge, three-eighths of a mile downstream from dam of Woodbridge Irrigation District. Altitude of gage, about 30 feet.

Drainage area.- 644 square miles.

Records available.- May 1924 to September 1940 (for 1924 and 1925, low-water records only).

Average discharge.- 13 years (1926-27, 1928-40), 637 second-feet.

Extremes.- Maximum discharge during year, 5,100 second-feet Apr. 4 (gage height, 22.32 feet); minimum, 22 second-feet Dec. 11.

1924-40: Maximum gage height, 26.58 feet, former datum, about 30.6 feet, present datum, Mar. 26, 1928 (discharge not determined); minimum discharge, 0.9 second-foot Sept. 3, 1924.

Remarks.- Records excellent. Flow regulated by storage, power plants, and many diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 301 | 167 | 372 | 92 | 300 | 864 | 4,890 | 1,400 | 2,190 | 609 | 137 | 221 |
| 2 | 97 | 267 | 261 | 110 | 467 | 926 | 4,880 | 1,270 | 2,380 | 51 | 167 | 121 |
| 3 | 171 | 346 | 236 | 177 | 643 | 1,220 | 5,060 | 1,780 | 2,640 | 138 | 194 | 152 |
| 4 | 256 | 468 | 135 | 253 | 689 | 1,540 | 5,100 | 2,100 | 2,190 | 255 | 172 | 305 |
| 5 | 346 | 490 | 169 | 276 | 645 | 1,620 | 4,970 | 2,120 | 1,880 | 74 | 71 | 346 |
| 6 | 283 | 298 | 213 | 363 | 650 | 1,630 | 4,540 | 1,950 | 1,770 | 100 | 155 | 351 |
| 7 | 282 | 357 | 220 | 232 | 674 | 1,640 | 3,590 | 1,440 | 1,910 | 162 | 258 | 344 |
| 8 | 278 | 402 | 220 | 220 | 652 | 1,640 | 2,910 | 654 | 1,890 | 72 | 254 | 336 |
| 9 | 114 | 434 | 217 | 478 | 647 | 1,650 | 2,170 | 750 | 1,740 | 94 | 246 | 164 |
| 10 | 202 | 486 | 138 | 486 | 647 | 1,550 | 2,060 | 1,350 | 1,540 | 195 | 244 | 220 |
| 11 | 291 | 464 | 58 | 438 | 647 | 1,260 | 2,000 | 1,930 | 1,350 | 221 | 221 | 310 |
| 12 | 375 | 468 | 30 | 513 | 645 | 1,190 | 1,950 | 2,520 | 1,340 | 233 | 75 | 318 |
| 13 | 286 | 464 | 113 | 474 | 647 | 1,170 | 2,110 | 2,870 | 1,330 | 287 | 84 | 322 |
| 14 | 248 | 205 | 228 | 404 | 752 | 1,020 | 2,320 | 2,970 | 1,270 | 233 | 113 | 356 |
| 15 | 218 | 518 | 234 | 442 | 735 | 903 | 2,380 | 3,470 | 1,170 | 74 | 140 | 358 |
| 16 | 69 | 951 | 390 | 531 | 672 | 886 | 2,250 | 3,500 | 1,100 | 100 | 149 | 203 |
| 17 | 141 | 642 | 252 | 597 | 698 | 881 | 2,050 | 2,970 | 885 | 153 | 158 | 286 |
| 18 | 195 | 468 | 196 | 612 | 816 | 879 | 2,050 | 2,980 | 815 | 144 | 142 | 320 |
| 19 | 203 | 177 | 181 | 614 | 694 | 872 | 1,780 | 3,200 | 885 | 136 | 74 | 324 |
| 20 | 221 | 115 | 216 | 617 | 672 | 862 | 1,720 | 3,240 | 729 | 140 | 108 | 349 |
| 21 | 228 | 246 | 222 | 579 | 665 | 862 | 1,960 | 3,320 | 393 | 141 | 180 | 360 |
| 22 | 232 | 297 | 308 | 470 | 665 | 746 | 1,940 | 3,190 | 358 | 66 | 230 | 370 |
| 23 | 109 | 296 | 229 | 537 | 678 | 693 | 2,180 | 2,460 | 356 | 144 | 221 | 214 |
| 24 | 202 | 158 | 226 | 614 | 694 | 700 | 3,100 | 2,490 | 278 | 163 | 218 | 305 |
| 25 | 251 | 126 | 123 | 634 | 734 | 700 | 3,370 | 3,420 | 205 | 160 | 208 | 312 |
| 26 | 277 | 118 | 74 | 698 | 950 | 693 | 3,280 | 3,370 | 234 | 146 | 127 | 318 |
| 27 | 286 | 84 | 229 | 566 | 1,290 | 750 | 3,090 | 3,300 | 235 | 153 | 243 | 325 |
| 28 | 304 | 411 | 216 | 208 | 1,190 | 1,020 | 2,330 | 2,620 | 210 | 201 | 230 | 337 |
| 29 | 304 | 523 | 219 | 157 | 1,050 | 1,460 | 1,920 | 2,460 | 197 | 88 | 209 | 322 |
| 30 | 136 | 413 | 149 | 311 | - | 2,120 | 1,640 | 2,460 | 188 | 108 | 203 | 256 |
| 31 | 192 | - | 101 | 277 | - | 3,650 | - | 2,500 | - | 148 | 203 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 7,098 | 375 | 69 | 229 | 14,080 | | |
| November..... | | | | | | 10,859 | 951 | 84 | 362 | 21,640 | | |
| December..... | | | | | | 6,175 | 390 | 30 | 199 | 12,250 | | |
| Calendar year 1939..... | | | | | | 111,955 | 951 | 24 | 307 | 222,100 | | |
| January..... | | | | | | 12,979 | 698 | 92 | 419 | 25,740 | | |
| February..... | | | | | | 20,939 | 1,290 | 300 | 722 | 41,530 | | |
| March..... | | | | | | 37,597 | 3,650 | 693 | 1,213 | 74,670 | | |
| April..... | | | | | | 66,190 | 5,100 | 1,640 | 2,840 | 169,000 | | |
| May..... | | | | | | 76,284 | 3,500 | 654 | 2,460 | 181,200 | | |
| June..... | | | | | | 33,558 | 2,640 | 188 | 1,122 | 66,760 | | |
| July..... | | | | | | 4,989 | 609 | 51 | 161 | 9,900 | | |
| August..... | | | | | | 5,434 | 258 | 71 | 175 | 10,780 | | |
| September..... | | | | | | 8,845 | 380 | 121 | 295 | 17,540 | | |
| Water year 1939-40..... | | | | | | 310,017 | 5,100 | 30 | 847 | 614,900 | | |

Tiger Creek powerhouse conduit below Salt Springs Dam, Calif.

Location.— Water-stage recorder and concrete control, lat. 38°30', long. 120°13', in SW¼ sec. 33, T. 8 N., R. 16 E., 1,000 feet downstream from Salt Springs Dam and powerhouse. Altitude of gage, about 3,700 feet (from topographic map).

Records available.— June 1931 to September 1940.

Extremes.— Maximum daily discharge during year, 552 second-feet Sept. 29; no flow Apr.

7-20

1931-40: Maximum daily discharge, 558 second-feet July 11, 1938; no flow at times in each year.

Remarks.— Records good. Conduit conveys water of North Fork of Mokelumne River from tail-race of Salt Springs powerhouse to forebay of Tiger Creek powerhouse, picking up water from Bear River and several small creeks en route.

Cooperation.— Water-stage recorder graph and results of four discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.1 | 300 | 313 | 88 | 99 | 2.3 | 0.9 | 536 | 454 | 502 | 529 | 110 |
| 2 | 290 | 301 | 313 | 59 | 103 | .7 | 2.1 | 537 | 454 | 466 | 467 | 173 |
| 3 | 261 | 302 | 313 | 107 | 58 | .7 | 1.9 | 537 | 453 | 510 | 357 | 484 |
| 4 | 259 | 302 | 315 | 118 | .3 | 2.3 | 1.9 | 513 | 454 | 513 | 236 | 548 |
| 5 | 286 | 301 | 313 | 252 | 89 | .3 | 1.9 | 506 | 453 | 513 | 466 | 550 |
| 6 | 283 | 303 | 311 | 135 | 38 | .2 | .9 | 526 | 453 | 512 | 538 | 548 |
| 7 | 293 | 304 | 422 | 122 | 44 | .2 | 0 | 534 | 455 | 510 | 536 | 548 |
| 8 | 291 | 303 | 494 | 145 | 96 | .2 | 0 | 536 | 457 | 513 | 538 | 546 |
| 9 | 296 | 304 | 496 | 91 | 115 | .2 | 0 | 225 | 460 | 518 | 538 | 546 |
| 10 | 302 | 304 | 490 | 95 | .2 | .2 | 0 | 4.8 | 461 | 518 | 458 | 546 |
| 11 | 304 | 304 | 465 | 22 | .2 | 1.9 | 0 | 4.5 | 461 | 514 | 336 | 548 |
| 12 | 303 | 302 | 471 | 12 | 157 | 2.5 | 0 | 1.2 | 461 | 467 | 492 | 548 |
| 13 | 305 | 306 | 485 | 109 | 145 | 2.5 | 0 | 245 | 464 | 520 | 541 | 548 |
| 14 | 303 | 304 | 486 | .2 | 145 | 2.3 | 0 | 538 | 462 | 522 | 541 | 550 |
| 15 | 302 | 305 | 498 | 149 | 171 | 2.3 | 0 | 538 | 464 | 522 | 542 | 492 |
| 16 | 302 | 304 | 490 | 151 | 173 | 2.1 | 0 | 366 | 465 | 522 | 542 | 544 |
| 17 | 301 | 305 | 490 | 170 | 163 | 2.1 | 0 | 412 | 464 | 522 | 452 | 540 |
| 18 | 303 | 305 | 486 | 169 | 34 | 75 | 0 | 305 | 462 | 522 | 65 | 544 |
| 19 | 299 | 306 | 481 | 175 | 195 | 52 | 0 | 309 | 460 | 522 | 502 | 550 |
| 20 | 301 | 314 | 467 | 184 | 226 | 3.8 | 0 | 371 | 451 | 525 | 546 | 550 |
| 21 | 300 | 318 | 455 | 190 | 183 | 3.5 | 218 | 447 | 444 | 523 | 544 | 487 |
| 22 | 180 | 317 | 457 | 188 | 184 | 3.5 | 451 | 450 | 451 | 524 | 544 | 183 |
| 23 | 280 | 315 | 455 | 198 | 67 | 3.2 | 352 | 454 | 465 | 526 | 544 | 504 |
| 24 | 294 | 315 | 453 | 185 | 90 | 3.2 | 537 | 454 | 479 | 526 | 544 | 550 |
| 25 | 297 | 311 | 457 | 112 | 18 | 3.2 | 536 | 455 | 482 | 529 | 336 | 548 |
| 26 | 231 | 308 | 451 | .3 | 46 | 3.2 | 554 | 454 | 486 | 532 | 483 | 548 |
| 27 | 282 | 310 | 447 | .2 | 1.9 | 3.2 | 556 | 455 | 489 | 532 | 538 | 550 |
| 28 | 299 | 316 | 443 | .2 | 1.9 | 3.0 | 536 | 454 | 486 | 492 | 544 | 361 |
| 29 | 291 | 310 | 434 | 63 | 2.5 | .5 | 536 | 454 | 479 | 528 | 546 | 552 |
| 30 | 296 | 309 | 352 | 86 | - | .7 | 536 | 454 | 326 | 526 | 451 | 544 |
| 31 | 300 | - | 280 | 99 | - | .7 | - | 454 | - | 530 | 443 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 8,632.1 | 304 | 0.1 | 278 | 17,120 | | | |
| November..... | | | | | 9,208 | 318 | 300 | 307 | 18,260 | | | |
| December..... | | | | | 13,243 | 496 | 280 | 427 | 26,270 | | | |
| Calendar year 1939..... | | | | | 80,956.6 | 552 | 0 | 222 | 160,600 | | | |
| January..... | | | | | 3,473.9 | 252 | .2 | 112 | 6,890 | | | |
| February..... | | | | | 2,644.0 | 226 | .2 | 91.2 | 5,240 | | | |
| March..... | | | | | 181.7 | 75 | .2 | 5.86 | 360 | | | |
| April..... | | | | | 4,781.6 | 537 | 0 | 159 | 9,480 | | | |
| May..... | | | | | 12,527.5 | 537 | 1.2 | 404 | 24,850 | | | |
| June..... | | | | | 13,758 | 499 | 326 | 459 | 27,290 | | | |
| July..... | | | | | 16,019 | 532 | 467 | 517 | 31,770 | | | |
| August..... | | | | | 14,739 | 546 | 65 | 475 | 29,230 | | | |
| September..... | | | | | 14,840 | 552 | 110 | 495 | 29,430 | | | |
| Water year 1939-40..... | | | | | 114,047.8 | 552 | 0 | 312 | 226,200 | | | |

a No gage-height record; discharge computed on basis of unpublished records of the Pacific Gas & Electric Co.

Cold Creek near Mokelumne Peak, Calif.

Location.— Water-stage recorder, lat. 38°31', long. 120°13', in sec. 28, T. 8 N., R. 16 E., 2.4 miles upstream from mouth and 6 miles southwest of Mokelumne Peak. Altitude of gage, about 6,000 feet (from topographic map).

Drainage area.— 23 square miles.

Records available.— July 1927 to September 1940.

Average discharge.— 13 years, 55.0 second-feet.

Extremes.— Maximum discharge during year, 1,570 second-feet Mar. 26 (gage height, 6.01 feet); minimum recorded, 0.2 second-foot Aug. 31, probably lower in September.
1927-40: Maximum discharge, 4,100 second-feet Dec. 11, 1937 (gage height, 8.98 feet), from rating curve extended above 1,000 second-feet on basis of velocity-area and AVE studies; practically no flow Aug. 17 to Oct. 7, 1931.

Remarks.— Records good except those for periods of ice effect or doubtful gage-height record, which are fair.

Cooperation.— Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0.7 | 4.2 | b2 | 31 | 57 | 51 | 119 | 308 | 249 | 8.5 | 0.5 | |
| 2 | 12 | 3.4 | b2 | 540 | 52 | 51 | 100 | 501 | 176 | 7.5 | .5 | |
| 3 | 12 | 2.8 | b2 | 107 | 51 | 47 | 91 | 384 | 182 | 7 | .5 | |
| 4 | 11 | 2.2 | b2.5 | 87 | 49 | 44 | 83 | 284 | 167 | 6 | .5 | |
| 5 | 10 | 1.8 | b2.5 | 51 | 46 | 51 | 77 | 176 | 173 | 5.5 | .5 | |
| 6 | 16 | 1.6 | 6 | 39 | 66 | 56 | 85 | 178 | 190 | 4.4 | .4 | |
| 7 | 17 | 1.4 | 8.5 | 34 | 54 | 76 | 106 | 229 | 175 | 4 | .4 | |
| 8 | 13 | 1.1 | 6 | 39 | 44 | 95 | 102 | 340 | 162 | 3.6 | .4 | |
| 9 | 8 | 1.0 | 6 | 38 | 40 | 90 | 125 | 416 | 149 | 3.1 | .4 | |
| 10 | 5 | 1.0 | 8.5 | 44 | 44 | 71 | 166 | 450 | 154 | 2.7 | .4 | |
| 11 | 3.8 | .9 | 36 | 167 | 43 | 55 | 202 | 478 | 145 | 2.4 | .4 | |
| 12 | 3.8 | .8 | 16 | 108 | 38 | 48 | 254 | 450 | 132 | 2.1 | .4 | |
| 13 | 3.4 | .7 | 10 | 64 | 35 | 44 | 311 | 403 | 121 | 1.9 | .4 | |
| 14 | 2.8 | .6 | 8 | 52 | 37 | 48 | 311 | 371 | 112 | 1.8 | .3 | |
| 15 | 2.2 | .6 | 7 | 51 | 38 | 59 | 226 | 358 | 89 | 1.6 | .3 | |
| 16 | 1.7 | .6 | 6.5 | 53 | 34 | 61 | 151 | 358 | 79 | 1.5 | .3 | d0.2 |
| 17 | 1.3 | .6 | 6 | 55 | 33 | 69 | 175 | 334 | 70 | 1.5 | .3 | |
| 18 | 1.0 | .5 | 6.5 | 46 | b30 | 74 | 258 | 331 | 58 | 1.4 | .3 | |
| 19 | .8 | .5 | 6 | 38 | b30 | 79 | 294 | 300 | 48 | 1.3 | .3 | |
| 20 | .6 | .5 | 5.5 | 32 | b30 | 107 | 286 | 352 | 39 | 1.2 | .3 | |
| 21 | .6 | .5 | b4 | 31 | b30 | 128 | 328 | 384 | 39 | 1.1 | .3 | |
| 22 | .5 | .5 | b3 | 30 | 31 | 159 | 365 | 352 | 30 | 1.0 | .3 | |
| 23 | .5 | .5 | b3.5 | 26 | 56 | 160 | 346 | 355 | 24 | 1.0 | .3 | |
| 24 | .6 | .5 | b2.5 | 23 | 54 | 196 | 294 | 365 | 22 | .9 | .3 | |
| 25 | 1.4 | .6 | b2 | 45 | 49 | 385 | 218 | 294 | 18 | .8 | .3 | |
| 26 | 4.5 | 2.0 | b2.5 | 269 | 58 | 733 | 143 | 249 | 14 | .7 | .3 | |
| 27 | 8.5 | b3 | b2 | 144 | 61 | 510 | 122 | 251 | 12 | .7 | .3 | |
| 28 | 18 | b2 | b2 | 87 | 88 | 178 | 116 | 244 | 11 | .7 | .3 | |
| 29 | 13 | b2 | b1.5 | 72 | 63 | 217 | 114 | 222 | 11 | .7 | .3 | |
| 30 | 9 | b2 | 20 | 61 | - | 312 | 152 | 176 | 10 | .6 | .3 | |
| 31 | 6 | - | 17 | 57 | - | 162 | - | 256 | - | .6 | .2 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 188.7 | 18 | 0.5 | 6.09 | 374 | | |
| November..... | | | | | | 40.4 | 4.2 | .5 | 1.35 | 80 | | |
| December..... | | | | | | 227 | 36 | 2 | 7.32 | 450 | | |
| Calendar year 1939..... | | | | | | 11,113.2 | 233 | .1 | 30.4 | 22,040 | | |
| January..... | | | | | | 2,521 | 540 | 23 | 81.3 | 5,000 | | |
| February..... | | | | | | 1,340 | 88 | 30 | 46.2 | 2,660 | | |
| March..... | | | | | | 4,436 | 733 | 44 | 145 | 8,800 | | |
| April..... | | | | | | 5,720 | 365 | 77 | 191 | 11,350 | | |
| May..... | | | | | | 10,149 | 501 | 176 | 327 | 20,130 | | |
| June..... | | | | | | 2,861 | 249 | 10 | 95.4 | 5,670 | | |
| July..... | | | | | | 77.8 | 8.5 | .6 | 2.51 | 154 | | |
| August..... | | | | | | 11.0 | .5 | .2 | .55 | 22 | | |
| September..... | | | | | | 6 | - | - | .2 | 12 | | |
| Water year 1939-40..... | | | | | | 27,577.9 | 733 | .2 | 75.3 | 54,700 | | |

Peak discharge.— Jan. 2 (4 p.m.) 1,350 sec.-ft.; Mar. 26 (11 p.m.) 1,570 sec.-ft.; May 10 (8 p.m.) 814 sec.-ft.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge based on two field estimates of flow.

MOKELUMNE RIVER BASIN

Bear River at Pardoe Camp, Calif.

Location.— Water-stage recorder, lat. 38°32', long. 120°15', in sec. 18, T. 8 N., R. 16 E., 2 miles downstream from Bear River Reservoir of Pacific Gas & Electric Co. Altitude of gage, about 5,650 feet (from topographic map).

Drainage area.— 33.0 square miles.

Records available.— July 1927 to September 1940.

Average discharge.— 13 years, 90.6 second-feet.

Extremes.— Maximum discharge during year, 2,700 second-feet Mar. 26 (gage height, 7.78 feet); minimum, 4.2 second-feet Dec. 8.

1927-40: Maximum discharge, 5,850 second-feet Dec. 11, 1937 (gage height, 12.0 feet, from floodmarks), from rating curve extended above 1,500 second-feet; no flow Sept. 8-30, Oct. 1-4, 7-29, 1928, result of regulation.

Remarks.— Records good. About 6,000 acre-feet is stored each year at reservoir above station and usually released during late summer and early winter.

Cooperation.— Water-stage recorder graph and results of four discharge measurements furnished by the Pacific Gas & Electric Co., under general supervision of the Geological Survey in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 6.5 | 6 | 4.8 | 47 | 159 | 138 | 232 | 468 | 390 | 11 | 6 | 4.8 |
| 2 | 8.5 | 6 | 4.8 | 374 | 152 | 132 | 182 | 780 | 287 | 8.5 | 6 | 4.8 |
| 3 | 6 | 5.5 | 4.6 | 182 | 186 | 126 | 159 | 625 | 273 | 8 | 6 | 4.8 |
| 4 | 5.5 | 5.5 | 4.4 | 248 | 167 | 124 | 144 | 494 | 258 | 7.5 | 6 | 4.8 |
| 5 | 5.5 | 5.5 | 4.4 | 106 | 158 | 122 | 126 | 282 | 245 | 7.5 | 6 | 4.8 |
| 6 | 8 | 5.5 | 4.6 | 101 | 192 | 120 | 128 | 306 | 249 | 7.5 | 6 | 4.8 |
| 7 | 6.5 | 5.5 | 4.4 | 101 | 161 | 124 | 159 | 393 | 236 | 7.5 | 6 | 4.8 |
| 8 | 6.5 | 5.5 | 4.4 | 128 | 148 | 128 | 152 | 542 | 216 | 7.5 | 6 | 4.6 |
| 9 | 6 | 5.5 | 4.4 | 130 | 143 | 126 | 180 | 664 | 198 | 7.5 | 6 | 4.6 |
| 10 | 6 | 5.5 | 5.5 | 146 | 140 | 120 | 245 | 723 | 192 | 7.5 | 6 | 4.6 |
| 11 | 6 | 5 | 9.5 | 223 | 136 | 98 | 302 | 810 | 186 | 7 | 6 | 4.6 |
| 12 | 6 | 5 | 6.5 | 165 | 135 | 20 | 376 | 770 | 172 | 7 | 6 | 4.6 |
| 13 | 6 | 5 | 6 | 123 | 132 | 18 | 453 | 689 | 154 | 7 | 6 | 4.6 |
| 14 | 6 | 5 | 5.5 | 110 | 130 | 18 | 474 | 656 | 141 | 7 | 6 | 4.6 |
| 15 | 5.5 | 5 | 5.5 | 108 | 128 | 19 | 368 | 636 | 120 | 7 | 6 | 4.6 |
| 16 | 5.5 | 5 | 5.5 | 120 | 124 | 31 | 223 | 595 | 105 | 7 | 6 | 4.6 |
| 17 | 5.5 | 5 | 5.5 | 154 | 123 | 31 | 238 | 566 | 94 | 7 | 6 | 4.6 |
| 18 | 5.5 | 5 | 5.5 | 151 | 120 | 28 | 365 | 577 | 78 | 7 | 6 | 4.6 |
| 19 | 5.5 | 4.8 | 10 | 148 | 119 | 31 | 441 | 532 | 66 | 7 | 6 | 4.6 |
| 20 | 5.5 | 4.8 | 40 | 144 | 117 | 34 | 430 | 588 | 51 | 7 | 6 | 4.4 |
| 21 | 5.5 | 4.6 | 40 | 143 | 116 | 36 | 471 | 640 | 51 | 6.5 | 5.5 | 4.4 |
| 22 | 5.5 | 4.6 | 40 | 140 | 116 | 44 | 542 | 613 | 40 | 6.5 | 5.5 | 4.4 |
| 23 | 5 | 4.6 | 40 | 136 | 215 | 49 | 539 | 598 | 31 | 6.5 | 5.5 | 4.4 |
| 24 | 6.5 | 4.4 | 40 | 135 | 146 | 66 | 478 | 580 | 27 | 6.5 | 5.5 | 4.4 |
| 25 | 6.5 | 5.5 | 40 | 210 | 143 | 116 | 368 | 500 | 24 | 6.5 | 5.5 | 4.4 |
| 26 | 6 | 5.5 | 40 | 349 | 163 | 1,320 | 232 | 432 | 19 | 6.5 | 5.5 | 4.4 |
| 27 | 6 | 5 | 40 | 194 | 230 | 1,080 | 180 | 410 | 16 | 6.5 | 5.5 | 4.4 |
| 28 | 6.5 | 5 | 40 | 172 | 227 | 368 | 159 | 396 | 14 | 6.5 | 5 | 4.4 |
| 29 | 6 | 5 | 40 | 167 | 154 | 542 | 156 | 351 | 14 | 6 | 5 | 4.4 |
| 30 | 6 | 4.8 | 40 | 163 | - | 851 | 219 | 304 | 12 | 6 | 4.8 | 4.4 |
| 31 | 6 | - | 40 | 165 | - | 365 | - | 404 | - | 6 | 4.8 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 187.5 | 8.5 | 5 | 6.05 | 372 | | |
| November..... | | | | | | 154.6 | 6 | 4.4 | 5.15 | 307 | | |
| December..... | | | | | | 585.8 | 40 | 4.4 | 18.9 | 1,160 | | |
| Calendar year 1939..... | | | | | | 21,708.8 | 447 | 4.4 | 59.5 | 43,060 | | |
| January..... | | | | | | 4,983 | 374 | 47 | 161 | 9,880 | | |
| February..... | | | | | | 4,380 | 230 | 116 | 151 | 8,690 | | |
| March..... | | | | | | 6,425 | 1,320 | 18 | 207 | 12,740 | | |
| April..... | | | | | | 8,741 | 542 | 126 | 291 | 17,340 | | |
| May..... | | | | | | 16,935 | 810 | 282 | 546 | 33,590 | | |
| June..... | | | | | | 3,959 | 390 | 12 | 132 | 7,850 | | |
| July..... | | | | | | 220 | 11 | 6 | 7.10 | 436 | | |
| August..... | | | | | | 178.1 | 6 | 4.8 | 5.75 | 353 | | |
| September..... | | | | | | 137.2 | 4.8 | 4.4 | 4.57 | 272 | | |
| Water year 1939-40..... | | | | | | 46,886.2 | 1,320 | 4.4 | 128 | 92,990 | | |

Peak discharge.— Jan. 2 (5 p.m.) 1,330 sec.-ft.; Mar. 26 (10 p.m.) 2,700 sec.-ft.; May 11 (10 p.m.) 1,300 sec.-ft.

Middle Fork of Mokelumne River at West Point, Calif.

Location.— Water-stage recorder, lat. 38°23'15", long. 120°31'40", in sec. 10, T. 6 N., R. 13 E., 200 feet downstream from highway bridge, 1 mile south of West Point, and 3½ miles upstream from confluence with South Fork. Altitude of gage, about 2,500 feet.

Drainage area.— 67.2 square miles.

Records available.— October 1926 to September 1940. October 1911 to October 1926, at site about 1,200 feet upstream.

Average discharge.— 28 years (1912-40), 52.5 second-feet.

Extremes.— Maximum discharge during year, 1,900 second-feet Mar. 31 (gage height, 6.40 feet); minimum, 3.0 second-feet Oct. 1. 1911-40: Maximum discharge observed, 2,550 second-feet Jan. 23, 1914 (gage height, 10.0 feet, former site and datum), from rating curve extended above 490 second-feet; practically no flow Aug. 23 to Sept. 14, 1931, and no flow part of day Sept. 9, 10, 1934.

Remarks.— Records excellent except those for period of backwater which are fair. Several small diversions above station. Storage in Calaveras Reservoir (capacity, 1,740 acre-feet), 6 miles above station, began in January 1940. Some water diverted from river above station to South Fork of Mokelumne River.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 4.9 | 6 | 4.6 | 6.5 | 93 | 515 | 742 | 116 | 46 | 13 | 12 | 4.9 |
| 2 | 10 | 4.4 | 4.6 | 42 | 93 | 400 | 536 | 113 | 44 | 12 | 11 | 4.9 |
| 3 | 7 | 4.2 | 4.6 | 25 | 132 | h324 | 441 | 109 | 43 | 12 | 10 | 5 |
| 4 | 5 | 4.0 | 4.6 | 77 | 186 | h298 | 384 | 114 | 41 | 12 | 9 | 6 |
| 5 | 4.6 | 4.0 | 4.4 | 29 | 180 | h266 | 330 | 109 | 41 | 11 | 8.5 | 6 |
| 6 | 8.5 | 3.8 | 5 | 20 | 184 | h216 | 290 | 88 | 40 | 10 | 8 | 5.5 |
| 7 | 7 | 3.6 | 5 | 45 | 174 | 199 | 263 | 44 | 40 | 10 | 7.5 | 5.5 |
| 8 | 5.5 | 3.4 | 4.9 | 160 | 145 | 190 | 240 | 42 | 33 | 11 | 7 | 5 |
| 9 | 4.9 | 3.2 | 4.6 | 246 | 125 | 182 | 222 | 39 | 16 | 10 | 6.5 | 4.2 |
| 10 | 4.4 | 3.2 | 7 | 152 | 109 | 176 | 205 | 38 | 14 | 10 | 6 | 4.0 |
| 11 | 4.0 | 3.2 | 18 | 182 | 98 | 170 | 190 | 37 | 14 | 10 | 5 | 4.2 |
| 12 | 3.8 | 3.2 | 12 | 178 | 88 | 164 | 180 | 36 | 12 | 11 | 4.5 | 4.0 |
| 13 | 3.8 | 3.2 | 10 | 101 | 84 | 158 | 174 | 35 | 12 | 11 | 4.0 | 4.0 |
| 14 | 3.8 | 3.2 | 9.5 | 96 | 111 | 154 | 170 | 35 | 12 | 15 | 4.0 | 4.9 |
| 15 | 3.8 | 3.2 | 8.5 | 78 | 90 | 149 | 168 | 34 | 12 | 15 | 4.0 | 5 |
| 16 | 3.8 | 3.6 | 8 | 64 | 81 | 158 | 162 | 32 | 14 | 14 | 4.0 | 6 |
| 17 | 3.6 | 3.6 | 7.5 | 55 | 98 | 147 | 156 | 33 | 14 | 14 | 4.0 | 6 |
| 18 | 4.0 | 3.6 | 7 | 49 | 98 | 141 | 152 | 30 | 14 | 13 | 4.0 | 6.5 |
| 19 | 4.0 | 3.6 | 7 | 43 | 86 | 136 | 150 | 31 | 14 | 13 | 4.0 | 6 |
| 20 | 4.0 | 3.6 | 5 | 39 | 80 | 132 | 143 | 31 | 14 | 13 | 4.0 | 6 |
| 21 | 4.0 | 3.6 | 4.6 | 36 | 74 | 128 | 141 | 30 | 13 | 12 | 4.5 | 5.5 |
| 22 | 3.8 | 3.8 | 4.4 | 34 | 81 | 127 | 139 | 30 | 12 | 12 | 4.5 | 5 |
| 23 | 3.6 | 3.8 | 4.4 | 32 | 308 | 121 | 136 | 29 | 12 | 13 | 4.5 | 4.9 |
| 24 | 6 | 3.8 | 4.6 | 29 | 257 | 125 | 134 | 29 | 12 | 12 | 4.5 | 4.9 |
| 25 | 12 | 7 | 4.6 | 122 | 209 | 139 | 134 | 29 | 12 | 12 | 4.5 | 4.9 |
| 26 | 8.5 | 14 | 4.6 | 400 | 248 | 266 | 139 | 30 | 11 | 12 | 4.5 | 4.9 |
| 27 | 7.5 | 7.5 | 4.9 | 246 | 950 | 410 | 132 | 33 | 11 | 12 | 4.5 | 4.6 |
| 28 | 7 | 6 | 4.6 | 162 | 935 | 300 | 127 | 34 | 11 | 12 | 4.5 | 4.9 |
| 29 | 7.5 | 5 | 4.9 | 130 | 783 | 371 | 123 | 34 | 14 | 12 | 4.5 | 5.5 |
| 30 | 7.5 | 4.9 | 5 | 109 | - | 1,080 | 120 | 35 | 15 | 12 | 4.5 | 5.5 |
| 31 | 7.5 | - | 5 | 101 | - | 1,310 | - | 40 | - | 12 | 4.5 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 175.3 | 12 | 3.6 | 5.65 | 348 | | | |
| November..... | | | | | 133.2 | 14 | 3.2 | 4.44 | 264 | | | |
| December..... | | | | | 193.4 | 18 | 4.4 | 6.24 | 384 | | | |
| Calendar year 1939..... | | | | | 6,951.5 | 128 | 1.0 | 19.0 | 13,790 | | | |
| January..... | | | | | 3,090.5 | 400 | 6.5 | 99.7 | 6,130 | | | |
| February..... | | | | | 6,180 | 950 | 74 | 213 | 12,260 | | | |
| March..... | | | | | 8,652 | 1,310 | 121 | 279 | 17,160 | | | |
| April..... | | | | | 6,623 | 742 | 120 | 221 | 13,140 | | | |
| May..... | | | | | 1,499 | 116 | 29 | 48.4 | 2,970 | | | |
| June..... | | | | | 613 | 46 | 11 | 20.4 | 1,220 | | | |
| July..... | | | | | 373 | 15 | 10 | 12.0 | 740 | | | |
| August..... | | | | | 176.5 | 12 | 4.0 | 5.69 | 350 | | | |
| September..... | | | | | 154.2 | 6.5 | 4.0 | 5.14 | 306 | | | |
| Water year 1939-40..... | | | | | 27,863.1 | 1,310 | 3.2 | 76.1 | 55,270 | | | |

Peak discharge.— Jan. 9 (2:30 a.m.) 365 sec.-ft.; Jan. 26 (1 p.m.) 452 sec.-ft.; Feb. 23 (2 p.m.) 512 sec.-ft.; Feb. 28 (12 m.) 1,150 sec.-ft.; Mar. 26 (12 p.m.) 597 sec.-ft.; Mar. 31 (1 a.m.) 1,900 sec.-ft.

h Discharge computed from staff gage read twice daily.

Note.— Backwater from obstructions on control June 13 to Sept. 30; discharge computed on basis of gage-height record and discharge measurement.

MOKELUMNE RIVER BASIN

South Fork of Mokelumne River near West Point, Calif.

Location.- Water-stage recorder, lat. 38°22', long. 120°33', in SW $\frac{1}{4}$ sec. 16, T. 6 N., R. 13 E., 600 feet downstream from Sawyer Bridge, 2 miles upstream from confluence with Middle Fork, and 2 $\frac{1}{2}$ miles southwest of West Point. Altitude of gage, about 2,000 feet.

Drainage area.- 73.8 square miles.

Records available.- October 1933 to September 1940.

Extremes.- Maximum discharge during year, 3,440 second-feet Mar. 31 (gage height, 9.55 feet); minimum, 7.5 second-feet Oct. 1.

1933-40: Maximum discharge, 3,600 second-feet Feb. 22, 1936 (gage height, 8.90 feet), from rating curve extended above 710 second-feet; no flow Aug. 6, 7, Aug. 12 to Sept. 26, 1934.

Remarks.- Records good. Small diversions above station. At times as much as 12 second-feet are diverted from the Middle Fork into the South Fork above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|------|-----|------|------|------|-------|
| 1 | 10 | 9.5 | 13 | 14 | 126 | 688 | 953 | 90 | 47 | 27 | 12 | 11 |
| 2 | 29 | 10 | 13 | 96 | 123 | 500 | 645 | 86 | 44 | 26 | 12 | 11 |
| 3 | 20 | 11 | 12 | 71 | 192 | 400 | 495 | 83 | 42 | 26 | 12 | 12 |
| 4 | 13 | 11 | 12 | 159 | 228 | 326 | 420 | 95 | 42 | 26 | 12 | 12 |
| 5 | 12 | 10 | 12 | 73 | 228 | 280 | 352 | 88 | 41 | c24 | 12 | 12 |
| 6 | 18 | 10 | 13 | 55 | 230 | 248 | 312 | 82 | 39 | c22 | 12 | 12 |
| 7 | 20 | 10 | 13 | 99 | 216 | 228 | 284 | 78 | 38 | c21 | 12 | 12 |
| 8 | 14 | 10 | 13 | 308 | 181 | 210 | 262 | 74 | 37 | c20 | 12 | 12 |
| 9 | 12 | 10 | 12 | 458 | 168 | 197 | 244 | 69 | 35 | c19 | 11 | 11 |
| 10 | 11 | 10 | 17 | 323 | 142 | 181 | 225 | 66 | 36 | 17 | 11 | 11 |
| 11 | 10 | 10 | 40 | 430 | 132 | 170 | 209 | 63 | 33 | 17 | 12 | 11 |
| 12 | 9.5 | 10 | 20 | 427 | 119 | 166 | 197 | 60 | 32 | 17 | 12 | 11 |
| 13 | 9.5 | 10 | 14 | 210 | 112 | 145 | 185 | 60 | 32 | 17 | 12 | 11 |
| 14 | 9.5 | 10 | 12 | 145 | 150 | 135 | 177 | 59 | 32 | 17 | 12 | 9.5 |
| 15 | 9 | 10 | 12 | 112 | 122 | 130 | 172 | 59 | 32 | 17 | 12 | 11 |
| 16 | 8.5 | 10 | 12 | 94 | 110 | 138 | 164 | 59 | 31 | 17 | 12 | 11 |
| 17 | 8.5 | 10 | 11 | 82 | 127 | 126 | 149 | 59 | 31 | 17 | 12 | 12 |
| 18 | 8.5 | 10 | 11 | 73 | 122 | 119 | 142 | 55 | 31 | 17 | 12 | 14 |
| 19 | 8.5 | 10 | 10 | 66 | 109 | 114 | 134 | 55 | 30 | 17 | 12 | 12 |
| 20 | 8.5 | 10 | 10 | 60 | 101 | 109 | 126 | 54 | 30 | 17 | 12 | 11 |
| 21 | 8.5 | 10 | 9.5 | 57 | 96 | 105 | 122 | 52 | 29 | 16 | 11 | 11 |
| 22 | 8.5 | 10 | 9.5 | 53 | 102 | 102 | 116 | 51 | 28 | 16 | 11 | 10 |
| 23 | 8.5 | 10 | 9.5 | 50 | 279 | 100 | 112 | 50 | 28 | 16 | 11 | 9.5 |
| 24 | 12 | 10 | 10 | 49 | 262 | 106 | 109 | 51 | 27 | 15 | 12 | 10 |
| 25 | 18 | 15 | 10 | 179 | 240 | 144 | 110 | 51 | 26 | 15 | 11 | 10 |
| 26 | 12 | 30 | 10 | 570 | 308 | 364 | 120 | 50 | 26 | 14 | 12 | 10 |
| 27 | 10 | 18 | 10 | 348 | 1,650 | 750 | 109 | 49 | 27 | 15 | 11 | 10 |
| 28 | 10 | 15 | 9.5 | 230 | 1,460 | 438 | 104 | 50 | 26 | 15 | 11 | 14 |
| 29 | 9.5 | 14 | 10 | 179 | 1,100 | 496 | 99 | 48 | 27 | 14 | 11 | 14 |
| 30 | 9 | 13 | 10 | 151 | - | 1,400 | 95 | 48 | 28 | 14 | 11 | 14 |
| 31 | 8.5 | - | 10 | 136 | - | 1,960 | - | 50 | - | 14 | 11 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 363.5 | 29 | 8.5 | 11.7 | 721 |
| November..... | 348.5 | 30 | 9.5 | 11.6 | 687 |
| December..... | 390.0 | 40 | 9.5 | 12.6 | 774 |
| Calendar year 1939..... | 9,112.8 | 136 | 2.9 | 25.0 | 18,080 |
| January..... | 5,357 | 570 | 14 | 173 | 10,630 |
| February..... | 8,525 | 1,650 | 96 | 294 | 16,910 |
| March..... | 10,568 | 1,960 | 100 | 341 | 20,960 |
| April..... | 6,843 | 958 | 95 | 231 | 13,770 |
| May..... | 1,944 | 95 | 48 | 62.7 | 3,860 |
| June..... | 987 | 47 | 26 | 32.9 | 1,960 |
| July..... | 562 | 27 | 14 | 18.1 | 1,110 |
| August..... | 361 | 12 | 11 | 11.6 | 716 |
| September..... | 342.0 | 14 | 9.5 | 11.4 | 678 |
| Water year 1939-40..... | 36,689.0 | 1,960 | 8.5 | 100 | 72,780 |

Peak discharge.- Jan. 11 (10 p.m.) 664 sec.-ft.; Jan. 26 (7 p.m.) 664 sec.-ft.; Feb. 23 (1 p.m.) 415 sec.-ft.; Feb. 27 (5 p.m.) 2,170 sec.-ft.; Mar. 27 (12:30 a.m.) 1,300 sec.-ft.; Mar. 31 (1 a.m.) 3,440 sec.-ft.

c Backwater from obstructions on control; discharge interpolated.

Woodbridge canal at Woodbridge, Calif.

Location.- Differential water-stage recorder and gate-opening recorder, lat. 38°09'10", long. 121°18'00", in SE $\frac{1}{4}$ sec. 34, T. 4 N., R. 6 E., at Woodbridge, at point of diversion. Datum of gage is 32.18 feet above mean sea level.

Records available.- April 1926 to September 1940.

Average discharge.- 14 years, 102 second-feet.

Extremes.- Maximum daily discharge during year, 346 second-feet June 16; no flow Nov. 17 to Dec. 11, Dec. 17 to Apr. 16.

1926-40: Maximum daily discharge, 368 second-feet June 30, 1937; no flow during part of each year.

Remarks.- Records excellent except those for periods of doubtful or no gage-height records, which are fair. Discharge computed from records of gage openings and effective head as shown by recorders. Canal diverts water from Woodbridge Reservoir on Mokelumne River in sec. 34, T. 4 N., R. 6 E., in Woodbridge for irrigation of lands south and west of Woodbridge.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 162 | 99 | 0 | | | | 0 | 59 | 217 | 35 | 330 | 240 |
| 2 | 151 | 100 | 0 | | | | 0 | 90 | 223 | 166 | 315 | 233 |
| 3 | 170 | 87 | 0 | | | | 0 | 113 | 224 | 312 | 266 | 222 |
| 4 | 174 | 79 | 0 | | | | 0 | 109 | 238 | 315 | 264 | 244 |
| 5 | 157 | 76 | 0 | | | | 0 | 98 | 246 | 293 | 286 | 244 |
| 6 | 137 | 86 | 0 | | | | 0 | 112 | 262 | 315 | 300 | 242 |
| 7 | 134 | 99 | 0 | | | | 0 | 114 | 295 | 319 | 315 | 248 |
| 8 | 125 | 104 | 0 | | | | 0 | 129 | 302 | 266 | 312 | 220 |
| 9 | 125 | 100 | 0 | | | | 0 | 183 | 289 | 325 | 313 | 210 |
| 10 | 141 | 95 | 0 | | | | 0 | 204 | 296 | 343 | 310 | 244 |
| 11 | 151 | 86 | 0 | | | | 0 | 223 | 294 | 342 | 238 | 250 |
| 12 | 148 | 86 | a1 | | | | 0 | 192 | 295 | 328 | 288 | 242 |
| 13 | 145 | 85 | a4 | | | | 0 | 235 | 310 | 310 | 313 | 220 |
| 14 | 143 | 90 | a7 | | | | 0 | 263 | 315 | 280 | 324 | 195 |
| 15 | 143 | 93 | a7 | | | | 0 | 260 | 333 | 280 | 322 | 163 |
| 16 | 145 | 32 | a3 | | | | 0 | 241 | 346 | 307 | 319 | 177 |
| 17 | 152 | 0 | 0 | | | | 41 | 241 | 328 | 319 | 305 | 193 |
| 18 | 147 | 0 | 0 | | | | 55 | 242 | 333 | 314 | 295 | 198 |
| 19 | 156 | 0 | 0 | | | | 58 | 222 | 359 | 312 | 286 | 195 |
| 20 | 133 | 0 | 0 | | | | 62 | 234 | 325 | 298 | 315 | 194 |
| 21 | 132 | 0 | 0 | | | | 41 | 238 | 308 | 262 | 315 | 198 |
| 22 | 145 | 0 | 0 | | | | 89 | 233 | 335 | 247 | 303 | 190 |
| 23 | 118 | 0 | 0 | | | | 125 | 226 | 335 | 278 | 280 | 184 |
| 24 | d118 | 0 | 0 | | | | 133 | 263 | 323 | 314 | 275 | 184 |
| 25 | d117 | 0 | 0 | | | | 142 | 242 | 307 | 316 | 264 | 191 |
| 26 | d117 | 0 | 0 | | | | 86 | 226 | 312 | 316 | 242 | 184 |
| 27 | d118 | 0 | 0 | | | | 67 | 236 | 311 | 314 | 240 | 176 |
| 28 | d116 | 0 | 0 | | | | 51 | 235 | 317 | 286 | 244 | 175 |
| 29 | d104 | 0 | 0 | | | | 51 | 280 | 315 | 291 | 268 | 171 |
| 30 | 91 | 0 | 0 | | | | 60 | 263 | 303 | 328 | 275 | 170 |
| 31 | 104 | - | 0 | | | | - | 244 | - | 312 | 266 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 4,197 | 174 | 91 | 135 | 8,320 | | | | |
| November..... | | | | 1,397 | 104 | 0 | 46.6 | 2,770 | | | | |
| December..... | | | | 22 | 7 | 0 | .7 | 44 | | | | |
| Calendar year 1939..... | | | | 50,378 | 347 | 0 | 138 | 99,920 | | | | |
| January..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| February..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| March..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| April..... | | | | 1,059 | 142 | 0 | 35.3 | 2,100 | | | | |
| May..... | | | | 6,250 | 280 | 59 | 202 | 12,400 | | | | |
| June..... | | | | 9,976 | 346 | 217 | 299 | 17,800 | | | | |
| July..... | | | | 9,063 | 343 | 35 | 292 | 17,980 | | | | |
| August..... | | | | 9,038 | 330 | 240 | 292 | 17,930 | | | | |
| September..... | | | | 6,197 | 250 | 163 | 207 | 12,290 | | | | |
| Water year 1939-40..... | | | | 46,199 | 346 | 0 | 126 | 91,630 | | | | |

a No gage-height record; discharge estimated.

d Doubtful gage-height record; discharge computed on basis of partial gage-height records and one discharge measurement.

Sutter Creek near Sutter Creek, Calif.

Location.- Water-stage recorder and concrete control, lat. 38°23'30", long. 120°46'50", in sec. 9, T. 6 N., R. 11 E., 1.3 miles east of Sutter Creek post office. Altitude of gage, about 1,150 feet.

Drainage area.- 50.6 square miles.

Records available.- January 1936 to September 1940. February 1922 to December 1935, at site 1.7 miles downstream. Flow from mine drainage and town sewers enters between the two sites.

Extremes.- Maximum discharge during year, 2,050 second-feet Mar. 31 (gage height, 5.74 feet); no flow Aug. 22 to Sept. 3.

1936-40: Maximum discharge, 3,900 second-feet Feb. 22, 1936 (gage height, 8.0 feet, present datum), which exceeds maximum recorded at former site downstream; no flow at times in each year except 1938.

Remarks.- Records good. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|------|-----|------|------|------|-------|
| 1 | 0.2 | 2.6 | 4.4 | 4.8 | 33 | 274 | 404 | 22 | 11 | 1.1 | 0.1 | 0 |
| 2 | .4 | 1.8 | 4.4 | 32 | 32 | 180 | 240 | 22 | 9.5 | 1.1 | .2 | 0 |
| 3 | .4 | 1.8 | 4.8 | 30 | 57 | 135 | 177 | 22 | 9 | 1.1 | .2 | 0 |
| 4 | .4 | 1.5 | 5 | 87 | 66 | 107 | 157 | 26 | 8 | 1.1 | .2 | .1 |
| 5 | .5 | 1.8 | 5 | 30 | 70 | 87 | 121 | 24 | 7.5 | 1.1 | .2 | .1 |
| 6 | .9 | 1.8 | 6.5 | 22 | 74 | 72 | 105 | 22 | 7 | 1.1 | .3 | .1 |
| 7 | 3.9 | 1.8 | 7 | 24 | 72 | 64 | 92 | 22 | 6.5 | .9 | .3 | .2 |
| 8 | 3.2 | 1.8 | 6 | 116 | 53 | 57 | 83 | 21 | 6.5 | .9 | .3 | .2 |
| 9 | 2.3 | 1.8 | 6 | 368 | 44 | 48 | 73 | 20 | 6.5 | 1.1 | .3 | .3 |
| 10 | 1.8 | 1.8 | 5.5 | 118 | 37 | 46 | 66 | 18 | 5.5 | 1.1 | .2 | .4 |
| 11 | 1.3 | 1.5 | 12 | 130 | 33 | 41 | 60 | 15 | 5 | .9 | .2 | .5 |
| 12 | 1.1 | 1.3 | 9.5 | 180 | 30 | 37 | 55 | 14 | 4.8 | .7 | .2 | .5 |
| 13 | 1.1 | 1.1 | 6.5 | 64 | 28 | 33 | 52 | 14 | 4.4 | .6 | .2 | .6 |
| 14 | .9 | 1.1 | 6.5 | 40 | 78 | 31 | 48 | 13 | 4.4 | .5 | .2 | .7 |
| 15 | 1.1 | .9 | 4.4 | 28 | 59 | 30 | 47 | 12 | 3.6 | .4 | .1 | .7 |
| 16 | 1.5 | .7 | 4.0 | 23 | 44 | 31 | 45 | 13 | 2.9 | .4 | .2 | .9 |
| 17 | 1.8 | 1.1 | 3.6 | 22 | 70 | 28 | 39 | 11 | 2.3 | .3 | .2 | .9 |
| 18 | 1.8 | 1.1 | 3.2 | 21 | 91 | 25 | 36 | 9.5 | 2.0 | .2 | .1 | .9 |
| 19 | 1.8 | 1.1 | 3.2 | 21 | 62 | 23 | 34 | 8 | 2.0 | .2 | .1 | .9 |
| 20 | 1.8 | .9 | 2.9 | 19 | 48 | 21 | 30 | 8 | 2.0 | .2 | .1 | .9 |
| 21 | 1.8 | 1.5 | 2.9 | 15 | 42 | 20 | 28 | 7.5 | 2.0 | .2 | .1 | .7 |
| 22 | 1.5 | 1.8 | 2.6 | 14 | 40 | 20 | 26 | 6.5 | 1.5 | .2 | 0 | .7 |
| 23 | 1.5 | 1.8 | 2.3 | 12 | 107 | 20 | 26 | 6.5 | 1.1 | .1 | 0 | .7 |
| 24 | 1.8 | 1.5 | 2.3 | 12 | 87 | 20 | 24 | 6.5 | .9 | .1 | 0 | .6 |
| 25 | 3.6 | 2.0 | 2.3 | 98 | 85 | 33 | 26 | 6.5 | .7 | .1 | 0 | .6 |
| 26 | 4.0 | 3.2 | 2.6 | 342 | 135 | 149 | 36 | 6.5 | .6 | .1 | 0 | .6 |
| 27 | 3.2 | 5 | 2.6 | 128 | 932 | 269 | 33 | 6.5 | .7 | .1 | 0 | .6 |
| 28 | 2.9 | 4.4 | 2.6 | 70 | 504 | 126 | 28 | 7 | .7 | .1 | 0 | .6 |
| 29 | 2.6 | 4.0 | 2.6 | 50 | 468 | 171 | 26 | 7.5 | .9 | .1 | 0 | .6 |
| 30 | 2.6 | 4.0 | 2.9 | 40 | - | 831 | 24 | 8 | .9 | .1 | 0 | .7 |
| 31 | 2.9 | - | 3.6 | 36 | - | 1,110 | - | 11 | - | .1 | 0 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 56.6 | 4.0 | 0.2 | 1.85 | 112 |
| November..... | 58.6 | 5 | .7 | 1.95 | 115 |
| December..... | 138.7 | 12 | 2.3 | 4.47 | 275 |
| Calendar year 1939..... | 2,845.0 | 102 | 0 | 7.79 | 5,650 |
| January..... | 2,166.8 | 368 | 4.8 | 69.9 | 4,300 |
| February..... | 3,501 | 932 | 28 | 121 | 6,940 |
| March..... | 4,139 | 1,110 | 20 | 134 | 8,210 |
| April..... | 2,241 | 404 | 24 | 74.7 | 4,440 |
| May..... | 415.5 | 25 | 5.5 | 13.4 | 825 |
| June..... | 120.4 | 11 | .8 | 4.01 | 239 |
| July..... | 16.3 | 1.1 | .1 | .53 | 32 |
| August..... | 4.0 | .3 | 0 | .13 | 7.9 |
| September..... | 15.3 | .9 | 0 | .51 | 30 |
| Water year 1939-40..... | 12,874.1 | 1,110 | 0 | 35.2 | 25,530 |

Peak discharge.- Jan. 4 (8:30 a.m.) 227 sec.-ft.; Jan. 9 (9 a.m.) 682 sec.-ft.; Jan. 26 (1 a.m.) 459 sec.-ft. Feb. 27 (11 a.m.) 1,520 sec.-ft.; Mar. 26 (11:30 p.m.) 758 sec.-ft.; Mar. 31 (1:30 a.m.) 2,050 sec.-ft.

North Fork of Cosumnes River near El Dorado, Calif.

Location.- Water-stage recorder, lat. 38°36', long. 120°51', in NE¼ sec. 35, T. 9 N., R. 10 E., 1 mile north of Nashville, 2.7 miles upstream from mouth, and 6 miles south of El Dorado. Altitude of gage, about 910 feet (from topographic map).

Drainage area. 202 square miles.

Records available.- October 1933 to September 1940. August 1911 to September 1933, at site 1½ miles upstream.

Average discharge.- 29 years, 195 second-feet.

Extremes.- Maximum discharge during year, 8,350 second-feet Mar. 31 (gage height, 10.12 feet), from rating curve extended above 4,000 second-feet; minimum, 0.4 second-foot Aug. 15, 16, 21.
1911-40: Maximum discharge, that of Mar. 31, 1940; no flow during part of 1924, 1926, 1931, 1933, 1934.

Remarks.- Records good. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | 7.5 | 16 | 16 | 23 | 395 | 2,200 | 2,970 | 260 | 122 | 20 | 2.0 | 0.8 |
| 2 | 9.5 | 15 | 16 | 191 | 348 | 1,570 | 2,020 | 268 | 111 | 16 | 1.3 | .8 |
| 3 | 16 | 15 | 16 | 298 | 435 | 1,190 | 1,550 | 276 | 101 | 14 | 1.6 | .7 |
| 4 | 20 | 14 | 16 | 420 | 712 | 953 | 1,340 | 302 | 94 | 14 | 1.4 | .6 |
| 5 | 16 | 14 | 16 | 248 | 773 | 799 | 1,080 | 284 | 87 | 12 | 1.4 | .7 |
| 6 | 15 | 14 | 18 | 129 | 870 | 694 | 925 | 260 | 80 | 11 | 1.2 | .7 |
| 7 | 40 | 14 | 20 | 116 | 818 | 615 | 838 | 244 | 75 | 10 | 1.2 | 1.0 |
| 8 | 28 | 13 | 19 | 476 | 640 | 569 | 754 | 240 | 73 | 9.5 | 1.0 | 1.0 |
| 9 | 20 | 12 | 18 | 1,490 | 530 | 536 | 682 | 240 | 67 | 9 | 1.0 | 1.0 |
| 10 | 16 | 12 | 25 | 618 | 450 | 466 | 622 | 248 | 62 | 8 | .8 | 1.0 |
| 11 | 14 | 12 | 43 | 1,630 | 395 | 460 | 569 | 256 | 58 | 7.5 | .7 | 1.0 |
| 12 | 12 | 12 | 55 | 1,950 | 343 | 415 | 536 | 260 | 53 | 7.5 | .6 | 1.0 |
| 13 | 12 | 12 | 30 | 780 | 316 | 380 | 514 | 260 | 50 | 7.5 | .6 | .8 |
| 14 | 11 | 12 | 23 | 491 | 700 | 358 | 498 | 244 | 46 | 7.5 | .6 | 1.0 |
| 15 | 10 | 12 | 20 | 356 | 460 | 354 | 514 | 232 | 45 | 7.5 | .4 | 1.2 |
| 16 | 10 | 12 | 19 | 280 | 356 | 338 | 460 | 220 | 40 | 7.5 | .4 | 1.2 |
| 17 | 10 | 12 | 16 | 232 | 445 | 354 | 420 | 224 | 39 | 7.5 | .5 | 1.3 |
| 18 | 10 | 12 | 16 | 196 | 455 | 316 | 405 | 204 | 36 | 6.5 | .5 | 1.4 |
| 19 | 10 | 12 | 14 | 168 | 366 | 302 | 395 | 196 | 35 | 5 | .5 | 1.4 |
| 20 | 10 | 12 | 14 | 148 | 320 | 289 | 375 | 186 | 33 | 5 | .5 | 6 |
| 21 | 10 | 12 | 14 | 132 | 294 | 284 | 366 | 186 | 32 | 4.8 | .4 | 4.8 |
| 22 | 9.5 | 12 | 14 | 127 | 280 | 280 | 361 | 182 | 28 | 5.5 | .6 | 3.8 |
| 23 | 9.5 | 12 | 14 | 119 | 730 | 276 | 361 | 168 | 27 | 10 | .6 | 3.2 |
| 24 | 12 | 12 | 14 | 114 | 925 | 289 | 352 | 161 | 24 | 9 | .6 | 2.5 |
| 25 | 27 | 15 | 14 | 336 | 897 | 420 | 343 | 158 | 22 | 5.5 | .6 | 2.0 |
| 26 | 27 | 31 | 14 | 1,780 | 1,130 | 1,090 | 352 | 148 | 19 | 4.8 | 1.9 | 1.9 |
| 27 | 20 | 33 | 13 | 1,500 | 3,860 | 3,320 | 330 | 132 | 18 | 3.5 | 1.2 | 2.0 |
| 28 | 16 | 23 | 14 | 858 | 4,230 | 1,860 | 288 | 124 | 17 | 3.2 | .7 | 4.2 |
| 29 | 16 | 19 | 14 | 622 | 3,660 | 2,230 | 280 | 119 | 16 | 2.9 | .7 | 3.2 |
| 30 | 16 | 18 | 15 | 498 | - | 5,190 | 264 | 116 | 17 | 2.5 | .7 | 5.5 |
| 31 | 16 | - | 18 | 430 | - | 5,570 | - | 122 | - | 2.5 | .7 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 476.0 | 40. | 7.5 | 15.4 | 944 | | | | |
| November..... | | | | 446 | 33 | 12 | 14.9 | 885 | | | | |
| December..... | | | | 588 | 55 | 13 | 19.0 | 1,170 | | | | |
| Calendar year 1939..... | | | | 20,474.4 | 390 | .2 | 56.1 | 40,610 | | | | |
| January..... | | | | 16,946 | 1,950 | 23 | 547 | 33,610 | | | | |
| February..... | | | | 26,123 | 4,230 | 280 | 901 | 51,810 | | | | |
| March..... | | | | 33,946 | 5,570 | 276 | 1,095 | 67,330 | | | | |
| April..... | | | | 20,774 | 2,970 | 264 | 692 | 41,200 | | | | |
| May..... | | | | 6,520 | 302 | 116 | 210 | 12,930 | | | | |
| June..... | | | | 1,525 | 122 | 16 | 50.8 | 3,020 | | | | |
| July..... | | | | 245.7 | 20 | 2.5 | 7.66 | 489 | | | | |
| August..... | | | | 27.4 | 2.0 | .6 | .88 | 54 | | | | |
| September..... | | | | 57.7 | 6 | .6 | 1.92 | 114 | | | | |
| Water year 1939-40..... | | | | 107,675.8 | 5,570 | .4 | 294 | 213,600 | | | | |

Peak discharge.- Jan. 9 (12 m.) 2,040 sec.-ft.; Jan. 11 (10 p.m.) 3,500 sec.-ft.; Jan. 26 (8 p.m.) 2,640 sec.-ft.; Feb. 28 (2 p.m.) 4,940 sec.-ft.; Mar. 27 (3 a.m.) 5,170 sec.-ft.; Mar. 31 (2 a.m.) 8,350 sec.-ft.

Cosumnes River at Michigan Bar, Calif.

Location.— Water-stage recorder, lat. 38°30'00", long. 121°02'45", 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 and 12 miles downstream from confluence of North and Middle Forks. Altitude of gage, about 190 feet (from topographic map).

Drainage area.— 537 square miles.

Records available.— October 1907 to September 1940.

Average discharge.— 33 years, 462 second-feet.

Extremes.— Maximum discharge during year, 26,200 second-feet Mar. 31 (gage height, 11.66 feet), from rating curve extended above 10,000 second-feet; minimum, 0.5 second-foot Sept. 19.

1907-40: Maximum discharge observed, that of Mar. 31, 1940; no flow during part of 1908, 1918, 1919, 1924-26, 1931, 1934, 1939.

Flood in March 1907 reached a stage of 16.3 feet.

Remarks.— Records good. Diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|--------|
| 1.5 | 0.4 | 2.7 | 91 | 4.4 | 1,090 | 7.8 | 9,800 |
| 1.7 | 1.1 | 2.9 | 140 | 4.8 | 1,610 | 8.4 | 12,200 |
| 1.9 | 5.5 | 3.1 | 204 | 5.4 | 2,660 | 9.0 | 14,700 |
| 2.1 | 17 | 3.4 | 326 | 6.0 | 3,790 | 9.5 | 16,800 |
| 2.3 | 35 | 3.7 | 490 | 6.6 | 5,400 | | |
| 2.5 | 57 | 4.0 | 710 | 7.2 | 7,440 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|--------|-------|-----|------|------|------|-------|
| 1 | 12 | 29 | 30 | 40 | 844 | 4,870 | 7,190 | 570 | 280 | 43 | 5.5 | a0.8 |
| 2 | 11 | 26 | 27 | 148 | 750 | 3,470 | 4,540 | 570 | 256 | 43 | 5 | h.9 |
| 3 | 16 | 24 | 27 | 734 | 940 | 2,670 | 3,470 | 600 | 236 | 39 | 4.8 | a1.0 |
| 4 | 38 | 23 | 28 | 880 | 1,460 | 2,150 | 3,030 | 622 | 218 | 36 | 4.5 | a1.0 |
| 5 | 35 | 23 | a28 | 694 | 1,710 | 1,810 | 2,450 | 662 | 201 | 109 | 3.8 | a.9 |
| 6 | 30 | 22 | 28 | 376 | 1,900 | 1,580 | 2,080 | 585 | 184 | 102 | 3.2 | a.8 |
| 7 | 31 | 22 | 30 | 361 | 1,939 | 1,400 | 1,900 | 542 | 173 | 95 | 2.5 | a.9 |
| 8 | 63 | 20 | 33 | 1,210 | 1,460 | 1,300 | 1,740 | 522 | 164 | 25 | 2.2 | a.9 |
| 9 | 45 | 19 | 33 | 4,300 | 1,190 | 1,210 | 1,570 | 522 | 155 | 23 | 2.2 | a1.0 |
| 10 | 33 | 19 | 38 | 2,110 | 1,000 | 1,110 | 1,430 | 529 | 140 | 23 | 1.6 | 1.1 |
| 11 | 22 | 18 | 66 | 2,900 | 880 | 1,020 | 1,310 | 548 | 129 | 22 | 1.6 | 1.1 |
| 12 | 22 | 18 | 106 | 3,910 | 782 | 950 | 1,220 | 555 | 118 | 21 | 1.6 | 1.1 |
| 13 | 19 | 18 | 82 | 1,800 | 774 | 871 | 1,190 | 555 | 111 | 21 | 1.6 | 1.0 |
| 14 | 17 | 16 | 56 | 1,100 | 2,640 | 808 | 1,130 | 536 | 102 | 17 | 1.1 | |
| 15 | 16 | 17 | 46 | 799 | 1,280 | 758 | 1,130 | 516 | 91 | 18 | a1.0 | 1.0 |
| 16 | 14 | 17 | 42 | 638 | 920 | 742 | 1,040 | 496 | 83 | 14 | a1.1 | 1.1 |
| 17 | 13 | 17 | 37 | 522 | 1,250 | 758 | 940 | 478 | 82 | 16 | a1.2 | .8 |
| 18 | 12 | 17 | 34 | 448 | 1,240 | 710 | 890 | 448 | 78 | 18 | 1.2 | .6 |
| 19 | 12 | 17 | 32 | 398 | 950 | 678 | 871 | 425 | 72 | 18 | 1.0 | .6 |
| 20 | 13 | 17 | 30 | 361 | 799 | 646 | 835 | 408 | 68 | 14 | .8 | .9 |
| 21 | 13 | 17 | 31 | 321 | 718 | 630 | 799 | 398 | 68 | 14 | a.8 | 1.0 |
| 22 | 12 | 17 | 30 | 298 | 670 | 622 | 790 | 392 | 66 | 14 | a.7 | 1.1 |
| 23 | 12 | 17 | 29 | 280 | 1,670 | 615 | 790 | 381 | 62 | 13 | a.7 | 4.2 |
| 24 | 14 | 17 | 28 | 268 | 2,020 | 622 | 774 | 366 | 57 | 15 | a.6 | 4.2 |
| 25 | 18 | 19 | 30 | 890 | 2,400 | 853 | 742 | 351 | 55 | 15 | a.7 | 4.5 |
| 26 | 45 | 21 | 30 | 4,160 | 2,890 | 1,910 | 782 | 331 | 49 | 11 | a.7 | 4.2 |
| 27 | 43 | 62 | 29 | 3,380 | 10,500 | 7,280 | 750 | 309 | 49 | 9 | a.8 | 3.5 |
| 28 | 34 | 52 | 28 | 1,920 | 10,500 | 3,500 | 878 | 285 | 45 | 8 | h.9 | 2.5 |
| 29 | 29 | 40 | 23 | 1,390 | 9,200 | 4,550 | 622 | 276 | 43 | 6.5 | a.9 | 2.2 |
| 30 | 29 | 33 | 28 | 1,090 | - | 13,500 | 585 | 264 | 41 | 6 | a.9 | 2.1 |
| 31 | 34 | - | 32 | 920 | - | 16,700 | - | 268 | - | 6 | a.8 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 761 | 63 | 11 | 24.5 | 1,510 |
| November..... | 695 | 62 | 17 | 23.2 | 1,580 |
| December..... | 1,151 | 106 | 23 | 37.1 | 2,280 |
| Calendar year 1939..... | 43,149.9 | 1,500 | 0 | 118 | 86,580 |
| January..... | 38,646 | 4,300 | 40 | 1,247 | 76,550 |
| February..... | 65,347 | 10,800 | 670 | 2,253 | 129,600 |
| March..... | 80,393 | 16,700 | 615 | 2,593 | 159,500 |
| April..... | 47,268 | 7,190 | 585 | 1,576 | 93,750 |
| May..... | 14,309 | 662 | 264 | 452 | 28,330 |
| June..... | 3,476 | 250 | 41 | 116 | 6,890 |
| July..... | 834.5 | 109 | 6 | 26.9 | 1,660 |
| August..... | 56.0 | 5.5 | .6 | 18.1 | 111 |
| September..... | 47.8 | 4.5 | .5 | 1.59 | 95 |
| Water year 1939-40..... | 252,984.3 | 16,700 | .5 | 691 | 501,800 |

Peak discharge.— Jan. 9 (11 a.m.) 6,280 sec.-ft.; Jan. 12 (12:30 a.m.) 5,620 sec.-ft.; Jan. 26 (9 to 11 a.m.) 5,500 sec.-ft.; Feb. 27 (8 a.m.) 12,000 sec.-ft.; Mar. 27 (2 a.m.) 11,400 sec.-ft.; Mar. 31 (3 a.m.) 26,200 sec.-ft.

a No gage-height record; discharge interpolated or computed on basis of recorded range of stage.
h Discharge computed from staff-gage reading.

Drew Creek near Lakeview, Oreg.

Location.- Staff gage, lat. 42°07', long. 120°36', in SE¼ sec. 4, T. 40 S., R. 18 E., at highway bridge, half a mile downstream from Willow Creek, 1 mile downstream from Drew Creek Dam and 13 miles southwest of Lakeview.

Drainage area.- 211 square miles.

Records available.- January 1909 to September 1921 and October 1925 to September 1940 in reports of U. S. Geological Survey, January 1909 to September 1936 in reports of State engineer.

Average discharge.- 23 years (1909-30, 1937-38, 1939-40), 66.3 second-feet, including diversion by North Drew canal.

Extremes.- Maximum discharge during year, 707 second-feet Mar. 31 (gage height not observed), computed from gage reading Mar. 30 and reservoir data; minimum not determined.

1909-40: Maximum discharge, 3,000 second-feet (estimated) Mar. 1, 2, 1910; no flow at times.

Remarks.- Records fair except those for days on which no gage reading was obtained, which are poor. Considerable regulation caused by Drew Creek Reservoir, 1 mile above station. Since March 1914 North Drew canal of Goose Lake Valley Irrigation Co. has diverted water around station (see following page).

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|----|-----|-----|-----|-----|
| 0.4 | 14 | 1.3 | 69 | 2.5 | 200 |
| .6 | 22 | 1.6 | 94 | 3.0 | 297 |
| .8 | 34 | 1.9 | 122 | 3.5 | 418 |
| 1.0 | 47 | 2.2 | 155 | 4.0 | 560 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 672 | 122 | h72 | h74 | 47 | 28 |
| 2 | | | | | | | h642 | 122 | 72 | h72 | h40 | 28 |
| 3 | | | | | | | 615 | h103 | 72 | 72 | 40 | h22 |
| 4 | | | | | | | 590 | 103 | h64 | 72 | 40 | 22 |
| 5 | | | | | | | 571 | 103 | 64 | 72 | h46 | 22 |
| 6 | | | | | | | h554 | h94 | 64 | h61 | 44 | 22 |
| 7 | | | | | | | 546 | 94 | 64 | 60 | 43 | h22 |
| 8 | | | | | | | h536 | h52 | h57 | h60 | 42 | 22 |
| 9 | | | | | | | h404 | h22 | 57 | 60 | h40 | h21 |
| 10 | | | | | | | 94 | 22 | 57 | 60 | 38 | 21 |
| 11 | | | | | | | 94 | h22 | h61 | 60 | 36 | 19 |
| 12 | | | | | | | 94 | 22 | 61 | 60 | h34 | 17 |
| 13 | | | | | | | h94 | h35 | h71 | h64 | 34 | 15 |
| 14 | | | | | | | h161 | 83 | 72 | 61 | 34 | h14 |
| 15 | | | | | | | h255 | 83 | h72 | h58 | 34 | |
| 16 | 5 | 5 | 5 | 5 | 5 | 5 | 255 | 83 | 72 | h58 | h34 | |
| 17 | | | | | | | 255 | 83 | 72 | 58 | 32 | |
| 18 | | | | | | | 255 | h35 | h72 | 58 | 30 | |
| 19 | | | | | | | h255 | 84 | 72 | 58 | h28 | |
| 20 | | | | | | | 255 | 84 | 72 | h58 | 33 | |
| 21 | | | | | | | 255 | h85 | 72 | 58 | h33 | |
| 22 | | | | | | | h183 | 85 | h79 | 59 | 33 | 5 |
| 23 | | | | | | | 183 | 85 | 79 | h60 | 33 | |
| 24 | | | | | | | 183 | 85 | 79 | 60 | h22 | |
| 25 | | | | | | | 183 | h94 | h79 | 60 | 22 | |
| 26 | | | | | | | h122 | 94 | 78 | h60 | 22 | |
| 27 | | | | | | | h120 | 94 | 76 | 60 | h24 | |
| 28 | | | | | | | 121 | h72 | 74 | 60 | 24 | |
| 29 | | | | | | | h122 | 72 | h74 | h47 | 24 | |
| 30 | | | | | - | h322 | 122 | 72 | 74 | 47 | 24 | |
| 31 | | | | | | h707 | - | 72 | - | 47 | h28 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 155 | - | - | 5 | 307 | | |
| November..... | | | | | | 150 | - | - | 5 | 298 | | |
| December..... | | | | | | 155 | - | - | 5 | 307 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 155 | - | - | 5 | 307 | | |
| February..... | | | | | | 145 | - | - | 5 | 298 | | |
| March..... | | | | | | 1,174 | 707 | - | 37.9 | 2,330 | | |
| April..... | | | | | | 8,791 | 672 | 94 | 293 | 17,440 | | |
| May..... | | | | | | 2,409 | 122 | 22 | 77.7 | 4,780 | | |
| June..... | | | | | | 2,104 | 79 | 57 | 70.1 | 4,170 | | |
| July..... | | | | | | 1,874 | 74 | 47 | 60.5 | 3,720 | | |
| August..... | | | | | | 1,058 | 47 | 22 | 33.5 | 2,060 | | |
| September..... | | | | | | 375 | 28 | - | 12.5 | 744 | | |
| Water year 1939-40..... | | | | | | 18,525 | 707 | - | 50.6 | 36,750 | | |

h Staff-gage reading; discharge computed from reading and observer's notes of gate changes at reservoir above station.

Note.- Discharge for days on which no staff-gage reading was obtained interpolated or computed on basis of information furnished by county watermaster, data for Drew Creek Reservoir, and known or assumed time of changing control gates.

GOOSE LAKE BASIN

Monthly gage height and contents, of Drew Creek Reservoir near Lakeview, Oreg.,
water year October 1939 to September 1940

| Date | Gage height (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|-----------------------|-------------------------|---|
| Sept. 30..... | 40.7 | 17,200 | - |
| Oct. 31..... | 40.5 | 16,800 | -400 |
| Nov. 30..... | 40.3 | 16,400 | -400 |
| Dec. 31..... | 40.9 | 17,600 | +1,200 |
| Calendar year 1939..... | - | - | -14,630 |
| Jan. 31..... | 43.3 | 23,050 | +5,450 |
| Feb. 29..... | 49.7 | 41,780 | +18,730 |
| Mar. 31..... | 55.7 | 65,750 | +23,970 |
| Apr. 30..... | 55.0 | 62,500 | -3,250 |
| May 31..... | 53.6 | 56,390 | -6,110 |
| June 30..... | 51.3 | 47,370 | -9,020 |
| July 31..... | 48.6 | 38,120 | -9,250 |
| Aug. 31..... | 46.4 | 31,360 | -6,760 |
| Sept. 30..... | 45.6 | 29,080 | -2,280 |
| Water year 1939-40..... | - | - | +11,880 |

Note.- Maximum contents observed during year, 65,750 acre-feet Mar. 31 (gage height, 55.7 feet).

Diversion, in acre-feet, of North Drew canal near Lakeview, Oreg.,
water year October 1939 to September 1940

| | |
|----------------|-------|
| May..... | 2,080 |
| June..... | 4,000 |
| July..... | 3,560 |
| August..... | 3,250 |
| September..... | 912 |

The water year..... 13,800

Note.- No flow during months omitted.

Cottonwood Creek near Lakeview, Oreg.

Location.- Water-stage recorder, lat. 42°14', long. 120°30', in SW¼ sec. 29, T. 38 S., R. 19 E., 200 yards downstream from Cottonwood Reservoir and 10 miles northwest of Lakeview.

Drainage area.- 30 square miles.

Records available.- November 1908 to September 1919 and October 1925 to September 1940 in reports of U. S. Geological Survey. November 1908 to September 1919 and October 1924 to September 1936 in reports of State engineer.

Average discharge.- 23 years (1909-19, 1924-35, 1936-40), 20.1 second-feet.

Extremes.- Maximum discharge during year, 376 second-feet Mar. 28 (gage height, 4.49 feet); minimum recorded, 0.8 second-foot Aug. 30 to Sept. 2 (gage height, 1.25 feet). 1908-19, 1924-40: Maximum discharge, between 500 and 1,000 second-feet during period Apr. 26 to May 1, 1927, when natural flow, estimated as 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 except those for period of no gage-height record, which are poor. In 1923, considerable regulation caused by Cottonwood Reservoir, 200 yards above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 28

Mar. 15 to Sept. 30

| | | | | | | | |
|-----|-----|-----|-----|-----|------|-----|------|
| 1.2 | 0.6 | 1.2 | 0.5 | 2.0 | 12.9 | 3.2 | 11.7 |
| 1.3 | 1.3 | 1.4 | 2.0 | 2.3 | 23 | 3.5 | 170 |
| 1.4 | 2.3 | 1.6 | 4.4 | 2.6 | 44 | 4.0 | 272 |
| | | 1.8 | 8.1 | 2.9 | 74 | 4.5 | 378 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 1.4 | 2.5 | | | | | 308 | 42 | 50 | 15 | 19 | 0.9 |
| 2 | 1.6 | 2.5 | | | | | 177 | 28 | 38 | 15 | 19 | .8 |
| 3 | 1.7 | 2.5 | | | | | 112 | 27 | 37 | 15 | 19 | .9 |
| 4 | 1.9 | 2.4 | | | | | 106 | 26 | 37 | 15 | 18 | .9 |
| 5 | 2.2 | 2.3 | | | | | 64 | 41 | 37 | 15 | 19 | .9 |
| 6 | 2.4 | 2.3 | | | | | 51 | 38 | 35 | 17 | 18 | 1.1 |
| 7 | 2.1 | 2.3 | | | | a15 | 58 | 25 | 35 | 21 | 17 | 1.2 |
| 8 | 1.9 | 2.2 | | | | | 66 | 24 | 30 | 23 | 17 | 1.2 |
| 9 | 1.7 | 2.0 | | | | | 64 | 30 | 30 | 23 | 16 | 1.2 |
| 10 | 1.6 | 2.0 | | | | | 42 | 34 | 34 | 24 | 16 | 1.2 |
| 11 | 1.6 | 2.0 | | | | | 42 | 41 | 36 | 24 | 16 | 1.2 |
| 12 | 1.5 | 2.0 | | | | | 42 | 42 | 35 | 24 | 15 | 1.2 |
| 13 | 1.4 | 2.0 | | | | | 88 | 40 | 35 | 24 | 15 | 1.2 |
| 14 | 1.3 | 2.0 | | | | | 73 | 36 | 34 | 25 | 16 | 1.2 |
| 15 | 1.3 | 2.0 | | | | 29 | 68 | 32 | 33 | 25 | 15 | 1.2 |
| 16 | 1.3 | 2.1 | a3 | a3 | a3 | 29 | 84 | 36 | 32 | 25 | 15 | 1.4 |
| 17 | 1.3 | 2.4 | | | | 29 | 82 | 45 | 24 | 23 | 14 | 1.3 |
| 18 | 1.3 | 2.4 | | | | 27 | 64 | 45 | 10 | 24 | 13 | 1.9 |
| 19 | 1.3 | 2.3 | | | | 22 | 62 | 46 | 25 | 24 | 12 | 2.7 |
| 20 | 1.4 | 2.5 | | | | 22 | 74 | 25 | 23 | 23 | 12 | 2.0 |
| 21 | 1.5 | 2.5 | | | | 24 | 90 | 35 | 18 | 21 | 10 | 1.8 |
| 22 | 1.5 | 2.5 | | | | 38 | 52 | 35 | 15 | 23 | 9.7 | 1.7 |
| 23 | 1.6 | 2.4 | | | | 49 | 45 | 35 | 12 | 23 | 4.0 | 1.6 |
| 24 | 1.9 | 2.4 | | | | 74 | 59 | 35 | 12 | 24 | 1.7 | 1.6 |
| 25 | 2.1 | 2.4 | | | | 123 | 68 | 36 | 12 | 27 | 1.7 | 1.6 |
| 26 | 2.2 | 2.5 | | | | 180 | 68 | 39 | 11 | 27 | 1.6 | 1.6 |
| 27 | 2.5 | 2.7 | | | | 322 | 46 | 48 | 8.8 | 27 | 1.6 | 1.6 |
| 28 | 2.8 | 2.5 | | | | 304 | 22 | 53 | 9.7 | 26 | 1.5 | 2.0 |
| 29 | 2.8 | 2.5 | | | | 196 | 18 | 53 | 12 | 24 | 1.0 | 1.9 |
| 30 | 2.7 | 2.5 | | | - | 232 | 58 | 53 | 13 | 24 | .9 | 1.8 |
| 31 | 2.5 | - | | | - | 304 | - | 53 | - | 21 | .8 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 56.3 | 2.8 | 1.3 | 1.82 | 112 |
| November..... | 69.6 | 2.7 | 2.0 | 2.32 | 138 |
| December..... | 93 | - | - | 3 | 184 |
| Calendar year 1939..... | 3,266.4 | 36 | .3 | 8.95 | 6,480 |
| January..... | 93 | - | - | 3 | 184 |
| February..... | 87 | - | - | 3 | 173 |
| March..... | 2,214 | 322 | - | 71.4 | 4,390 |
| April..... | 2,253 | 308 | 18 | 75.1 | 4,470 |
| May..... | 1,178 | 53 | 24 | 38.0 | 2,340 |
| June..... | 773.5 | 50 | 8.8 | 25.8 | 1,530 |
| July..... | 691 | 27 | 15 | 22.3 | 1,370 |
| August..... | 355.5 | 19 | .8 | 11.5 | 705 |
| September..... | 42.8 | 2.7 | .8 | 1.43 | 85 |
| Water year 1939-40..... | 7,906.7 | 322 | .8 | 21.6 | 15,680 |

a No gage-height record; discharge computed on basis of information furnished by county water-master.

SACRAMENTO RIVER MAIN STEM

Sacramento River at Antler, Calif.

Location.- Staff gage, lat. 40°53', long. 122°23', in SE¼ sec. 13, T. 35N., R. 5 W., 200 feet upstream from highway bridge at Antler, 400 feet upstream from Gregory Creek, and 14 miles upstream from Pit River. December 1930 to Feb. 19, 1940, water-stage recorder a quarter of a mile downstream. Altitude of gage, about 938 feet (from topographic map).

Drainage area.- 461 square miles, at site above Gregory Creek.

Records available.- November 1910 to December 1911, April 1919 to September 1940.

Average discharge.- 21 years (1919-40), 1,000 second-feet.

Extremes.- Maximum discharge during year, 58,000 second-feet Feb. 28 (gage height, 21.0 feet, from floodmarks, recorder datum; 25.4 feet, from floodmarks, staff-gage datum), from rating curve extended above 10,000 second-feet on basis of slope-area and velocity-area studies; minimum, not determined.
1910-11; 1919-40: Maximum discharge, that of Feb. 28, 1940; minimum, 95 second-feet Aug. 19, 28, 29, Sept. 3, 4, 1931.

Remarks.- Records good except those for periods of no gage-height record and varying backwater which are fair. No diversions. Recorder station below Gregory Creek destroyed by flood on Feb. 28.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|-------|------------------|---------|---------|-------|----------------------|-------|------|------|-------|
| 1 | 164 | 164 | 184 | 6,240 | 1,800 | 10,000 | 7,560 | 1,540 | 1,180 | 346 | 222 | 135 |
| 2 | 169 | 164 | 184 | 9,350 | 1,860 | 6,500 | 5,630 | 1,780 | 980 | 346 | 219 | 135 |
| 3 | 169 | 164 | 184 | 6,400 | 7,230 | 4,600 | 5,000 | 1,710 | 862 | 333 | 219 | 160 |
| 4 | 161 | 164 | 182 | 7,500 | 6,740 | 3,500 | 4,910 | 2,070 | 740 | 314 | 197 | 198 |
| 5 | 171 | 164 | 182 | 4,040 | 5,320 | 3,200 | 4,420 | 1,680 | 670 | 314 | 197 | 210 |
| 6 | 184 | 164 | 182 | 2,640 | 6,470 | 3,000 | 3,670 | 1,590 | 632 | 314 | 197 | 198 |
| 7 | 177 | 164 | 184 | 2,160 | 5,380 | 2,700 | 4,020 | 1,520 | 623 | 296 | 197 | 198 |
| 8 | 166 | 164 | 341 | 4,130 | 3,810 | 2,500 | 4,500 | 1,460 | 595 | 290 | 197 | 190 |
| 9 | 161 | 164 | 4,380 | 9,200 | 3,080 | 2,400 | 4,260 | 1,480 | 595 | 278 | 192 | 190 |
| 10 | 158 | 164 | 9,640 | 5,990 | 2,590 | 2,250 | 3,600 | 1,650 | 577 | 278 | 192 | 190 |
| 11 | 166 | 164 | 3,700 | 4,660 | 2,260 | 2,170 | 3,170 | 1,650 | 542 | 278 | 169 | 190 |
| 12 | 153 | 164 | 1,550 | 3,230 | 1,990 | 2,050 | 3,000 | 1,650 | 508 | 272 | 169 | 198 |
| 13 | 153 | 166 | 1,020 | 2,380 | 2,020 | 1,950 | 3,000 | 1,580 | 468 | 278 | 152 | 243 |
| 14 | 153 | 166 | 782 | 1,940 | 2,000 | 1,850 | 2,840 | 1,500 | 460 | 266 | 148 | 237 |
| 15 | 153 | 166 | 650 | 1,650 | 1,900 | 1,750 | 2,490 | 1,390 | 441 | 266 | 146 | 225 |
| 16 | 153 | 169 | 600 | 1,460 | 1,820 | 1,720 | 2,190 | 1,280 | 441 | 260 | 144 | 205 |
| 17 | 153 | 169 | 860 | 1,310 | 4,420 | 1,680 | 2,130 | 1,280 | 430 | 245 | 142 | 200 |
| 18 | 156 | 169 | 710 | 1,200 | 3,180 | 1,580 | 1,880 | 1,200 | 422 | 236 | 140 | 205 |
| 19 | 158 | 169 | 616 | 1,090 | 2,380 | 1,610 | 1,780 | 1,140 | 422 | 245 | 140 | 213 |
| 20 | 156 | 169 | 575 | 1,010 | 2,000 | 1,610 | 1,740 | 1,120 | 452 | 236 | 140 | 219 |
| 21 | 156 | 166 | 515 | 946 | 1,900 | 1,540 | 1,880 | 1,060 | 452 | 230 | 139 | 205 |
| 22 | 156 | 169 | 478 | 890 | 1,850 | 1,680 | 1,880 | 1,020 | 441 | 230 | 138 | 205 |
| 23 | 156 | 166 | 460 | 878 | 1,800 | 1,640 | 1,780 | 962 | 441 | 233 | 136 | 190 |
| 24 | 177 | 169 | 428 | 1,040 | 1,800 | 1,990 | 1,840 | 950 | 422 | 219 | 136 | 190 |
| 25 | 179 | 182 | 402 | 3,810 | 4,000 | 2,230 | 2,310 | 902 | 422 | 219 | 136 | 195 |
| 26 | 171 | 292 | 386 | 7,540 | 11,000 | 4,820 | 1,840 | 846 | 430 | 219 | 136 | 205 |
| 27 | 171 | 228 | 370 | 4,690 | 33,000 | 4,420 | 1,740 | 808 | 430 | 219 | 135 | 246 |
| 28 | 171 | 200 | 382 | 3,200 | 50,000 | 4,680 | 1,630 | 770 | 430 | 208 | 135 | 240 |
| 29 | 169 | 190 | 478 | 2,480 | 22,000 | 13,200 | 1,660 | 705 | 441 | 208 | 135 | 251 |
| 30 | 166 | 184 | 1,010 | 2,150 | - | 26,300 | 1,610 | 755 | 430 | 208 | 135 | 208 |
| 31 | 166 | - | 2,710 | 1,950 | - | 14,500 | - | 862 | - | 222 | 135 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 5,062 | 184 | 153 | 163 | 10,040 | | | | |
| November..... | | | | 5,257 | 292 | 164 | 175 | 10,430 | | | | |
| December..... | | | | 34,325 | 9,640 | 182 | 1,107 | 68,080 | | | | |
| Calendar year 1939..... | | | | 202,338 | 9,640 | 117 | 554 | 401,300 | | | | |
| January..... | | | | 106,194 | 9,330 | 878 | 3,426 | 210,600 | | | | |
| February..... | | | | 195,700 | 50,000 | 1,800 | 6,748 | 388,200 | | | | |
| March..... | | | | 135,320 | 26,300 | 1,510 | 4,365 | 268,400 | | | | |
| April..... | | | | 89,730 | 7,560 | 1,510 | 2,991 | 178,000 | | | | |
| May..... | | | | 39,910 | 2,070 | 705 | 1,287 | 79,160 | | | | |
| June..... | | | | 16,379 | 1,180 | 422 | 546 | 32,490 | | | | |
| July..... | | | | 8,106 | 346 | 208 | 261 | 16,080 | | | | |
| August..... | | | | 6,014 | 222 | - | 162 | 9,960 | | | | |
| September..... | | | | 6,054 | 246 | - | 202 | 12,010 | | | | |
| Water year 1939-40..... | | | | 647,051 | 50,000 | - | 1,768 | 1,283,000 | | | | |

Note.- No gage-height record Feb. 20 to Mar. 16, gage-height record affected by backwater from bridge construction Aug. 14 to Sept. 2; discharge for these periods computed on basis of discharge measurements and records for McClellan River at Baird.

Sacramento River at Kennett, Calif.

Location.- Water-stage recorder, lat. 40°44', long. 122°24', in SW¼ sec. 2, T. 33 N., R. 5 W., at highway bridge at Kennett. Datum of gage is 618.26 feet above mean sea level. Datum of gage is 2.00 feet lower than wire-weight gage of U. S. Weather Bureau at same location.

Drainage area.- 6,600 square miles, not including Goose Lake Basin.

Records available.- November 1925 to September 1940.

Average discharge.- 14 years (1926-40), 6,474 second-feet.

Extremes.- Maximum discharge during year, 162,000 second-feet Feb. 28 (gage height, 38.2 feet), from rating curve extended above 70,000 second-feet on basis of velocity-area studies and logarithmic plotting; minimum, 2,880 second-feet Sept. 2 (gage height, 1.07 feet); minimum gage height, 0.98 foot Oct. 20.

1925-40: Maximum discharge, that of Feb. 28, 1940; minimum, 2,290 second-feet Oct. 4, 1934.

Remarks.- Records excellent. Flow regulated by storage and many diversions in Pit River Basin.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|--------|---------|--------|--------|-------|-------|-------|-------|-------|
| 1 | 3,080 | 3,150 | 3,110 | 20,000 | 9,800 | 56,200 | 40,800 | 7,660 | 5,640 | 3,920 | 3,420 | 3,090 |
| 2 | 3,000 | 3,150 | 3,160 | 31,400 | 9,500 | 41,300 | 31,000 | 8,020 | 5,670 | 3,900 | 3,450 | 2,920 |
| 3 | 2,990 | 3,140 | 3,200 | 22,000 | 28,000 | 31,700 | 27,300 | 8,240 | 5,360 | 3,850 | 3,560 | 3,180 |
| 4 | 3,040 | 3,080 | 3,270 | 27,500 | 30,400 | 25,900 | 26,200 | 8,840 | 5,240 | 3,710 | 3,180 | 3,590 |
| 5 | 3,060 | 3,080 | 3,170 | 17,000 | 27,000 | 22,100 | 22,900 | 8,700 | 5,160 | 3,710 | 3,160 | 3,510 |
| 6 | 3,160 | 3,100 | 3,140 | 12,900 | 30,200 | 19,700 | 20,100 | 8,100 | 4,980 | 3,710 | 3,490 | 3,450 |
| 7 | 3,220 | 3,100 | 3,150 | 11,700 | 27,200 | 17,500 | 20,200 | 7,920 | 4,800 | 3,850 | 3,530 | 3,320 |
| 8 | 3,200 | 3,160 | 3,150 | 19,700 | 21,100 | 16,200 | 20,200 | 7,920 | 4,760 | 3,720 | 3,530 | 3,150 |
| 9 | 3,120 | 3,190 | 3,140 | 36,800 | 17,700 | 15,100 | 19,200 | 7,780 | 4,720 | 3,680 | 3,530 | 3,130 |
| 10 | 3,180 | 3,180 | 22,400 | 34,900 | 15,000 | 13,800 | 17,700 | 7,720 | 4,620 | 3,880 | 3,310 | 3,460 |
| 11 | | | | | | | | | | | | |
| 12 | 3,060 | 3,160 | 16,000 | 24,600 | 13,100 | 13,400 | 16,000 | 7,560 | 4,520 | 3,820 | 3,100 | 3,520 |
| 13 | 3,010 | 3,150 | 7,710 | 17,400 | 11,900 | 12,400 | 15,400 | 7,090 | 4,520 | 3,840 | 3,110 | 3,450 |
| 14 | 3,060 | 3,110 | 6,030 | 13,900 | 12,300 | 11,500 | 14,400 | 6,840 | 4,580 | 3,680 | 3,270 | 3,470 |
| 15 | 3,140 | 3,100 | 5,260 | 11,800 | 13,100 | 11,100 | 13,700 | 6,540 | 4,490 | 3,360 | 3,460 | 3,280 |
| 16 | 3,140 | 3,110 | 4,580 | 10,200 | 12,000 | 10,300 | 13,000 | 6,540 | 4,370 | 3,260 | 3,420 | 3,080 |
| 17 | | | | | | | | | | | | |
| 18 | 3,050 | 3,170 | 4,240 | 9,080 | 11,200 | 10,500 | 12,400 | 6,690 | 4,340 | 3,540 | 3,480 | 3,170 |
| 19 | 3,040 | 3,160 | 4,660 | 8,200 | 21,800 | 9,800 | 11,900 | 6,500 | 4,250 | 3,780 | 3,260 | 3,470 |
| 20 | 3,050 | 3,150 | 4,580 | 7,210 | 17,300 | 8,800 | 11,200 | 6,440 | 4,230 | 3,810 | 3,020 | 3,540 |
| 21 | 3,040 | 3,100 | 4,340 | 6,670 | 14,600 | 8,760 | 11,000 | 6,250 | 4,160 | 3,710 | 3,120 | 3,540 |
| 22 | 2,990 | 3,090 | 4,230 | 6,420 | 12,200 | 9,240 | 10,600 | 5,910 | 4,330 | 3,600 | 3,270 | 3,580 |
| 23 | | | | | | | | | | | | |
| 24 | 3,000 | 3,110 | 4,090 | 6,120 | 11,100 | 8,930 | 10,200 | 5,840 | 4,340 | 3,340 | 3,400 | 3,280 |
| 25 | 3,050 | 3,140 | 3,940 | 5,920 | 10,600 | 8,760 | 9,940 | 5,910 | 4,340 | 3,240 | 3,350 | 3,020 |
| 26 | 3,110 | 3,150 | 3,900 | 5,850 | 10,200 | 8,600 | 9,850 | 5,890 | 4,210 | 3,530 | 3,370 | 3,300 |
| 27 | 3,370 | 3,120 | 3,810 | 6,350 | 11,000 | 8,820 | 9,240 | 5,670 | 4,080 | 3,720 | 3,240 | 3,470 |
| 28 | 3,410 | 3,170 | 3,820 | 14,100 | 20,800 | 10,000 | 9,480 | 5,640 | 3,990 | 3,640 | 2,950 | 3,470 |
| 29 | | | | | | | | | | | | |
| 30 | 3,260 | 3,410 | 3,700 | 32,000 | 46,300 | 21,400 | 9,000 | 5,500 | 3,970 | 3,600 | 3,110 | 3,450 |
| 31 | 3,250 | 3,310 | 3,560 | 24,300 | 120,000 | 24,400 | 8,650 | 5,400 | 3,970 | 3,530 | 3,220 | 3,510 |
| 1 | 3,150 | 3,230 | 3,720 | 16,800 | 159,000 | 19,800 | 8,500 | 5,340 | 4,020 | 3,240 | 3,350 | 3,350 |
| 2 | 3,100 | 3,150 | 3,940 | 13,700 | 89,200 | 51,800 | 8,140 | 5,200 | 4,010 | 3,150 | 3,450 | 3,130 |
| 3 | 3,080 | 3,110 | 4,720 | 11,900 | - | 92,100 | 7,900 | 5,430 | 3,980 | 3,490 | 3,430 | 3,210 |
| 4 | 3,090 | - | 8,240 | 10,900 | - | 64,100 | - | 5,840 | - | 3,570 | 3,260 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 96,410 | 3,410 | 2,990 | 3,110 | 191,200 |
| November..... | 94,520 | 3,410 | 3,080 | 3,151 | 187,500 |
| December..... | 171,510 | 22,400 | 3,110 | 5,533 | 340,200 |
| Calendar year 1939..... | 1,658,770 | 33,800 | 2,660 | 4,545 | 3,290,000 |
| January..... | 497,320 | 36,800 | 5,850 | 16,040 | 986,400 |
| February..... | 833,600 | 159,000 | 9,500 | 28,740 | 1,653,000 |
| March..... | 684,010 | 92,100 | 8,600 | 22,060 | 1,357,000 |
| April..... | 466,130 | 40,800 | 7,900 | 15,540 | 924,600 |
| May..... | 208,970 | 8,640 | 5,200 | 6,741 | 414,500 |
| June..... | 135,590 | 5,870 | 3,970 | 4,520 | 268,900 |
| July..... | 112,360 | 3,920 | 3,150 | 3,625 | 222,900 |
| August..... | 102,650 | 3,530 | 2,950 | 3,311 | 203,600 |
| September..... | 100,070 | 3,590 | 2,920 | 3,356 | 198,500 |
| Water year 1939-40..... | 3,503,160 | 159,000 | 2,920 | 9,571 | 6,948,000 |

Peak discharge.- Jan. 9 (5 a.m.) 42,400 sec.-ft.; Jan. 26 (10 a.m.) 35,300 sec.-ft.; Feb. 3 (6 p.m.) 39,100 sec.-ft.; Feb. 6 (3 p.m.) 35,000 sec.-ft.; Feb. 28 (9 a.m.) 182,000 sec.-ft.; Mar. 30 (6 p.m.) 98,200 sec.-ft.

Note.- Discharge Feb. 28 to Mar. 5 computed from wire-weight gage readings.

SACRAMENTO RIVER MAIN STEM

Sacramento River at Keswick, Calif.

Location.- Water-stage recorder, lat. 40°37', long. 122°27', in SE¼SE¼ sec. 17, T. 32 N., R. 5 W., at Keswick, half a mile downstream from Spring Creek and 9 miles downstream from Shasta dam, now under construction. Datum of gage is 495.0 feet above mean sea level (revised).

Drainage area.- 6,700 square miles.

Records available.- October 1938 to September 1940.

Extremes.- Maximum discharge during year, 186,000 second-feet Feb. 28 (gage height, 47.2 feet) from rating curve extended above 75,000 second-feet on basis of peak discharge at Kennett plus 4,000 second-feet estimated inflow; minimum, about 2,950 second-feet Sept. 2, on basis of records for station at Kennett.

1938-40: Maximum discharge, that of Feb. 28, 1940; minimum, 2,730 second-feet Aug. 22, 1939.

Remarks.- Records excellent except those for periods of no gage-height record which are good. Flow regulated by storage reservoirs and many diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|--------|--------|---------|--------|------------------|---------|---------|--------|----------------------|-------|
| 1 | 3,140 | 3,170 | 3,130 | 17,300 | 10,300 | 59,400 | 42,600 | 8,100 | 5,800 | 4,000 | 3,490 | 3,150 |
| 2 | 3,060 | 3,200 | 3,160 | 33,800 | 9,980 | 43,400 | 32,000 | 8,010 | 5,830 | 3,980 | 3,520 | 2,980 |
| 3 | 3,060 | 3,200 | 3,220 | 24,300 | 27,400 | 32,300 | 28,100 | 8,380 | 5,690 | 3,860 | 3,400 | 3,240 |
| 4 | 3,070 | 3,140 | 3,290 | 29,400 | 32,700 | 26,700 | 26,900 | 8,510 | 5,480 | 3,780 | 3,230 | 3,580 |
| 5 | 3,110 | 3,150 | 3,200 | 17,800 | 28,700 | 22,200 | 23,400 | 8,990 | 5,350 | 3,780 | 3,190 | 3,550 |
| 6 | 3,200 | 3,170 | 3,190 | 13,200 | 29,900 | 19,600 | 20,400 | 8,360 | 5,190 | 3,780 | 3,460 | 3,480 |
| 7 | 3,260 | 3,190 | 3,200 | 11,800 | 27,900 | 17,600 | 19,800 | 8,030 | 5,040 | 3,930 | 3,540 | 3,360 |
| 8 | 3,260 | 3,230 | 3,620 | 18,400 | 21,300 | 16,400 | 19,700 | 7,920 | 4,950 | 3,790 | 3,540 | 3,180 |
| 9 | 3,180 | 3,270 | 14,000 | 40,300 | 17,700 | 15,400 | 18,700 | 7,870 | 4,880 | 3,750 | 3,530 | 3,130 |
| 10 | 3,170 | 3,260 | 21,900 | 38,400 | 15,400 | 14,300 | 17,300 | 7,760 | 4,830 | 3,960 | 3,340 | 3,430 |
| 11 | 3,130 | 3,250 | 17,600 | 26,200 | 13,300 | 13,700 | 15,900 | 7,670 | 4,610 | 3,900 | 3,120 | 3,500 |
| 12 | 3,090 | 3,240 | 6,150 | 17,700 | 12,100 | 12,700 | 15,200 | 7,400 | 4,610 | 3,920 | 3,120 | 3,460 |
| 13 | 3,110 | 3,200 | 6,300 | 13,800 | 12,700 | 12,000 | 14,400 | 7,160 | 4,610 | 3,750 | 3,260 | 3,480 |
| 14 | 3,200 | 3,190 | 5,360 | 11,700 | 13,600 | 11,500 | 13,700 | 6,940 | 4,580 | 3,430 | 3,480 | 3,290 |
| 15 | 3,190 | 3,210 | 4,680 | 10,200 | 12,600 | 10,900 | 13,100 | 6,750 | 4,460 | 3,330 | 3,410 | 3,100 |
| 16 | 3,120 | 3,250 | 4,320 | 9,200 | 11,700 | 10,800 | 12,500 | 6,750 | 4,430 | 3,640 | 3,510 | 3,160 |
| 17 | 3,100 | 3,240 | 4,910 | 8,420 | 22,800 | 10,500 | 12,100 | 6,750 | 4,340 | 3,860 | 3,310 | 3,430 |
| 18 | 3,120 | 3,230 | 4,680 | 7,520 | 18,200 | 9,450 | 11,600 | 6,680 | 4,310 | 3,890 | 3,100 | 3,530 |
| 19 | 3,140 | 3,200 | 4,410 | 7,080 | 15,100 | 9,150 | 11,200 | 6,540 | 4,240 | 3,780 | 3,150 | 3,540 |
| 20 | 3,070 | 3,190 | 4,300 | 6,680 | 12,700 | 9,420 | 11,000 | 6,360 | 4,420 | 3,670 | 3,310 | 3,560 |
| 21 | 3,080 | 3,180 | 4,130 | 6,390 | 11,600 | 9,340 | 10,700 | 6,120 | 4,430 | 3,410 | 3,430 | 3,320 |
| 22 | 3,100 | 3,230 | 3,990 | 6,110 | 10,900 | 9,150 | 10,300 | 6,020 | 4,430 | 3,300 | 3,420 | 3,040 |
| 23 | 3,160 | 3,220 | 3,920 | 6,050 | 10,600 | 8,940 | 10,200 | 6,000 | 4,290 | 3,600 | 3,410 | 3,240 |
| 24 | 3,340 | 3,200 | 3,820 | 6,500 | 11,100 | 8,660 | 9,880 | 5,970 | 4,160 | 3,750 | 3,320 | 3,460 |
| 25 | 3,430 | 3,210 | 3,820 | 15,000 | 18,900 | 9,490 | 9,940 | 5,850 | 4,070 | 3,660 | 3,030 | 3,450 |
| 26 | 3,290 | 3,470 | 3,700 | 33,700 | 42,700 | 17,100 | 9,610 | 5,750 | 4,050 | 3,640 | 3,130 | 3,440 |
| 27 | 3,260 | 3,360 | 3,600 | 27,100 | 120,000 | 23,700 | 9,230 | 5,670 | 4,050 | 3,530 | 3,350 | 3,490 |
| 28 | 3,200 | 3,270 | 3,730 | 18,100 | 160,000 | 17,500 | 8,940 | 5,590 | 4,100 | 3,300 | 3,420 | 3,410 |
| 29 | 3,130 | 3,190 | 3,960 | 14,300 | 91,100 | 47,500 | 8,660 | 5,510 | 4,090 | 3,270 | 3,520 | 3,140 |
| 30 | 3,110 | 3,150 | 4,790 | 12,400 | - | 95,200 | 8,280 | 5,510 | 4,060 | 3,600 | 3,500 | 3,160 |
| 31 | 3,120 | - | 7,890 | 11,300 | - | 70,000 | - | 5,800 | - | 3,620 | 3,330 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | 98,000 | 3,430 | 3,060 | 3,161 | 194,400 | |
| November..... | | | | | | | 96,650 | 3,470 | 3,140 | 3,222 | 191,700 | |
| December..... | | | | | | | 173,960 | 21,900 | 3,130 | 5,612 | 345,000 | |
| Calendar year 1939..... | | | | | | | 1,696,150 | 37,400 | 2,750 | 4,647 | 3,364,000 | |
| January..... | | | | | | | 520,100 | 40,300 | 6,050 | 16,780 | 1,032,000 | |
| February..... | | | | | | | 842,980 | 160,000 | 9,980 | 29,070 | 1,672,000 | |
| March..... | | | | | | | 694,000 | 95,200 | 8,660 | 22,390 | 1,377,000 | |
| April..... | | | | | | | 475,340 | 42,600 | 8,280 | 15,840 | 942,800 | |
| May..... | | | | | | | 214,620 | 8,890 | 5,510 | 6,923 | 425,700 | |
| June..... | | | | | | | 139,390 | 5,830 | 4,050 | 4,646 | 276,500 | |
| July..... | | | | | | | 114,460 | 4,000 | 3,270 | 3,692 | 227,000 | |
| August..... | | | | | | | 103,870 | 3,540 | 3,030 | 3,351 | 206,000 | |
| September..... | | | | | | | 100,270 | 3,580 | 2,980 | 3,342 | 198,900 | |
| Water year 1939-40..... | | | | | | | 3,573,640 | 160,000 | 2,980 | 9,764 | 7,089,000 | |

Peak discharge.- Jan. 4 (10:30 a.m.) 35,600 sec.-ft.; Jan. 9 (8 a.m.) 46,500 sec.-ft.; Jan. 26 (12 p.m.) 38,400 sec.-ft.; Feb. 3 (9 p.m.) 41,600 sec.-ft.; Feb. 28 (9:30 a.m.) 186,000 sec.-ft.; Mar. 30 (5 p.m.) 100,000 sec.-ft.

Note.- No gage-height record June 11 to July 2, July 4-15, 17-23, 28, Aug. 1, 2, Aug. 27 to Sept. 3; discharge computed on basis of records for station at Kennett. Discharge computed from staff-gage readings July 3, 16, 24-27, 29-31.

Sacramento River near Red Bluff, Calif.

Location.- Water-stage recorder, lat. 40°13'55", long. 122°10'50", in SE¼ sec. 34, T. 28 N., R. 3 W., at lower end of Iron Canyon, half a mile downstream from Sevenmile Creek and 4 miles northeast of Red Bluff. Datum of gage is 252.6 feet above mean sea level.

Drainage area.- 9,300 square miles, not including Goose Lake Basin.

Records available.- January 1902 to September 1940. April 1895 to June 1902, at site at Jellys Ferry, 12 miles upstream from Red Bluff..

Average discharge.- 44 years, 11,270 second-feet.

Extremes.- Maximum discharge during year, 291,000 second-feet Feb. 28 (gage height, 38.9 feet), from rating curve extended above 200,000 second-feet by logarithmic plotting and on basis of velocity-area studies; minimum, 3,160 second-feet Oct. 13 (gage height, 0.39 foot).

1895-1940: Maximum discharge, that of Feb. 28, 1940; minimum, 2,400 second-feet Aug. 13, 1931, Sept. 9, 1934.

Correction.- The correct figure of maximum discharge for flood of Feb. 3, 1909, is 252,000 second-feet (revised). This figure was erroneously published in Water-Supply Papers 843 (p. 199) and 861 (p. 258).

Remarks.- Records excellent. Some storage and many diversions above station.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Mar. 31 | | | | Apr. 1 to Sept. 30 | | | |
|-------------------|--------|----|--------|--|--------|---|--------|
| -0.1 | 2,400 | 6 | 18,700 | 1.0 | 3,200 | 5 | 14,100 |
| .2 | 2,560 | 7 | 22,400 | 1.2 | 3,540 | 6 | 18,000 |
| .5 | 3,350 | 8 | 26,500 | 1.5 | 4,100 | 7 | 22,100 |
| 1.0 | 4,260 | 9 | 31,000 | 2 | 5,160 | 8 | 26,440 |
| 2.0 | 6,470 | 10 | 35,800 | 3 | 7,760 | 9 | 31,000 |
| 3 | 9,150 | 11 | 40,800 | 4 | 10,740 | | |
| 4 | 12,100 | 12 | 45,800 | Note.- Same as preceding table above 9.0 feet. | | | |
| 5 | 15,300 | 14 | 56,800 | | | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|--------|--------|---------|---------|------------------|---------|---------|--------|----------------------|-------|
| 1 | 3,330 | 3,380 | 3,650 | 30,800 | 15,500 | 97,300 | 75,600 | 10,600 | 7,120 | 4,360 | 3,760 | 3,420 |
| 2 | 3,330 | 3,420 | 3,650 | 62,700 | 14,100 | 69,500 | 51,800 | 10,500 | 7,200 | 4,320 | 3,580 | 3,300 |
| 3 | 3,260 | 3,400 | 3,680 | 44,800 | 25,900 | 54,200 | 42,900 | 12,100 | 6,760 | 4,260 | 3,650 | 3,280 |
| 4 | 3,230 | 3,370 | 3,770 | 57,600 | 50,300 | 43,600 | 33,200 | 12,400 | 6,430 | 4,140 | 3,610 | 3,700 |
| 5 | 3,260 | 3,350 | 3,750 | 33,100 | 45,400 | 36,100 | 36,500 | 13,600 | 6,300 | 4,080 | 3,590 | 3,910 |
| 6 | 3,420 | 3,350 | 3,680 | 22,500 | 42,700 | 31,500 | 31,700 | 11,600 | 6,060 | 4,080 | 3,440 | 3,800 |
| 7 | 3,540 | 3,370 | 3,660 | 21,600 | 43,000 | 28,200 | 29,800 | 10,700 | 5,780 | 4,100 | 3,720 | 3,720 |
| 8 | 3,490 | 3,380 | 3,750 | 33,600 | 32,700 | 25,700 | 31,000 | 10,500 | 5,660 | 4,140 | 3,720 | 3,540 |
| 9 | 3,420 | 3,440 | 11,100 | 50,700 | 26,300 | 23,900 | 29,400 | 10,300 | 5,620 | 4,040 | 3,720 | 3,420 |
| 10 | 3,350 | 3,470 | 23,500 | 52,300 | 22,900 | 22,000 | 26,800 | 10,100 | 5,500 | 4,060 | 3,670 | 3,490 |
| 11 | 3,320 | 3,450 | 29,400 | 45,000 | 19,700 | 20,600 | 24,700 | 9,920 | 5,380 | 4,140 | 3,440 | 3,720 |
| 12 | 3,210 | 3,450 | 13,100 | 28,900 | 17,600 | 19,400 | 22,500 | 9,440 | 5,280 | 4,120 | 3,320 | 3,720 |
| 13 | 3,200 | 3,490 | 8,790 | 21,500 | 18,400 | 18,200 | 21,600 | 8,990 | 5,260 | 4,080 | 3,540 | 3,740 |
| 14 | 3,260 | 3,440 | 7,210 | 17,700 | 33,500 | 17,200 | 20,200 | 8,600 | 5,210 | 3,850 | 3,540 | 3,680 |
| 15 | 3,330 | 3,440 | 6,220 | 15,200 | 21,900 | 16,600 | 19,400 | 8,520 | 5,090 | 3,610 | 3,610 | 3,490 |
| 16 | 3,320 | 3,560 | 5,570 | 13,200 | 18,700 | 16,000 | 18,200 | 8,320 | 5,050 | 3,650 | 3,580 | 3,390 |
| 17 | 3,260 | 3,700 | 5,660 | 11,800 | 40,400 | 15,800 | 17,200 | 8,320 | 4,940 | 3,910 | 3,650 | 3,580 |
| 18 | 3,260 | 3,740 | 6,120 | 10,600 | 36,700 | 14,400 | 16,400 | 8,120 | 4,870 | 4,080 | 3,400 | 3,590 |
| 19 | 3,280 | 3,660 | 5,660 | 9,720 | 25,100 | 13,700 | 15,600 | 7,830 | 4,790 | 4,060 | 3,250 | 3,990 |
| 20 | 3,260 | 3,610 | 5,590 | 9,150 | 20,500 | 13,800 | 16,200 | 7,650 | 4,900 | 3,950 | 3,590 | 3,930 |
| 21 | 3,210 | 3,610 | 5,260 | 8,730 | 18,200 | 13,500 | 14,700 | 7,280 | 4,940 | 3,800 | 3,460 | 3,830 |
| 22 | 3,250 | 3,630 | 5,080 | 8,320 | 16,800 | 13,100 | 14,000 | 7,200 | 4,870 | 3,580 | 3,540 | 3,560 |
| 23 | 3,300 | 3,650 | 4,980 | 8,130 | 16,000 | 12,800 | 13,700 | 7,230 | 4,810 | 3,610 | 3,540 | 3,420 |
| 24 | 3,420 | 3,660 | 4,910 | 8,320 | 15,600 | 12,700 | 13,200 | 7,090 | 4,640 | 3,910 | 3,540 | 3,680 |
| 25 | 3,940 | 3,660 | 4,830 | 26,600 | 21,800 | 14,500 | 13,500 | 6,870 | 4,510 | 3,950 | 3,370 | 3,780 |
| 26 | 3,750 | 3,790 | 4,720 | 77,600 | 38,400 | 19,600 | 13,200 | 6,740 | 4,430 | 3,850 | 3,220 | 3,780 |
| 27 | 3,590 | 3,960 | 4,660 | 48,600 | 150,000 | 41,200 | 12,500 | 6,600 | 4,360 | 3,620 | 3,400 | 3,830 |
| 28 | 3,500 | 3,830 | 4,580 | 29,700 | 261,000 | 30,800 | 11,900 | 6,500 | 4,400 | 3,670 | 3,520 | 3,820 |
| 29 | 3,440 | 3,780 | 5,060 | 22,100 | 178,000 | 55,200 | 11,500 | 6,370 | 4,470 | 3,420 | 3,550 | 3,610 |
| 30 | 3,400 | 3,650 | 6,700 | 18,700 | - | 131,000 | 11,000 | 6,530 | 4,450 | 3,520 | 3,670 | 3,440 |
| 31 | 3,370 | - | 14,700 | 16,700 | - | 149,000 | - | 7,480 | - | 3,780 | 3,580 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | 104,480 | 3,940 | 3,200 | 3,370 | 207,200 | |
| November..... | | | | | | | 106,570 | 3,960 | 3,350 | 3,556 | 211,600 | |
| December..... | | | | | | | 222,790 | 29,400 | 3,650 | 7,187 | 441,900 | |
| Calendar year 1939..... | | | | | | | 1,954,610 | 36,200 | 2,700 | 5,355 | 3,876,900 | |
| January..... | | | | | | | 865,970 | 77,600 | 8,130 | 27,930 | 1,718,000 | |
| February..... | | | | | | | 1,286,700 | 261,000 | 14,100 | 44,370 | 2,552,000 | |
| March..... | | | | | | | 1,091,400 | 149,000 | 12,700 | 35,210 | 2,165,000 | |
| April..... | | | | | | | 718,800 | 75,500 | 11,000 | 23,960 | 1,426,000 | |
| May..... | | | | | | | 273,960 | 13,500 | 6,370 | 8,837 | 543,400 | |
| June..... | | | | | | | 159,080 | 7,200 | 4,360 | 5,303 | 315,500 | |
| July..... | | | | | | | 121,960 | 4,360 | 3,420 | 3,934 | 241,900 | |
| August..... | | | | | | | 109,110 | 3,760 | 3,220 | 3,520 | 216,400 | |
| September..... | | | | | | | 109,460 | 3,990 | 3,280 | 3,649 | 217,100 | |
| Water year 1939-40..... | | | | | | | 5,170,360 | 261,000 | 3,200 | 14,130 | 10,266,000 | |

Peak discharge.- Jan. 2 (8:30 a.m.) 71,000 sec.-ft.; Jan. 4 (9 a.m.) 70,600 sec.-ft.; Jan. 26 (7 a.m.) 89,500 sec.-ft.; Feb. 17 (5 p.m.) 59,400 sec.-ft.; Feb. 28 (2 p.m.) 291,000 sec.-ft.; Mar. 31 (3 a.m.) 197,000 sec.-ft.

SACRAMENTO RIVER MAIN STEM

Sacramento River at Butte City, Calif.

Location.- Water-stage recorder, lat. 39°27'35", long. 121°59'35", in NE¼ sec. 32, T. 19 N., R. 1 W., half a mile south of Butte City. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Records available.- April 1921 to October 1940 (low-water periods only) in reports of Geological Survey. 1914-17, 1920-21, 1929-40 (gage heights for high-water periods) in reports of Division of Water Resources, Department of Public Works, State of California.

Extremes.- Minimum discharge during period June to October 1940, 1,890 second-feet Aug. 27 (gage height, 69.41 feet).

1921-40: Minimum discharge recorded, 1,050 second-feet July 15, 25, 26, 1931 (gage height, 67.49 feet).

Remarks.- Records good except those for June 23 to July 3, which are fair. Storage and many diversions above station for irrigation.

Discharge, in second-feet, 1939-40

| Day | Oct. | | | | | | | June | July | Aug. | Sept. | Oct. |
|-----|-------|--|--|--|--|--|--|-------|-------|-------|-------|-------|
| 1 | 3,040 | | | | | | | 7,140 | 3,380 | 2,240 | 2,170 | 3,380 |
| 2 | 3,140 | | | | | | | 7,360 | 3,340 | 2,240 | 2,110 | 3,480 |
| 3 | 3,180 | | | | | | | 7,120 | 3,290 | 2,170 | 2,040 | 3,500 |
| 4 | 3,160 | | | | | | | 6,900 | 3,210 | 2,200 | 2,030 | 3,380 |
| 5 | 3,150 | | | | | | | 6,530 | 3,140 | 2,180 | 2,250 | 3,530 |
| 6 | 3,260 | | | | | | | 6,260 | 2,930 | 2,080 | 2,500 | 3,560 |
| 7 | 3,340 | | | | | | | 6,020 | 2,780 | 2,020 | 2,520 | 3,420 |
| 8 | 3,630 | | | | | | | 5,670 | 2,830 | 2,150 | 2,600 | 3,160 |
| 9 | 3,640 | | | | | | | 5,360 | 2,880 | 2,180 | 2,520 | 3,220 |
| 10 | 3,400 | | | | | | | 5,190 | 2,800 | 2,170 | 2,490 | 3,370 |
| 11 | 3,280 | | | | | | | 4,960 | 2,760 | 2,180 | 2,490 | 3,400 |
| 12 | 3,210 | | | | | | | 4,760 | 2,830 | 2,070 | 2,750 | 3,370 |
| 13 | 3,160 | | | | | | | 4,660 | 2,800 | 1,960 | 2,810 | 3,340 |
| 14 | 3,060 | | | | | | | 4,540 | 2,830 | 1,940 | 2,910 | 3,190 |
| 15 | 3,100 | | | | | | | 4,420 | 2,730 | 2,020 | 3,010 | 3,180 |
| 16 | 3,210 | | | | | | | 4,260 | 2,570 | 2,100 | 2,930 | 3,270 |
| 17 | 3,240 | | | | | | | 4,160 | 2,460 | 2,110 | 2,930 | 3,340 |
| 18 | 3,220 | | | | | | | 4,060 | 2,550 | 2,230 | 3,080 | 3,380 |
| 19 | 3,210 | | | | | | | 3,960 | 2,670 | 2,150 | 3,300 | 3,480 |
| 20 | 3,200 | | | | | | | 3,850 | 2,660 | 2,060 | 3,430 | 3,460 |
| 21 | 3,100 | | | | | | | 3,870 | 2,620 | 1,970 | 3,460 | 3,370 |
| 22 | 3,100 | | | | | | | 3,940 | 2,560 | 2,040 | 3,450 | 3,210 |
| 23 | 3,160 | | | | | | | 3,880 | 2,380 | 2,080 | 3,260 | 3,160 |
| 24 | 3,210 | | | | | | | 3,810 | 2,280 | 2,090 | 3,060 | 3,700 |
| 25 | 3,300 | | | | | | | 3,740 | 2,390 | 2,100 | 3,220 | 5,360 |
| 26 | 3,600 | | | | | | | 3,690 | 2,400 | 2,030 | 3,340 | 7,620 |
| 27 | 3,640 | | | | | | | 3,630 | 2,390 | 1,910 | 3,370 | 5,780 |
| 28 | 3,510 | | | | | | | 3,560 | 2,350 | 1,970 | 3,380 | 5,060 |
| 29 | 3,460 | | | | | | | 3,510 | 2,290 | 2,070 | 3,450 | 4,560 |
| 30 | 3,390 | | | | | | | 3,450 | 2,160 | 2,120 | 3,320 | 4,940 |
| 31 | 3,340 | | | | | | | - | 2,110 | 2,180 | - | 5,190 |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------------|------------------|---------|---------|-------|----------------------|
| 1939 | | | | | |
| October..... | 101,640 | 3,640 | 3,040 | 3,279 | 201,600 |
| 1940 | | | | | |
| June..... | 144,260 | 7,360 | 3,450 | 4,809 | 286,100 |
| July..... | 83,370 | 3,380 | 2,110 | 2,689 | 166,400 |
| August..... | 65,010 | 2,240 | 1,910 | 2,097 | 128,800 |
| September..... | 86,160 | 3,460 | 2,030 | 2,872 | 170,900 |
| October..... | 119,160 | 7,620 | 3,160 | 3,844 | 236,400 |
| The period..... | - | - | - | - | 987,700 |

Sacramento River at Colusa, Calif.

Location.— Water-stage recorder, lat. 39°12'50", long. 121°59'55", at north end of Jimeno grant, just downstream from highway bridge at Colusa, Colusa County. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Records available.— April 1921 to October 1940 (low-water periods only) in reports of Geological Survey. 1920-40 (gage heights for high-water periods) in reports of Division of Water Resources, Department of Public Works, State of California.

Extremes.— Minimum discharge during period June to October 1940, 2,020 second-feet Aug. 28 (gage height, 37.38 feet).

1921-40: Minimum discharge recorded, 820 second-feet July 25, 26, 1931 (gage height, 34.79 feet).

Remarks.— Records excellent except those for period of no gage-height record, which are good. Flow regulated by storage and many diversions above station for irrigation.

Discharge, in second-feet, 1939-40

| Day | Oct. | | | | | | June | July | Aug. | Sept. | Oct. |
|-----------------|-------|--|--|--|--|--|------------------|---------|---------|-------|----------------------|
| 1 | 3,070 | | | | | | 7,020 | 3,340 | 2,260 | 2,280 | 3,260 |
| 2 | 3,120 | | | | | | 7,510 | 3,260 | 2,310 | 2,220 | 3,500 |
| 3 | 3,190 | | | | | | 7,280 | 3,170 | 2,260 | 2,190 | 3,480 |
| 4 | 3,200 | | | | | | 7,110 | 3,160 | 2,260 | 2,180 | 3,400 |
| 5 | 3,200 | | | | | | 6,690 | 3,090 | 2,280 | 2,240 | 3,520 |
| 6 | 3,250 | | | | | | 6,350 | 3,050 | 2,210 | 2,490 | 3,580 |
| 7 | 3,300 | | | | | | 6,140 | 2,900 | 2,200 | 2,580 | 3,530 |
| 8 | 3,450 | | | | | | 5,810 | 2,860 | 2,200 | 2,630 | 3,320 |
| 9 | 3,650 | | | | | | 5,450 | 2,880 | 2,250 | 2,630 | 3,260 |
| 10 | 3,600 | | | | | | 5,240 | 2,800 | 2,260 | 2,580 | 3,400 |
| 11 | 3,400 | | | | | | 5,060 | 2,680 | 2,260 | 2,570 | 3,460 |
| 12 | 3,290 | | | | | | 4,910 | 2,740 | 2,220 | 2,690 | 3,420 |
| 13 | 3,260 | | | | | | 4,780 | 2,740 | 2,160 | 2,850 | 3,420 |
| 14 | 3,230 | | | | | | 4,700 | 2,770 | 2,110 | 2,900 | 3,300 |
| 15 | 3,150 | | | | | | 4,620 | 2,740 | 2,090 | 3,020 | 3,180 |
| 16 | 3,200 | | | | | | 4,540 | 2,570 | 2,120 | 3,010 | 3,260 |
| 17 | 3,260 | | | | | | 4,420 | 2,440 | 2,140 | 2,960 | 3,370 |
| 18 | 3,290 | | | | | | 4,330 | 2,450 | 2,190 | 3,040 | 3,390 |
| 19 | 3,280 | | | | | | 4,200 | 2,560 | 2,180 | 3,200 | 3,470 |
| 20 | 3,270 | | | | | | 4,000 | 2,620 | 2,140 | 3,390 | 3,500 |
| 21 | 3,250 | | | | | | 4,020 | 2,620 | 2,110 | 3,420 | 3,430 |
| 22 | 3,190 | | | | | | 4,080 | 2,560 | 2,120 | 3,430 | 3,270 |
| 23 | 3,200 | | | | | | 4,010 | 2,420 | 2,170 | 3,310 | 3,160 |
| 24 | 3,240 | | | | | | 3,950 | 2,330 | 2,180 | 3,110 | 3,440 |
| 25 | 3,270 | | | | | | 3,830 | 2,370 | 2,190 | 3,100 | 4,240 |
| 26 | 3,410 | | | | | | 3,690 | 2,420 | 2,180 | 3,270 | 7,000 |
| 27 | 3,640 | | | | | | 3,580 | 2,410 | 2,130 | 3,320 | 6,430 |
| 28 | 3,610 | | | | | | 3,460 | 2,420 | 2,040 | 3,330 | 5,390 |
| 29 | 3,530 | | | | | | 3,370 | 2,360 | 2,130 | 3,380 | 4,820 |
| 30 | 3,460 | | | | | | 3,380 | 2,230 | 2,200 | 3,360 | 4,740 |
| 31 | 3,400 | | | | | | - | 2,190 | 2,260 | - | 5,220 |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| 1939 | | | | | | | | | | | |
| October..... | | | | | | | 102,860 | 3,650 | 3,070 | 3,318 | 204,000 |
| 1940 | | | | | | | | | | | |
| June..... | | | | | | | 147,530 | 7,510 | 3,370 | 4,918 | 292,600 |
| July..... | | | | | | | 83,150 | 3,340 | 2,190 | 2,682 | 164,900 |
| August..... | | | | | | | 67,810 | 2,310 | 2,040 | 2,187 | 134,500 |
| September..... | | | | | | | 86,690 | 3,430 | 2,180 | 2,890 | 171,900 |
| October..... | | | | | | | 119,180 | 7,000 | 3,160 | 3,845 | 256,400 |
| The period..... | | | | | | | - | - | - | - | 1,000,000 |

a No gage-height record; discharge computed on basis of records for station at Butte City.

SACRAMENTO RIVER MAIN STEM

Sacramento River below Wilkins Slough, Calif.

Location.-- Water-stage recorder, lat. 39°00'35", long. 121°49'25", in Jimeno grant, 1,500 feet downstream from Wilkins Slough, Colusa County, and 6 miles southeast of Grimes. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Records available.-- August 1931 to October 1940 (low-water periods only) in reports of Geological Survey. 1931-40 (gage heights for high-water periods) in reports of Division of Water Resources, Department of Public Works, State of California.

Extremes.-- Minimum discharge recorded during period June to October 1940, 1,280 second-feet Aug. 13 and 14 (gage height, 19.53 feet), probably lower on Aug. 15. 1931-40: Minimum discharge recorded, 100 second-feet Aug. 1, 1931 (gage height, 14.20 feet).

Remarks.-- Records excellent except those for period of no gage-height record, which are good. Flow regulated by storage and many diversions above station for irrigation.

Rating table for period June 1 to Oct. 31, 1940 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-------|------|-------|------|-------|
| 19.5 | 1,270 | 22.0 | 2,410 | 26.0 | 4,970 |
| 20.0 | 1,470 | 22.5 | 2,710 | 27.0 | 5,620 |
| 20.5 | 1,670 | 23.0 | 3,020 | 28.0 | 6,300 |
| 21.0 | 1,890 | 24.0 | 3,670 | 29.4 | 7,280 |
| 21.5 | 2,130 | 25.0 | 4,320 | | |

Discharge, in second-feet, 1939-40

| Day | Oct. | | | | | | | June | July | Aug. | Sept. | Oct. |
|-----------------|-------|--|--|--|--|--|--|------------------|---------|---------|-------|----------------------|
| 1 | 3,090 | | | | | | | 6,550 | 2,520 | 1,440 | 1,560 | 3,420 |
| 2 | 3,160 | | | | | | | 7,160 | 2,410 | 1,540 | 1,590 | 3,450 |
| 3 | 3,180 | | | | | | | 7,270 | 2,340 | 1,530 | 1,600 | 3,600 |
| 4 | 3,220 | | | | | | | 7,130 | 2,210 | 1,490 | 1,580 | 3,510 |
| 5 | 3,210 | | | | | | | 6,780 | 2,210 | 1,520 | 1,550 | 3,550 |
| 6 | 3,220 | | | | | | | 6,390 | 2,160 | 1,460 | 1,700 | 3,640 |
| 7 | 3,300 | | | | | | | 6,100 | 2,100 | 1,360 | 1,970 | 3,660 |
| 8 | 3,420 | | | | | | | 5,630 | 2,050 | 1,330 | 2,140 | 3,560 |
| 9 | 3,630 | | | | | | | 5,480 | 2,080 | 1,450 | 2,300 | 3,370 |
| 10 | 3,640 | | | | | | | 5,150 | 2,070 | 1,470 | 2,410 | 3,420 |
| 11 | 3,470 | | | | | | | 4,880 | 1,940 | 1,470 | 2,260 | 3,560 |
| 12 | 3,340 | | | | | | | a4,800 | 1,920 | 1,470 | 2,270 | 3,600 |
| 13 | 3,270 | | | | | | | a4,600 | 1,950 | 1,370 | 2,510 | 3,600 |
| 14 | 3,210 | | | | | | | a4,400 | 1,950 | a1,310 | 2,660 | 3,570 |
| 15 | 3,130 | | | | | | | a4,300 | 1,980 | a1,310 | 2,860 | 3,420 |
| 16 | 3,160 | | | | | | | a4,200 | 1,880 | a1,310 | 2,930 | 3,400 |
| 17 | 3,240 | | | | | | | a4,000 | 1,690 | a1,350 | 3,060 | 3,530 |
| 18 | 3,270 | | | | | | | a3,900 | 1,600 | a1,390 | 3,070 | 3,600 |
| 19 | 3,260 | | | | | | | a3,700 | 1,670 | a1,470 | 3,220 | 3,670 |
| 20 | 3,250 | | | | | | | a3,600 | 1,800 | a1,470 | 3,390 | 3,760 |
| 21 | 3,230 | | | | | | | 3,410 | 1,850 | a1,350 | 3,500 | 3,750 |
| 22 | 3,160 | | | | | | | 3,440 | 1,890 | a1,350 | 3,570 | 3,620 |
| 23 | 3,180 | | | | | | | 3,420 | 1,790 | 1,370 | 3,510 | 3,510 |
| 24 | 3,220 | | | | | | | 3,380 | 1,630 | 1,380 | 3,310 | 3,550 |
| 25 | 3,270 | | | | | | | 3,300 | 1,560 | 1,410 | 3,160 | 3,990 |
| 26 | 3,360 | | | | | | | 3,050 | 1,630 | 1,450 | 3,240 | 5,410 |
| 27 | 3,600 | | | | | | | 2,870 | 1,620 | 1,440 | 3,400 | 6,590 |
| 28 | 3,630 | | | | | | | 2,690 | 1,640 | 1,330 | 3,470 | 5,770 |
| 29 | 3,550 | | | | | | | 2,520 | 1,640 | 1,320 | 3,510 | 5,300 |
| 30 | 3,510 | | | | | | | 2,520 | 1,530 | 1,410 | 3,530 | 4,800 |
| 31 | 3,420 | | | | | | | - | 1,460 | 1,600 | - | 5,000 |
| Month | | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| 1939 | | | | | | | | | | | | |
| October..... | | | | | | | | 102,800 | 3,640 | 3,090 | 3,316 | 203,900 |
| 1940 | | | | | | | | | | | | |
| June..... | | | | | | | | 136,820 | 7,270 | 2,520 | 4,561 | 271,400 |
| July..... | | | | | | | | 58,770 | 2,520 | 1,460 | 1,896 | 116,600 |
| August..... | | | | | | | | 43,820 | 1,540 | 1,310 | 1,414 | 86,920 |
| September..... | | | | | | | | 80,830 | 3,570 | 1,550 | 2,694 | 160,300 |
| October..... | | | | | | | | 122,180 | 6,590 | 3,370 | 3,941 | 242,300 |
| The period..... | | | | | | | | - | - | - | - | 877,500 |

a No gage-height record; discharge computed on basis of records for station at Colusa.

Sacramento River at Knights Landing, Calif.

Location.- Water-stage recorder, lat. 38°48'10", long. 121°42'55", in NE¼ sec. 14, T. 11 N., R. 2 E., just upstream from Southern Pacific Railroad bridge at Knights Landing. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Records available.- April 1921 to October 1940 (low-water periods only) in reports of Geological Survey. 1926-40 (gage heights for high-water periods) in report of Division of Water Resources, Department of Public Works, State of California.

Extremes.- Minimum discharge during period June to October 1940, 1,490 second-feet Aug. 16 (gage height, 10.99 feet).
1921-40: Minimum discharge recorded, 250 second-feet July 23, 1931 (gage height, 7.80 feet).

Remarks.- Records good. Flow affected by reservoirs, many diversions for irrigation, and return water. Backwater from Feather River taken into account in computing records for the period June 1 to Oct. 31.

Discharge, in second-feet, 1939-40

| Day | Oct. | | | | | | June | July | Aug. | Sept. | Oct. |
|------------|-------|--|--|--|--|--|------------------|---------|---------|-------|----------------------|
| 1 | 3,370 | | | | | | 6,840 | 2,660 | 1,700 | 2,220 | 3,670 |
| 2 | 3,400 | | | | | | 7,750 | 2,580 | 1,750 | 2,200 | 3,570 |
| 3 | 3,460 | | | | | | 8,480 | 2,480 | 1,830 | 2,240 | 3,700 |
| 4 | 3,510 | | | | | | 8,160 | 2,480 | 1,800 | 2,220 | 3,660 |
| 5 | 3,540 | | | | | | 7,630 | 2,360 | 1,830 | 2,180 | 3,620 |
| 6 | 3,550 | | | | | | 7,140 | 2,320 | 1,840 | 2,300 | 3,680 |
| 7 | 3,580 | | | | | | 6,680 | 2,290 | 1,770 | 2,580 | 3,680 |
| 8 | 3,670 | | | | | | 6,320 | 2,260 | 1,690 | 2,860 | 3,630 |
| 9 | 3,780 | | | | | | 5,790 | 2,240 | 1,720 | 3,170 | 3,420 |
| 10 | 3,740 | | | | | | 5,250 | 2,320 | 1,820 | 3,210 | 3,430 |
| 11 | 3,680 | | | | | | 4,800 | 2,240 | 1,830 | 3,070 | 3,610 |
| 12 | 3,550 | | | | | | 4,530 | 2,140 | 1,830 | 3,030 | 3,710 |
| 13 | 3,430 | | | | | | 4,410 | 2,180 | 1,780 | 3,090 | 3,730 |
| 14 | 3,360 | | | | | | 4,270 | 2,180 | 1,640 | 3,260 | 3,720 |
| 15 | 3,360 | | | | | | 4,120 | 2,200 | 1,540 | 3,610 | 3,640 |
| 16 | 3,310 | | | | | | 4,070 | 2,180 | 1,530 | 3,530 | 3,540 |
| 17 | 3,300 | | | | | | 4,020 | 1,960 | 1,630 | 3,560 | 3,600 |
| 18 | 3,310 | | | | | | 3,890 | 1,790 | 1,710 | 3,590 | 3,860 |
| 19 | 3,330 | | | | | | 3,810 | 1,800 | 1,810 | 3,720 | 3,990 |
| 20 | 3,330 | | | | | | 3,630 | 1,950 | 1,850 | 3,700 | 3,550 |
| 21 | 3,350 | | | | | | 3,590 | 2,040 | 1,740 | 3,800 | 3,930 |
| 22 | 3,310 | | | | | | 3,490 | 2,190 | 1,620 | 3,960 | 3,850 |
| 23 | 3,250 | | | | | | 3,520 | 2,180 | 1,670 | 3,830 | 3,730 |
| 24 | 3,220 | | | | | | 3,460 | 2,030 | 1,730 | 3,650 | 3,660 |
| 25 | 3,270 | | | | | | 3,500 | 1,870 | 1,790 | 3,570 | 3,940 |
| 26 | 3,420 | | | | | | 3,250 | 1,850 | 1,850 | 3,410 | 4,900 |
| 27 | 3,590 | | | | | | 3,050 | 1,870 | 1,860 | 3,650 | 6,810 |
| 28 | 3,730 | | | | | | 2,880 | 1,880 | 1,770 | 3,730 | 6,320 |
| 29 | 3,610 | | | | | | 2,790 | 1,930 | 1,740 | 3,900 | 5,590 |
| 30 | 3,540 | | | | | | 2,640 | 1,890 | 1,860 | 3,780 | 5,050 |
| 31 | 3,480 | | | | | | - | 1,780 | 2,050 | - | 5,050 |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| 1939 | | | | | | | 107,330 | 3,780 | 3,220 | 3,462 | 212,900 |
| 1940 | | | | | | | 143,760 | 8,480 | 2,640 | 4,792 | 285,100 |
| June | | | | | | | 66,120 | 2,660 | 1,780 | 2,133 | 131,100 |
| July | | | | | | | 54,590 | 2,050 | 1,530 | 1,761 | 108,300 |
| August | | | | | | | 96,620 | 3,960 | 2,180 | 3,221 | 191,600 |
| September | | | | | | | 125,950 | 6,610 | 3,420 | 4,063 | 249,800 |
| October | | | | | | | - | - | - | - | 965,900 |
| The period | | | | | | | - | - | - | - | 965,900 |

Sacramento River at Verona, Calif.

Location.- Water-stage recorder, lat. 38°46'50", long. 121°36'15", in SE¼ sec. 23, T. 11 N., R. 3 E., three-quarters of a mile southeast of Verona and 1 mile downstream from Feather River. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Drainage area.- 21,400 square miles, excluding that of Goose Lake Basin.

Records available.- May 1926 to September 1940 (1926-29, low-water periods only).

Average discharge.- 11 years (1929-40), 15,230 second-feet.

Extremes.- Maximum discharge during year, 79,200 second-feet Mar. 1 (gage height, 41.20 feet); minimum, 2,230 second-feet Aug. 16 (gage height, 8.37 feet).
1926-40: Maximum discharge, that of Mar. 1, 1940; minimum, 261 second-feet July 24, 1931 (gage height, 6.93 feet).

Remarks.- Records good. Stage at Verona slightly affected by tide during periods of lowest flow, July to September. Storage, many diversions, and considerable return water affect flow. When discharge is larger than about 55,000 second-feet, unmeasured flow begins over Fremont weir and down Yolo Bypass. Elevation of crest of Fremont weir is 33.5 feet (Corps of Engineers, U. S. Army, datum).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|--------|--------|--------|------------------|---------|---------|--------|-------|----------------------|-------|
| 1 | 5,040 | 4,870 | 5,480 | 9,230 | 54,600 | 76,300 | 69,700 | 31,500 | 16,100 | 4,450 | 2,590 | 3,590 |
| 2 | 4,940 | 4,810 | 5,460 | 17,400 | 52,200 | 69,600 | 68,400 | 29,300 | 17,800 | 4,310 | 2,570 | 3,520 |
| 3 | 5,020 | 4,790 | 5,520 | 34,700 | 49,100 | 69,500 | 67,500 | 28,200 | 17,300 | 4,190 | 2,650 | 3,290 |
| 4 | 5,170 | 4,620 | 5,330 | 42,400 | 48,100 | 69,100 | 66,000 | 29,600 | 16,300 | 4,290 | 2,800 | 3,250 |
| 5 | 5,220 | 4,540 | 5,310 | 46,800 | 51,500 | 66,300 | 64,300 | 31,000 | 15,000 | 3,970 | 2,630 | 3,300 |
| 6 | 5,250 | 4,460 | 5,870 | 51,100 | 55,800 | 64,100 | 62,700 | 31,200 | 14,300 | 3,870 | 2,630 | 3,560 |
| 7 | 5,330 | 4,360 | 6,100 | 53,700 | 57,200 | 62,200 | 61,200 | 30,200 | 13,300 | 3,920 | 2,530 | 4,020 |
| 8 | 5,480 | 4,300 | 6,360 | 54,600 | 58,000 | 60,700 | 60,200 | 27,900 | 12,600 | 3,740 | 2,410 | 4,810 |
| 9 | 5,540 | 4,490 | 6,360 | 55,800 | 58,100 | 59,500 | 59,400 | 25,900 | 11,900 | 3,680 | 2,450 | 5,050 |
| 10 | 5,180 | 4,560 | 6,640 | 57,900 | 57,400 | 58,600 | 58,700 | 25,600 | 10,700 | 3,640 | 2,520 | 4,810 |
| 11 | 5,240 | 4,720 | 9,570 | 58,800 | 56,500 | 57,700 | 58,000 | 26,000 | 9,300 | 3,530 | 2,710 | 4,870 |
| 12 | 5,080 | 4,730 | 19,700 | 58,400 | 55,200 | 56,500 | 57,500 | 26,400 | 9,100 | 3,420 | 2,630 | 5,020 |
| 13 | 4,940 | 4,610 | 24,600 | 58,600 | 53,300 | 55,400 | 56,700 | 26,400 | 8,730 | 3,420 | 2,600 | 5,050 |
| 14 | 4,850 | 4,420 | 21,500 | 57,800 | 53,200 | 53,800 | 56,600 | 25,800 | 8,150 | 3,580 | 2,510 | 5,240 |
| 15 | 4,940 | 4,390 | 16,300 | 55,900 | 54,900 | 51,000 | 56,300 | 24,500 | 7,400 | 3,350 | 2,410 | 5,970 |
| 16 | 4,720 | 4,760 | 13,200 | 53,500 | 55,000 | 48,500 | 54,700 | 23,400 | 7,010 | 3,330 | 2,400 | 5,680 |
| 17 | 4,490 | 5,040 | 11,500 | 50,000 | 54,000 | 45,800 | 53,100 | 22,000 | 6,630 | 3,150 | 2,480 | 5,640 |
| 18 | 4,490 | 5,180 | 9,800 | 44,900 | 54,000 | 43,300 | 51,500 | 21,200 | 6,080 | 2,970 | 2,800 | 5,850 |
| 19 | 4,660 | 5,370 | 8,890 | 38,900 | 54,600 | 40,900 | 49,900 | 20,600 | 6,300 | 2,870 | 2,740 | 6,060 |
| 20 | 4,620 | 5,290 | 9,080 | 33,400 | 54,800 | 38,200 | 48,300 | 19,200 | 6,220 | 2,910 | 2,750 | 6,060 |
| 21 | 4,720 | 5,040 | 9,070 | 29,300 | 54,900 | 36,100 | 46,600 | 17,800 | 6,080 | 3,120 | 2,620 | 6,120 |
| 22 | 4,680 | 5,020 | 8,970 | 25,200 | 53,800 | 34,500 | 44,500 | 17,700 | 5,850 | 3,050 | 2,600 | 6,440 |
| 23 | 4,520 | 5,110 | 8,420 | 22,100 | 51,400 | 33,400 | 43,100 | 18,100 | 5,940 | 3,170 | 2,710 | 5,980 |
| 24 | 4,340 | 5,290 | 8,250 | 20,300 | 47,900 | 32,600 | 42,500 | 17,800 | 5,540 | 3,000 | 2,770 | 5,810 |
| 25 | 4,390 | 5,240 | 7,800 | 19,300 | 45,900 | 32,000 | 41,300 | 17,300 | 5,270 | 2,840 | 2,970 | 5,780 |
| 26 | 4,850 | 5,080 | 7,500 | 26,400 | 47,200 | 33,400 | 39,400 | 17,200 | 5,030 | 2,790 | 2,840 | 5,720 |
| 27 | 5,040 | 5,120 | 7,230 | 41,800 | 53,200 | 42,400 | 37,700 | 16,200 | 4,980 | 2,730 | 2,880 | 5,750 |
| 28 | 5,120 | 5,210 | 7,340 | 52,900 | 68,400 | 56,300 | 36,100 | 15,400 | 4,840 | 2,790 | 2,660 | 5,780 |
| 29 | 5,020 | 5,440 | 7,490 | 57,300 | 75,200 | 57,900 | 34,700 | 14,700 | 4,640 | 2,790 | 2,770 | 6,090 |
| 30 | 4,790 | 5,520 | 7,600 | 57,400 | - | 61,100 | 33,300 | 14,800 | 4,520 | 2,790 | 2,970 | 5,910 |
| 31 | 4,740 | - | 7,980 | 56,200 | - | 70,100 | - | 14,800 | - | 2,680 | 3,150 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 152,410 | 5,540 | 4,340 | 4,916 | | 302,300 | |
| November..... | | | | | | 146,380 | 5,520 | 4,300 | 4,879 | | 290,300 | |
| December..... | | | | | | 290,120 | 24,600 | 5,310 | 9,359 | | 575,400 | |
| Calendar year 1939..... | | | | | | 2,726,828 | 30,200 | 965 | 7,471 | | 5,408,000 | |
| January..... | | | | | | 1,342,030 | 58,800 | 9,230 | 43,290 | | 2,662,000 | |
| February..... | | | | | | 1,585,200 | 75,200 | 45,900 | 54,650 | | 3,144,000 | |
| March..... | | | | | | 1,636,800 | 76,300 | 32,000 | 52,800 | | 3,247,000 | |
| April..... | | | | | | 1,579,900 | 69,700 | 33,300 | 52,660 | | 3,134,000 | |
| May..... | | | | | | 707,900 | 31,500 | 14,700 | 22,840 | | 1,404,000 | |
| June..... | | | | | | 272,910 | 17,800 | 4,520 | 9,097 | | 541,300 | |
| July..... | | | | | | 104,340 | 4,450 | 2,680 | 3,366 | | 207,000 | |
| August..... | | | | | | 82,750 | 3,150 | 2,400 | 2,659 | | 164,100 | |
| September..... | | | | | | 154,020 | 6,440 | 3,250 | 5,134 | | 305,500 | |
| Water year 1939-40..... | | | | | | 8,054,760 | 76,300 | 2,400 | 22,010 | | 15,980,000 | |

Pit River near Canby, Calif.

Location.- Water-stage recorder, lat. 41°24', long. 120°55', in SW $\frac{1}{4}$ sec. 10, T. 41 N., R. 9 E., at lower end of Warm Spring Valley, about 4 miles southwest of Canby. Altitude of gage, about 4,300 feet (from topographic map).

Drainage area.- 1,430 square miles, excluding that of Goose Lake Basin.

Records available.- January 1904 to December 1905, May 1929 to September 1940 (1929-31 incomplete).

Extremes.- Maximum discharge during year, 4,280 second-feet probably Feb. 28 (gage height, 8.72 feet from floodmarks in well); minimum, 3.5 second-feet Oct. 22, 23.

1904-5, 1929-40: Maximum discharge recorded, 17,000 second-feet Mar. 8, 1904 (gage height, 14.0 feet, former datum); minimum, 0.1 second-foot Apr. 29, Aug. 5, Sept. 18, 1934, Aug. 18-21, 1935.

Remarks.- Records good except those for periods of no gage-height record, which are fair. FLOW regulated by storage and many diversions above station for irrigation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 19 to Sept. 30)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|-------|
| 2.0 | 3.0 | 2.6 | 69 | 3.9 | 680 | 6.0 | 2,060 |
| 2.1 | 5.6 | 2.8 | 125 | 4.2 | 860 | 6.5 | 2,410 |
| 2.2 | 9.6 | 3.0 | 205 | 4.6 | 1,110 | 7.0 | 2,800 |
| 2.3 | 17 | 3.3 | 350 | 5.0 | 1,370 | 7.6 | 3,230 |
| 2.4 | 30 | 3.6 | 510 | 5.6 | 1,710 | 8.2 | 3,810 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|--------|--------|--------|-----|------|------|------|-------|
| 1 | 8.5 | 49 | 25 | 151 | 171 | a2,800 | a1,500 | 158 | 25 | 45 | 9 | 18 |
| 2 | 8 | 35 | 25 | 236 | 161 | a1,900 | 956 | 179 | 35 | 30 | 10 | 17 |
| 3 | 7.5 | 35 | 25 | 265 | 171 | a1,500 | 1,010 | 161 | 40 | 25 | 13 | 12 |
| 4 | 7.5 | 35 | 26 | 270 | 250 | a1,000 | 938 | 201 | 35 | 35 | 16 | 11 |
| 5 | 7.5 | 33 | 30 | 241 | a400 | a800 | 806 | 166 | 30 | 30 | 9 | 12 |
| 6 | 7.5 | 33 | 26 | 218 | a750 | 609 | 668 | 155 | 26 | 32 | 9 | 15 |
| 7 | 7 | 38 | 25 | 175 | a800 | 499 | 626 | 136 | 20 | 26 | 9.6 | 60 |
| 8 | 6.5 | 38 | 29 | 161 | a700 | 390 | 411 | 87 | 16 | 22 | 14 | 125 |
| 9 | 6.5 | 37 | 118 | 171 | a500 | 310 | 370 | 46 | 26 | 27 | 16 | 175 |
| 10 | 5.5 | 36 | 98 | 214 | 355 | 285 | 360 | 30 | 62 | 25 | 18 | 101 |
| 11 | 5 | 33 | 107 | 228 | 335 | 295 | 325 | 30 | 107 | 22 | 18 | 54 |
| 12 | 4.8 | 33 | 98 | 265 | 246 | 255 | 300 | 29 | 85 | 20 | 17 | 37 |
| 13 | 4.5 | 33 | 79 | 232 | 192 | 228 | 275 | 24 | 85 | 20 | 14 | 30 |
| 14 | 4.2 | 33 | 74 | 136 | 175 | 218 | 246 | 14 | 95 | 17 | 14 | 25 |
| 15 | 4.0 | 32 | 62 | 98 | 166 | 205 | 228 | 9 | 98 | 16 | 12 | 20 |
| 16 | 3.8 | 32 | 56 | 90 | 175 | 196 | 255 | 40 | 92 | 16 | 55 | 21 |
| 17 | 3.8 | 32 | 58 | 82 | 210 | 192 | 255 | 60 | 72 | 15 | 135 | 16 |
| 18 | 3.8 | 30 | 66 | 67 | 255 | 171 | 270 | 113 | 54 | 15 | 144 | 14 |
| 19 | 3.8 | 29 | 51 | 72 | 235 | 171 | 270 | 136 | 54 | 14 | 140 | 14 |
| 20 | 3.8 | 27 | 45 | 72 | 246 | 155 | 193 | 129 | 38 | 13 | 113 | 14 |
| 21 | 3.8 | 27 | 42 | 69 | 201 | 144 | 210 | 136 | 25 | 14 | 85 | 14 |
| 22 | 3.5 | 44 | 40 | 72 | 179 | 132 | 218 | 116 | 24 | 15 | 72 | 16 |
| 23 | 3.5 | 27 | 38 | 77 | 196 | 125 | 192 | 110 | 25 | 7.5 | 62 | 26 |
| 24 | 8.5 | 27 | 38 | 79 | 228 | 132 | 188 | 87 | 27 | 5 | 47 | 37 |
| 25 | 29 | 26 | 29 | 85 | a260 | 147 | 161 | 69 | 30 | 5 | 35 | 40 |
| 26 | 32 | 29 | 32 | 270 | a300 | 175 | 136 | 62 | 26 | 7.5 | 30 | 40 |
| 27 | 54 | 25 | 33 | 310 | a3,000 | 360 | 151 | 67 | 44 | 4.8 | 26 | 40 |
| 28 | 49 | 25 | 38 | 385 | a3,800 | a440 | 107 | 72 | 98 | 5 | 25 | 35 |
| 29 | 56 | 25 | 49 | 375 | a3,400 | a500 | 95 | 47 | 85 | 6.5 | 25 | 35 |
| 30 | 67 | 25 | 82 | 265 | - | a700 | 87 | 27 | 72 | 7.5 | 21 | 30 |
| 31 | 51 | - | 95 | 201 | - | a1,100 | - | 21 | - | 8.5 | 20 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 470.8 | 67 | 3.5 | 15.2 | 934 |
| November..... | 962 | 49 | 25 | 32.1 | 1,910 |
| December..... | 1,629 | 118 | 25 | 52.5 | 3,230 |
| Calendar year 1939..... | 24,706.5 | 854 | 2.3 | 67.7 | 48,990 |
| January..... | 5,622 | 385 | 67 | 181 | 11,150 |
| February..... | 18,078 | 3,800 | 151 | 623 | 35,860 |
| March..... | 15,934 | 2,800 | 125 | 514 | 31,600 |
| April..... | 11,697 | 1,500 | 87 | 390 | 25,200 |
| May..... | 2,706 | 201 | 9 | 87.3 | 5,370 |
| June..... | 1,551 | 107 | 16 | 51.7 | 3,080 |
| July..... | 551.3 | 45 | 4.8 | 17.8 | 1,090 |
| August..... | 1,237.5 | 144 | 9 | 39.9 | 2,450 |
| September..... | 1,104 | 175 | 11 | 36.8 | 2,190 |
| Water year 1939-40..... | 61,542.6 | 3,800 | 3.5 | 168 | 122,100 |

a No gage-height record; discharge computed on basis of records for Pit River at Fall River Mills and weather records.

Pit River at Fall River Mills, Calif.

Location.- Water-stage recorder, lat. 41°00', long. 121°26', in NE $\frac{1}{4}$ sec. 6, T. 36 N., R. 5 E., 0.8 mile downstream from Fall River and town of Fall River Mills. Altitude of gage, about 3,235 feet (from topographic map).

Drainage area.- 4,150 square miles, excluding that of Goose Lake Basin.

Records available.- December 1922 to September 1940. March 1921 to December 1922, at site 0.7 mile upstream.

Average discharge.- 17 years (1923-40), 407 second-feet (not including flow of Fall River).

Extremes.- Maximum discharge during year, 16,900 second-feet Feb. 29 (gage height, 9.00 feet); minimum, 48 second-feet Oct. 16.

1921-40: Maximum discharge, 28,600 second-feet Dec. 12, 1937 (gage height, 11.8 feet), from rating curve extended above 9,000 second-feet on basis of velocity-area and A V d studies; minimum, 12 second-feet Aug. 5, 1926, Oct. 23, 1936.

Remarks.- Records good for discharges above 400 second-feet and fair below. Entire flow of Fall River is diverted through Pit No. 1 powerhouse and returned to Pit River below station. Many small reservoirs and diversions above station for irrigation. River receives return flow from McArthur, Knoch, and other diversions.

Cooperation.- Water-stage recorder graph and results of four discharge measurements furnished by Pacific Gas & Electric Co.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|-----|-----|-----|-------|-----|-------|-----|-------|-----|--------|
| 0.4 | 53 | 1.4 | 310 | 3.0 | 1,550 | 5.0 | 4,800 | 7.0 | 10,100 |
| .6 | 81 | 1.8 | 520 | 3.5 | 2,190 | 5.5 | 5,950 | 8.0 | 13,350 |
| .8 | 118 | 2.2 | 795 | 4.0 | 2,950 | 6.0 | 7,200 | 9.0 | 16,900 |
| 1.0 | 170 | 2.6 | 1,130 | 4.5 | 3,820 | 6.5 | 8,600 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 63 | 60 | 98 | 391 | 735 | 11,800 | 4,600 | 241 | 200 | 112 | 90 | 83 |
| 2 | 78 | 70 | 98 | 780 | 624 | f8,150 | 3,940 | 234 | 245 | 104 | 74 | 83 |
| 3 | 72 | 86 | 98 | 1,010 | 578 | a6,200 | 2,950 | 252 | 263 | 86 | 76 | 81 |
| 4 | 78 | 90 | 98 | 1,520 | 836 | a4,800 | 2,460 | 294 | 270 | 84 | 78 | 78 |
| 5 | 86 | 91 | 96 | 1,370 | 1,720 | a3,800 | f2,190 | 376 | 256 | 125 | 81 | 75 |
| 6 | 86 | 104 | 96 | 1,080 | 1,960 | a3,000 | a2,000 | 520 | 248 | 116 | 76 | 81 |
| 7 | 84 | 116 | 96 | 848 | 2,190 | a2,300 | a1,700 | 539 | 241 | 110 | 70 | 88 |
| 8 | 80 | 100 | 104 | 735 | 2,120 | f1,840 | a1,600 | 449 | 227 | 104 | 84 | 81 |
| 9 | 78 | 98 | 375 | 855 | 1,730 | 1,560 | a1,500 | 381 | 214 | 108 | 78 | 81 |
| 10 | 74 | 96 | 394 | 918 | 1,370 | 1,370 | a1,350 | 298 | 224 | 102 | 74 | 90 |
| 11 | 72 | 96 | 643 | 1,150 | 1,110 | 1,230 | a1,180 | 207 | 234 | 98 | 72 | 88 |
| 12 | 68 | 96 | 496 | 1,270 | 950 | 1,150 | f1,080 | 164 | 224 | 96 | 81 | 75 |
| 13 | 65 | 98 | 428 | 1,040 | 825 | 1,080 | 977 | 142 | 179 | 93 | 91 | 54 |
| 14 | 52 | 98 | 310 | 795 | 788 | 977 | 870 | 137 | 200 | 78 | 84 | 76 |
| 15 | 50 | 100 | f248 | 597 | 742 | 886 | 840 | 217 | 200 | 80 | 78 | 95 |
| 16 | 50 | 96 | a230 | 438 | 788 | 848 | 802 | 315 | 210 | 98 | 78 | 95 |
| 17 | 51 | 93 | a215 | 356 | 1,010 | 810 | 735 | 306 | 176 | 96 | 78 | 90 |
| 18 | 53 | 93 | a200 | 310 | 1,120 | 742 | 692 | 294 | 167 | 96 | 75 | 93 |
| 19 | 52 | 95 | a190 | 333 | 1,040 | 713 | 692 | 298 | 176 | 104 | 68 | 95 |
| 20 | 52 | 96 | a185 | 302 | 950 | 713 | 685 | 270 | 217 | 95 | 58 | 95 |
| 21 | 53 | 93 | a180 | 298 | 848 | 671 | 650 | 263 | 164 | 96 | 65 | 95 |
| 22 | 56 | 91 | f179 | 290 | 795 | 630 | 571 | 282 | 123 | 98 | 81 | 95 |
| 23 | 60 | 91 | 167 | 286 | 832 | 591 | 472 | 294 | 100 | 96 | 78 | 95 |
| 24 | 86 | 95 | 164 | 278 | 950 | 578 | 478 | 278 | 84 | 90 | 81 | 98 |
| 25 | 83 | 98 | 150 | 298 | 1,260 | 591 | 520 | 270 | 93 | 78 | 84 | 98 |
| 26 | 72 | 98 | 140 | 565 | 2,050 | 630 | 460 | 259 | 88 | 78 | 83 | 95 |
| 27 | 65 | 98 | 137 | 650 | 5,780 | 848 | 433 | 306 | 96 | 80 | 78 | 102 |
| 28 | 65 | 98 | 140 | 1,030 | 11,800 | 1,510 | 381 | 286 | 83 | 84 | 68 | 104 |
| 29 | 65 | 98 | 148 | 1,040 | 15,600 | 1,820 | 391 | 282 | 84 | 86 | 90 | 100 |
| 30 | 61 | 98 | 167 | 894 | - | 2,310 | 356 | 278 | 125 | 68 | 91 | 100 |
| 31 | 61 | - | 241 | 848 | - | 3,840 | - | 274 | - | 74 | 84 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 2,071 | 86 | 50 | 66.8 | 4,110 | | |
| November..... | | | | | | 2,830 | 116 | 60 | 94.3 | 5,610 | | |
| December..... | | | | | | 6,511 | 643 | 96 | 210 | 12,910 | | |
| Calendar year 1939..... | | | | | | 61,422 | 1,500 | 49 | 168 | 121,800 | | |
| January..... | | | | | | 22,575 | 1,520 | 278 | 728 | 44,780 | | |
| February..... | | | | | | 63,101 | 15,600 | 578 | 2,176 | 125,200 | | |
| March..... | | | | | | 67,988 | 11,800 | 578 | 2,193 | 134,900 | | |
| April..... | | | | | | 37,555 | 4,600 | 356 | 1,252 | 74,490 | | |
| May..... | | | | | | 9,006 | 539 | 137 | 291 | 17,860 | | |
| June..... | | | | | | 5,401 | 270 | 83 | 180 | 10,710 | | |
| July..... | | | | | | 2,913 | 125 | 68 | 94.0 | 5,780 | | |
| August..... | | | | | | 2,427 | 91 | 58 | 78.2 | 4,810 | | |
| September..... | | | | | | 2,559 | 104 | 54 | 88.6 | 5,270 | | |
| Water year 1939-40..... | | | | | | 225,037 | 15,600 | 50 | 615 | 446,400 | | |

a No gage-height record; discharge interpolated.

f Discharge computed on basis of partly estimated gage-height record.

Pit River at Big Bend, Calif.

Location.— Water-stage recorder, lat. 41°01', long. 121°55', in sec. 31, T. 37 N., R. 1 E., at settlement of Big Bend, half a mile downstream from Nelson Creek and 1 mile upstream from Koek Creek. Altitude of gage, about 1,700 feet (from topographic map).

Drainage area.— 4,920 square miles, excluding that of Goose Lake Basin.

Records available.— September 1910 to September 1940.

Average discharge.— 29 years (1911-40), 2,807 second-feet.

Extremes.— Maximum discharge during year, 24,900 second-feet Feb. 29 (gage height, 14.80 feet); minimum, 1,540 second-feet Aug. 25 (gage height, 7.62 feet).

1910-40: Maximum discharge, 34,200 second-feet Dec. 12, 1937 (gage height, 16.26 feet), from rating curve extended above 11,000 second-feet on basis of velocity-area studies; minimum daily, 692 second-feet July 9, 1925.

Remarks.— Records excellent. Flow regulated by storage, power plants, and many diversions above station; daily fluctuations usually reduced by automatic regulator at Pit No. 4 dam.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-------|-----|-------|------|--------|------|--------|
| 7.7 | 1,640 | 8.6 | 2,880 | 10.0 | 5,630 | 12.5 | 13,700 |
| 7.8 | 1,760 | 8.8 | 3,200 | 10.5 | 6,970 | 13.0 | 18,700 |
| 8.0 | 2,010 | 9.0 | 3,550 | 11.0 | 8,450 | 13.8 | 19,400 |
| 8.2 | 2,280 | 9.3 | 4,110 | 11.5 | 10,050 | 14.7 | 24,300 |
| 8.4 | 2,570 | 9.6 | 4,720 | 12.0 | 11,800 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|-------|--------|------------------|---------|---------|-------|----------------------|-------|-------|
| 1 | 1,840 | 2,000 | 1,940 | 2,540 | 3,170 | 19,600 | 10,400 | 2,880 | 2,580 | 2,150 | 1,970 | 1,740 |
| 2 | 1,810 | 2,010 | 1,980 | 3,060 | 2,850 | 15,100 | 9,860 | 2,850 | 2,580 | 2,150 | 2,040 | 1,710 |
| 3 | 1,840 | 1,980 | 2,060 | 3,660 | 2,890 | 11,600 | 8,300 | 2,820 | 2,510 | 2,080 | 1,880 | 1,980 |
| 4 | 1,860 | 1,940 | 2,060 | 4,020 | 3,410 | 9,790 | 7,550 | 3,060 | 2,540 | 2,010 | 1,720 | 2,210 |
| 5 | 1,980 | 1,960 | 2,000 | 3,940 | 4,350 | 8,000 | 6,890 | 3,150 | 2,510 | 2,090 | 1,880 | 2,110 |
| 6 | 1,920 | 1,970 | 1,960 | 3,960 | 5,030 | 6,910 | 6,220 | 3,060 | 2,390 | 2,170 | 2,180 | 2,050 |
| 7 | 2,010 | 1,980 | 1,940 | 3,940 | 5,700 | 6,090 | 6,170 | 3,200 | 2,320 | 2,220 | 2,180 | 1,870 |
| 8 | 2,010 | 2,040 | 2,020 | 3,710 | 5,560 | 5,680 | 5,960 | 3,320 | 2,390 | 2,110 | 2,180 | 1,780 |
| 9 | 1,960 | 2,060 | 2,580 | 3,770 | 5,610 | 5,070 | 5,760 | 3,180 | 2,580 | 2,210 | 2,100 | 1,930 |
| 10 | 1,930 | 2,050 | 3,420 | 3,860 | 4,370 | 5,010 | 5,730 | 3,020 | 2,290 | 2,320 | 1,820 | 2,200 |
| 11 | 1,890 | 2,010 | 2,940 | 3,680 | 3,640 | 5,050 | 4,720 | 2,770 | 2,280 | 2,290 | 1,720 | 2,180 |
| 12 | 1,880 | 1,980 | 2,630 | 3,770 | 3,810 | 4,640 | 5,090 | 2,580 | 2,310 | 2,250 | 1,810 | 2,140 |
| 13 | 1,940 | 1,960 | 2,580 | 3,840 | 3,730 | 4,170 | 4,490 | 2,440 | 2,350 | 1,960 | 2,100 | 2,020 |
| 14 | 2,000 | 1,960 | 2,390 | 3,590 | 3,620 | 4,190 | 4,410 | 2,420 | 2,250 | 1,720 | 2,140 | 1,780 |
| 15 | 1,940 | 1,980 | 2,140 | 3,100 | 3,530 | 3,750 | 4,410 | 2,680 | 2,250 | 1,870 | 2,140 | 1,720 |
| 16 | 1,930 | 2,020 | 2,090 | 2,930 | 3,570 | 3,920 | 4,470 | 2,930 | 2,210 | 2,180 | 2,130 | 2,000 |
| 17 | 1,890 | 2,010 | 2,210 | 2,570 | 3,980 | 3,300 | 4,430 | 2,930 | 2,180 | 2,340 | 1,800 | 2,200 |
| 18 | 1,910 | 1,980 | 2,180 | 2,290 | 3,550 | 2,960 | 4,000 | 2,900 | 2,110 | 2,270 | 1,710 | 2,220 |
| 19 | 1,870 | 1,960 | 2,140 | 2,270 | 4,110 | 3,480 | 4,030 | 2,720 | 2,140 | 2,170 | 1,890 | 2,250 |
| 20 | 1,840 | 1,960 | 2,140 | 2,340 | 3,710 | 3,730 | 4,050 | 2,540 | 2,250 | 1,930 | 2,040 | 2,170 |
| 21 | 1,890 | 1,970 | 2,100 | 2,280 | 3,550 | 3,550 | 3,790 | 2,670 | 2,360 | 1,740 | 2,090 | 1,840 |
| 22 | 1,940 | 2,010 | 2,100 | 2,310 | 3,440 | 3,340 | 3,790 | 2,740 | 2,350 | 1,680 | 2,080 | 1,780 |
| 23 | 2,010 | 1,980 | 2,080 | 2,350 | 3,440 | 3,280 | 3,690 | 2,680 | 2,220 | 2,250 | 2,040 | 2,140 |
| 24 | 2,130 | 1,980 | 2,090 | 2,450 | 3,570 | 3,280 | 3,250 | 2,560 | 2,130 | 2,290 | 1,770 | 2,210 |
| 25 | 2,140 | 2,000 | 2,090 | 2,580 | 4,230 | 3,480 | 3,120 | 2,670 | 2,100 | 2,200 | 1,650 | 2,210 |
| 26 | 2,080 | 2,000 | 2,010 | 3,420 | 6,120 | 3,550 | 3,180 | 2,630 | 2,100 | 2,170 | 1,910 | 2,180 |
| 27 | 2,020 | 2,010 | 2,010 | 3,920 | 12,400 | 4,530 | 3,250 | 2,670 | 2,200 | 1,930 | 2,040 | 2,110 |
| 28 | 1,960 | 2,000 | 2,060 | 3,580 | 19,800 | 4,900 | 3,180 | 2,540 | 2,250 | 1,700 | 2,140 | 1,940 |
| 29 | 1,920 | 1,930 | 2,130 | 3,580 | 23,900 | 6,750 | 2,990 | 2,500 | 2,200 | 1,880 | 2,210 | 1,810 |
| 30 | 1,930 | 1,920 | 2,240 | 3,640 | - | 7,430 | 2,960 | 2,670 | 2,150 | 2,200 | 2,110 | 2,010 |
| 31 | 1,940 | - | 2,350 | 3,510 | - | 9,540 | - | 2,580 | - | 2,130 | 1,890 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 60,110 | 2,140 | 1,810 | 1,930 | 119,200 | | |
| November..... | | | | | | 59,610 | 2,060 | 1,920 | 1,987 | 118,200 | | |
| December..... | | | | | | 68,660 | 3,420 | 1,940 | 2,215 | 136,200 | | |
| Calendar year 1939..... | | | | | | 780,820 | 3,940 | 1,540 | 2,139 | 1,548,000 | | |
| January..... | | | | | | 100,480 | 4,020 | 2,270 | 3,241 | 199,300 | | |
| February..... | | | | | | 160,940 | 23,900 | 2,550 | 5,550 | 319,200 | | |
| March..... | | | | | | 185,670 | 19,600 | 2,960 | 5,989 | 368,300 | | |
| April..... | | | | | | 150,140 | 10,400 | 2,960 | 5,005 | 297,800 | | |
| May..... | | | | | | 85,960 | 3,320 | 2,420 | 2,773 | 170,500 | | |
| June..... | | | | | | 68,910 | 2,580 | 2,100 | 2,297 | 136,700 | | |
| July..... | | | | | | 64,860 | 2,340 | 1,700 | 2,092 | 128,600 | | |
| August..... | | | | | | 61,340 | 2,210 | 1,650 | 1,979 | 121,700 | | |
| September..... | | | | | | 60,450 | 2,250 | 1,710 | 2,015 | 119,900 | | |
| Water year 1939-40..... | | | | | | 1,127,130 | 23,900 | 1,650 | 3,080 | 2,236,000 | | |

Peak discharge.— Feb. 29 (10 a.m.) 24,900 sec.-ft.; Mar. 31 (10:30 p.m.) 12,100 sec.-ft.

Pit River near Ydalpom, Calif.

Location.— Water-stage recorder, lat. 40°46', long. 122°14', in NW¼ sec. 32, T. 34 N., R. 3 W., at Silverthorne Ferry, half a mile downstream from Squaw Creek, 1½ miles southwest of Ydalpom, and 4 miles upstream from McCloud River. Altitude of gage, about 735 feet.

Drainage area.— 5,350 square miles, excluding Goose Lake Basin.

Records available.— May 1924 to September 1940. November 1910 to May 1924, at site 400 feet downstream.

Average discharge.— 29 years (1911-40), 3,905 second-feet.

Extremes.— Maximum discharge during year, 56,000 second-feet Feb. 28 (gage height, 22.25 feet); minimum, 1,690 second-feet Aug. 25 (gage height, 4.56 feet).
1910-40: Maximum discharge, 65,000 second-feet Dec. 10, 1937 (gage height, 24.20 feet), from rating curve extended above 22,000 second-feet on basis of velocity-area and AFD studies; minimum, 1,000 second-feet (regulated) July 10, 1925.

Remarks.— Records excellent. Flow regulated by storage, power plants, and many diversions above station; daily fluctuations usually reduced by automatic regulator at Pit No. 4 dam.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------|-------|-------|-------|--------|--------|------------------|--------|---------|---------|--------|----------------------|-------|
| 1 | 2,020 | 2,100 | 2,070 | 8,930 | 5,100 | 31,400 | 19,700 | 3,980 | 3,160 | 2,390 | 2,130 | 1,910 |
| 2 | 1,960 | 2,130 | 2,120 | 11,200 | 4,780 | 24,100 | 16,400 | 4,140 | 3,140 | 2,390 | 2,190 | 1,770 |
| 3 | 1,960 | 2,120 | 2,170 | 7,660 | 10,200 | 18,700 | 13,800 | 4,090 | 3,030 | 2,320 | 2,070 | 1,970 |
| 4 | 2,000 | 2,080 | 2,220 | 10,200 | 12,400 | 15,600 | 12,800 | 4,570 | 3,020 | 2,210 | 1,900 | 2,380 |
| 5 | 2,020 | 2,070 | 2,140 | 6,800 | 12,300 | 12,800 | 11,300 | 4,590 | 3,000 | 2,290 | 1,920 | 2,290 |
| 6 | 2,070 | 2,090 | 2,100 | 5,860 | 14,100 | 11,100 | 10,100 | 4,270 | 2,590 | 2,300 | 2,300 | 2,230 |
| 7 | 2,160 | 2,090 | 2,100 | 5,650 | 12,700 | 9,650 | 9,930 | 4,250 | 2,760 | 2,480 | 2,320 | 2,050 |
| 8 | 2,160 | 2,140 | 2,410 | 9,450 | 10,500 | 8,940 | 9,650 | 4,380 | 2,810 | 2,320 | 2,320 | 1,920 |
| 9 | 2,090 | 2,170 | 5,860 | 13,000 | 9,410 | 8,200 | 9,270 | 4,200 | 2,790 | 2,300 | 2,300 | 1,940 |
| 10 | 2,090 | 2,160 | 5,850 | 14,800 | 7,660 | 7,460 | 8,800 | 4,030 | 2,710 | 2,550 | 2,030 | 2,320 |
| 11 | 2,040 | 2,140 | 5,120 | 9,710 | 6,670 | 7,600 | 7,710 | 3,780 | 2,670 | 2,460 | 1,830 | 2,340 |
| 12 | 2,010 | 2,130 | 3,330 | 7,380 | 6,350 | 6,950 | 7,580 | 3,470 | 2,680 | 2,480 | 1,850 | 2,280 |
| 13 | 2,060 | 2,070 | 3,100 | 6,350 | 6,680 | 6,330 | 7,140 | 3,320 | 2,720 | 2,240 | 2,150 | 2,240 |
| 14 | 2,140 | 2,070 | 2,860 | 5,720 | 7,050 | 6,290 | 6,820 | 3,200 | 2,670 | 1,920 | 2,280 | 2,000 |
| 15 | 2,130 | 2,090 | 2,510 | 4,950 | 6,480 | 5,790 | 6,650 | 3,340 | 2,600 | 1,920 | 2,220 | 1,810 |
| 16 | 2,060 | 2,140 | 2,370 | 4,490 | 6,080 | 5,930 | 6,510 | 3,590 | 2,560 | 2,270 | 2,320 | 2,020 |
| 17 | 2,040 | 2,140 | 2,640 | 4,040 | 9,950 | 5,460 | 6,360 | 3,640 | 2,500 | 2,500 | 1,980 | 2,300 |
| 18 | 2,030 | 2,130 | 2,510 | 3,540 | 7,820 | 4,600 | 5,860 | 3,590 | 2,470 | 2,480 | 1,800 | 2,390 |
| 19 | 2,020 | 2,060 | 2,440 | 3,580 | 7,380 | 4,840 | 5,790 | 3,470 | 2,430 | 2,380 | 1,960 | 2,390 |
| 20 | 1,960 | 2,080 | 2,410 | 3,500 | 6,420 | 5,270 | 5,660 | 3,170 | 2,560 | 2,220 | 2,110 | 2,390 |
| 21 | 2,000 | 2,100 | 2,390 | 3,180 | 5,990 | 5,030 | 5,440 | 3,140 | 2,670 | 1,930 | 2,220 | 2,070 |
| 22 | 2,040 | 2,130 | 2,330 | 3,140 | 5,740 | 4,790 | 5,280 | 3,320 | 2,670 | 1,920 | 2,190 | 1,880 |
| 23 | 2,090 | 2,130 | 2,320 | 3,110 | 5,800 | 4,600 | 5,220 | 3,320 | 2,650 | 2,360 | 2,190 | 2,210 |
| 24 | 2,270 | 2,120 | 2,290 | 3,330 | 6,170 | 4,690 | 4,720 | 3,160 | 2,450 | 2,500 | 1,970 | 2,340 |
| 25 | 2,290 | 2,120 | 2,320 | 5,460 | 9,150 | 5,270 | 4,490 | 3,090 | 2,380 | 2,560 | 1,740 | 2,340 |
| 26 | 2,190 | 2,160 | 2,250 | 13,300 | 19,600 | 11,000 | 4,520 | 3,160 | 2,370 | 2,340 | 1,980 | 2,340 |
| 27 | 2,170 | 2,160 | 2,190 | 11,100 | 46,700 | 11,400 | 4,490 | 3,090 | 2,420 | 2,190 | 2,150 | 2,300 |
| 28 | 2,090 | 2,150 | 2,280 | 7,680 | 51,400 | 10,700 | 4,460 | 3,070 | 2,520 | 1,910 | 2,190 | 2,160 |
| 29 | 2,050 | 2,090 | 2,380 | 6,490 | 40,900 | 27,000 | 4,190 | 3,020 | 2,460 | 1,900 | 2,330 | 1,920 |
| 30 | 2,030 | 2,060 | 2,670 | 6,040 | - | 34,100 | 4,090 | 3,160 | 2,420 | 2,330 | 2,300 | 2,040 |
| 31 | 2,060 | - | 3,960 | 5,680 | - | 26,000 | - | 3,210 | - | 2,340 | 2,070 | - |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | 64,300 | | 2,290 | 1,960 | 2,074 | 127,500 | |
| November | | | | | | 63,440 | | 2,170 | 2,060 | 2,115 | 125,800 | |
| December | | | | | | 85,720 | | 5,860 | 2,070 | 2,765 | 170,000 | |
| Calendar year 1939 | | | | | | 951,410 | | 14,800 | 1,690 | 2,607 | 1,687,000 | |
| January | | | | | | 215,000 | | 14,800 | 3,110 | 6,935 | 426,400 | |
| February | | | | | | 361,260 | | 51,400 | 4,780 | 12,460 | 716,500 | |
| March | | | | | | 351,590 | | 34,100 | 4,600 | 11,340 | 697,400 | |
| April | | | | | | 235,030 | | 19,700 | 4,090 | 7,834 | 466,200 | |
| May | | | | | | 111,810 | | 4,590 | 3,020 | 3,607 | 221,800 | |
| June | | | | | | 80,080 | | 3,160 | 2,370 | 2,669 | 158,800 | |
| July | | | | | | 70,500 | | 2,550 | 1,900 | 2,274 | 139,800 | |
| August | | | | | | 65,310 | | 2,330 | 1,740 | 2,107 | 129,500 | |
| September | | | | | | 64,460 | | 2,390 | 1,770 | 2,149 | 127,900 | |
| Water year 1939-40 | | | | | | 1,768,500 | | 51,400 | 1,740 | 4,832 | 3,508,000 | |

Peak discharge.— Feb. 28 (1:30 a.m.) 56,000 sec.-ft.; Mar. 26 (5 p.m.) 17,500 sec.-ft.; Mar. 30 (4:30 p.m.) 37,200 sec.-ft.

South Fork of Pit River near Likely, Calif.

Location.— Water-stage recorder, lat. 41°14', long. 120°25', in NE¼ sec. 11, T. 39 N., R. 13 E., 1.3 miles downstream from West Valley Creek and 3½ miles east of Likely. Altitude of gage, about 4,580 feet (from topographic map).

Drainage area.— 248 square miles.

Records available.— October 1928 to September 1940.

Extremes.— Maximum discharge during year, 233 second-feet May 12 (gage height, 3.31 feet); minimum, 0.4 second-foot Feb. 19.
1928-40: Maximum discharge, 1,060 second-feet Apr. 27, 1932 (gage height, 5.55 feet), from rating curve extended above 600 second-feet; minimum, that of Feb. 19, 1940..

Remarks.— Records good except those for periods of ice effect, which are fair. Flow regulated by storage and diversions above station for irrigation. Diversion through feed canal (capacity about 50 second-feet) to West Valley Creek Reservoir began July 1, 1936.

Rating table, water year 1939-40, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|------|-----|----|-----|-----|
| 1.2 | 0.5 | 1.6 | 6.0 | 2.0 | 27 | 2.6 | 89 |
| 1.3 | 1.1 | 1.7 | 10.5 | 2.1 | 35 | 2.8 | 120 |
| 1.4 | 2.0 | 1.8 | 15.5 | 2.2 | 44 | 3.0 | 157 |
| 1.5 | 3.5 | 1.9 | 21 | 2.4 | 64 | 3.2 | 204 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | 14 | 16 | 3.5 | 14 | 2.5 | 23 | 98 | 107 | 118 | 44 | 137 | 38 |
| 2 | 22 | 16 | 2.0 | 26 | 4.8 | 33 | 52 | 110 | 116 | 40 | 145 | 33 |
| 3 | 21 | 17 | 3.2 | 19 | 4.0 | 37 | 39 | 130 | 112 | 40 | 153 | 30 |
| 4 | 19 | 12 | 3.2 | 12 | 3.5 | 17 | 30 | 159 | 117 | 40 | 155 | 32 |
| 5 | 19 | 9.5 | 2.0 | 5 | 41 | 10 | 29 | 164 | 106 | 35 | 130 | 33 |
| 6 | 25 | 8 | 1.6 | b2.6 | 57 | 4.5 | 25 | 157 | 96 | 27 | 125 | 33 |
| 7 | 21 | 8 | 1.6 | b2.9 | 28 | 2.4 | 29 | 145 | 96 | 26 | 123 | 33 |
| 8 | 19 | 7 | 2.6 | 1.7 | 7.5 | 2.6 | 30 | 130 | 109 | 24 | 118 | 33 |
| 9 | 19 | 7.5 | 10 | 2.3 | 4.0 | 3.0 | 30 | 127 | 117 | 22 | 112 | 36 |
| 10 | 18 | 6 | 12 | 3.0 | 1.7 | 2.9 | 35 | 164 | 117 | 20 | 114 | 56 |
| 11 | 18 | 7 | 9.5 | 3.0 | 1.5 | 6 | 44 | 207 | 107 | 20 | 110 | 34 |
| 12 | 18 | 6 | 1.6 | b4 | 4.0 | b7.5 | 55 | 212 | 86 | 19 | 109 | 33 |
| 13 | 18 | 9 | 10 | b6 | 1.9 | 2.3 | 71 | 194 | 81 | 19 | 109 | 29 |
| 14 | 16 | 12 | 2.8 | b9 | 1.4 | 1.1 | 96 | 202 | 81 | 34 | 117 | 29 |
| 15 | 17 | 14 | 4.5 | b12 | 1.3 | .9 | 139 | 199 | 86 | 54 | 132 | 25 |
| 16 | 16 | 15 | 5 | b15 | 1.2 | 1.1 | 95 | 185 | 85 | 77 | 132 | 26 |
| 17 | 17 | 12 | 2.4 | b18 | 1.5 | 2.1 | 60 | 164 | 84 | 85 | 130 | 26 |
| 18 | 17 | 6.5 | 3.4 | b20 | 1.6 | .9 | 89 | 151 | 82 | 95 | 130 | 35 |
| 19 | 18 | 8 | 3.0 | b20 | b5 | .8 | 107 | 143 | 79 | 84 | 110 | 25 |
| 20 | 18 | 5 | 1.6 | b18 | b13 | .8 | 130 | 139 | 60 | 82 | 90 | 21 |
| 21 | 19 | 5.5 | b1.5 | b18 | b8 | 1.9 | 132 | 132 | 74 | 84 | 94 | 19 |
| 22 | 18 | 3.5 | b4.5 | b18 | 1.8 | 6 | 151 | 123 | 66 | 84 | 95 | 23 |
| 23 | 18 | 2.4 | b6 | 14 | 1.2 | 12 | 162 | 112 | 64 | 84 | 95 | 21 |
| 24 | 20 | 2.9 | b7.5 | 6.5 | 18 | 20 | 151 | 106 | 64 | 89 | 94 | 21 |
| 25 | 20 | 4.8 | b8 | 4.2 | 33 | 54 | 135 | 100 | 62 | 101 | 92 | 22 |
| 26 | 19 | 7 | b9 | 39 | 21 | 49 | 115 | 95 | 51 | 107 | 92 | 20 |
| 27 | 29 | b4 | b9.5 | 20 | 26 | 56 | 104 | 92 | 40 | 115 | 77 | 23 |
| 28 | 26 | b5 | b10 | 6.5 | 28 | 48 | 98 | 90 | 47 | 130 | 42 | 31 |
| 29 | 16 | b4 | 26 | 3.6 | 25 | 37 | 182 | 89 | 48 | 147 | 49 | 25 |
| 30 | 16 | b2 | 29 | 2.6 | - | 38 | 118 | 96 | 50 | 137 | 46 | 23 |
| 31 | 16 | - | 28 | 1.8 | - | 75 | - | 117 | - | 135 | 39 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 589 | 29 | 14 | 19.0 | 1,170 | | | |
| November..... | | | | | 242.6 | 17 | 2 | 6.09 | 481 | | | |
| December..... | | | | | 238.9 | 29 | 1.5 | 7.71 | 474 | | | |
| Calendar year 1939..... | | | | | 17,754.0 | 190 | 1.5 | 48.6 | 35,200 | | | |
| January..... | | | | | 347.9 | 39 | 1.7 | 11.2 | 690 | | | |
| February..... | | | | | 348.4 | 57 | 1.2 | 12.0 | 691 | | | |
| March..... | | | | | 555.8 | 75 | .8 | 17.9 | 1,100 | | | |
| April..... | | | | | 2,651 | 182 | 25 | 88.4 | 5,260 | | | |
| May..... | | | | | 4,341 | 212 | 89 | 140 | 8,610 | | | |
| June..... | | | | | 2,519 | 118 | 40 | 84.0 | 5,000 | | | |
| July..... | | | | | 2,030 | 147 | 19 | 57.4 | 4,150 | | | |
| August..... | | | | | 3,296 | 155 | 39 | 106 | 6,540 | | | |
| September..... | | | | | 848 | 38 | 19 | 28.3 | 1,680 | | | |
| Water year 1939-40..... | | | | | 18,067.6 | 212 | .8 | 49.4 | 35,850 | | | |

b Stage-discharge relation affected by ice.

Hat Creek near Hat Creek, Calif.

Location.— Water-stage recorder, lat. $40^{\circ}41'$, long. $121^{\circ}25'$, in SE $\frac{1}{4}$ sec. 28, T. 33 N., R. 5 E., about 1 mile northeast of Old Station post office and 8 miles southeast of Hat Creek post office. Altitude of gage, about 4,500 feet (from topographic map).

Drainage area.— 155 square miles.

Records available.— April 1928 to September 1940. July 1926 to April 1928, at site half a mile upstream.

Average discharge.— 13 years (1926-29, 1930-40), 107 second-feet.

Extremes.— Maximum discharge during year, 387 second-feet Jan. 2 (gage height, 3.38 feet); minimum, 96 second-feet Oct. 19.
1926-40: Maximum discharge, 2,500 second-feet Dec. 11, 1937 (gage height, 7.75 feet, in well, affected by drawdown), by slope-area method; minimum, 67 second-feet Sept. 7, 1934.

Remarks.— Records excellent except those for period of no gage-height record, which are fair. Irrigation canals above station divert from 2 to 30 second-feet.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| 2.2 | 90 | 2.6 | 171 | 3.0 | 278 |
| 2.3 | 106 | 2.7 | 197 | 3.1 | 306 |
| 2.4 | 125 | 2.8 | 223 | | |
| 2.5 | 147 | 2.9 | 250 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|------|---------|---------|------|----------------------|-------|
| 1 | 112 | 98 | 100 | 220 | 114 | 170 | 165 | 171 | 202 | 129 | 119 | 101 |
| 2 | 114 | 98 | 100 | 284 | 112 | 160 | 157 | 192 | 192 | 127 | 117 | 100 |
| 3 | 110 | 98 | 100 | 164 | 114 | 150 | 152 | 192 | 187 | 127 | 117 | 100 |
| 4 | 106 | 98 | 100 | 145 | 114 | 140 | 147 | 181 | 187 | 123 | 117 | 100 |
| 5 | 104 | 98 | 100 | 132 | 112 | 130 | 143 | 161 | 181 | 119 | 117 | 101 |
| 6 | 106 | 98 | 100 | 123 | 117 | 120 | 140 | 157 | 179 | 117 | 117 | 101 |
| 7 | 104 | 98 | 100 | 123 | 114 | 115 | 140 | 157 | 176 | 117 | 117 | 101 |
| 8 | 103 | 98 | 100 | 123 | 110 | 110 | 140 | 164 | 169 | 116 | 117 | 110 |
| 9 | 101 | 98 | 192 | 123 | 110 | 110 | 140 | 176 | 166 | 114 | 110 | 116 |
| 10 | 101 | 98 | 192 | 119 | 112 | 110 | 140 | 197 | 164 | 123 | 103 | 116 |
| 11 | 100 | 98 | 149 | 119 | 108 | 110 | 143 | 197 | 164 | 129 | 104 | 117 |
| 12 | 100 | 98 | 121 | 116 | 106 | 110 | 147 | 194 | 164 | 127 | 104 | 116 |
| 13 | 98 | 98 | 116 | 108 | 106 | 110 | 152 | 197 | 164 | 123 | 106 | 117 |
| 14 | 98 | 98 | 112 | 104 | 103 | 108 | 161 | 202 | 161 | 121 | 104 | 117 |
| 15 | 98 | 98 | 110 | 106 | 104 | 108 | 157 | 194 | 164 | 121 | 104 | 117 |
| 16 | 98 | 98 | 110 | 106 | 108 | 108 | 145 | 189 | 166 | 121 | 106 | 117 |
| 17 | 98 | 98 | 116 | 106 | 103 | 107 | 145 | 194 | 164 | 121 | 104 | 117 |
| 18 | 98 | 98 | 110 | 108 | 104 | 106 | 154 | 194 | 159 | 121 | 104 | 129 |
| 19 | 98 | 98 | 108 | 110 | 103 | 105 | 164 | 192 | 159 | 119 | 112 | 121 |
| 20 | 100 | 98 | 108 | 110 | 103 | 105 | 171 | 197 | 159 | 114 | 114 | 116 |
| 21 | 101 | 98 | 106 | 108 | 103 | 104 | 171 | 194 | 159 | 108 | 114 | 116 |
| 22 | 103 | 98 | 103 | 110 | 102 | 103 | 174 | 194 | 157 | 106 | 116 | 116 |
| 23 | 104 | 98 | 106 | 110 | 102 | 102 | 174 | 200 | 154 | 104 | 116 | 114 |
| 24 | 106 | 98 | 104 | 108 | 102 | 102 | 171 | 200 | 154 | 104 | 114 | 114 |
| 25 | 106 | 98 | 103 | 110 | 102 | 102 | 164 | 194 | 149 | 104 | 114 | 114 |
| 26 | 104 | 98 | 104 | 119 | 105 | 103 | 159 | 189 | 147 | 103 | 114 | 116 |
| 27 | 106 | 100 | 104 | 114 | 140 | 105 | 154 | 187 | 145 | 101 | 114 | 116 |
| 28 | 103 | 100 | 106 | 112 | 200 | 110 | 157 | 181 | 140 | 101 | 112 | 116 |
| 29 | 98 | 103 | 110 | 112 | 180 | 120 | 154 | 181 | 138 | 103 | 108 | 116 |
| 30 | 98 | 103 | 110 | 112 | - | 140 | 159 | 205 | 134 | 114 | 104 | 116 |
| 31 | 98 | - | 123 | 114 | - | 170 | - | 220 | - | 119 | 101 | - |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | 3,176 | | 114 | 98 | 102 | 6,300 | |
| November..... | | | | | | 2,954 | | 103 | 98 | 98.5 | 5,860 | |
| December..... | | | | | | 3,523 | | 192 | 100 | 114 | 6,990 | |
| Calendar year 1939..... | | | | | | 42,325 | | 192 | 91 | 116 | 83,970 | |
| January..... | | | | | | 3,878 | | 284 | 104 | 125 | 7,690 | |
| February..... | | | | | | 3,313 | | 200 | 102 | 114 | 6,370 | |
| March..... | | | | | | 3,653 | | 170 | 102 | 118 | 7,280 | |
| April..... | | | | | | 4,640 | | 174 | 140 | 155 | 9,200 | |
| May..... | | | | | | 5,843 | | 220 | 157 | 188 | 11,590 | |
| June..... | | | | | | 4,904 | | 202 | 134 | 163 | 9,730 | |
| July..... | | | | | | 3,596 | | 129 | 101 | 116 | 7,130 | |
| August..... | | | | | | 3,440 | | 119 | 101 | 111 | 6,820 | |
| September..... | | | | | | 3,384 | | 129 | 100 | 113 | 6,710 | |
| Water year 1939-40..... | | | | | | 46,304 | | 284 | 98 | 127 | 91,840 | |

Note.— No gage-height record Feb. 20 to Apr. 1; discharge computed on basis of rainfall record near Hat Creek, records for Pit River near Ganby, and range of stage.

McCloud River near McCloud, Calif.

Location.- Water-stage recorder, lat. 41°11', long. 122°04', in NE¼ sec. 34, T. 39 N., R. 2 W., half a mile downstream from Angel Creek and 6 miles southeast of McCloud. Altitude of gage, about 2,750 feet (from topographic map).

Drainage area.- 388 square miles.

Records available.- April 1931 to September 1940.

Extremes.- Maximum discharge during year, 8,820 second-feet Feb. 28 (gage height, 8.9 feet); minimum, 632 second-feet Dec. 28 (gage height, 1.07 feet).
1931-40: Maximum discharge, that of Feb. 28, 1940, from rating curve extended above 2,400 second-feet on basis of velocity-area and AVG studies; minimum, 524 second-feet Nov. 23, 24, 1932.

Remarks.- Records good. Two small diversions above station with a total capacity of about 10 second-feet.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|-------|-------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 702 | 663 | 650 | 859 | 832 | 2,810 | 2,280 | 1,070 | 952 | 844 | 826 | 787 |
| 2 | 696 | 663 | 650 | 1,210 | 838 | 2,260 | 1,920 | 1,090 | 938 | 838 | 820 | 792 |
| 3 | 656 | 656 | 650 | 1,240 | 1,150 | 1,940 | 1,790 | 1,110 | 932 | 838 | 820 | 809 |
| 4 | 689 | 656 | 650 | 1,170 | 1,290 | 1,740 | 1,720 | 1,140 | 926 | 838 | 820 | 792 |
| 5 | 689 | 656 | 650 | 1,020 | 1,200 | 1,560 | 1,610 | 1,120 | 919 | 832 | 814 | 792 |
| 6 | 689 | 656 | 650 | 908 | 1,480 | 1,470 | 1,510 | 1,090 | 912 | 832 | 814 | 787 |
| 7 | 689 | 656 | 656 | 852 | 1,450 | 1,390 | 1,510 | 1,070 | 912 | 832 | 814 | 782 |
| 8 | 689 | 656 | 689 | 936 | 1,240 | 1,350 | 1,570 | 1,060 | 906 | 826 | 814 | 782 |
| 9 | 682 | 656 | 880 | 1,470 | 1,130 | 1,300 | 1,500 | 1,060 | 900 | 826 | 809 | 782 |
| 10 | 682 | 656 | 1,160 | 1,500 | 1,080 | 1,260 | 1,430 | 1,060 | 906 | 826 | 809 | 782 |
| 11 | 682 | 656 | 1,070 | 1,330 | 1,080 | 1,210 | 1,380 | 1,060 | 906 | 838 | 809 | 782 |
| 12 | 682 | 656 | 812 | 1,140 | 1,020 | 1,160 | 1,340 | 1,040 | 906 | 838 | 809 | 782 |
| 13 | 682 | 656 | 734 | 1,010 | 985 | 1,130 | 1,310 | 1,040 | 906 | 838 | 809 | 782 |
| 14 | 682 | 656 | 702 | 936 | 957 | 1,120 | 1,300 | 1,030 | 906 | 838 | 809 | 782 |
| 15 | 676 | 650 | 682 | 880 | 922 | 1,100 | 1,280 | 1,020 | 906 | 838 | 809 | 782 |
| 16 | 676 | 650 | 682 | 845 | 894 | 1,090 | 1,230 | 1,020 | 906 | 838 | 804 | 782 |
| 17 | 676 | 650 | 689 | 819 | 894 | 1,080 | 1,210 | 1,000 | 900 | 838 | 804 | 782 |
| 18 | 676 | 650 | 689 | 808 | 873 | 1,050 | 1,190 | 997 | 900 | 844 | 804 | 782 |
| 19 | 670 | 650 | 676 | 786 | 845 | 1,040 | 1,180 | 997 | 900 | 838 | 804 | 776 |
| 20 | 670 | 650 | 670 | 787 | 838 | 1,040 | 1,170 | 990 | 893 | 838 | 796 | 776 |
| 21 | 670 | 650 | 656 | 754 | 832 | 1,030 | 1,160 | 964 | 893 | 838 | 798 | 776 |
| 22 | 670 | 650 | 656 | 748 | 826 | 1,020 | 1,150 | 978 | 886 | 832 | 798 | 776 |
| 23 | 670 | 650 | 650 | 741 | 819 | 1,030 | 1,150 | 971 | 880 | 832 | 798 | 776 |
| 24 | 682 | 650 | 644 | 754 | 845 | 1,040 | 1,140 | 964 | 880 | 832 | 798 | 776 |
| 25 | 670 | 663 | 644 | 786 | 1,190 | 1,180 | 1,140 | 958 | 874 | 832 | 792 | 770 |
| 26 | 670 | 663 | 638 | 901 | 2,310 | 1,390 | 1,120 | 945 | 874 | 832 | 792 | 776 |
| 27 | 670 | 656 | 638 | 965 | 5,900 | 1,710 | 1,100 | 945 | 868 | 832 | 792 | 776 |
| 28 | 663 | 650 | 638 | 929 | 7,540 | 1,450 | 1,090 | 938 | 868 | 832 | 792 | 770 |
| 29 | 663 | 650 | 644 | 880 | 4,250 | 1,910 | 1,070 | 938 | 862 | 832 | 792 | 770 |
| 30 | 663 | 650 | 656 | 852 | - | 4,140 | 1,070 | 952 | 850 | 826 | 787 | 770 |
| 31 | 663 | - | 722 | 845 | - | 3,060 | - | 958 | - | 826 | 787 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 21,029 | 702 | 663 | 678 | 41,710 | | | |
| November..... | | | | | 19,630 | 663 | 650 | 654 | 38,940 | | | |
| December..... | | | | | 21,877 | 1,160 | 638 | 706 | 43,390 | | | |
| Calendar year 1939..... | | | | | 274,345 | 1,160 | 638 | 752 | 544,200 | | | |
| January..... | | | | | 29,659 | 1,500 | 741 | 957 | 58,830 | | | |
| February..... | | | | | 45,510 | 7,540 | 819 | 1,569 | 90,270 | | | |
| March..... | | | | | 47,070 | 4,140 | 1,020 | 1,518 | 93,360 | | | |
| April..... | | | | | 40,620 | 2,280 | 1,070 | 1,354 | 80,570 | | | |
| May..... | | | | | 31,595 | 1,140 | 938 | 1,019 | 62,670 | | | |
| June..... | | | | | 26,967 | 952 | 850 | 899 | 53,490 | | | |
| July..... | | | | | 25,864 | 844 | 826 | 834 | 51,300 | | | |
| August..... | | | | | 24,945 | 826 | 787 | 805 | 49,480 | | | |
| September..... | | | | | 23,431 | 809 | 770 | 781 | 46,470 | | | |
| Water year 1939-40..... | | | | | 358,197 | 7,540 | 638 | 979 | 710,500 | | | |

Peak discharge.- Dec. 10 (11 p.m.) 1,560 sec.-ft.; Jan. 2 (8 p.m.) 1,390 sec.-ft.; Feb. 6 (8:30 p.m.) 1,670 sec.-ft.; Feb. 28 (8:30 a.m.) 8,820 sec.-ft.; Mar. 27 (1 a.m.) 1,910 sec.-ft.; Mar. 30 (11 a.m.) 4,590 sec.-ft.

McCloud River at Baird, Calif.

Location.- Water-stage recorder, lat. 40°47', long. 122°18', in SE¼ sec. 22, T. 34 N., R. 4 W., half a mile downstream from Baird post office and 1½ miles upstream from mouth. Altitude of gage, about 700 feet (from topographic map).

Drainage area.- 668 square miles.

Records available.- December 1930 to September 1940. December 1910 to December 1930 at site 1 mile upstream.

Average discharge.- 29 years (1911-40), 1,690 second-feet.

Extremes.- Maximum discharge during year, 50,000 second-feet Feb. 28 (gage height, 29.2 feet) from rating curve extended above 26,000 second-feet by logarithmic plotting and cable-gage ratings at old and present sites; minimum, 820 second-feet Nov. 20-24, Dec. 4-5.

1910-40: Maximum discharge, that of Feb. 28, 1940; minimum, 650 second-feet for several days during period August to October 1931.

Remarks.- Records excellent except those for period of no water-stage recorder record, which are good.

Discharge, in second-foot, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1 | 841 | 830 | 827 | 3,750 | 2,400 | 13,000 | 9,310 | 2,030 | 1,570 | 1,200 | 1,070 | 994 |
| 2 | 838 | 830 | 827 | 7,060 | 2,390 | 9,400 | 6,980 | 2,060 | 1,530 | 1,180 | 1,060 | 994 |
| 3 | 834 | 830 | 824 | 5,760 | 7,100 | 7,200 | 6,140 | 2,080 | 1,490 | 1,180 | 1,050 | 1,070 |
| 4 | 830 | 830 | 820 | 6,530 | 7,650 | 5,600 | 6,120 | 2,320 | 1,470 | 1,160 | 1,050 | 1,050 |
| 5 | 841 | 830 | 820 | 4,260 | 6,320 | 5,000 | 5,480 | 2,210 | 1,450 | 1,160 | 1,030 | 1,020 |
| 6 | 855 | 830 | 824 | 3,100 | 6,930 | 4,500 | 4,560 | 2,110 | 1,430 | 1,150 | 1,050 | 1,020 |
| 7 | 841 | 830 | 824 | 2,660 | 6,330 | 4,080 | 4,740 | 2,030 | 1,410 | 1,150 | 1,050 | 1,020 |
| 8 | 834 | 827 | 1,000 | 4,760 | 4,820 | 3,700 | 4,360 | 1,980 | 1,400 | 1,140 | 1,040 | 1,010 |
| 9 | 834 | 827 | 3,110 | 11,000 | 3,940 | 3,580 | 4,750 | 1,940 | 1,370 | 1,120 | 1,040 | 1,000 |
| 10 | 830 | 827 | 4,780 | 10,200 | 3,440 | 3,320 | 4,420 | 1,910 | 1,370 | 1,120 | 1,030 | 998 |
| 11 | 830 | 827 | 4,590 | 7,090 | 3,140 | 3,120 | 4,040 | 1,890 | 1,360 | 1,120 | 1,030 | 998 |
| 12 | 827 | 827 | 2,180 | 4,760 | 2,840 | 2,920 | 3,770 | 1,860 | 1,340 | 1,130 | 1,030 | 998 |
| 13 | 827 | 827 | 1,820 | 3,640 | 2,860 | 2,770 | 3,530 | 1,840 | 1,340 | 1,130 | 1,030 | 1,010 |
| 14 | 827 | 827 | 1,380 | 3,020 | 2,900 | 2,680 | 3,370 | 1,800 | 1,340 | 1,120 | 1,020 | 1,010 |
| 15 | 827 | 827 | 1,250 | 2,620 | 2,740 | 2,640 | 3,220 | 1,770 | 1,330 | 1,120 | 1,020 | 998 |
| 16 | 827 | 824 | 1,190 | 2,360 | 2,570 | 2,500 | 3,020 | 1,750 | 1,330 | 1,120 | 1,020 | 994 |
| 17 | 827 | 824 | 1,300 | 2,170 | 4,270 | 2,400 | 2,860 | 1,700 | 1,320 | 1,110 | 1,020 | 994 |
| 18 | 827 | 824 | 1,210 | 2,020 | 3,780 | 2,310 | 2,740 | 1,670 | 1,310 | 1,110 | 1,020 | 998 |
| 19 | 827 | 824 | 1,160 | 1,900 | 3,100 | 2,230 | 2,650 | 1,650 | 1,340 | 1,110 | 1,020 | 994 |
| 20 | 827 | 820 | 1,120 | 1,790 | 2,750 | 2,170 | 2,570 | 1,630 | 1,330 | 1,100 | 1,020 | 989 |
| 21 | 827 | 820 | 1,080 | 1,710 | 2,550 | 2,120 | 2,480 | 1,610 | 1,300 | 1,100 | 1,020 | 984 |
| 22 | 827 | 820 | 1,060 | 1,650 | 2,460 | 2,080 | 2,420 | 1,600 | 1,290 | 1,090 | 1,020 | 980 |
| 23 | 827 | 820 | 1,040 | 1,610 | 2,360 | 2,040 | 2,370 | 1,580 | 1,280 | 1,090 | 1,010 | 976 |
| 24 | 893 | 820 | 1,010 | 1,700 | 2,540 | 2,070 | 2,340 | 1,580 | 1,280 | 1,080 | 1,010 | 976 |
| 25 | 855 | 844 | 994 | 3,270 | 4,890 | 2,310 | 2,420 | 1,560 | 1,250 | 1,080 | 1,010 | 976 |
| 26 | 838 | 950 | 975 | 6,840 | 12,900 | 4,860 | 2,290 | 1,540 | 1,250 | 1,080 | 1,010 | 980 |
| 27 | 838 | 855 | 970 | 5,620 | 34,200 | 5,600 | 2,210 | 1,520 | 1,240 | 1,080 | 1,010 | 998 |
| 28 | 838 | 854 | 978 | 4,170 | 44,000 | 4,540 | 2,150 | 1,510 | 1,230 | 1,070 | 1,010 | 984 |
| 29 | 834 | 830 | 1,020 | 3,360 | 24,000 | 12,400 | 2,100 | 1,500 | 1,230 | 1,070 | 1,000 | 976 |
| 30 | 830 | 827 | 1,130 | 2,910 | - | 26,000 | 2,060 | 1,570 | 1,230 | 1,070 | 1,000 | 972 |
| 31 | 830 | - | 1,680 | 2,590 | - | 16,600 | - | 1,600 | - | 1,070 | 998 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 25,878 | 883 | 827 | 835 | 51,330 |
| November..... | 24,942 | 930 | 820 | 831 | 49,470 |
| December..... | 43,596 | 4,780 | 820 | 1,406 | 86,470 |
| Calendar year 1939..... | 442,994 | 9,420 | 820 | 1,214 | 878,700 |
| January..... | 125,860 | 11,000 | 1,610 | 4,060 | 249,600 |
| February..... | 212,170 | 44,000 | 2,360 | 7,316 | 420,800 |
| March..... | 165,540 | 26,000 | 2,040 | 5,340 | 328,300 |
| April..... | 112,400 | 9,310 | 2,060 | 3,747 | 222,900 |
| May..... | 55,400 | 2,320 | 1,500 | 1,787 | 109,900 |
| June..... | 40,390 | 1,570 | 1,230 | 1,346 | 60,110 |
| July..... | 34,610 | 1,200 | 1,070 | 1,116 | 68,650 |
| August..... | 31,818 | 1,070 | 998 | 1,026 | 63,110 |
| September..... | 29,961 | 1,070 | 972 | 929 | 59,430 |
| Water year 1939-40..... | 902,565 | 44,000 | 820 | 2,466 | 1,790,000 |

Peak discharge.- Dec. 10 (7 p.m.) 7,640 sec.-ft.; Jan. 2 (4 p.m.) 8,000 sec.-ft.; Jan. 9 (4:30 a.m.) 12,700 sec.-ft.; Feb. 3 (4:30 p.m.) 10,000 sec.-ft.; Feb. 28 (about 7 a.m.) 50,000 sec.-ft.; Mar. 30 (4 p.m.) 27,000 sec.-ft.

Note.- No water-stage recorder record Feb. 28 to Mar. 18; discharge computed on basis of staff-gage readings Mar. 7, 9-16, 18, and records for Sacramento River at Kennett and Pit River near Ydopolon.

Mill Creek near Los Molinos, Calif.

Location.- Water-stage recorder, lat. 40°03'20", long. 122°01'15", in N $\frac{1}{2}$ sec. 6, T. 25 N., R. 1 W., 5 miles upstream from mouth and 5 miles northeast of Los Molinos. Altitude of gage, about 420 feet (from topographic map).

Drainage area.- 134 square miles.

Records available.- October 1928 to September 1940. September 1909 to September 1913 (fragmentary), staff gage at site 0.3 mile downstream.

Average discharge.- 12 years (1928-40), 246 second-feet.

Extremes.- Maximum discharge during year, 11,400 second-feet Feb. 28 (gage height, 12.35 feet); minimum, 84 second-feet Oct. 20-23.

1928-40: Maximum discharge, 23,000 second-feet Dec. 11, 1937 (gage height, 23.4 feet, from floodmarks), from rating curve extended above 3,900 second-feet on basis of slope-area studies; minimum, 49 second-feet Dec. 13, 1932.

Remarks.- Records fair except those for period of no gage-height record, which are poor. No large diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|-------|---------|---------|-------|----------------------|-------|
| 1 | 92 | 86 | 90 | 1,840 | 298 | 1,490 | 1,690 | 380 | 384 | 203 | 118 | 95 |
| 2 | 109 | 86 | 90 | 2,800 | 291 | 1,150 | 1,070 | 390 | 366 | 191 | 118 | 92 |
| 3 | 94 | 86 | 88 | 898 | 686 | 858 | 852 | 430 | 356 | 188 | 115 | 95 |
| 4 | 90 | 86 | 88 | 975 | 763 | 666 | 708 | 450 | 362 | 185 | 115 | 110 |
| 5 | 92 | 86 | 88 | 691 | 768 | 574 | 582 | 450 | 348 | 179 | 113 | 107 |
| 6 | 120 | 86 | 92 | 614 | 826 | 502 | 510 | 440 | 345 | 173 | 113 | 107 |
| 7 | 105 | 86 | 92 | 874 | 704 | 458 | 510 | 430 | 334 | 170 | 113 | 105 |
| 8 | 94 | 86 | 96 | 1,690 | 538 | 450 | 478 | 420 | 331 | 167 | 110 | 102 |
| 9 | 92 | 86 | 497 | 1,220 | 438 | 440 | 446 | 415 | 317 | 161 | 110 | 102 |
| 10 | 90 | 86 | 612 | 1,420 | 392 | 408 | 432 | 466 | 317 | 158 | 107 | 100 |
| 11 | 88 | 86 | 554 | 889 | 364 | 373 | 422 | 498 | 331 | 155 | 107 | 100 |
| 12 | 86 | 86 | 213 | 614 | 316 | 345 | 418 | 458 | 342 | 152 | 107 | 100 |
| 13 | 86 | 86 | 156 | 438 | 330 | 328 | 436 | 466 | 338 | 149 | 107 | 100 |
| 14 | 86 | 86 | 137 | 354 | 550 | 314 | 446 | 466 | 328 | 146 | 105 | 100 |
| 15 | 86 | 86 | 126 | 302 | 389 | 307 | 432 | 470 | 331 | 143 | 102 | 100 |
| 16 | 86 | 86 | 120 | 260 | 326 | 324 | 394 | 426 | 338 | 140 | 102 | 100 |
| 17 | 86 | 86 | 130 | 231 | 1,390 | 324 | 373 | 446 | 338 | 140 | 100 | 110 |
| 18 | 86 | 86 | 128 | 216 | 637 | 303 | 380 | 440 | 324 | 140 | 100 | 135 |
| 19 | 86 | 86 | 118 | 201 | 422 | 300 | 398 | 426 | 314 | 138 | 97 | 176 |
| 20 | 84 | 86 | 118 | 186 | 347 | 303 | 415 | 432 | 314 | 135 | 97 | 138 |
| 21 | 84 | 86 | 109 | 177 | 312 | 314 | 420 | 446 | 290 | 135 | 97 | 129 |
| 22 | 84 | 86 | 105 | 149 | 302 | 328 | 420 | 446 | 276 | 129 | 97 | 126 |
| 23 | 84 | 86 | 105 | 164 | 280 | 345 | 420 | 443 | 263 | 129 | 97 | 123 |
| 24 | 103 | 86 | 103 | 169 | 277 | 380 | 415 | 454 | 260 | 123 | 97 | 123 |
| 25 | 105 | 90 | 101 | 747 | 446 | 562 | 410 | 438 | 250 | 123 | 100 | 123 |
| 26 | 92 | 103 | 96 | 1,220 | 2,150 | 1,280 | 400 | 408 | 241 | 123 | 100 | 107 |
| 27 | 90 | 92 | 96 | 814 | 7,640 | 1,510 | 390 | 387 | 234 | 123 | 97 | 105 |
| 28 | 90 | 90 | 99 | 446 | 7,580 | 948 | 390 | 378 | 222 | 123 | 97 | 102 |
| 29 | 90 | 90 | 159 | 368 | 3,260 | 2,180 | 380 | 368 | 218 | 123 | 95 | 102 |
| 30 | 88 | 90 | 192 | 330 | - | 6,430 | 370 | 370 | 209 | 120 | 95 | 102 |
| 31 | 86 | - | 540 | 308 | - | 3,470 | - | 443 | - | 118 | 95 | - |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | 2,834 | | 120 | 84 | 91.4 | 5,620 | |
| November..... | | | | | | 2,619 | | 103 | 86 | 87.3 | 5,190 | |
| December..... | | | | | | 5,338 | | 612 | 88 | 172 | 10,590 | |
| Calendar year 1939..... | | | | | | 54,110 | | 612 | 72 | 148 | 107,300 | |
| January..... | | | | | | 21,425 | | 2,800 | 164 | 691 | 42,500 | |
| February..... | | | | | | 33,002 | | 7,640 | 277 | 1,138 | 65,480 | |
| March..... | | | | | | 27,924 | | 6,430 | 300 | 901 | 55,590 | |
| April..... | | | | | | 15,407 | | 1,690 | 370 | 514 | 30,560 | |
| May..... | | | | | | 13,374 | | 498 | 366 | 431 | 26,530 | |
| June..... | | | | | | 9,221 | | 384 | 209 | 307 | 18,290 | |
| July..... | | | | | | 4,562 | | 203 | 118 | 148 | 9,090 | |
| August..... | | | | | | 3,223 | | 118 | 95 | 104 | 6,590 | |
| September..... | | | | | | 3,316 | | 176 | 92 | 111 | 6,580 | |
| Water year 1939-40..... | | | | | | 142,265 | | 7,640 | 84 | 389 | 282,200 | |

Peak discharge.- Jan. 2 (1:30 p.m.) 4,600 sec.-ft.; Jan. 8 (8 a.m.) 2,800 sec.-ft.; Feb. 17 (8 a.m.) 2,360 sec.-ft.; Feb. 28 (5:30 a.m.) 11,400 sec.-ft.; Mar. 26 (9 p.m.) 3,060 sec.-ft.; Mar. 30 (9 p.m.) 9,360 sec.-ft.

Note.- No gage-height record Apr. 21 to May 8; discharge computed on basis of records for station on Deer Creek near Vina.

Elder Creek near Henleyville, Calif.

Location.- Water-stage recorder, lat. 40°02', long. 122°15', in SE $\frac{1}{4}$ sec. 10, T. 25 N., R. 4 W., at bridge on Paskenta-Red Bluff road, 1.2 miles upstream from Spring Branch and 6 miles northeast of Henleyville. Altitude of gage, about 310 feet (from topographic map).

Drainage area.- 147 square miles.

Records available.- October 1930 to September 1940.

Average discharge.- 10 years, 68.1 second-feet.

Extremes.- Maximum discharge during year, 13,100 second-feet Feb. 28 (well gage height, 10.3 feet; outside gage height, 9.7 feet); no flow Oct. 1 to Dec. 8, Aug. 1 to Sept. 15, Sept. 20-30.
1930-40: Maximum discharge, that of Feb. 28, 1940; no flow for several months each year.

Remarks.- Records fair except those for Mar. 15-23, May 14 to Sept. 30, which are poor.
No large diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|------|------|----------------------|-------|--|
| 1 | | | 0 | 273 | 290 | 1,150 | 565 | 70 | 26 | 2.0 | | 0 | |
| 2 | | | 0 | 358 | 232 | 788 | 422 | 73 | 58 | | | 0 | |
| 3 | | | 0 | 466 | 885 | 574 | 380 | 73 | 30 | | | 0 | |
| 4 | | | 0 | 772 | 565 | 480 | 305 | 73 | 20 | | | 0 | |
| 5 | | | 0 | 207 | 443 | 394 | 260 | 71 | 15 | | | 0 | |
| 6 | | | 0 | 172 | 450 | 319 | 218 | 66 | 13 | | | 0 | |
| 7 | | | 0 | 441 | 350 | 284 | 207 | 65 | 12 | | | 0 | |
| 8 | | | 0 | 906 | 270 | 258 | 199 | 60 | 11 | | | 0 | |
| 9 | | | 100 | 547 | 214 | 228 | 175 | 57 | 10 | | | 0 | |
| 10 | | | 335 | 368 | 178 | 195 | 163 | 54 | 10 | | | 0 | |
| 11 | | | 124 | 280 | 152 | 170 | 149 | 52 | 9 | | | 0 | |
| 12 | | | 37 | 203 | 132 | 147 | 142 | 50 | 9 | | | 0 | |
| 13 | | | 20 | 154 | 647 | 131 | 140 | 47 | 9 | | | 0 | |
| 14 | | | 13 | 128 | 725 | 122 | 135 | 44 | 8 | | | 0 | |
| 15 | | | 10 | 113 | 246 | 100 | 128 | 40 | 8 | | | 0 | |
| 16 | | | 8 | 104 | 192 | 90 | 119 | 36 | 8 | 2.0 | | 39 | |
| 17 | | | 7 | 93 | 1,030 | 80 | 113 | 34 | 7 | | | 3.0 | |
| 18 | | | 7 | 88 | 320 | 75 | 109 | 32 | 7 | | | .2 | |
| 19 | | | 6 | 81 | 222 | 70 | 102 | 30 | 7 | | | .1 | |
| 20 | | | 5.5 | 78 | 181 | 65 | 97 | 28 | 6 | | | 0 | |
| 21 | | | 4.9 | 74 | 157 | 60 | 93 | 26 | 6 | | | 0 | |
| 22 | | | 4.4 | 71 | 144 | 55 | 91 | 24 | 6 | | | 0 | |
| 23 | | | 4.9 | 76 | 130 | 55 | 88 | 22 | 5 | | | 0 | |
| 24 | | | 8 | 86 | 124 | 92 | 86 | 20 | 5 | | | 0 | |
| 25 | | | 6 | 2,180 | 172 | 58 | 97 | 18 | 4 | | | 0 | |
| 26 | | | 5.5 | 1,240 | 707 | 381 | 93 | 16 | 4 | | | 0 | |
| 27 | | | 4.9 | 415 | 5,820 | 170 | 84 | 14 | 3.7 | | | 0 | |
| 28 | | | 4.9 | 265 | 7,560 | 108 | 79 | 12 | 3.5 | | | 0 | |
| 29 | | | 7 | 203 | 2,100 | 944 | 78 | 10 | 3.5 | | | 0 | |
| 30 | | | 22 | 176 | - | 1,700 | 74 | 41 | 3.5 | | | 0 | |
| 31 | | | 63 | 172 | - | 860 | - | 47 | - | | | - | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | | 0 | | |
| December..... | | | | | | 828.0 | 335 | 0 | 26.7 | | 1,640 | | |
| Calendar year 1939..... | | | | | | 3,756.7 | 335 | 0 | 10.3 | | 7,450 | | |
| January..... | | | | | | 10,669 | 2,180 | 71 | 344 | | 21,160 | | |
| February..... | | | | | | 24,638 | 7,560 | 124 | 850 | | 48,870 | | |
| March..... | | | | | | 10,203 | 1,700 | 55 | 329 | | 20,240 | | |
| April..... | | | | | | 4,991 | 565 | 74 | 166 | | 9,900 | | |
| May..... | | | | | | 1,305 | 73 | 10 | 42.1 | | 2,590 | | |
| June..... | | | | | | 327.2 | 58 | 3.5 | 10.9 | | 649 | | |
| July..... | | | | | | 62.0 | - | - | 2.0 | | 123 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | | 0 | | |
| September..... | | | | | | 42.3 | 39 | 0 | 1.41 | | 84 | | |
| Water year 1939-40..... | | | | | | 53,065.5 | 7,560 | 0 | 145 | | 105,300 | | |

Peak discharge.- Jan. 25 (7:30 p.m.) 3,780 sec.-ft.; Feb. 3 (9 a.m.) 2,600 sec.-ft.; Feb. 13 (11 p.m.) 3,860 sec.-ft.; Feb. 17 (6:30 a.m.) 3,780 sec.-ft.; Feb. 28 (6:30 a.m.) 13,100 sec.-ft.; Mar. 30 (6 p.m.) 2,960 sec.-ft.

Note.- Doubtful or no gage-height record Mar. 15-23, May 15-29, June 3-26, June 28 to Sept. 15, Sept. 20-30; discharge computed on basis of records for Thomas Creek at Paskenta, precipitation records, and known periods of no flow.

Thomas Creek at Paskenta, Calif.

Location.- Water-stage recorder, lat. 39°52', long. 122°33', in SE¼ sec. 5, T. 23 N., R. 6 W., half a mile upstream from Paskenta and 4½ miles downstream from Mill Creek.

Drainage area.- 188 square miles.

Records available.- August 1930 to September 1940. October 1920 to August 1930, at site half a mile downstream prior to January 1921 (gage heights only).

Average discharge.- 19 years (1921-40), 231 second-feet.

Extremes.- Maximum discharge during year, 14,500 second-feet Feb. 28 (gage height, 14.3 feet); minimum, 1.5 second-feet Oct. 3, 4.

1921-40: Maximum discharge observed, about 16,600 second-feet Mar. 26, 1928 (gage height, 10.5 feet, site and datum then in use), from rating curve extended above 9,000 second-feet; no flow at times in 1921, 1922, 1924, 1926, 1929-34, 1939.

Remarks.- Records fair. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|-------|------------------|--------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 3.0 | 2.8 | 4.3 | 2,360 | 992 | 1,860 | 1,660 | 290 | 152 | 24 | 4.0 | 2.4 |
| 2 | 1.9 | 2.8 | 4.6 | 1,990 | 824 | 1,580 | 1,300 | 314 | 158 | 22 | 4.0 | 2.4 |
| 3 | 1.6 | 3.0 | 4.6 | 1,280 | 1,290 | 1,260 | 1,120 | 297 | 136 | 19 | 3.6 | 2.6 |
| 4 | 1.6 | 2.8 | 4.6 | 1,940 | 2,010 | 1,100 | 944 | 365 | 124 | 17 | 3.6 | 3.0 |
| 5 | 1.7 | 2.8 | 4.6 | 786 | 2,010 | 999 | 830 | 322 | 116 | 16 | 3.4 | 3.2 |
| 6 | 1.9 | 2.8 | 4.6 | 529 | 2,340 | 878 | 740 | 294 | 108 | 13 | 3.4 | 3.2 |
| 7 | 2.1 | 2.8 | 4.9 | 517 | 1,580 | 902 | 770 | 297 | 103 | 12 | 3.4 | 3.0 |
| 8 | 2.1 | 2.8 | 5.5 | 634 | 1,130 | 878 | 776 | 290 | 96 | 12 | 3.2 | 3.2 |
| 9 | 2.3 | 3.0 | 742 | 1,150 | 890 | 794 | 698 | 294 | 88 | 11 | 3.0 | 3.2 |
| 10 | 2.5 | 2.8 | 576 | 1,300 | 806 | 692 | 632 | 337 | 84 | 9.5 | 2.8 | 3.2 |
| 11 | 2.3 | 3.0 | 422 | 946 | 722 | 608 | 656 | 352 | 80 | 9 | 2.6 | 3.4 |
| 12 | 2.3 | 3.0 | 156 | 730 | 608 | 540 | 674 | 356 | 75 | 9 | 2.6 | 4.2 |
| 13 | 2.3 | 3.0 | 96 | 536 | 728 | 475 | 680 | 348 | 71 | 8.5 | 2.6 | 5.0 |
| 14 | 2.3 | 3.0 | 65 | 434 | 770 | 426 | 680 | 311 | 67 | 8 | 2.4 | 4.2 |
| 15 | 2.3 | 3.0 | 51 | 366 | 570 | 408 | 626 | 283 | 62 | 7.5 | 2.6 | 4.2 |
| 16 | 2.3 | 3.0 | 42 | 309 | 515 | 431 | 555 | 254 | 60 | 7 | 2.8 | 5.5 |
| 17 | 2.3 | 3.0 | 97 | 269 | 830 | 440 | 500 | 251 | 57 | 6.5 | 2.8 | 6 |
| 18 | 2.3 | 3.2 | 88 | 244 | 602 | 412 | 510 | 235 | 53 | 6.5 | 2.6 | 6 |
| 19 | 2.1 | 3.2 | 62 | 224 | 520 | 412 | 515 | 222 | 48 | 6.5 | 2.6 | 6 |
| 20 | 2.1 | 3.2 | 53 | 203 | 470 | 435 | 495 | 212 | 45 | 7 | 2.6 | 5.5 |
| 21 | 1.9 | 3.2 | 44 | 187 | 450 | 460 | 460 | 210 | 39 | 15 | 2.6 | 5.0 |
| 22 | 1.9 | 3.4 | 38 | 183 | 435 | 515 | 460 | 200 | 36 | 11 | 2.6 | 4.8 |
| 23 | 1.9 | 3.4 | 40 | 191 | 412 | 520 | 445 | 196 | 33 | 8.5 | 2.6 | 4.8 |
| 24 | 1.9 | 3.6 | 36 | 203 | 450 | 555 | 422 | 183 | 32 | 6.5 | 2.6 | 4.8 |
| 25 | 2.1 | 4.1 | 32 | 896 | 866 | 555 | 394 | 172 | 30 | 5.5 | 2.6 | 4.5 |
| 26 | 2.1 | 4.9 | 30 | 2,260 | 2,970 | 2,420 | 352 | 152 | 29 | 4.8 | 2.6 | 4.5 |
| 27 | 2.5 | 4.9 | 28 | 1,330 | 10,800 | 1,910 | 314 | 140 | 27 | 4.5 | 2.6 | 4.2 |
| 28 | 2.5 | 4.6 | 61 | 896 | 9,460 | 1,380 | 297 | 140 | 25 | 4.5 | 2.6 | 4.5 |
| 29 | 2.5 | 4.6 | 396 | 770 | 3,100 | 3,790 | 280 | 132 | 24 | 4.5 | 2.4 | 4.2 |
| 30 | 2.5 | 4.3 | 603 | 794 | - | 4,380 | 267 | 194 | 24 | 4.5 | 2.4 | 4.2 |
| 31 | 2.5 | - | 1,330 | 836 | - | 2,500 | - | 164 | - | 4.2 | 2.4 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 67.6 | | 3.0 | 1.6 | 2.18 | 134 | | | |
| November..... | | | | 100.0 | | 4.9 | 2.8 | 3.33 | 198 | | | |
| December..... | | | | 5,125.7 | | 1,330 | 4.3 | 165 | 10,170 | | | |
| Calendar year 1939..... | | | | 31,679.1 | | 1,330 | 0 | 86.8 | 62,840 | | | |
| January..... | | | | 25,283 | | 2,360 | 183 | 816 | 50,150 | | | |
| February..... | | | | 49,150 | | 10,800 | 412 | 1,695 | 97,490 | | | |
| March..... | | | | 34,515 | | 4,380 | 408 | 1,113 | 68,460 | | | |
| April..... | | | | 19,072 | | 1,660 | 267 | 636 | 37,830 | | | |
| May..... | | | | 7,807 | | 365 | 132 | 252 | 15,480 | | | |
| June..... | | | | 2,081 | | 158 | 24 | 69.4 | 4,130 | | | |
| July..... | | | | 304.5 | | 24 | 4.2 | 9.92 | 604 | | | |
| August..... | | | | 88.6 | | 4.0 | 2.4 | 2.96 | 176 | | | |
| September..... | | | | 124.9 | | 6 | 2.4 | 4.16 | 248 | | | |
| Water year 1939-40..... | | | | 143,719.3 | | 10,800 | 1.6 | 393 | 285,100 | | | |

Peak discharge.- Jan. 1 (6 p.m.) 4,390 sec.-ft.; Jan. 26 (10 a.m.) 3,480 sec.-ft.; Feb. 6 (11 a.m.) 3,330 sec.-ft.; Feb. 28 (3 a.m.) 14,500 sec.-ft.; Mar. 26 (5 p.m.) 5,450 sec.-ft.; Mar. 29 (8 p.m.) 6,910 sec.-ft.

Deer Creek near Vina, Calif.

Location.- Water-stage recorder, lat. 40°01', long. 121°56', in NE¼ sec. 23, T. 25 N., R. 1 W., 0.8 mile upstream from concrete diversion dam and 9 miles northeast of Vina. Prior to Jan. 19, 1939, at datum 2.64 feet higher. Altitude of gage, about 480 feet (from topographic map).

Drainage area.- 200 square miles.

Records available.- October 1911 to December 1915, March 1920 to December 1937, January 1939 to September 1940.

Average discharge.- 21 years (1912-15, 1920-37, 1939-40), 272 second-feet.

Extremes.- Maximum discharge during year, 18,400 second-feet Feb. 28 (gage height, 13.8 feet); minimum, 73 second-feet Oct. 1. 1911-15; 1920-40: Maximum discharge, 23,800 second-feet Dec. 10, 1937 (gage height, 19.2 feet, present datum, from floodmarks), from rating curve extended above 8,000 second-feet; minimum, 43 second-feet Dec. 13, 1932.

Remarks.- Records good. No diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | 75 | 78 | 78 | 1,580 | 335 | 2,680 | 3,010 | 321 | 200 | 122 | 97 | 89 |
| 2 | 95 | 78 | 78 | 1,900 | 331 | 1,870 | 2,020 | 318 | 193 | 118 | 97 | 89 |
| 3 | 83 | 78 | 78 | 770 | 1,500 | 1,410 | 1,540 | 344 | 186 | 117 | 97 | 90 |
| 4 | 78 | 78 | 78 | 1,060 | 1,240 | 1,180 | 1,280 | 352 | 179 | 115 | 96 | 97 |
| 5 | 80 | 76 | 78 | 645 | 1,070 | 990 | 1,060 | 368 | 174 | 114 | 96 | 96 |
| 6 | 90 | 76 | 78 | 508 | 1,120 | 870 | 918 | 325 | 168 | 112 | 94 | 96 |
| 7 | 90 | 76 | 80 | 787 | 993 | 760 | 855 | 303 | 162 | 112 | 94 | 94 |
| 8 | 81 | 76 | 84 | 2,080 | 740 | 712 | 810 | 287 | 157 | 110 | 93 | 93 |
| 9 | 78 | 76 | 331 | 1,500 | 600 | 673 | 732 | 274 | 153 | 110 | 93 | 92 |
| 10 | 76 | 76 | 703 | 1,450 | 522 | 595 | 673 | 268 | 151 | 109 | 90 | 92 |
| 11 | 76 | 76 | 530 | 986 | 472 | 547 | 621 | 265 | 147 | 108 | 90 | 92 |
| 12 | 75 | 76 | 191 | 712 | 400 | 480 | 577 | 265 | 145 | 108 | 90 | 92 |
| 13 | 75 | 76 | 151 | 508 | 427 | 435 | 577 | 268 | 142 | 106 | 90 | 92 |
| 14 | 75 | 76 | 112 | 398 | 655 | 408 | 559 | 265 | 138 | 106 | 90 | 99 |
| 15 | 75 | 76 | 104 | 321 | 486 | 391 | 559 | 262 | 136 | 106 | 90 | 94 |
| 16 | 75 | 76 | 99 | 270 | 409 | 440 | 524 | 256 | 134 | 104 | 90 | 94 |
| 17 | 75 | 75 | 106 | 237 | 1,300 | 470 | 491 | 247 | 134 | 104 | 90 | 99 |
| 18 | 75 | 75 | 116 | 213 | 826 | 408 | 470 | 236 | 132 | 104 | 90 | 106 |
| 19 | 75 | 75 | 99 | 196 | 605 | 387 | 460 | 231 | 130 | 104 | 89 | 115 |
| 20 | 75 | 75 | 99 | 183 | 490 | 379 | 445 | 225 | 130 | 104 | 87 | 102 |
| 21 | 75 | 75 | 95 | 170 | 427 | 375 | 430 | 220 | 129 | 103 | 87 | 97 |
| 22 | 75 | 76 | 93 | 163 | 396 | 375 | 426 | 215 | 125 | 103 | 89 | 94 |
| 23 | 78 | 76 | 91 | 158 | 360 | 385 | 408 | 210 | 124 | 102 | 89 | 94 |
| 24 | 93 | 76 | 91 | 165 | 356 | 421 | 404 | 208 | 122 | 100 | 90 | 96 |
| 25 | 104 | 80 | 90 | 686 | 522 | 692 | 396 | 200 | 120 | 99 | 90 | 96 |
| 26 | 86 | 95 | 86 | 1,320 | 3,550 | 1,460 | 391 | 198 | 120 | 99 | 90 | 97 |
| 27 | 83 | 83 | 86 | 794 | 11,800 | 1,850 | 383 | 195 | 120 | 100 | 90 | 106 |
| 28 | 83 | 80 | 90 | 560 | 12,300 | 1,390 | 356 | 193 | 120 | 100 | 90 | 100 |
| 29 | 81 | 80 | 124 | 445 | 5,220 | 2,760 | 356 | 188 | 120 | 100 | 90 | 94 |
| 30 | 80 | 78 | 153 | 380 | - | 8,290 | 333 | 205 | 122 | 100 | 89 | 92 |
| 31 | 78 | - | 307 | 349 | - | 5,430 | - | 215 | - | 99 | 89 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 2,491 | 104 | 75 | 80.4 | 4,940 | | | | |
| November..... | | | | 2,323 | 95 | 75 | 77.4 | 4,610 | | | | |
| December..... | | | | 4,559 | 703 | 78 | 147 | 9,040 | | | | |
| Calendar year | | | | - | - | - | - | - | | | | |
| January..... | | | | 21,484 | 2,080 | 158 | 693 | 42,610 | | | | |
| February..... | | | | 49,452 | 12,300 | 331 | 1,705 | 98,090 | | | | |
| March..... | | | | 39,511 | 8,290 | 375 | 1,275 | 78,370 | | | | |
| April..... | | | | 22,064 | 3,010 | 333 | 735 | 43,760 | | | | |
| May..... | | | | 7,927 | 368 | 188 | 256 | 15,720 | | | | |
| June..... | | | | 4,313 | 200 | 120 | 144 | 8,550 | | | | |
| July..... | | | | 3,298 | 122 | 99 | 106 | 6,540 | | | | |
| August..... | | | | 2,826 | 97 | 87 | 91.2 | 5,610 | | | | |
| September..... | | | | 2,879 | 115 | 89 | 96.0 | 5,710 | | | | |
| Water year 1939-40..... | | | | 163,127 | 12,300 | 75 | 446 | 323,600 | | | | |

Peak discharge.- Jan. 1 (6:30 p.m.) 2,820 sec.-ft.; Jan. 8 (7:30 a.m.) 2,880 sec.-ft.; Feb. 3 (5:30 p.m.) 4,020 sec.-ft.; Feb. 28 (6 a.m.) 18,400 sec.-ft.; Mar. 26 (10:30 p.m.) 2,830 sec.-ft.; Mar. 30 (9 p.m.) 10,800 sec.-ft.

Chico Creek near Chico, Calif.

Location.— Water-stage recorder, lat. 39°46', long. 121°46', in Arroyo Chico grant, 1 mile upstream from golf clubhouse in Municipal Park, and 6 miles northeast of Chico, Butte County. Altitude of gage, about 400 feet (from topographic map).

Drainage area.— 68.3 square miles.

Records available.— May 1930 to September 1940.

Average discharge.— 10 years, 121 second-feet.

Extremes.— Maximum discharge during year, 7,040 second-feet Feb. 27 (gage height, 14.52 feet); minimum, 20 second-feet Oct. 13-23.

1930-40: Maximum discharge, 8,260 second-feet Dec. 10, 1937 (gage height 16.6 feet), from rating curve extended above 5,000 second-feet on basis of rating at cable gage, velocity-area studies, and logarithmic plotting; minimum, 10 second-feet (regulated) Dec. 11, 1932 and Aug. 15, 1939.

Remarks.— Records good. No large diversion above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 21 | 22 | 23 | 1,020 | 171 | 1,710 | 1,670 | 32 | 52 | 33 | 24 | 22 |
| 2 | 24 | 22 | 23 | 1,750 | 160 | 1,040 | 1,020 | 81 | 48 | 31 | 24 | 22 |
| 3 | 23 | 22 | 23 | 526 | 636 | 747 | 748 | 35 | 46 | 30 | 24 | 22 |
| 4 | 21 | 22 | 22 | 766 | 823 | 577 | 589 | 101 | 46 | 29 | 24 | 24 |
| 5 | 22 | 22 | 23 | 362 | 730 | 464 | 468 | 97 | 43 | 29 | 24 | 24 |
| 6 | 27 | 22 | 23 | 246 | 665 | 383 | 385 | 86 | 42 | 29 | 24 | 24 |
| 7 | 25 | 22 | 23 | 364 | 545 | 321 | 340 | 81 | 41 | 28 | 24 | 24 |
| 8 | 22 | 22 | 25 | 2,000 | 419 | 280 | 291 | 76 | 40 | 28 | 24 | 24 |
| 9 | 22 | 23 | 111 | 1,300 | 322 | 253 | 258 | 73 | 39 | 28 | 23 | 24 |
| 10 | 21 | 23 | 321 | 1,040 | 263 | 226 | 230 | 70 | 38 | 28 | 23 | 23 |
| 11 | 21 | 23 | 225 | 812 | 224 | 208 | 204 | 68 | 38 | 28 | 22 | 23 |
| 12 | 21 | 23 | 83 | 494 | 196 | 156 | 185 | 67 | 37 | 28 | 22 | 22 |
| 13 | 20 | 23 | 54 | 317 | 205 | 168 | 171 | 65 | 36 | 28 | 22 | 24 |
| 14 | 20 | 23 | 43 | 232 | 354 | 157 | 161 | 63 | 36 | 27 | 22 | 24 |
| 15 | 20 | 23 | 37 | 179 | 289 | 147 | 153 | 62 | 35 | 27 | 22 | 23 |
| 16 | 20 | 23 | 33 | 152 | 238 | 149 | 145 | 57 | 34 | 26 | 22 | 24 |
| 17 | 20 | 23 | 33 | 129 | 440 | 142 | 138 | 54 | 34 | 27 | 22 | 24 |
| 18 | 20 | 23 | 32 | 116 | 440 | 130 | 130 | 52 | 33 | 27 | 22 | 24 |
| 19 | 20 | 23 | 30 | 106 | 365 | 123 | 124 | 51 | 33 | 27 | 22 | 27 |
| 20 | 20 | 23 | 30 | 96 | 299 | 116 | 117 | 50 | 33 | 26 | 22 | 24 |
| 21 | 20 | 23 | 29 | 89 | 259 | 111 | 112 | 49 | 32 | 26 | 22 | 24 |
| 22 | 20 | 23 | 28 | 85 | 238 | 107 | 107 | 48 | 32 | 25 | 22 | 22 |
| 23 | 20 | 23 | 28 | 81 | 218 | 103 | 104 | 47 | 32 | 25 | 22 | 23 |
| 24 | 30 | 23 | 28 | 53 | 203 | 108 | 101 | 46 | 33 | 24 | 22 | 23 |
| 25 | 33 | 24 | 27 | 506 | 277 | 121 | 103 | 45 | 33 | 24 | 22 | 23 |
| 26 | 24 | 28 | 27 | 1,770 | 1,690 | 537 | 104 | 45 | 33 | 25 | 22 | 23 |
| 27 | 24 | 24 | 27 | 752 | 6,310 | 703 | 101 | 44 | 33 | 25 | 22 | 24 |
| 28 | 24 | 24 | 28 | 434 | 5,710 | 533 | 98 | 44 | 30 | 25 | 22 | 26 |
| 29 | 23 | 25 | 33 | 299 | 3,200 | 2,030 | 96 | 44 | 33 | 25 | 22 | 25 |
| 30 | 23 | 25 | 35 | 232 | - | 4,840 | 86 | 58 | 33 | 24 | 22 | 24 |
| 31 | 22 | - | 79 | 194 | - | 3,180 | - | 67 | - | 24 | 22 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 693 | 33 | 20 | 22.4 | 1,370 | | |
| November..... | | | | | | 690 | 28 | 22 | 23.0 | 1,370 | | |
| December..... | | | | | | 1,586 | 321 | 22 | 51.2 | 3,150 | | |
| Calendar year 1939..... | | | | | | 15,691 | 321 | 18 | 43.0 | 31,130 | | |
| January..... | | | | | | 16,532 | 2,000 | 31 | 533 | 32,790 | | |
| February..... | | | | | | 25,889 | 6,310 | 160 | 893 | 51,350 | | |
| March..... | | | | | | 19,900 | 4,340 | 103 | 642 | 39,470 | | |
| April..... | | | | | | 8,539 | 1,670 | 86 | 285 | 16,940 | | |
| May..... | | | | | | 1,958 | 101 | 44 | 63.2 | 3,880 | | |
| June..... | | | | | | 1,108 | 52 | 30 | 36.9 | 2,200 | | |
| July..... | | | | | | 836 | 33 | 24 | 27.0 | 1,660 | | |
| August..... | | | | | | 700 | 24 | 22 | 22.6 | 1,390 | | |
| September..... | | | | | | 711 | 27 | 22 | 23.7 | 1,410 | | |
| Water year 1939-40..... | | | | | | 79,142 | 6,310 | 20 | 216 | 157,000 | | |

Peak discharge.— Jan. 1 (12 p.m.) 2,530 sec.-ft.; Jan. 8 (5 p.m.) 2,600 sec.-ft.; Jan. 26 (7 a.m.) 2,470 sec.-ft.; Feb. 27 (6 to 7 a.m.) 7,040 sec.-ft.; Mar. 26 (6:30 p.m.) 1,740 sec.-ft.; Mar. 30 (9 a.m.) 5,330 sec.-ft.

Stony Creek above Stony Gorge Reservoir, Calif.

Location.— Water-stage recorder, lat. 39°30'05", long. 122°31'00", in sec. 15, T. 19 N., R. 6 W., 700 feet downstream from road bridge and 6 miles south of Stony Gorge Dam.

Drainage area.— 266 square miles.

Records available.— October 1933 to September 1940.

Extremes.— Maximum discharge during year, 18,100 second-feet Feb. 28 (gage height, 12.40 feet); minimum, 9 second-feet Aug. 10.

1933-40: Maximum discharge, 20,800 second-feet Dec. 10, 1937 (gage height, 13.1 feet), from rating curve extended above 2,100 second-feet on basis of studies of change in contents in Stony Gorge Reservoir, 6 miles below station; minimum, 2.4 second-feet Aug. 22, Sept. 8, 1934.

Remarks.— Records good except those for periods of doubtful gage-height record, which are fair. Flow regulated by East Park Reservoir.

Cooperation.— Water-stage recorder graph and results of three discharge measurements furnished by E. A. Garland, Federal watermaster for Stony Creek and tributaries.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | 20 | 15 | 18 | 848 | 660 | 3,760 | 2,100 | 190 | 131 | 38 | 18 | d360 |
| 2 | 18 | 15 | 18 | 1,110 | 468 | 2,560 | 1,470 | 182 | 133 | 36 | 16 | h362 |
| 3 | 17 | 15 | 18 | 688 | 1,030 | 1,740 | 1,150 | 180 | 118 | 34 | 15 | d355 |
| 4 | 15 | 42 | 18 | 1,160 | 1,250 | 1,310 | 935 | 225 | 106 | 34 | 15 | d350 |
| 5 | 15 | 95 | 18 | 531 | 1,130 | 1,030 | 790 | 231 | 93 | 31 | 15 | d345 |
| 6 | 19 | 80 | 18 | 386 | 1,080 | 814 | 688 | 207 | 88 | 26 | 15 | d340 |
| 7 | 27 | 57 | 18 | 685 | 868 | 677 | 660 | 195 | 80 | 24 | 14 | h266 |
| 8 | 22 | 32 | 18 | 1,400 | 660 | 578 | 647 | 182 | 66 | 24 | 12 | 60 |
| 9 | 18 | 17 | 87 | 1,350 | 516 | 506 | 614 | 175 | 66 | 21 | 11 | h409 |
| 10 | 18 | 16 | 220 | 1,290 | 421 | 464 | 571 | 170 | 64 | 23 | 12 | d406 |
| 11 | 17 | 16 | 274 | 1,030 | 355 | 446 | 535 | 162 | 61 | 23 | 14 | d408 |
| 12 | 16 | 14 | 101 | 704 | 286 | 435 | 502 | 155 | 56 | 23 | 14 | d407 |
| 13 | 15 | 15 | 66 | 511 | 874 | 424 | 470 | 155 | 53 | 23 | 201 | d406 |
| 14 | 16 | 16 | 55 | 386 | 1,020 | 416 | 449 | 153 | 54 | 26 | 332 | d405 |
| 15 | 16 | 15 | 45 | 318 | 592 | 413 | 404 | 150 | 51 | 24 | 328 | d404 |
| 16 | 15 | 15 | 40 | 256 | 472 | 406 | 376 | 148 | 48 | 24 | 328 | h404 |
| 17 | 15 | 15 | 43 | 212 | 1,430 | 395 | 349 | 144 | 50 | 28 | 325 | d400 |
| 18 | 15 | 15 | 43 | 183 | 775 | 384 | 298 | 133 | 50 | 28 | 328 | d390 |
| 19 | 15 | 15 | 40 | 133 | 582 | 378 | 269 | 133 | 51 | 24 | 345 | d380 |
| 20 | 15 | 14 | 37 | 103 | 468 | 372 | 259 | 129 | 52 | 26 | d365 | d340 |
| 21 | 15 | 14 | 36 | 94 | 399 | 366 | 245 | 123 | 48 | 26 | h367 | d40 |
| 22 | 15 | 15 | 35 | 85 | 351 | 363 | 238 | 112 | 47 | 26 | d365 | d25 |
| 23 | 15 | 15 | 38 | 95 | 506 | 360 | 231 | 108 | 43 | 25 | d360 | h20 |
| 24 | 15 | 14 | 36 | 94 | 286 | 360 | 228 | 106 | 41 | 25 | d355 | d20 |
| 25 | 16 | 16 | 35 | 2,150 | 372 | 560 | 248 | 100 | 41 | 24 | d350 | 18 |
| 26 | 17 | 18 | 34 | 2,160 | 1,680 | 1,080 | 302 | 103 | 41 | 24 | h345 | 15 |
| 27 | 17 | 18 | 34 | 1,000 | 8,920 | 1,400 | 266 | 105 | 40 | 24 | d345 | 13 |
| 28 | 16 | 18 | 38 | 660 | 13,300 | 1,020 | 235 | 105 | 38 | 21 | d350 | 14 |
| 29 | 15 | 18 | 128 | 492 | 6,250 | 2,430 | 219 | 103 | 38 | 20 | d350 | 18 |
| 30 | 16 | 18 | 152 | 403 | - | 4,120 | 198 | 144 | 38 | 19 | d355 | 19 |
| 31 | 16 | - | 348 | 577 | - | 3,180 | - | 146 | - | 21 | d355 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 517 | 27 | 15 | 16.7 | 1,030 | | | | |
| November..... | | | | 696 | 95 | 14 | 23.3 | 1,380 | | | | |
| December..... | | | | 2,109 | 348 | 18 | 68.0 | 4,180 | | | | |
| Calendar year 1939..... | | | | 41,043.0 | 384 | 5.5 | 112 | 81,410 | | | | |
| January..... | | | | 21,074 | 2,160 | 85 | 680 | 41,800 | | | | |
| February..... | | | | 46,801 | 13,300 | 286 | 1,614 | 92,830 | | | | |
| March..... | | | | 32,545 | 4,120 | 360 | 1,050 | 64,550 | | | | |
| April..... | | | | 15,946 | 2,100 | 198 | 532 | 31,630 | | | | |
| May..... | | | | 4,654 | 231 | 100 | 150 | 9,230 | | | | |
| June..... | | | | 1,886 | 133 | 38 | 62.9 | 3,740 | | | | |
| July..... | | | | 795 | 38 | 19 | 25.6 | 1,580 | | | | |
| August..... | | | | 6,620 | 367 | 11 | 214 | 13,130 | | | | |
| September..... | | | | 7,401 | 409 | 13 | 247 | 14,680 | | | | |
| Water year 1939-40..... | | | | 141,046 | 13,300 | 11 | 385 | 279,800 | | | | |

d Doubtful gage-height record; discharge computed on basis of staff-gage readings and shape of water-stage recorder graph.

h Discharge computed from outside staff-gage reading.

Grindstone Creek near Elk Creek, Calif.

Location.- Water-stage recorder, lat. 39°41', long. 122°32', in sec. 15, T. 21 N., R. 6 W., at county road bridge, 0.6 mile upstream from mouth and 5 miles north of town of Elk Creek. Former gage at site 0.2 mile downstream at different datum.

Drainage area.- 166 square miles.

Records available.- November 1935 to September 1937, October 1939 to April 1940.

Extremes.- Maximum discharge during period October to April, 13,000 second-feet Feb. 27 (gage height, 7.55 feet); no flow Oct. 1 to Dec. 8.
1935-37; 1939-40: Maximum discharge computed, that of Feb. 27, 1940; no flow Oct. 24 to Dec. 23, 1936, Oct. 1 to Dec. 8, 1939.
A stage of 9.55 feet, former site and datum, occurred Dec. 11, 1937 (discharge not determined).

Remarks.- Records fair.

Cooperation.- Water-stage recorder record furnished by E. A. Garland, Federal Court Water Master for Stony Creek and tributaries.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|-------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | | 0 | 302 | 314 | 1,170 | 1,430 | | | | | |
| 2 | | | 0 | 430 | 230 | 890 | 1,230 | | | | | |
| 3 | | | 0 | 293 | 663 | 872 | 1,130 | | | | | |
| 4 | | | 0 | 588 | 1,220 | 783 | 1,000 | | | | | |
| 5 | | | 0 | 242 | 1,100 | 691 | 870 | | | | | |
| 6 | | | 0 | 161 | 1,070 | 587 | 770 | | | | | |
| 7 | | | 0 | 216 | 317 | 488 | 750 | | | | | |
| 8 | | | 0 | 424 | 570 | 431 | 690 | | | | | |
| 9 | | | 48 | 610 | 410 | 352 | 622 | | | | | |
| 10 | | | 92 | 632 | 321 | 285 | 584 | | | | | |
| 11 | | | 109 | 456 | 258 | 252 | 539 | | | | | |
| 12 | | | 37 | 288 | 205 | 195 | 512 | | | | | |
| 13 | | | 18 | 203 | 430 | 171 | 476 | | | | | |
| 14 | | | 12 | 153 | 540 | 145 | 460 | | | | | |
| 15 | | | 9 | 126 | 307 | 131 | 442 | | | | | |
| 16 | | | 7.5 | 109 | 235 | 127 | 408 | | | | | |
| 17 | | | 7 | 92 | 874 | 111 | 368 | | | | | |
| 18 | | | 23 | 81 | 477 | 88 | 336 | | | | | |
| 19 | | | 15 | 72 | 328 | 61 | 320 | | | | | |
| 20 | | | 12 | 62 | 252 | 78 | 290 | | | | | |
| 21 | | | 10 | 55 | 215 | 70 | 275 | | | | | |
| 22 | | | 10 | 48 | 195 | 70 | 260 | | | | | |
| 23 | | | 9 | 52 | 174 | 74 | 245 | | | | | |
| 24 | | | 8.5 | 55 | 174 | 74 | 245 | | | | | |
| 25 | | | 7 | 920 | 282 | 54 | 282 | | | | | |
| 26 | | | 5.5 | 1,310 | 1,140 | 752 | 252 | | | | | |
| 27 | | | 6 | 540 | 4,870 | 724 | 210 | | | | | |
| 28 | | | 6.5 | 307 | 7,000 | 651 | 166 | | | | | |
| 29 | | | 96 | 225 | 1,820 | 1,440 | 142 | | | | | |
| 30 | | | 154 | 190 | - | 2,420 | 116 | | | | | |
| 31 | | | 246 | 215 | - | 1,680 | - | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 948.0 | 246 | 0 | 30.6 | 1,880 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 9,457 | 1,310 | 45 | 305 | 18,760 | | |
| February..... | | | | | | 26,491 | 7,000 | 174 | 913 | 52,540 | | |
| March..... | | | | | | 15,870 | 2,420 | 70 | 515 | 31,680 | | |
| April..... | | | | | | 15,422 | 1,430 | 116 | 514 | 30,590 | | |
| May..... | | | | | | - | - | - | - | - | | |
| June..... | | | | | | - | - | - | - | - | | |
| July..... | | | | | | - | - | - | - | - | | |
| August..... | | | | | | - | - | - | - | - | | |
| September..... | | | | | | - | - | - | - | - | | |
| The period..... | | | | | | - | - | - | - | 135,400 | | |

BUTTE CREEK BASIN

Butte Creek near Chico, Calif.

Location.— Water-stage recorder, lat. 39°44', long. 121°42', in sec. 25, T. 22 N., R. 2 E., half a mile downstream from Little Butte Creek and 7½ miles east of Chico. Altitude of gage, about 350 feet (from topographic map).

Drainage area.— 148 square miles.

Records available.— November 1930 to September 1940.

Extremes.— Maximum discharge during year, 12,400 second-feet Feb. 28 (gage height, 13.8 feet); minimum, 30 second-feet (regulated) Nov. 9.

1930-40: Maximum discharge, 17,000 second-feet Dec. 11, 1937 (gage height, 18.9 feet), from rating curve extended above 6,000 second-feet on basis of logarithmic plotting; minimum discharge recorded, 22 second-feet (regulated) Aug. 19, 1939.

Remarks.— Records good. Butte Creek receives considerable water above station from

West Branch of Feather River by way of De Sabla and Centerville power plants. Pacific Gas & Electric Co. has furnished the following record of this flow for 1939-40:

Monthly discharge, water year October 1939 to September 1940

| Month | Mean (second-feet) | Run-off (acre-feet) |
|-------------------------|-----------------------|------------------------|
| October..... | 49.2 | 3,020 |
| November..... | 30.3 | 1,800 |
| December..... | 46.8 | 2,880 |
| January..... | 66.9 | 4,110 |
| February..... | 13.8 | 793 |
| March..... | .7 | 44 |
| April..... | 7.2 | 428 |
| May..... | 46.7 | 2,870 |
| June..... | 53.0 | 3,150 |
| July..... | 33.6 | 2,070 |
| August..... | 35.7 | 2,200 |
| September..... | 37.2 | 2,210 |
| Water year 1939-40..... | 35.1 | 25,580 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|-------|-------|-----|------|------|------|-------|
| 1 | 105 | 117 | 92 | 1,210 | 501 | 3,640 | 3,700 | 402 | 326 | 147 | 115 | 112 |
| 2 | 140 | 117 | 89 | 2,490 | 505 | 2,480 | 2,830 | 407 | 302 | 145 | 115 | 113 |
| 3 | 125 | 92 | 95 | 900 | 1,490 | 1,900 | 2,270 | 430 | 288 | 138 | 113 | 115 |
| 4 | 105 | 93 | 92 | 1,230 | 1,570 | 1,540 | 1,780 | 495 | 280 | 132 | 113 | 119 |
| 5 | 112 | 75 | 92 | 646 | 1,390 | 1,280 | 1,470 | 448 | 267 | 130 | 113 | 121 |
| 6 | 132 | 100 | 97 | 516 | 1,430 | 1,120 | 1,270 | 372 | 240 | 128 | 115 | 121 |
| 7 | 110 | 95 | 92 | 593 | 1,220 | 1,000 | 1,180 | 352 | 220 | 130 | 115 | 119 |
| 8 | 121 | 95 | 104 | 2,630 | 945 | 900 | 1,050 | 368 | 206 | 130 | 115 | 119 |
| 9 | 100 | 76 | 305 | 1,970 | 805 | 504 | 970 | 364 | 192 | 130 | 113 | 117 |
| 10 | 110 | 95 | 621 | 1,710 | 715 | 726 | 879 | 448 | 184 | 128 | 113 | 117 |
| 11 | 110 | 85 | 585 | 1,390 | 641 | 668 | 817 | 438 | 184 | 125 | 112 | 115 |
| 12 | 109 | 79 | 243 | 1,000 | 556 | 587 | 752 | 398 | 187 | 125 | 112 | 115 |
| 13 | 105 | 93 | 204 | 760 | 572 | 531 | 705 | 348 | 184 | 123 | 110 | 117 |
| 14 | 116 | 92 | 191 | 624 | 775 | 490 | 668 | 326 | 184 | 121 | 112 | 117 |
| 15 | 107 | 84 | 174 | 524 | 637 | 448 | 680 | 316 | 182 | 123 | 112 | 117 |
| 16 | 102 | 97 | 123 | 468 | 548 | 470 | 611 | 316 | 192 | 193 | 112 | 119 |
| 17 | 109 | 92 | 170 | 426 | 762 | 448 | 548 | 352 | 184 | 123 | 112 | 119 |
| 18 | 100 | 79 | 154 | 396 | 700 | 402 | 553 | 333 | 182 | 123 | 101 | 121 |
| 19 | 93 | 97 | 161 | 392 | 606 | 368 | 520 | 326 | 179 | 123 | 113 | 123 |
| 20 | 81 | 97 | 136 | 356 | 524 | 364 | 536 | 319 | 179 | 121 | 113 | 121 |
| 21 | 82 | 95 | 136 | 341 | 501 | 356 | 548 | 312 | 170 | 121 | 113 | 119 |
| 22 | 104 | 97 | 121 | 320 | 464 | 348 | 536 | 305 | 167 | 119 | 112 | 117 |
| 23 | 112 | 84 | 146 | 320 | 450 | 340 | 520 | 298 | 160 | 117 | 112 | 117 |
| 24 | 134 | 84 | 132 | 329 | 440 | 372 | 500 | 291 | 158 | 115 | 113 | 117 |
| 25 | 146 | 110 | 116 | 1,060 | 724 | 456 | 495 | 284 | 158 | 115 | 113 | 119 |
| 26 | 105 | 102 | 125 | 2,730 | 3,740 | 1,610 | 466 | 280 | 158 | 115 | 113 | 119 |
| 27 | 116 | 100 | 121 | 1,220 | 10,500 | 1,890 | 438 | 274 | 156 | 115 | 113 | 123 |
| 28 | 138 | 97 | 117 | 820 | 10,200 | 1,310 | 412 | 267 | 151 | 117 | 113 | 121 |
| 29 | 138 | 92 | 150 | 664 | 6,060 | 4,730 | 425 | 264 | 147 | 117 | 113 | 121 |
| 30 | 126 | 95 | 167 | 585 | - | 8,920 | 407 | 280 | 149 | 115 | 113 | 119 |
| 31 | 123 | - | 209 | 532 | - | 5,800 | - | 356 | - | 115 | 112 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 3,516 | 146 | 81 | 113 | 6,970 |
| November..... | 2,769 | 117 | 75 | 92.3 | 5,490 |
| December..... | 5,340 | 621 | 87 | 172 | 10,580 |
| Calendar year 1939..... | 63,684 | 621 | 60 | 174 | 126,500 |
| January..... | 29,142 | 2,730 | 320 | 940 | 57,800 |
| February..... | 49,974 | 10,500 | 440 | 1,725 | 99,120 |
| March..... | 46,298 | 8,920 | 340 | 1,495 | 81,830 |
| April..... | 28,547 | 3,700 | 407 | 952 | 56,520 |
| May..... | 10,769 | 495 | 264 | 347 | 21,360 |
| June..... | 5,906 | 326 | 147 | 197 | 11,710 |
| July..... | 3,849 | 147 | 115 | 124 | 7,630 |
| August..... | 3,489 | 115 | 101 | 113 | 6,920 |
| September..... | 3,549 | 123 | 112 | 118 | 7,040 |
| Water year 1939-40..... | 193,148 | 10,500 | 75 | 528 | 383,100 |

Peak discharge.— Jan. 2 (2 a.m.) 3,180 sec.-ft.; Jan. 8 (7:30 p.m.) 3,450 sec.-ft.; Jan. 26 (7 a.m.) 4,180 sec.-ft.; Feb. 28 (8 a.m.) 12,400 sec.-ft.; Mar. 26 (6:30 p.m.) 3,740 sec.-ft.; Mar. 30 (12 m.) 9,760 sec.-ft.

Lake Almanor near Prattville, Calif.

Location.— Staff gage, lat. 40°10'30", long. 121°05'25", in NW¼ sec. 28, T. 27 N., R. 8 E., at outlet tower at dam on North Fork of Feather River and 5 miles southeast of Prattville. Datum of gage is 4,400 feet above mean sea level; gage readings have been reduced to elevations above mean sea level.

Drainage area.— 506 square miles.

Records available.— October 1913 to September 1940. 1913 to 1930, summary records only.

Extremes.— Maximum contents observed during year, 524,300 acre-feet May 25 and 31 (elevation, 4,468.0 feet); minimum observed, 294,900 acre-feet Nov. 2 (elevation, 4,455.07 feet).

1913-40: Maximum contents, 798,900 acre-feet June 9, 1928 (elevation, 4,480.5 feet); minimum after initial filling, 5,230 acre-feet Feb. 5, 1918 (elevation, 4,416.1 feet).

Remarks.— Lake is formed by earth fill dam; storage began in July 1913; dam raised to elevation 4,455 feet above mean sea level in 1917 and to 4,515 feet in 1927. Storage is no longer carried above 4,468 feet. Capacity, 524,300 acre-feet between elevations 4,400 feet (bottom of outlet to river) and 4,468 feet above mean sea level. Water is diverted by tunnel to Butt Valley Reservoir for use in Caribou power plant and a small amount is released at Almanor Dam down natural channel of river. (See records for North Fork of Feather River near Prattville). Figures given herein represent contents at midnight, interpolated from readings made at 7 a.m., all of which is available for diversion to Butt Valley Reservoir except 15,700 acre-feet (below elevation 4,429 feet) that can only be released down the river.

Cooperation.— Record of contents furnished by Pacific Gas & Electric Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 323,700 | 295,100 | 298,000 | 303,200 | 363,300 | 456,900 | 508,700 | 496,800 | 523,700 | 514,600 | 482,200 | 439,000 |
| 2 | 323,100 | 294,900 | 298,700 | 309,900 | 365,000 | 480,300 | 508,500 | 497,400 | 523,200 | 513,700 | 481,400 | 436,900 |
| 3 | 321,800 | 295,800 | 299,300 | 313,800 | 366,900 | 483,500 | 507,200 | 500,300 | 523,000 | 512,700 | 480,700 | 435,100 |
| 4 | 320,700 | 296,500 | 299,300 | 316,500 | 369,600 | 465,100 | 504,500 | 501,500 | 523,200 | 511,900 | 479,900 | 432,900 |
| 5 | 319,900 | 297,300 | 298,800 | 318,900 | 371,700 | 465,500 | 502,500 | 504,800 | 523,200 | 510,900 | 479,900 | 430,900 |
| 6 | 319,400 | 298,000 | 298,700 | 320,800 | 374,600 | 465,500 | 500,300 | 506,200 | 523,000 | 509,700 | 480,300 | 429,100 |
| 7 | 318,400 | 298,800 | 297,400 | 323,300 | 376,800 | 465,500 | 497,800 | 507,600 | 522,800 | 508,900 | 479,200 | 426,900 |
| 8 | 317,400 | 299,600 | 297,100 | 326,500 | 378,200 | 466,700 | 494,900 | 509,700 | 523,000 | 508,000 | 478,000 | 424,700 |
| 9 | 316,200 | 300,400 | 297,900 | 329,300 | 379,600 | 467,400 | 492,400 | 512,100 | 523,700 | 506,800 | 476,900 | 423,100 |
| 10 | 314,900 | 301,000 | 298,700 | 332,100 | 380,600 | 467,800 | 489,700 | 514,400 | 523,400 | 506,600 | 475,900 | 421,100 |
| 11 | 314,100 | 301,800 | 299,600 | 333,900 | 382,000 | 468,300 | 488,500 | 517,400 | 523,200 | 504,400 | 474,800 | 418,700 |
| 12 | 313,300 | 302,600 | 302,000 | 334,800 | 383,600 | 468,900 | 488,200 | 519,600 | 522,800 | 503,500 | 473,500 | 416,200 |
| 13 | 312,300 | 303,900 | 303,200 | 336,000 | 385,500 | 468,900 | 488,000 | 521,200 | 522,400 | 502,500 | 472,100 | 414,200 |
| 14 | 311,400 | 304,500 | 304,500 | 336,800 | 388,300 | 468,500 | 487,600 | 521,800 | 522,200 | 501,500 | 470,300 | 413,000 |
| 15 | 310,400 | 304,500 | 305,600 | 337,800 | 389,900 | 468,700 | 487,400 | 522,000 | 522,600 | 500,300 | 469,100 | 412,800 |
| 16 | 309,400 | 303,600 | 306,600 | 338,800 | 391,800 | 471,400 | 488,000 | 521,800 | 523,400 | 499,200 | 467,600 | 411,700 |
| 17 | 308,500 | 302,800 | 307,400 | 340,100 | 394,700 | 472,900 | 490,300 | 521,400 | 523,000 | 498,000 | 466,100 | 409,800 |
| 18 | 307,400 | 303,100 | 308,200 | 341,600 | 396,400 | 474,800 | 493,700 | 522,000 | 522,600 | 497,000 | 464,400 | 408,000 |
| 19 | 306,400 | 301,400 | 308,800 | 343,400 | 398,000 | 476,300 | 497,000 | 523,000 | 522,200 | 496,100 | 462,100 | 406,900 |
| 20 | 305,500 | 300,400 | 309,000 | 344,600 | 399,500 | 477,800 | 500,900 | 523,500 | 521,600 | 495,300 | 460,100 | 405,700 |
| 21 | 304,500 | 299,500 | 308,200 | 345,300 | 401,200 | 479,300 | 503,100 | 523,500 | 521,000 | 494,100 | 458,200 | 404,200 |
| 22 | 303,400 | 298,700 | 307,200 | 346,100 | 402,800 | 481,300 | 503,500 | 523,200 | 520,500 | 493,000 | 456,200 | 402,600 |
| 23 | 302,800 | 297,700 | 306,400 | 347,400 | 403,900 | 483,200 | 503,700 | 523,200 | 521,000 | 491,600 | 454,300 | 400,500 |
| 24 | 302,600 | 296,900 | 305,500 | 348,900 | 405,300 | 486,000 | 503,700 | 523,700 | 520,000 | 490,800 | 452,400 | 398,500 |
| 25 | 301,400 | 296,800 | 304,700 | 351,100 | 406,200 | 489,100 | 503,700 | 524,300 | 519,400 | 489,900 | 451,300 | 396,400 |
| 26 | 300,200 | 295,800 | 303,900 | 353,600 | 414,400 | 492,200 | 502,700 | 523,900 | 518,800 | 488,700 | 449,800 | 394,500 |
| 27 | 299,300 | 295,400 | 302,800 | 355,700 | 425,300 | 493,700 | 500,900 | 523,500 | 518,200 | 487,800 | 448,000 | 392,700 |
| 28 | 298,400 | 296,000 | 302,000 | 357,000 | 439,700 | 493,900 | 499,400 | 523,500 | 517,600 | 487,000 | 446,500 | 391,300 |
| 29 | 297,400 | 296,800 | 301,400 | 358,500 | 450,200 | 496,800 | 498,400 | 523,500 | 516,400 | 485,800 | 444,800 | 390,600 |
| 30 | 296,500 | 297,400 | 300,900 | 359,900 | - | 504,400 | 498,000 | 523,400 | 515,400 | 484,500 | 443,200 | 390,300 |
| 31 | 295,700 | - | 300,900 | 361,400 | - | 507,800 | - | 524,300 | - | 483,400 | 441,200 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 4,456.9 | 324,100 | - |
| Oct. 31..... | 4,455.1 | 295,700 | -28,400 |
| Nov. 30..... | 4,455.2 | 297,400 | +1,700 |
| Dec. 31..... | 4,455.4 | 300,900 | +3,500 |
| Calendar year 1939..... | - | - | -63,900 |
| Jan. 31..... | 4,459.2 | 361,400 | +60,500 |
| Feb. 29..... | 4,464.1 | 450,200 | +88,800 |
| Mar. 31..... | 4,467.2 | 507,800 | +57,600 |
| Apr. 30..... | 4,466.7 | 496,000 | -9,800 |
| May 31..... | 4,468.0 | 524,300 | +28,300 |
| June 30..... | 4,467.6 | 515,400 | -8,900 |
| July 31..... | 4,465.9 | 483,400 | -32,000 |
| Aug. 31..... | 4,463.6 | 441,200 | -42,200 |
| Sept. 30..... | 4,460.8 | 390,300 | -50,900 |
| Water year 1939-40..... | - | - | +66,200 |

FEATHER RIVER BASIN

North Fork of Feather River near Prattville, Calif.

Location.— Water-stage recorder and compound rectangular concrete weir, lat. 40°10', long. 121°06', in SW¼ sec. 28, T. 27 N., R. 8 E., half a mile downstream from Almanor Dam, 5 miles southeast of Prattville, and about 9 miles upstream from Butt Creek. Altitude of gage, about 4,380 feet (from topographic map).

Drainage area.— 507 square miles.

Records available.— March 1914 to September 1940 (tables of daily discharge for May 1921 to September 1936, include water diverted through Butt Creek tunnel No. 1); June 1905 to March 1914 at site near that of Almanor Dam.

Average discharge.— 34 years (1905-10, 1911-40), 874 second-feet, including diversion through Butt Creek tunnel No. 1.

Extremes.— Maximum discharge during year, 2,340 second-feet (regulated) Apr. 1-3 (gage height, 6.85 feet); minimum, 2.9 second-feet Nov. 25 to Dec. 1 and Mar. 16-24.

Extremes do not include diversions through Butt Creek tunnel No. 1.

1905-40: Maximum discharge, 10,000 second-feet Mar. 19, 1907, before construction of dam (gage height, 16.2 feet, at former site), from rating curve extended above 3,700 second-feet; no flow (result of regulation) Apr. 15, 16, 1914, at times during period January to April 1919, and on Apr. 21, 1923.

Remarks.— Records good. For storage record see records for Lake Almanor near Prattville. Tables of daily discharge show releases from Lake Almanor down North Fork of Feather River. Tables of monthly discharge show total run-off. Water diverted for power from Lake Almanor through Butt Creek tunnel No. 1 to Butt Creek.

Cooperation.— Water-stage recorder graph and results of four discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | | | |
|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1.3 | 2.0 | 1.6 | 14 | 2.0 | 50 | 2.6 | 141 | 3.5 | 382 | 5.3 | 1,310 |
| 1.4 | 5 | 1.7 | 21 | 2.2 | 75 | 2.9 | 205 | 4.1 | 634 | 6.0 | 1,760 |
| 1.5 | 9 | 1.8 | 29 | 2.4 | 106 | 3.2 | 266 | 4.7 | 950 | 6.9 | 2,370 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|-------|-----|------|------|------|-------|
| 1 | 31 | 5.5 | 2.9 | 3.8 | 4.1 | 372 | 2,340 | 900 | 514 | 9 | 10 | 396 |
| 2 | 31 | 4.7 | 3.2 | 3.5 | 4.1 | 888 | 2,340 | 614 | 296 | 9 | 10 | 396 |
| 3 | 31 | 3.2 | 3.5 | 3.2 | 4.7 | 888 | 2,340 | 386 | 34 | 9 | 10 | 429 |
| 4 | 31 | 3.2 | 3.5 | 3.5 | 6 | 888 | 2,330 | 386 | 23 | 9 | 10 | 509 |
| 5 | 31 | 3.2 | 3.5 | 3.2 | 7 | 894 | 2,310 | 386 | 23 | 9 | 10 | 505 |
| 6 | 31 | 3.2 | 3.5 | 3.2 | 5.5 | 900 | 2,310 | 386 | 23 | 9 | 10 | 505 |
| 7 | 31 | 3.2 | 3.5 | 3.2 | 4.7 | 1,050 | 2,310 | 386 | 23 | 9 | 10 | 505 |
| 8 | 31 | 3.2 | 3.5 | 3.2 | 4.4 | 412 | 2,160 | 386 | 23 | 9 | 9.5 | 500 |
| 9 | 30 | 3.2 | 3.5 | 3.2 | 4.4 | 203 | 1,990 | 386 | 23 | 9 | 9.5 | 500 |
| 10 | 30 | 3.2 | 3.8 | 3.2 | 4.4 | 203 | 1,910 | 386 | 23 | 9 | 9.5 | 500 |
| 11 | 30 | 3.2 | 3.5 | 3.2 | 4.4 | 203 | 1,120 | 411 | 23 | 9 | 9.5 | 568 |
| 12 | 30 | 3.2 | 3.2 | 3.5 | 4.4 | 203 | 717 | 527 | 23 | 9 | 9.5 | 624 |
| 13 | 30 | 3.2 | 3.2 | 3.2 | 4.2 | 203 | 717 | 527 | 23 | 9 | 9.5 | 615 |
| 14 | 30 | 3.2 | 3.2 | 3.2 | 4.2 | 203 | 722 | 577 | 20 | 9 | 83 | 624 |
| 15 | 30 | 3.2 | 3.2 | 3.2 | 4.2 | 86 | 722 | 795 | 15 | 9 | 396 | 624 |
| 16 | 25 | 3.2 | 3.5 | 3.2 | 4.0 | 2.9 | 581 | 732 | 15 | 9.5 | 396 | 554 |
| 17 | 17 | 3.5 | 3.5 | 3.2 | 4.0 | 2.9 | 509 | 484 | 14 | 9.5 | 331 | 522 |
| 18 | 17 | 3.5 | 3.5 | 3.2 | 4.0 | 2.9 | 509 | 338 | 12 | 9.5 | 145 | 414 |
| 19 | 17 | 3.5 | 3.5 | 3.2 | 4.8 | 2.9 | 509 | 235 | 11 | 9.5 | 348 | 338 |
| 20 | 17 | 3.5 | 3.5 | 3.2 | 3.8 | 2.9 | 563 | 407 | 9.5 | 9.5 | 396 | 338 |
| 21 | 17 | 3.5 | 3.5 | 3.2 | 3.8 | 2.9 | 1,520 | 653 | 9 | 9.5 | 396 | 338 |
| 22 | 15 | 3.2 | 3.5 | 3.2 | 3.8 | 2.9 | 1,980 | 536 | 9 | 9.5 | 396 | 338 |
| 23 | 11 | 3.2 | 3.5 | 3.2 | 3.8 | 2.9 | 1,580 | 281 | 9 | 9.5 | 330 | 422 |
| 24 | 10 | 3.2 | 3.5 | 3.2 | 3.8 | 2.9 | 1,220 | 101 | 9 | 9.5 | 136 | 514 |
| 25 | 9 | 2.9 | 3.5 | 3.5 | 4.4 | 3.2 | 1,220 | 229 | 9 | 9.5 | 159 | 514 |
| 26 | 8.5 | 2.9 | 3.5 | 4.1 | 6 | 469 | 1,380 | 322 | 9 | 9.5 | 355 | 514 |
| 27 | 8 | 2.9 | 3.5 | 3.8 | 12 | 2,120 | 2,000 | 131 | 7 | 9.5 | 396 | 509 |
| 28 | 8 | 2.9 | 3.5 | 3.8 | 12 | 2,320 | 2,080 | 44 | 6 | 9.5 | 396 | 509 |
| 29 | 8 | 2.9 | 3.8 | 4.1 | 6.5 | 2,320 | 1,660 | 25 | 9 | 9.5 | 396 | 509 |
| 30 | 8 | 2.9 | 3.8 | 4.1 | - | 2,330 | 1,010 | 24 | 9 | 9.5 | 396 | 505 |
| 31 | 7 | - | 3.8 | 4.1 | - | 2,330 | - | 204 | - | 9.5 | 396 | - |

| Month | Observed | | | | | Diversions in acre-feet† | Adjusted for diversion | |
|--------------------|----------------------|---------|---------|-------|-------------------------|--------------------------------|---------------------------|-------------------------|
| | Second- foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | Mean | Run-off in acre-feet |
| October..... | 680.5 | 31 | 7 | 21.3 | 1,310 | 54,750 | 912 | 56,060 |
| November..... | 99.5 | 5.5 | 2.9 | 3.32 | 197 | 25,390 | 430 | 25,590 |
| December..... | 107.6 | 3.8 | 2.9 | 3.47 | 213 | 32,970 | 540 | 33,180 |
| Calendar year 1939 | 17,578.3 | 494 | 1.5 | 48.2 | 34,860 | 429,000 | 641 | 463,900 |
| January..... | 105.8 | 4.1 | 3.2 | 3.41 | 210 | 3,040 | 52.9 | 3,250 |
| February..... | 146.4 | 12 | 3.8 | 5.05 | 290 | 1,470 | 30.6 | 1,760 |
| March..... | 19,514.3 | 2,330 | 2.9 | 629 | 38,710 | 33,360 | 1,172 | 72,070 |
| April..... | 44,649 | 2,540 | 509 | 1,488 | 88,560 | 39,180 | 2,147 | 127,700 |
| May..... | 12,185 | 900 | 24 | 393 | 24,170 | 42,190 | 1,079 | 66,360 |
| June..... | 1,255.5 | 514 | 6 | 41.8 | 2,490 | 49,080 | 867 | 51,570 |
| July..... | 5,277.0 | 9.5 | 9 | 9.28 | 569 | 57,270 | 941 | 57,840 |
| August..... | 5,974.0 | 396 | 9.5 | 195 | 11,850 | 56,410 | 1,110 | 68,260 |
| September..... | 14,538 | 624 | 338 | 488 | 29,040 | 49,300 | 1,317 | 78,340 |
| Water year 1939-40 | 99,622.6 | 2,540 | 2.9 | 272 | 197,600 | 444,400 | 884 | 642,000 |

†Diversion through Butt Creek tunnel No. 1, which was computed as the difference in flow between Butt Creek below tunnel No. 1 (unpublished records) and Butt Creek above tunnel No. 1 (published records). There is some unmeasured inflow between the two stations.

a No gage-height record; discharge interpolated.

Feather River near Oroville, Calif.

Location.- Water-stage recorder, lat. 39°32', long. 121°29', in NE $\frac{1}{4}$ sec. 2, T. 19 N., R. 4 E., 2 miles downstream from confluence of North and Middle Forks and 3 miles north-east of Oroville. Datum of gage is 182.02 feet above mean sea level (general adjustment of 1929).

Drainage area.- 3,611 square miles.

Records available.- October 1934 to September 1940. January 1902 to September 1934 at site at Oroville, 5 miles downstream (different datum).

Average discharge.- 38 years, 5,794 second-feet.

Extremes.- Maximum discharge during year, 152,000 second-feet Feb. 27 (gage height, 68.1 feet); minimum, 578 second-feet Nov. 6 (gage height, 4.05 feet).

1902-34 at Oroville: Maximum discharge, 230,000 second-feet (revised on basis of 1937 rating) Mar. 19, 1907 (maximum gage height observed, 28.2 feet; probably higher during the night); minimum, 300 second-feet (estimated, regulated), Nov. 9, 1931 (gage height, -1.7 feet).

1934-40 near Oroville: Maximum discharge, 185,000 second-feet Dec. 11, 1937 (gage height, 73.6 feet, from floodmarks), from rating curve extended above 62,000 second-feet on basis of velocity-area and A d studies and verified by slope-area computations, minimum, 462 second-feet Dec. 10, 1934 (gage height, 3.55 feet).

Remarks.- Records excellent. Flow regulated by power plants and storage in Lake Almanor (p. 271), Bucks (p. 221), Butt Valley, and other smaller reservoirs.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|--------|---------|---------|--------|-------|-------|-------|-------|-------|
| 1 | 1,440 | 1,370 | 1,340 | 7,720 | 6,700 | 45,400 | 55,200 | 8,440 | 5,100 | 2,150 | 1,700 | 1,870 |
| 2 | 1,670 | 1,260 | 1,020 | 25,000 | 6,280 | 31,400 | 38,000 | 5,630 | 4,940 | 2,170 | 1,680 | 1,820 |
| 3 | 1,640 | 954 | 966 | 10,100 | 11,300 | 23,400 | 29,000 | 9,260 | 4,550 | 2,180 | 1,640 | 1,900 |
| 4 | 1,580 | 912 | 1,630 | 12,700 | 15,500 | 19,100 | 24,600 | 9,330 | 4,310 | 2,030 | 1,600 | 2,140 |
| 5 | 1,530 | 615 | 1,570 | 7,940 | 16,600 | 16,900 | 21,100 | 8,640 | 4,100 | 1,990 | 1,600 | 2,310 |
| 6 | 1,740 | 892 | 1,580 | 6,100 | 17,100 | 15,200 | 18,800 | 8,080 | 4,900 | 2,140 | 1,700 | 2,360 |
| 7 | 1,500 | 1,450 | 1,740 | 5,850 | 16,000 | 14,000 | 17,900 | 7,680 | 4,700 | 1,920 | 1,660 | 2,160 |
| 8 | 790 | 1,410 | 1,680 | 17,900 | 13,000 | 13,300 | 17,400 | 7,600 | 4,500 | 1,910 | 1,870 | 1,970 |
| 9 | 1,240 | 1,380 | 1,870 | 20,500 | 10,600 | 12,400 | 15,900 | 7,570 | 2,790 | 1,970 | 1,720 | 2,040 |
| 10 | 1,520 | 1,300 | 3,530 | 15,900 | 9,080 | 11,900 | 15,000 | 7,840 | 2,900 | 2,020 | 1,610 | 2,190 |
| 11 | 1,640 | 937 | 5,930 | 15,000 | 7,940 | 11,300 | 14,000 | 8,020 | 3,220 | 2,090 | 1,630 | 2,250 |
| 12 | 1,620 | 624 | 2,410 | 13,500 | 7,060 | 10,400 | 12,700 | 7,510 | 3,100 | 1,920 | 1,630 | 2,330 |
| 13 | 1,630 | 869 | 2,290 | 9,260 | 6,980 | 9,590 | 12,600 | 7,780 | 2,980 | 1,950 | 1,640 | 2,440 |
| 14 | 1,420 | 1,590 | 1,900 | 7,020 | 9,040 | 9,010 | 12,800 | 7,720 | 2,840 | 1,830 | 1,700 | 2,360 |
| 15 | 1,060 | 1,590 | 1,730 | 5,860 | 7,420 | 8,680 | 13,700 | 7,570 | 2,760 | 1,840 | 1,900 | 2,100 |
| 16 | 1,240 | 1,630 | 1,320 | 5,400 | 6,380 | 8,620 | 12,900 | 7,190 | 2,410 | 1,870 | 2,130 | 2,320 |
| 17 | 1,500 | 1,680 | 966 | 4,800 | 7,300 | 8,200 | 11,700 | 6,960 | 2,380 | 1,930 | 1,980 | 2,280 |
| 18 | 1,530 | 1,500 | 1,280 | 4,470 | 7,220 | 7,940 | 11,500 | 6,620 | 2,600 | 1,870 | 1,690 | 2,270 |
| 19 | 1,540 | 892 | 1,560 | 4,260 | 6,320 | 7,860 | 11,200 | 5,990 | 2,520 | 1,930 | 1,730 | 2,190 |
| 20 | 1,540 | 1,030 | 1,930 | 3,810 | 5,820 | 7,840 | 10,900 | 5,760 | 2,500 | 1,880 | 2,090 | 2,220 |
| 21 | 1,430 | 1,280 | 1,580 | 3,300 | 5,540 | 7,890 | 10,800 | 6,100 | 2,460 | 1,800 | 2,120 | 2,060 |
| 22 | 895 | 1,350 | 1,500 | 3,540 | 5,200 | 8,210 | 12,200 | 6,180 | 2,450 | 1,820 | 2,110 | 1,970 |
| 23 | 1,220 | 1,070 | 1,350 | 3,690 | 4,860 | 8,160 | 12,000 | 5,780 | 2,030 | 1,860 | 2,040 | 2,090 |
| 24 | 1,650 | 708 | 966 | 3,630 | 5,160 | 8,420 | 10,900 | 5,500 | 2,130 | 1,810 | 1,870 | 2,270 |
| 25 | 1,580 | 894 | 772 | 6,680 | 8,020 | 11,300 | 10,400 | 5,120 | 2,350 | 1,920 | 1,680 | 2,280 |
| 26 | 1,320 | 912 | 1,150 | 22,100 | 24,200 | 27,200 | 10,400 | 5,250 | 2,330 | 1,820 | 1,940 | 2,280 |
| 27 | 1,300 | 1,170 | 1,250 | 15,000 | 113,000 | 41,300 | 10,700 | 4,980 | 2,340 | 1,790 | 1,990 | 2,270 |
| 28 | 1,040 | 1,230 | 1,360 | 10,800 | 120,000 | 32,500 | 10,900 | 4,670 | 2,280 | 1,750 | 2,010 | 2,330 |
| 29 | 1,190 | 1,310 | 1,460 | 9,260 | 68,800 | 62,300 | 10,700 | 4,450 | 2,250 | 1,700 | 2,000 | 2,050 |
| 30 | 1,360 | 1,340 | 1,780 | 7,860 | - | 131,000 | 8,870 | 4,360 | 2,130 | 1,780 | 2,070 | 2,250 |
| 31 | 1,580 | - | 2,010 | 7,020 | - | 87,300 | - | 5,220 | - | 1,760 | 1,930 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 43,725 | 1,740 | 790 | 1,410 | 86,730 |
| November..... | 35,059 | 1,630 | 615 | 1,169 | 69,540 |
| December..... | 53,380 | 5,930 | 772 | 1,722 | 105,900 |
| Calendar year 1939..... | 796,134 | 7,200 | 615 | 2,181 | 1,579,000 |
| January..... | 293,670 | 23,000 | 3,300 | 9,473 | 582,500 |
| February..... | 548,420 | 120,000 | 4,860 | 18,910 | 1,088,000 |
| March..... | 718,020 | 131,000 | 7,840 | 23,160 | 1,424,000 |
| April..... | 484,770 | 55,200 | 8,870 | 16,160 | 961,500 |
| May..... | 211,740 | 9,330 | 4,360 | 6,830 | 420,000 |
| June..... | 89,850 | 5,100 | 2,030 | 2,995 | 173,200 |
| July..... | 59,300 | 2,180 | 1,700 | 1,913 | 117,600 |
| August..... | 56,200 | 2,130 | 1,600 | 1,813 | 111,500 |
| September..... | 65,370 | 2,440 | 1,820 | 2,179 | 129,700 |
| Water year 1939-40..... | 2,659,504 | 131,000 | 615 | 7,266 | 5,275,000 |

Peak discharge.- Jan. 2 (8 a.m.) 25,900 sec.-ft.; Jan. 8 (8 p.m.) 25,000 sec.-ft.; Jan. 26 (1 p.m.) 30,500 sec.-ft.; Feb. 27 (12 p.m.) 152,000 sec.-ft.; Mar. 26 (9 p.m.) 57,300 sec.-ft.; Mar. 30 (12 m.) 140,000 sec.-ft.

a No gage-height record; discharge interpolated.

f Discharge computed from partly estimated gage height.

Feather River at Nicolaus, Calif.

Location.- Water-stage recorder, lat. 38°54'00", long. 121°35'05", at Nicolaus, Sutter County, 0.4 mile downstream from highway bridge. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Records available.- June 1921 to October 1940 (low-water periods only) in reports of Geological Survey. 1920-21 and 1926-40 (gage heights for high-water periods) in reports of Division of Water Resources, Department of Public Works, State of California.

Extremes.- Minimum discharge during period June to October 1940, 406 second-feet Aug. 7 (gage height, 22.67 feet).
1921-40: No flow Aug. 2-18, 1924, July 11-22, 24, 26, Aug. 1, 1931.

Remarks.- Records good June 1 to July 15, fair July 16 to Oct. 31. Western, Sutter Butte, and other canals above station, divert a large amount of water. Many reservoirs and power plants upstream.

Rating table for period June 1 to October 31, 1940 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-------|------|-------|------|-------|
| 22.6 | 375 | 25.0 | 2,040 | 27.5 | 5,100 |
| 23.0 | 560 | 25.5 | 2,550 | 28.0 | 5,800 |
| 23.5 | 835 | 26.0 | 3,120 | 28.5 | 6,520 |
| 24.0 | 1,175 | 26.5 | 3,740 | 29.0 | 7,270 |
| 24.5 | 1,580 | 27.0 | 4,400 | 29.8 | 8,470 |

Discharge, in second-feet, 1939-40

| Day | Oct. | | | | | | June | July | Aug. | Sept. | Oct. |
|-----------------|-------|--|--|--|--|--|------------------|---------|---------|-------|----------------------|
| 1 | 1,370 | | | | | | 8,350 | 1,180 | 478 | 835 | 1,720 |
| 2 | 1,340 | | | | | | 8,350 | 1,050 | 520 | 764 | 1,580 |
| 3 | 1,480 | | | | | | 7,460 | 1,030 | 535 | 709 | 1,930 |
| 4 | 1,580 | | | | | | 6,440 | 1,030 | 590 | 726 | 1,940 |
| 5 | 1,570 | | | | | | 5,930 | 1,040 | 530 | 817 | 1,930 |
| 6 | 1,620 | | | | | | 5,730 | 889 | 474 | 1,040 | 1,920 |
| 7 | 1,740 | | | | | | 5,420 | 829 | 438 | 1,310 | 1,870 |
| 8 | 1,810 | | | | | | 5,040 | 895 | 452 | 1,630 | 1,720 |
| 9 | 1,490 | | | | | | 4,830 | 770 | 510 | 1,630 | 1,830 |
| 10 | 1,020 | | | | | | 4,200 | 714 | 515 | 1,400 | 1,840 |
| 11 | 1,280 | | | | | | 3,520 | 682 | 555 | 1,520 | 1,920 |
| 12 | 1,240 | | | | | | 3,730 | 731 | 510 | 1,870 | 2,030 |
| 13 | 1,300 | | | | | | 3,400 | 764 | 501 | 1,640 | 2,050 |
| 14 | 1,370 | | | | | | 2,930 | 748 | 492 | 1,770 | 1,990 |
| 15 | 1,360 | | | | | | 2,500 | 687 | 488 | 1,830 | 1,970 |
| 16 | 1,140 | | | | | | 2,130 | 621 | 515 | 1,780 | 2,080 |
| 17 | 847 | | | | | | 1,820 | 595 | 676 | 1,720 | 2,150 |
| 18 | 1,010 | | | | | | 1,660 | 595 | 793 | 1,900 | 2,170 |
| 19 | 1,160 | | | | | | 1,870 | 605 | 748 | 1,920 | 2,220 |
| 20 | 1,210 | | | | | | 1,840 | 600 | 621 | 1,900 | 2,330 |
| 21 | 1,220 | | | | | | 1,730 | 654 | 560 | 1,840 | 2,280 |
| 22 | 1,200 | | | | | | 1,690 | 616 | 720 | 1,770 | 2,240 |
| 23 | 980 | | | | | | 1,570 | 580 | 764 | 1,750 | 2,370 |
| 24 | 733 | | | | | | 1,440 | 525 | 764 | 1,680 | 2,410 |
| 25 | 1,060 | | | | | | 1,120 | 535 | 742 | 1,830 | 2,620 |
| 26 | 1,390 | | | | | | 1,250 | 501 | 590 | 1,850 | 2,940 |
| 27 | 1,340 | | | | | | 1,290 | 506 | 506 | 1,810 | 2,350 |
| 28 | 1,140 | | | | | | 1,270 | 525 | 616 | 1,820 | 1,980 |
| 29 | 1,000 | | | | | | 1,240 | 535 | 736 | 1,870 | 1,680 |
| 30 | 889 | | | | | | 1,240 | 530 | 775 | 1,870 | 2,210 |
| 31 | 1,040 | | | | | | - | 478 | 817 | - | 2,410 |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| 1939 | | | | | | | | | | | |
| October..... | | | | | | | 38,929 | 1,810 | 733 | 1,256 | 77,210 |
| 1940 | | | | | | | | | | | |
| June..... | | | | | | | 100,870 | 8,350 | 1,120 | 3,362 | 200,100 |
| July..... | | | | | | | 22,030 | 1,180 | 478 | 711 | 43,700 |
| August..... | | | | | | | 18,531 | 817 | 438 | 598 | 36,760 |
| September..... | | | | | | | 46,501 | 1,920 | 709 | 1,550 | 92,230 |
| October..... | | | | | | | 64,880 | 2,940 | 1,650 | 2,093 | 128,700 |
| The period..... | | | | | | | - | - | - | - | 501,500 |

FEATHER RIVER BASIN

Butt Creek above tunnel No. 1, near Prattville, Calif.

Location.- Water-stage recorder, lat. 40°12', long. 121°12', in NW¼ sec. 16, T. 27 N., R. 7 E., about 1½ miles upstream from outlet of tunnel No. 1 from Lake Almanor to Butt Creek and 2½ miles southwest of Prattville. Altitude of gage, about 4,300 feet.

Drainage area.- 64.3 square miles.

Records available.- October 1936 to September 1937, October 1938 to September 1940.

Extremes.- Maximum discharge during year, 1,500 second-feet Feb. 28 (gage height, 5.75 feet); minimum, 7 second-feet Dec. 25.
1936-37, 1938-40: Maximum discharge, that of Feb. 28, 1940; minimum, 3.2 second-feet Dec. 11, 1936.

Remarks.- Records good except those for periods affected by ice and periods of no gage-height record, which are fair. Wallack ditch, above station, occasionally diverts several second-feet into Yellow Creek Basin.

Cooperation.- Water-stage recorder graph and results of five discharge measurements furnished by Pacific Gas and Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|------|------|-----|------|------|------|-------|
| 1 | 27 | 18 | 18 | 125 | 53 | 353 | 446 | 115 | 57 | 28 | 26 | 22 |
| 2 | 23 | 18 | 18 | 170 | 59 | 278 | 342 | 120 | 56 | 27 | 26 | 22 |
| 3 | 19 | 18 | 18 | 81 | 97 | 224 | 278 | 124 | 53 | 27 | 26 | 22 |
| 4 | 19 | 18 | 18 | b110 | 112 | 194 | 237 | 143 | 53 | 27 | 25 | 23 |
| 5 | 18 | 18 | 18 | 63 | 114 | 176 | 206 | 128 | 51 | 27 | 24 | 24 |
| 6 | 21 | 18 | 19 | 51 | 162 | 162 | 191 | 116 | 48 | 27 | 22 | 24 |
| 7 | 21 | 18 | 19 | 39 | 134 | 157 | 196 | 109 | 47 | 27 | 22 | 24 |
| 8 | 18 | 18 | 21 | 43 | 102 | 164 | 180 | 105 | 46 | 27 | 22 | 24 |
| 9 | 18 | 19 | 64 | b90 | 89 | 157 | 168 | 105 | 45 | 27 | 22 | 24 |
| 10 | 18 | 19 | 79 | 61 | 89 | 143 | 162 | 108 | 44 | 26 | 22 | 24 |
| 11 | 18 | 19 | 74 | 55 | 79 | 133 | 162 | 109 | 42 | 26 | 22 | 24 |
| 12 | 18 | 18 | 32 | 57 | 68 | 121 | 162 | 107 | 40 | 26 | 22 | 24 |
| 13 | 18 | 18 | 27 | 22 | a65 | 115 | 170 | 105 | 37 | 26 | 22 | 26 |
| 14 | 18 | 18 | 24 | 51 | a65 | 114 | 178 | 104 | 36 | 26 | 22 | a26 |
| 15 | 18 | 18 | 23 | b60 | a60 | 115 | 178 | 100 | 35 | 26 | 22 | 27 |
| 16 | 18 | 18 | 22 | b60 | a55 | 127 | 162 | 95 | 34 | 26 | 22 | a27 |
| 17 | 18 | 18 | 22 | b45 | a45 | 127 | 157 | 91 | 34 | 26 | 22 | a27 |
| 18 | 18 | 18 | 25 | b40 | a50 | 122 | 159 | 87 | 34 | 26 | 22 | a27 |
| 19 | 18 | 18 | 22 | b35 | 53 | 126 | 162 | 84 | 34 | 26 | 22 | a27 |
| 20 | 18 | 18 | 21 | b30 | 51 | 132 | 160 | 80 | 34 | 25 | 22 | a27 |
| 21 | 18 | 18 | 19 | b30 | 52 | 138 | 157 | 76 | 34 | 25 | 22 | 27 |
| 22 | 18 | 18 | 17 | b30 | 50 | 146 | 167 | 70 | 33 | 25 | 22 | 26 |
| 23 | 18 | 18 | 19 | b30 | 49 | 157 | 151 | 69 | 32 | 26 | 22 | 26 |
| 24 | 22 | 18 | 19 | b30 | 51 | 194 | 146 | 68 | 29 | 26 | 22 | 26 |
| 25 | 21 | 24 | 16 | b30 | 89 | 237 | 138 | 65 | 29 | 26 | 23 | 26 |
| 26 | 19 | 22 | 19 | b90 | 164 | 491 | 133 | 64 | a29 | 26 | 22 | 26 |
| 27 | 18 | 19 | 19 | b80 | 858 | 514 | 127 | 61 | a28 | 26 | 22 | 26 |
| 28 | 18 | 19 | 21 | 43 | 1,220 | 352 | 122 | 58 | a28 | 27 | 22 | 26 |
| 29 | 18 | 18 | 34 | 50 | 595 | 504 | 120 | 54 | 28 | 27 | 22 | 26 |
| 30 | 18 | 18 | 35 | 45 | - | 895 | 115 | 59 | 29 | 26 | 22 | 26 |
| 31 | 18 | - | 66 | 38 | - | 634 | - | 60 | - | 26 | 22 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 588 | 27 | 18 | 19.0 | 1,170 |
| November..... | 555 | 24 | 18 | 18.5 | 1,100 |
| December..... | 875 | 79 | 16 | 28.2 | 1,740 |
| Calendar year 1939..... | 11,159 | 137 | 12 | 30.6 | 22,150 |
| January..... | 1,774 | 170 | 22 | 57.2 | 3,520 |
| February..... | 4,730 | 1,220 | 45 | 163 | 9,380 |
| March..... | 7,492 | 895 | 114 | 242 | 14,860 |
| April..... | 5,422 | 446 | 115 | 181 | 10,750 |
| May..... | 2,839 | 143 | 54 | 91.6 | 5,630 |
| June..... | 1,159 | 57 | 28 | 38.6 | 2,300 |
| July..... | 915 | 28 | 25 | 26.3 | 1,690 |
| August..... | 700 | 26 | 22 | 22.6 | 1,390 |
| September..... | 758 | 28 | 22 | 25.3 | 1,500 |
| Water year 1939-40..... | 27,707 | 1,220 | 16 | 75.7 | 54,960 |

Peak discharge.- Dec. 10 (11 p.m.) 179 sec.-ft.; Jan. 1 (10 p.m.) 224 sec.-ft.; Feb. 6 (4 p.m.) 235 sec.-ft.; Feb. 28 (2 a.m.) 1,500 sec.-ft.; Mar. 26 (9 p.m.) 900 sec.-ft.; Mar. 30 (6 a.m.) 988 sec.-ft.

a No gage-height record; discharge computed on basis of records for station below tunnel and interpolation.

b Stage-discharge relation affected by ice.

Butt Creek below tunnel No. 1, near Prattville, Calif.

Location.- Water-stage recorder and concrete control, lat. 40°10', long. 121°11', in NW¼ sec. 22, T. 27 N., R. 7 E., about 400 feet downstream from outlet of tunnel No. 1 from Lake Almanor to Butt Creek, and 3 miles southwest of Prattville. Altitude of gage, about 4,200 feet (from topographic map).

Records available.- October 1938 to September 1940.

Extremes.- 1938-39: Maximum discharge during water year, 1,000 second-feet Mar. 14 (gage height, 2.79 feet); minimum, 36 second-feet June 13.
1939-40: Maximum discharge during water year, 2,170 second-feet Mar. 30 (gage height, 4.37 feet); minimum, 36 second-feet Dec. 3.

Remarks.- Records good except those for periods of no gage-height record which are fair. The difference in flow at this station and at the station above tunnel No. 1 (see preceding page) shows the amount of water diverted from Lake Almanor to Butt Creek and Butt Valley Reservoir plus natural local inflow which may vary from about 5 second-feet during dry periods to possibly 200 second-feet, momentarily, during floods.

Cooperation.- Water-stage recorder graph and results of several discharge measurements furnished by Pacific Gas and Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, 1938-40

1938-39

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|------|-----|------|------|------|-------|
| 1 | 954 | 978 | 70 | 938 | 930 | 946 | 116 | 62 | 45 | 934 | 922 | 908 |
| 2 | 946 | 962 | 84 | 938 | 946 | 938 | 114 | 60 | 44 | 922 | 922 | 908 |
| 3 | 946 | 954 | 99 | 938 | 954 | 938 | 123 | 59 | 44 | 915 | 915 | 908 |
| 4 | 946 | 970 | 88 | 946 | 954 | 946 | 123 | 57 | 42 | 915 | 915 | 908 |
| 5 | 946 | 970 | 76 | 994 | 954 | 962 | 114 | 57 | 41 | 915 | 915 | 908 |
| 6 | 665 | 962 | 70 | 962 | 596 | 962 | 111 | 56 | 40 | 915 | 915 | 908 |
| 7 | 66 | 954 | 69 | 946 | 64 | 970 | 109 | a56 | 40 | 915 | 915 | 908 |
| 8 | 62 | 954 | 67 | 946 | 62 | 946 | 114 | a54 | 40 | 922 | 915 | 908 |
| 9 | 61 | 954 | 67 | 946 | 61 | 962 | 109 | a50 | 40 | 915 | 915 | 908 |
| 10 | 61 | 962 | 66 | 946 | 66 | 978 | 100 | a48 | 40 | 915 | 915 | 908 |
| 11 | 67 | 962 | 61 | 938 | 64 | 986 | 96 | a48 | 40 | 908 | 915 | 908 |
| 12 | 559 | 954 | 59 | 938 | 62 | 986 | 98 | a46 | 39 | 908 | 915 | 908 |
| 13 | 946 | 962 | 61 | 938 | 62 | 994 | 90 | a44 | 38 | 908 | 915 | 908 |
| 14 | 946 | 954 | 62 | 930 | 62 | 1,000 | a85 | a44 | 39 | 915 | 908 | 908 |
| 15 | 954 | 954 | 64 | 930 | 62 | 618 | 80 | 382 | 39 | 922 | 908 | 908 |
| 16 | 946 | 946 | 62 | 930 | 62 | 70 | 82 | 967 | 240 | 922 | 908 | 908 |
| 17 | 946 | 954 | 336 | 938 | 61 | 74 | 84 | 967 | 954 | 922 | 908 | 908 |
| 18 | 946 | 946 | 938 | 946 | 61 | 82 | 84 | 967 | 954 | 922 | 908 | 908 |
| 19 | 954 | 946 | 946 | 946 | 61 | 86 | 86 | 967 | 954 | 922 | 915 | 908 |
| 20 | 970 | 938 | 946 | 946 | 525 | 92 | 84 | 967 | 954 | 922 | 915 | 908 |
| 21 | 962 | 938 | 946 | 946 | 938 | 103 | 84 | 980 | 954 | 922 | 908 | 908 |
| 22 | 962 | 930 | 954 | 946 | 938 | 109 | 80 | 800 | 954 | 922 | 908 | 908 |
| 23 | 954 | 930 | 954 | 946 | 938 | 118 | 82 | a60 | 948 | 922 | 908 | 908 |
| 24 | 962 | 930 | 946 | 946 | 938 | 123 | 78 | a58 | 948 | 922 | 908 | 908 |
| 25 | 954 | 921 | 946 | 938 | 938 | 128 | a72 | 57 | 948 | 922 | 915 | 908 |
| 26 | 962 | 921 | 946 | 946 | 946 | 159 | 66 | 57 | 948 | 922 | 908 | 908 |
| 27 | 954 | 758 | 946 | 946 | 946 | 128 | 66 | 54 | 948 | 922 | 908 | 908 |
| 28 | 954 | 69 | 946 | 938 | 938 | 114 | 66 | 55 | 948 | 922 | 908 | 908 |
| 29 | 962 | 69 | 930 | 946 | - | 118 | 66 | 52 | 941 | 922 | 908 | 908 |
| 30 | 978 | 69 | 930 | 946 | - | 118 | 65 | 50 | 934 | 922 | 908 | 915 |
| 31 | 970 | - | 930 | 946 | - | 111 | - | 49 | - | 922 | 908 | - |

a No gage-height record; discharge computed on basis of records for station above tunnel No. 1 near Prattville, and operation records of tunnel No. 1.

FEATHER RIVER BASIN

Discharge, in second-feet, of Butt Creek below tunnel No. 1 near Prattville, Calif., 1938-40--Contd.
1938-40

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|-------|-------|------|------|------|-------|
| 1 | 922 | a908 | 38 | 857 | 83 | 374 | 1,400 | 1,040 | 987 | 974 | 987 | 980 |
| 2 | 922 | 590 | 38 | 204 | 79 | 295 | 1,290 | 1,050 | 987 | 980 | 987 | 980 |
| 3 | 915 | 40 | 37 | 135 | 118 | 241 | 1,220 | 806 | 994 | 987 | 987 | 980 |
| 4 | 915 | 41 | 502 | 132 | 137 | 613 | 1,190 | 171 | 987 | 994 | 987 | 980 |
| 5 | 908 | 40 | 902 | 83 | 137 | 1,060 | 1,160 | 156 | 987 | 994 | 75 | 974 |
| 6 | 908 | 40 | 902 | 72 | 192 | 1,070 | 1,130 | 627 | 994 | 994 | 573 | 974 |
| 7 | 908 | 40 | 902 | 66 | 161 | 1,070 | 1,130 | 954 | 987 | 994 | 994 | 974 |
| 8 | 908 | 40 | 902 | 65 | 125 | 1,080 | 1,110 | 132 | 702 | 994 | 994 | 974 |
| 9 | 908 | 40 | 948 | 125 | 109 | 1,070 | 1,110 | 130 | 309 | 994 | 994 | 974 |
| 10 | 908 | 40 | 994 | 92 | 111 | 1,050 | 1,100 | 132 | 980 | 994 | 987 | 974 |
| 11 | 908 | 39 | 408 | 83 | 100 | 1,040 | 1,100 | 135 | 980 | 994 | 987 | 974 |
| 12 | 908 | 39 | 50 | a83 | 86 | 1,030 | 1,100 | 132 | 980 | 994 | 987 | 974 |
| 13 | 908 | 39 | 46 | a44 | 83 | 1,020 | 1,120 | 606 | 980 | 994 | 987 | 974 |
| 14 | 908 | 38 | 44 | a74 | 83 | 1,020 | 1,130 | 1,030 | 980 | 994 | 994 | 600 |
| 15 | 908 | 429 | 41 | a90 | 77 | 756 | 1,120 | 1,030 | 586 | 994 | 994 | 53 |
| 16 | 908 | 902 | 41 | a88 | 72 | 144 | 1,110 | 1,020 | 204 | 994 | 987 | 574 |
| 17 | 908 | 902 | 47 | a62 | 64 | 144 | 781 | 1,020 | 974 | 994 | 987 | 987 |
| 18 | 908 | 908 | 44 | a60 | 71 | 140 | 184 | 1,010 | 974 | 994 | 987 | 987 |
| 19 | 908 | 908 | 41 | 53 | 71 | 140 | 189 | 1,010 | 974 | 994 | 987 | 980 |
| 20 | 908 | 908 | 469 | 52 | 70 | 147 | 195 | 1,000 | 974 | 994 | 987 | 974 |
| 21 | 908 | 908 | 908 | 52 | 68 | 154 | 189 | 1,000 | 974 | 994 | 987 | 967 |
| 22 | 908 | 908 | 908 | 50 | 64 | 164 | 192 | 994 | 613 | 994 | 987 | 967 |
| 23 | 908 | a908 | 908 | 50 | 64 | 174 | 680 | 994 | 446 | 994 | 987 | 967 |
| 24 | 908 | a908 | 908 | 52 | 66 | 219 | 1,080 | 994 | 974 | 994 | 987 | 967 |
| 25 | a908 | a908 | 908 | 54 | 103 | 728 | 1,080 | 994 | 974 | 994 | 987 | 967 |
| 26 | a908 | a908 | 908 | 114 | 193 | 1,460 | 987 | 994 | 974 | 987 | 987 | 967 |
| 27 | a908 | a860 | 908 | 114 | 889 | 1,470 | 161 | 994 | 974 | 987 | 980 | 967 |
| 28 | a908 | a40 | 915 | 85 | 1,360 | 1,280 | 152 | 994 | 974 | 987 | 980 | 896 |
| 29 | a908 | 40 | 934 | 74 | 635 | 1,480 | 149 | 987 | 974 | 987 | 980 | 57 |
| 30 | a908 | 39 | 934 | 72 | - | 2,020 | 634 | 987 | 974 | 987 | 980 | 53 |
| 31 | a908 | - | 960 | 74 | - | 1,640 | - | 987 | - | 987 | 980 | - |

a No gage-height record; discharge computed on basis of records for station above tunnel No. 1, near Prattville, and operation records of tunnel No. 1.

Monthly discharge, in second-feet, 1938-40

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------------|------------------|---------|---------|------|----------------------|
| October 1938 | 24,461 | 978 | 61 | 789 | 48,520 |
| November..... | 25,671 | 978 | 69 | 856 | 50,920 |
| December..... | 14,665 | 954 | 59 | 473 | 29,080 |
| Calendar year | - | - | - | - | - |
| January 1939 | 29,270 | 994 | 930 | 944 | 58,060 |
| February..... | 14,189 | 954 | 61 | 507 | 28,140 |
| March..... | 15,865 | 1,000 | 70 | 512 | 31,470 |
| April..... | 2,727 | 123 | 65 | 90.9 | 5,410 |
| May..... | 8,228 | 980 | 44 | 265 | 16,320 |
| June..... | 14,138 | 954 | 58 | 471 | 28,040 |
| July..... | 28,496 | 934 | 908 | 919 | 56,520 |
| August..... | 28,274 | 922 | 908 | 912 | 56,080 |
| September..... | 27,247 | 915 | 908 | 908 | 54,040 |
| Water year 1938-39 | 233,231 | 1,000 | 38 | 639 | 462,600 |
| October 1939 | 28,190 | 922 | 908 | 909 | 55,910 |
| November..... | 13,358 | 908 | 38 | 445 | 26,500 |
| December..... | 17,496 | 994 | 37 | 564 | 34,700 |
| Calendar year 1939 | 227,478 | 1,000 | 37 | 623 | 461,200 |
| January 1940 | 3,309 | 857 | 44 | 107 | 6,560 |
| February..... | 5,471 | 1,360 | 64 | 189 | 10,850 |
| March..... | 24,313 | 2,020 | 140 | 784 | 48,220 |
| April..... | 25,173 | 1,400 | 149 | 839 | 49,930 |
| May..... | 24,110 | 1,050 | 130 | 778 | 47,820 |
| June..... | 26,371 | 994 | 204 | 879 | 52,310 |
| July..... | 30,751 | 994 | 974 | 991 | 60,960 |
| August..... | 29,271 | 984 | 75 | 944 | 58,060 |
| September..... | 25,616 | 987 | 53 | 854 | 50,810 |
| Water year 1939-40 | 253,409 | 2,020 | 37 | 692 | 502,600 |

Indian Creek near Crescent Mills, Calif.

Location.- Water-stage recorder, lat. 40°05', long. 120°56', in SW $\frac{1}{4}$ sec. 25, T. 26 N., R. 9 E., 0.8 mile upstream from Dixie Creek and about 1 $\frac{1}{2}$ miles downstream from town of Crescent Mills. Altitude of gage, about 3,500 feet (from topographic map).

Drainage area.- 746 square miles.

Records available.- October 1930 to September 1940. January 1906 to December 1909 and September 1911 to March 1918, at site 500 feet upstream.

Average discharge.- 19 years (1906-9, 1911-17, 1930-40), 527 second-feet.

Extremes.- Maximum discharge during year, 14,000 second-feet Feb. 28 (gage height, 16.07 feet), from rating curve extended above 4,000 second-feet by logarithmic plotting; minimum, 3.0 second-feet Aug. 15.

1906-9; 1911-18; 1930-40: Maximum discharge, that of Feb. 28, 1940; minimum, 1.7 second-feet Aug. 25, 1931.

Remarks.- Records good. Diversions above station for irrigation in Indian and Genesee Valleys.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | 9 | 31 | 41 | 137 | 622 | 7,120 | 7,310 | 1,070 | 357 | 51 | 9.6 | 5 |
| 2 | 10 | 27 | 41 | 544 | 640 | 4,160 | 4,820 | 1,080 | 334 | 56 | 7.5 | 4.9 |
| 3 | 13 | 28 | 41 | 690 | 746 | 2,910 | 3,640 | 1,150 | 310 | 54 | 6 | 5 |
| 4 | 15 | 27 | 41 | 850 | 1,050 | 2,240 | 3,000 | 1,250 | 297 | 46 | 6 | 6.5 |
| 5 | 15 | 34 | 41 | 773 | 1,350 | 1,070 | 2,510 | 1,290 | 284 | 43 | 8.5 | 7.5 |
| 6 | 16 | 37 | 42 | 596 | 1,550 | 1,610 | 2,150 | 1,220 | 269 | 39 | 8 | 8 |
| 7 | 27 | 35 | 42 | 446 | 2,110 | 1,450 | 1,940 | 1,100 | 241 | 40 | 9 | 9.5 |
| 8 | 25 | 34 | 42 | 516 | 1,940 | 1,430 | 1,880 | 1,010 | 219 | 37 | 9 | 10 |
| 9 | 24 | 34 | 53 | 1,240 | 1,420 | 1,670 | 1,820 | 964 | 200 | 30 | 8 | 10 |
| 10 | 23 | 34 | 81 | 1,290 | 1,080 | 1,650 | 1,770 | 988 | 179 | 24 | 6 | 11 |
| 11 | 22 | 34 | 177 | 1,100 | 922 | 1,500 | 1,730 | 1,040 | 157 | 24 | 4.1 | 11 |
| 12 | 22 | 35 | 148 | 892 | 806 | 1,290 | 1,750 | 1,050 | 130 | 23 | 3.7 | 11 |
| 13 | 22 | 35 | 114 | 695 | 690 | 1,110 | 1,840 | 1,030 | 93 | 22 | 3.7 | 12 |
| 14 | 22 | 34 | 93 | 532 | 730 | 1,000 | 2,030 | 982 | 85 | 26 | 3.5 | 14 |
| 15 | 22 | 35 | 81 | 424 | 690 | 940 | 2,170 | 934 | 82 | 26 | 3.4 | 15 |
| 16 | 22 | 35 | 73 | 337 | 609 | 970 | 2,100 | 974 | 81 | 24 | 3.5 | 16 |
| 17 | 21 | 35 | 73 | 284 | 636 | 1,070 | 1,820 | 808 | 74 | 20 | 3.5 | 18 |
| 18 | 29 | 35 | 70 | 246 | 663 | 1,180 | 1,650 | 730 | 68 | 20 | 3.7 | 22 |
| 19 | 29 | 35 | 68 | 226 | 578 | 1,200 | 1,620 | 668 | 68 | 20 | 3.7 | 26 |
| 20 | 26 | 35 | 69 | 215 | 509 | 1,240 | 1,670 | 622 | 70 | 20 | 3.9 | 40 |
| 21 | 26 | 35 | 66 | 198 | 464 | 1,340 | 1,690 | 574 | 67 | 18 | 4.1 | 37 |
| 22 | 25 | 37 | 61 | 184 | 470 | 1,470 | 1,680 | 544 | 68 | 15 | 4.1 | 32 |
| 23 | 25 | 37 | 58 | 181 | 470 | 1,630 | 1,660 | 516 | 64 | 14 | 4.3 | 36 |
| 24 | 30 | 38 | 61 | 182 | 505 | 1,830 | 1,600 | 491 | 64 | 12 | 4.3 | 42 |
| 25 | 44 | 41 | 57 | 228 | 681 | 2,130 | 1,500 | 456 | 62 | 12 | 4.5 | 47 |
| 26 | 44 | 45 | 55 | 509 | 1,320 | 2,710 | 1,400 | 433 | 58 | 12 | 4.5 | 34 |
| 27 | 39 | 45 | 57 | 715 | 6,920 | 5,610 | 1,390 | 411 | 52 | 11 | 4.7 | 36 |
| 28 | 37 | 44 | 57 | 790 | 13,000 | 6,430 | 1,330 | 364 | 46 | 11 | 4.7 | 37 |
| 29 | 40 | 43 | 58 | 740 | 11,900 | 5,240 | 1,220 | 366 | 41 | 11 | 4.7 | 36 |
| 30 | 41 | 42 | 61 | 672 | - | 9,450 | 1,120 | 346 | 42 | 12 | 4.5 | 36 |
| 31 | 40 | - | 72 | 622 | - | 10,300 | - | 357 | - | 11 | 4.7 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 807 | 44 | 9 | 26.0 | 1,600 | | | | |
| November..... | | | | 1,077 | 46 | 27 | 35.9 | 2,140 | | | | |
| December..... | | | | 2,094 | 177 | 41 | 67.5 | 4,150 | | | | |
| Calendar year 1939..... | | | | 44,904.9 | 1,160 | 2.6 | 123 | 89,060 | | | | |
| January..... | | | | 17,054 | 1,290 | 137 | 550 | 33,830 | | | | |
| February..... | | | | 55,091 | 13,000 | 470 | 1,900 | 109,300 | | | | |
| March..... | | | | 86,650 | 10,500 | 940 | 2,763 | 169,900 | | | | |
| April..... | | | | 63,790 | 7,310 | 1,120 | 2,126 | 126,500 | | | | |
| May..... | | | | 24,736 | 1,290 | 346 | 798 | 49,060 | | | | |
| June..... | | | | 4,162 | 357 | 41 | 139 | 8,260 | | | | |
| July..... | | | | 763 | 55 | 11 | 25.3 | 1,550 | | | | |
| August..... | | | | 167.5 | 9.5 | 3.4 | 5.40 | 332 | | | | |
| September..... | | | | 635.4 | 47 | 4.9 | 21.2 | 1,260 | | | | |
| Water year 1939-40..... | | | | 256,046.7 | 13,000 | 3.4 | 700 | 507,900 | | | | |

Peak discharge.- Feb. 28 (6 p.m.) 14,000 sec.-ft.; Mar. 27 (11:30 p.m.) 7,350 sec.-ft.; Mar. 31 (2 a.m.) 11,000 sec.-ft.

FEATHER RIVER BASIN

Spanish Creek at Keddle, Calif.

Location.- Water-stage recorder, lat. 40°00'05", long. 120°57'20", in NE¼ sec. 27, T. 25 N., R. 9 E., 200 feet upstream from Blackhawk Creek and 0.9 mile southeast of Keddle. Altitude of gage, about 3,250 feet (from topographic map).

Drainage area.- 184 square miles.

Records available.- October 1933 to September 1940. October 1911 to September 1933 at site 1.2 miles downstream.

Average discharge.- 20 years (1911-19, 1921-33), 230 second-feet, at former site.

Extremes.- Maximum discharge during year, 10,600 second-feet Feb. 27 (gage height, 11.80 feet); minimum 9.5 second-feet Aug. 24.

1911-40: Maximum discharge, 11,500 second-feet Dec. 11, 1937 (gage height, 12.43 feet), from rating curve extended above 5,000 second-feet on basis of AFD studies; minimum, 3.8 second-feet Aug. 12, 1934.

Remarks.- Records good. Water diverted above station for irrigation in American Valley.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|----|-----|-----|-----|-------|------|-------|
| 0.9 | 12 | 1.9 | 62 | 3.5 | 565 | 7.0 | 3,960 |
| 1.0 | 15 | 2.2 | 98 | 4.0 | 895 | 8.0 | 5,220 |
| 1.2 | 22 | 2.5 | 158 | 4.5 | 1,330 | 9.0 | 6,540 |
| 1.4 | 30 | 2.8 | 248 | 5.0 | 1,790 | 10.0 | 7,940 |
| 1.6 | 41 | 3.1 | 365 | 6.0 | 2,820 | 11.0 | 9,400 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-----|------|------|------|-------|
| 1 | 30 | 38 | 40 | 300 | 329 | 2,190 | 2,460 | 309 | 168 | 46 | 20 | 20 |
| 2 | 48 | 37 | 40 | 1,000 | 297 | 1,400 | 1,590 | 337 | 151 | 44 | 20 | 24 |
| 3 | 40 | 38 | 40 | 396 | 729 | 1,010 | 1,230 | 370 | 137 | 40 | 20 | 25 |
| 4 | 35 | 39 | 39 | 769 | 1,090 | 799 | 1,030 | 440 | 151 | 34 | 20 | 28 |
| 5 | 34 | 39 | 39 | 349 | 806 | 679 | 855 | 378 | 131 | 36 | 19 | 30 |
| 6 | 45 | 39 | 44 | 224 | 872 | 589 | 711 | 329 | 121 | 35 | 19 | 32 |
| 7 | 50 | 39 | 42 | 190 | 771 | 538 | 661 | 305 | 113 | 36 | 18 | 36 |
| 8 | 41 | 39 | 41 | 1,200 | 538 | 532 | 643 | 301 | 105 | 36 | 17 | 32 |
| 9 | 37 | 39 | 76 | 1,640 | 420 | 526 | 607 | 325 | 95 | 34 | 17 | 30 |
| 10 | 35 | 40 | 161 | 880 | 357 | 480 | 565 | 357 | 89 | 37 | 17 | 30 |
| 11 | 34 | 39 | 270 | 771 | 317 | 430 | 538 | 365 | 81 | 36 | 17 | 30 |
| 12 | 34 | 40 | 113 | 661 | 274 | 378 | 538 | 355 | 76 | 34 | 17 | 29 |
| 13 | 33 | 39 | 83 | 392 | 274 | 341 | 560 | 341 | 71 | 34 | 16 | 32 |
| 14 | 33 | 39 | 70 | 285 | 401 | 321 | 599 | 321 | 64 | 33 | 16 | 34 |
| 15 | 32 | 39 | 64 | 228 | 325 | 309 | 595 | 301 | 65 | 33 | 16 | 34 |
| 16 | 32 | 38 | 60 | 187 | 274 | 329 | 510 | 278 | 63 | 30 | 16 | 36 |
| 17 | 32 | 38 | 60 | 168 | 365 | 353 | 465 | 270 | 60 | 28 | 17 | 37 |
| 18 | 32 | 38 | 57 | 151 | 374 | 325 | 450 | 259 | 56 | 28 | 17 | 41 |
| 19 | 32 | 37 | 55 | 140 | 305 | 313 | 460 | 248 | 53 | 27 | 17 | 44 |
| 20 | 33 | 36 | 58 | 131 | 266 | 321 | 470 | 238 | 54 | 27 | 16 | 41 |
| 21 | 33 | 36 | 54 | 123 | 245 | 325 | 465 | 231 | 53 | 27 | 16 | 40 |
| 22 | 33 | 36 | 50 | 119 | 234 | 341 | 465 | 221 | 51 | 27 | 16 | 39 |
| 23 | 32 | 36 | 51 | 119 | 238 | 365 | 460 | 211 | 50 | 27 | 14 | 38 |
| 24 | 49 | 36 | 50 | 125 | 313 | 392 | 420 | 205 | 48 | 24 | 10 | 36 |
| 25 | 65 | 42 | 46 | 212 | 805 | 543 | 392 | 196 | 46 | 24 | 20 | 36 |
| 26 | 50 | 55 | 47 | 1,530 | 1,930 | 1,160 | 398 | 184 | 46 | 23 | 22 | 37 |
| 27 | 45 | 46 | 46 | 959 | 9,070 | 2,330 | 353 | 171 | 45 | 23 | 20 | 43 |
| 28 | 43 | 43 | 47 | 516 | 9,110 | 1,380 | 325 | 156 | 44 | 22 | 20 | 46 |
| 29 | 42 | 42 | 49 | 368 | 4,550 | 3,110 | 313 | 146 | 44 | 20 | 20 | 42 |
| 30 | 40 | 41 | 49 | 337 | - | 8,240 | 297 | 144 | 50 | 21 | 20 | 40 |
| 31 | 39 | - | 66 | 317 | - | 3,060 | - | 166 | - | 21 | 19 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,194 | 65 | 30 | 36.5 | 2,370 |
| November..... | 1,163 | 55 | 36 | 39.4 | 2,350 |
| December..... | 2,007 | 270 | 39 | 64.7 | 3,980 |
| Calendar year 1939..... | 29,474.5 | 490 | 5.5 | 80.8 | 58,460 |
| January..... | 14,807 | 1,640 | 119 | 478 | 29,370 |
| February..... | 35,879 | 9,110 | 234 | 1,237 | 71,160 |
| March..... | 35,409 | 8,240 | 309 | 1,142 | 70,230 |
| April..... | 19,385 | 2,460 | 297 | 646 | 38,450 |
| May..... | 8,456 | 440 | 144 | 273 | 16,770 |
| June..... | 2,381 | 168 | 44 | 79.4 | 4,720 |
| July..... | 947 | 46 | 20 | 30.5 | 1,880 |
| August..... | 549 | 22 | 10 | 17.7 | 1,090 |
| September..... | 1,041 | 45 | 20 | 34.7 | 2,060 |
| Water year 1939-40..... | 123,238 | 9,110 | 10 | 337 | 244,400 |

Peak discharge.- Jan. 4 (7 a.m.) 1,210 sec.-ft.; Jan. 9 (2 a.m.) 2,150 sec.-ft.; Jan. 26 (4 p.m.) 2,340 sec.-ft.; Feb. 27 (10 a.m.) 10,600 sec.-ft.; Mar. 27 (3 a.m.) 3,260 sec.-ft.; Mar. 30 (1 p.m.) 9,550 sec.-ft.

Bucks Creek Reservoir near Bucks ranch, Calif.

Location.- Water-stage recorder, lat. 39°54', long. 121°12', in NW¼ sec. 33, T. 24 N., R. 7 E., at dam on Bucks Creek, 2 miles northwest of former Bucks ranch and 15 miles west of Quincy. Datum of gage is 5,000 feet above mean sea level; gage readings have been reduced to elevations above mean sea level.

Drainage area.- 28 square miles.

Records available.- October 1922 to September 1940.

Extremes.- Maximum contents during year, 105,100 acre-feet Mar. 31 (elevation, 5,156.7 feet); minimum, 60,800 acre-feet Dec. 21-27 (elevation, 5,130.6 feet).

1938-40: Maximum contents, 105,800 acre-feet June 23, 1938 (elevation, 5,157.1 feet); minimum, 2,600 acre-feet July 28, 1927 (elevation, 5,075.5 feet).

Remarks.- Reservoir is formed by concrete-faced rock-fill dam completed in 1927; storage began in May 1927. Capacity, 101,400 acre-feet between elevations 5,064.75 feet (sill of outlet gate) and 5,154.85 feet (spillway crest) above mean sea level. Released water flows down Bucks Creek to diversion dam, where it enters tunnel that discharges into Grizzly Creek, and thence flows to Bucks Creek power plant. Records show total contents at midnight of which 274 acre-feet are not available for release.

Cooperation.- Records furnished by the Pacific Gas & Electric Co., in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|--------|
| 1 | 72,700 | 68,800 | 62,900 | 63,200 | 75,200 | 94,900 | 105,000 | 103,700 | 103,300 | 100,800 | 94,500 | 88,700 |
| 2 | 72,500 | 68,600 | 63,000 | 64,800 | 75,900 | 95,100 | 104,400 | 103,700 | 103,300 | 100,600 | 94,200 | 88,700 |
| 3 | 72,300 | 68,400 | 63,100 | 64,800 | 76,700 | 95,200 | 103,900 | 103,700 | 103,300 | 100,300 | 94,100 | 88,700 |
| 4 | 72,200 | 68,200 | 63,100 | 65,300 | 77,300 | 95,300 | 103,700 | 103,700 | 103,300 | 100,000 | 94,100 | 88,600 |
| 5 | 72,200 | 68,000 | 63,100 | 66,400 | 78,000 | 95,200 | 103,300 | 103,800 | 103,300 | 99,700 | 94,000 | 88,400 |
| 6 | 72,300 | 67,700 | 63,000 | 66,600 | 78,800 | 95,100 | 103,100 | 103,800 | 103,200 | 99,500 | 94,000 | 88,100 |
| 7 | 72,300 | 67,600 | 62,800 | 66,800 | 79,300 | 94,900 | 103,000 | 103,800 | 103,100 | 99,200 | 94,000 | 87,800 |
| 8 | 72,300 | 67,400 | 62,600 | 68,300 | 79,500 | 94,700 | 102,900 | 103,800 | 103,000 | 98,900 | 94,000 | 87,600 |
| 9 | 72,300 | 67,300 | 62,700 | 68,500 | 79,700 | 94,500 | 103,000 | 103,800 | 102,900 | 98,700 | 94,000 | 87,400 |
| 10 | 72,200 | 67,300 | 62,900 | 69,100 | 80,000 | 94,500 | 103,200 | 103,800 | 102,800 | 98,700 | 94,000 | 87,100 |
| 11 | 72,100 | 67,300 | 63,200 | 69,400 | 80,200 | 94,300 | 103,400 | 103,800 | 102,800 | 98,600 | 94,000 | 86,900 |
| 12 | 71,900 | 67,300 | 63,300 | 69,700 | 80,400 | 94,100 | 103,400 | 103,800 | 102,800 | 98,500 | 94,000 | 86,600 |
| 13 | 71,700 | 67,200 | 63,000 | 69,900 | 80,800 | 93,800 | 103,400 | 103,800 | 102,800 | 98,100 | 93,600 | 86,300 |
| 14 | 71,600 | 67,200 | 62,800 | 70,000 | 81,200 | 93,600 | 103,500 | 103,800 | 102,700 | 97,800 | 93,100 | 86,100 |
| 15 | 71,400 | 67,200 | 62,500 | 70,100 | 81,400 | 93,400 | 103,500 | 103,800 | 102,700 | 97,600 | 92,500 | 85,900 |
| 16 | 71,200 | 67,100 | 62,400 | 70,300 | 81,600 | 93,300 | 103,600 | 103,700 | 102,600 | 97,300 | 92,100 | 85,600 |
| 17 | 71,000 | 66,800 | 62,300 | 70,400 | 82,100 | 93,100 | 103,600 | 103,700 | 102,600 | 97,000 | 91,800 | 85,400 |
| 18 | 70,800 | 66,700 | 61,600 | 70,600 | 82,200 | 93,100 | 103,700 | 103,600 | 102,500 | 96,900 | 91,500 | 85,200 |
| 19 | 70,600 | 66,400 | 61,100 | 70,700 | 82,400 | 93,500 | 103,800 | 103,500 | 102,500 | 96,600 | 91,300 | 85,000 |
| 20 | 70,400 | 66,300 | 60,900 | 70,800 | 82,600 | 93,900 | 103,800 | 103,500 | 102,500 | 96,400 | 91,000 | 84,700 |
| 21 | 70,000 | 66,000 | 60,800 | 70,900 | 82,700 | 94,300 | 103,900 | 103,400 | 102,400 | 96,200 | 90,700 | 84,400 |
| 22 | 69,800 | 65,600 | 60,800 | 70,900 | 82,800 | 94,600 | 103,900 | 103,400 | 102,400 | 96,100 | 90,500 | 84,200 |
| 23 | 69,600 | 64,800 | 60,800 | 71,200 | 83,000 | 95,000 | 103,900 | 103,300 | 102,300 | 96,000 | 90,100 | 83,900 |
| 24 | 69,400 | 64,200 | 60,800 | 71,800 | 83,200 | 95,600 | 103,900 | 103,300 | 102,300 | 95,700 | 89,900 | 83,700 |
| 25 | 69,300 | 64,000 | 60,800 | 72,400 | 83,500 | 96,300 | 103,900 | 103,200 | 102,100 | 95,500 | 89,600 | 83,400 |
| 26 | 69,200 | 63,800 | 60,800 | 73,600 | 83,900 | 98,000 | 103,800 | 103,200 | 101,900 | 95,300 | 89,400 | 83,200 |
| 27 | 69,200 | 63,500 | 60,800 | 74,000 | 80,500 | 99,600 | 103,800 | 103,200 | 101,700 | 95,300 | 89,100 | 82,900 |
| 28 | 69,100 | 63,300 | 61,000 | 74,300 | 85,400 | 100,000 | 103,700 | 103,200 | 101,500 | 95,200 | 88,800 | 82,700 |
| 29 | 69,100 | 63,100 | 61,300 | 74,500 | 84,500 | 101,900 | 103,700 | 103,100 | 101,200 | 95,200 | 88,800 | 82,400 |
| 30 | 69,100 | 63,000 | 61,500 | 74,700 | - | 104,000 | 103,700 | 103,100 | 101,000 | 95,000 | 88,700 | 82,200 |
| 31 | 68,900 | - | 62,100 | 75,100 | - | 105,100 | - | 103,300 | - | 94,700 | 88,700 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|---------------------|-------------------------|---|
| Sept. 30..... | 5,138.2 | 72,900 | - |
| Oct. 31..... | 5,135.7 | 68,900 | -4,000 |
| Nov. 30..... | 5,132.0 | 63,000 | -5,900 |
| Dec. 31..... | 5,131.4 | 62,100 | -900 |
| Calendar year 1939..... | - | - | -12,700 |
| Jan. 31..... | 5,139.5 | 75,100 | +13,000 |
| Feb. 29..... | 5,150.9 | 94,500 | +19,400 |
| Mar. 31..... | 5,156.7 | 105,100 | +10,600 |
| Apr. 30..... | 5,156.0 | 103,700 | -1,400 |
| May 31..... | 5,155.8 | 103,300 | -400 |
| June 30..... | 5,154.5 | 101,000 | -2,300 |
| July 31..... | 5,151.0 | 94,700 | -6,300 |
| Aug. 31..... | 5,147.6 | 88,700 | -6,000 |
| Sept. 30..... | 5,143.8 | 82,200 | -6,500 |
| Water year 1939-40..... | - | - | +9,300 |

Grizzly Creek near Storrie, Calif.

Location.- Water-stage recorder, lat. 39°52', long. 121°14', in SW¼ sec. 5, T. 23 N., R. 7 E., about 2,000 feet upstream from outlet of tunnel from Bucks Creek and 6 miles southeast of Storrie. Altitude of gage, about 4,900 feet (from topographic map).

Records available.- December 1929 to September 1932, October 1933 to September 1940.

Extremes.- Maximum discharge during year, 835 second-feet Mar. 26 (gage height, 5.40 feet); minimum not known.

1929-32; 1933-40: Maximum discharge, 1,570 second-feet Dec. 10, 1937 (gage height, 7.20 feet), from rating curve extended above 150 second-feet on basis of velocity-area studies; minimum, 0.1 second-foot Sept. 7-14, 1932.

Remarks.- Records fair except those for periods of missing or incomplete gage-height record, which are poor. No diversion or regulation above station.

Cooperation.- Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|------|---------|------|------|-----|----------------------|------|------|-------|
| 1 | 0.6 | 1.2 | 1.2 | 242 | 51 | 104 | 138 | 47 | 12 | 2.3 | | |
| 2 | 1.0 | 1.2 | 1.3 | 252 | 56 | 84 | 109 | 59 | 10 | 2.2 | | |
| 3 | .7 | 1.2 | 1.6 | 86 | 151 | 68 | 95 | 59 | 9.5 | 2.1 | | |
| 4 | .6 | 1.2 | 1.5 | 180 | 156 | 58 | 82 | 58 | 14 | 2.1 | | |
| 5 | .6 | 1.2 | 1.6 | 53 | 128 | 80 | 69 | 51 | 9 | 2.0 | | |
| 6 | 2.0 | 1.3 | 1.8 | 31 | 190 | 50 | 64 | 43 | 8 | 1.9 | | |
| 7 | 1.6 | 1.3 | 1.7 | 26 | 101 | 54 | 75 | 39 | 8 | 1.8 | | |
| 8 | 1.4 | 1.3 | 2.2 | 148 | 66 | 64 | 80 | 41 | 7 | 1.8 | | |
| 9 | 1.3 | 1.3 | 40 | 136 | 51 | 62 | 80 | 46 | 6.5 | 1.7 | | |
| 10 | 1.2 | 1.3 | 91 | 74 | 48 | 54 | 75 | 47 | 6.5 | 1.6 | | |
| 11 | 1.0 | 1.3 | 39 | 128 | 42 | 48 | 80 | 42 | 5.5 | 1.5 | | |
| 12 | 1.0 | 1.3 | 7 | 78 | 35 | 44 | 97 | 37 | 4.5 | 1.5 | | |
| 13 | .9 | 1.3 | 3.8 | 42 | 32 | 43 | 95 | 33 | 4.2 | 1.4 | | |
| 14 | .9 | 1.4 | 3.3 | 30 | 37 | 42 | 95 | 30 | 4.3 | 1.3 | | |
| 15 | .8 | 1.4 | 3.1 | 22 | 29 | 42 | 81 | 27 | 4.1 | 1.2 | | |
| 16 | .8 | 1.4 | 2.9 | 19 | 26 | 62 | 68 | 25 | 3.8 | 1.2 | | |
| 17 | .8 | 1.6 | 5 | 1.6 | 27 | 60 | 70 | 24 | 3.5 | 1.1 | | |
| 18 | .7 | 1.5 | 3.4 | 14 | 23 | 54 | 76 | 22 | 3.4 | 1.1 | | |
| 19 | .7 | 1.4 | 3.2 | 12 | 20 | 53 | 82 | 18 | 3.4 | 1.1 | | |
| 20 | .6 | 1.4 | 3.2 | 10 | 19 | 55 | 81 | 18 | 3.2 | 1.0 | | |
| 21 | .6 | 1.4 | 2.6 | 9 | 18 | 58 | 80 | 15 | 3.1 | 1.0 | | |
| 22 | .5 | 1.4 | 2.6 | 9 | 17 | 65 | 77 | 13 | 3.0 | 1.0 | | |
| 23 | .5 | 1.3 | 2.3 | 9 | 17 | 68 | 63 | 12 | 2.8 | .9 | | |
| 24 | 1.7 | 1.3 | 2.2 | 11 | 24 | 104 | 53 | 11 | 2.8 | .9 | | |
| 25 | 1.6 | 1.7 | 5.5 | 53 | 95 | 115 | 44 | 9.5 | 2.7 | .9 | | |
| 26 | 1.4 | 1.7 | 2.2 | 300 | 322 | 398 | 41 | 9 | 2.6 | .8 | | |
| 27 | 1.4 | 1.5 | 2.2 | 101 | 603 | 218 | 37 | 8.5 | 2.6 | .8 | | |
| 28 | 1.5 | 1.4 | 2.3 | 59 | 358 | 140 | 37 | 8 | 2.5 | .8 | | |
| 29 | 1.4 | 1.4 | 4.0 | 48 | 152 | 453 | 42 | 7.5 | 2.4 | .7 | | |
| 30 | 1.3 | 1.2 | 10 | 44 | - | 501 | 43 | 15 | 2.4 | .7 | | |
| 31 | 1.2 | - | 53 | 46 | - | 212 | - | 19 | - | .7 | | |
| Month | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | |
| October..... | 32.3 | | 2.0 | | 0.5 | | 1.04 | | 64 | | | |
| November..... | 40.8 | | 1.7 | | 1.2 | | 1.36 | | 81 | | | |
| December..... | 306.7 | | 91 | | 1.2 | | 9.89 | | 608 | | | |
| Calendar year 1939..... | 3,986.1 | | 91 | | .3 | | 10.9 | | 7,910 | | | |
| January..... | 2,286 | | 300 | | 9 | | 73.7 | | 4,530 | | | |
| February..... | 2,924 | | 603 | | 17 | | 101 | | 5,800 | | | |
| March..... | 3,483 | | 501 | | 42 | | 112 | | 6,910 | | | |
| April..... | 2,209 | | 138 | | 37 | | 73.6 | | 4,380 | | | |
| May..... | 893.5 | | 59 | | 7.5 | | 28.8 | | 1,770 | | | |
| June..... | 187.4 | | 14 | | 2.4 | | 5.25 | | 312 | | | |
| July..... | 41.1 | | 2.3 | | .7 | | 1.33 | | 82 | | | |
| August..... | 12.4 | | - | | - | | .4 | | 25 | | | |
| September..... | 15.0 | | - | | - | | .5 | | 30 | | | |
| Water year 1939-40..... | 12,401.2 | | 603 | | - | | 33.9 | | 24,590 | | | |

Peak discharge.- Jan. 1 (7:30 p.m.) 433 sec.-ft.; Jan. 4 (1 a.m.) 407 sec.-ft.; Jan. 26 (7 a.m.) 591 sec.-ft.; Feb. 27 (4 p.m.) 732 sec.-ft.; Mar. 26 (4 p.m.) 835 sec.-ft.; Mar. 29 (5 p.m.) 716 sec.-ft.

Note.- Missing or incomplete gage-height record Oct. 1, 3-5, 9-23, Apr. 7-11, June 25 to Sept. 30; discharge computed on basis of partial gage-height record and results of three discharge measurements.

West Branch of Feather River near Yankee Hill, Calif.

Location.— Water-stage recorder, lat. 39°42', long. 121°34', in SW¼ sec. 5, T. 21 N., R. 4 E., at highway bridge, 1.4 miles downstream from Concow Creek and 2 miles west of Yankee Hill. Altitude of gage, about 1,100 feet (from topographic map).

Drainage area.— 145 square miles.

Records available.— September 1930 to September 1940.

Average discharge.— 10 years, 297 second-feet.

Extremes.— Maximum discharge during year, 17,500 second-feet Feb. 27 (gage height, 26.70 feet); minimum, 3.8 second-feet Dec. 27.

1930-40: Maximum discharge, 21,400 second-feet Dec. 11, 1937 (gage height, 30.3 feet), from rating curve extended above 15,000 second-feet; minimum, 0.3 second-foot Jan. 8, 1937 (gage height, 1.69 feet).

Remarks.— Records excellent. Spring Valley ditch (see p.) diverts water from Concow Creek, below Lake Wilenor (capacity 8,000 acre-feet), for power development and irrigation. Dewey, Miners, and Hendricks canals divert from headwaters of West Branch of Feather River into Butte Creek Basin (see p.) for power development in De Sabla and Centerville plants of Pacific Gas & Electric Co. Round Valley Reservoir (capacity, 1,285 acre-feet) and Philbrook Reservoir (capacity, 4,875 acre-feet) provide storage on headwaters for these three canals.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 6.5 | 7 | 6 | 2,280 | 575 | 3,210 | 3,470 | 439 | 186 | 9.5 | 8 | 6 |
| 2 | 7 | 7 | 6 | 3,290 | 542 | 2,440 | 2,410 | 474 | 139 | 9 | 7.5 | 6 |
| 3 | 9 | 7 | 6 | 970 | 1,880 | 1,560 | 1,920 | 560 | 121 | 8.5 | 7 | 6.5 |
| 4 | 7 | 7 | 6 | 1,670 | 1,880 | 1,520 | 1,540 | 620 | 128 | 8 | 7 | 8 |
| 5 | 6 | 6.5 | 13 | 714 | 1,940 | 1,320 | 1,240 | 556 | 108 | 8.5 | 6.5 | 8.5 |
| 6 | 8 | 6 | 21 | 524 | 1,990 | 1,180 | 1,090 | 452 | 119 | 10 | 7 | 9 |
| 7 | 10 | 6 | 7 | 672 | 1,440 | 1,050 | 1,090 | 409 | 126 | 8 | 7 | 8 |
| 8 | 8.5 | 6 | 7 | 3,140 | 1,060 | 974 | 1,040 | 404 | 119 | 7.5 | 7 | 7 |
| 9 | 7 | 6 | 289 | 2,120 | 847 | 922 | 978 | 400 | 101 | 8 | 7 | 6.5 |
| 10 | 6 | 6 | 916 | 1,690 | 732 | 829 | 906 | 373 | 94 | 8 | 8 | 6 |
| 11 | 6 | 6 | 903 | 1,330 | 844 | 799 | 840 | 359 | 82 | 7.5 | 8 | 6.5 |
| 12 | 5.5 | 6 | 191 | 938 | 837 | 727 | 795 | 373 | 70 | 7.5 | 8 | 6.5 |
| 13 | 5.5 | 6 | 100 | 659 | 644 | 604 | 777 | 378 | 53 | 7.5 | 8 | 7 |
| 14 | 5.5 | 6 | 71 | 521 | 1,080 | 562 | 748 | 361 | 49 | 7.5 | 8.5 | 7.5 |
| 15 | 6 | 6 | 40 | 472 | 738 | 544 | 710 | 332 | 45 | 8 | 8.5 | 7 |
| 16 | 6 | 6 | 17 | 418 | 590 | 598 | 611 | 260 | 42 | 8 | 8.5 | 7 |
| 17 | 6 | 6 | 14 | 368 | 808 | 595 | 574 | 252 | 36 | 8 | 8.5 | 8 |
| 18 | 6 | 6 | 33 | 331 | 714 | 532 | 568 | 244 | 31 | 8 | 8.5 | 8 |
| 19 | 6.5 | 6 | 17 | 296 | 590 | 508 | 568 | 228 | 26 | 8 | 8 | 8.5 |
| 20 | 7 | 6 | 10 | 240 | 509 | 505 | 562 | 221 | 25 | 8 | 8 | 8 |
| 21 | 6.5 | 6 | 9 | 216 | 462 | 502 | 559 | 202 | 22 | 8 | 8 | 7 |
| 22 | 6.5 | 6 | 6 | 200 | 435 | 508 | 565 | 193 | 20 | 8 | 7.5 | 6.5 |
| 23 | 6 | 11 | 4.6 | 193 | 408 | 508 | 553 | 191 | 17 | 8 | 7 | 6.5 |
| 24 | 16 | 16 | 4.2 | 198 | 410 | 573 | 520 | 180 | 15 | 7.5 | 7.5 | 6.5 |
| 25 | 38 | 9 | 4.0 | 847 | 903 | 765 | 500 | 167 | 14 | 7.5 | 7.5 | 7 |
| 26 | 10 | 8 | 4.0 | 3,220 | 4,780 | 3,410 | 474 | 151 | 12 | 7.5 | 7.5 | 7 |
| 27 | 7.5 | 8.5 | 3.8 | 1,300 | 15,600 | 2,900 | 466 | 128 | 11 | 8 | 7 | 7 |
| 28 | 7 | 7 | 7.5 | 864 | 12,300 | 1,950 | 447 | 112 | 10 | 8 | 6.5 | 7.5 |
| 29 | 7.5 | 6.5 | 38 | 886 | 5,810 | 7,970 | 463 | 107 | 10 | 8 | 6.5 | 7 |
| 30 | 7 | 6 | 50 | 614 | - | 14,300 | 424 | 178 | 10 | 8 | 6.5 | 6.5 |
| 31 | 7 | - | 312 | 584 | - | 6,640 | - | 324 | - | 8 | 6.5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 254.0 | 38 | 5.5 | 8.19 | 504 | | |
| November..... | | | | | | 208.5 | 16 | 6 | 6.95 | 414 | | |
| December..... | | | | | | 3,016.1 | 916 | 3.8 | 97.3 | 5,980 | | |
| Calendar year 1939..... | | | | | | 29,348.1 | 916 | 3.8 | 80.4 | 58,260 | | |
| January..... | | | | | | 31,565 | 3,290 | 193 | 1,018 | 62,610 | | |
| February..... | | | | | | 60,798 | 15,600 | 408 | 2,096 | 120,600 | | |
| March..... | | | | | | 61,194 | 14,300 | 502 | 1,974 | 121,400 | | |
| April..... | | | | | | 27,408 | 3,470 | 424 | 914 | 54,560 | | |
| May..... | | | | | | 9,628 | 620 | 107 | 311 | 19,100 | | |
| June..... | | | | | | 1,840 | 186 | 10 | 61.3 | 3,650 | | |
| July..... | | | | | | 249.5 | 10 | 7.5 | 8.05 | 495 | | |
| August..... | | | | | | 232.5 | 8.5 | 6.5 | 7.50 | 461 | | |
| September..... | | | | | | 214.0 | 9 | 6 | 7.13 | 424 | | |
| Water year 1939-40..... | | | | | | 196,607.6 | 15,600 | 3.8 | 537 | 390,000 | | |

Peak discharge.— Jan. 1 (8:30 p.m.) 4,960 sec.-ft.; Jan. 8 (5 p.m.) 4,300 sec.-ft.; Jan. 26 (9 a.m.) 5,200 sec.-ft.; Feb. 27 (9 p.m.) 17,500 sec.-ft.; Mar. 26 (7 p.m.) 8,450 sec.-ft.; Mar. 30 (9 a.m.) 16,000 sec.-ft.

Concow Creek near Yankee Hill, Calif.

Location.- Water-stage recorder, lat. 39°46', long. 121°32', in NE¼ sec. 16, T. 22 N., R. 4 E., at diversion dam for Spring Valley ditch, 300 feet downstream from Lake Wilenor Dam and 4 miles north of Yankee Hill post office. Altitude of gage, about 1,850 feet (from topographic map).

Drainage area.- 14.7 square miles.

Records available.- October 1927 to September 1940.

Average discharge.- 13 years, 13.1 second-feet.

Extremes.- Maximum discharge during year, 1,490 second-feet Feb. 27, Mar. 29, 30 (gage height, 3.8 feet); no flow most of year.
1927-40: Maximum discharge, 1,840 second-feet Mar. 26, 1928 (gage height, 5.9 feet); no flow for many months in each year.

Remarks.- Records good. On Sept. 30, 1939, storage in Lake Wilenor (capacity 8,000 acre-feet), was 2,320 acre-feet, and on Sept. 30, 1940, it was 3,740 acre-feet. Records show flow passing diversion dam; for total flow out of reservoir, add that of Spring Valley ditch, which diverts water above station (see following page).

Cooperation.- Water-stage recorder graph furnished by Table Mountain and Thermalito Irrigation Districts in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | 0 | 27 | 175 | 342 | | | | | |
| 2 | | | | 0 | 27 | 141 | 242 | | | | | |
| 3 | | | | 0 | 125 | 116 | 216 | | | | | |
| 4 | | | | 0 | 154 | 100 | 68 | | | | | |
| 5 | | | | 0 | 164 | 100 | 0 | | | | | |
| 6 | | | | 0 | 142 | 98 | 1.3 | | | | | |
| 7 | | | | 0 | 113 | 33 | 4.1 | | | | | |
| 8 | | | | 0 | 80 | 0 | 6.5 | | | | | |
| 9 | | | | 0 | 77 | 0 | 11 | | | | | |
| 10 | | | | 0 | 47 | 16 | 13 | | | | | |
| 11 | | | | 0 | 41 | 37 | 19 | | | | | |
| 12 | | | | 0 | 33 | 41 | 0 | | | | | |
| 13 | | | | 0 | 49 | 41 | 2.5 | | | | | |
| 14 | | | | 0 | 209 | 38 | 0 | | | | | |
| 15 | | | | 0 | 124 | 37 | 14 | | | | | |
| 16 | | | | 0 | 72 | 45 | 8 | | | | | |
| 17 | | | | 0 | 113 | 44 | 0 | | | | | |
| 18 | | | | 0 | 105 | 35 | 0 | | | | | |
| 19 | | | | 0 | 75 | 32 | 0 | | | | | |
| 20 | | | | 0 | 59 | 31 | 0 | | | | | |
| 21 | | | | 0 | 49 | 31 | 0 | | | | | |
| 22 | | | | 0 | 43 | 30 | 0 | | | | | |
| 23 | | | | 0 | 37 | 16 | 0 | | | | | |
| 24 | | | | 0 | 35 | 8.5 | 0 | | | | | |
| 25 | | | | 0 | 59 | 9 | 0 | | | | | |
| 26 | | | | 0 | 425 | 214 | 0 | | | | | |
| 27 | | | | 0 | 1,260 | 273 | 0 | | | | | |
| 28 | | | | .4 | 788 | 198 | 0 | | | | | |
| 29 | | | | 18 | 458 | 736 | 0 | | | | | |
| 30 | | | | 32 | - | 1,350 | 0 | | | | | |
| 31 | | | | 29 | - | 653 | - | | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| November..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| December..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Calendar year 1939..... | | | | | 431.4 | 122 | 0 | 1.18 | 855 | | | |
| January..... | | | | | 79.4 | 32 | 0 | 2.56 | 157 | | | |
| February..... | | | | | 4,980 | 1,260 | 27 | 172 | 9,900 | | | |
| March..... | | | | | 4,678.5 | 1,350 | 0 | 151 | 9,280 | | | |
| April..... | | | | | 949.4 | 342 | 0 | 31.6 | 1,680 | | | |
| May..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| June..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| July..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| August..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| September..... | | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Water year 1939-40..... | | | | | 10,697.3 | 1,350 | 0 | 29.2 | 21,220 | | | |

Spring Valley ditch near Yankee Hill, Calif.

Location.— Water-stage recorder, lat. 39°46', long. 121°32', in NE $\frac{1}{4}$ sec. 16, T. 22 N., R. 4 E., just downstream from diversion dam and 4 miles north of Yankee Hill post office. Altitude of gage, about 1,840 feet (from topographic map).

Records available.— October 1927 to September 1940.

Average discharge.— 13 years, 10.5 second-feet.

Extremes.— Maximum daily discharge during year, 35 second-feet Apr. 9; no flow Nov. 27–30, Dec. 5 to Jan. 12, and Apr. 11.

1927–40: Maximum daily discharge, 49 second-feet Oct. 25–27, 1928; no flow at times in each year except 1936, 1938, and 1939.

Remarks.— Records good. Ditch diverts from left bank of Concow Creek 300 feet downstream from Lake Wilenor; water used for power development in Lime, Saddle, and Coal Canyon plants of Pacific Gas & Electric Co. and for irrigation in Table Mountain and Thermalito irrigation districts.

Cooperation.— Water-stage recorder graph furnished by Table Mountain and Thermalito Irrigation Districts in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 22 | 21 | 0.1 | 0 | 0.2 | 0.1 | 0.2 | 20 | 13 | 1.5 | 22 | 27 |
| 2 | 22 | 21 | .1 | 0 | .2 | .1 | .1 | 20 | 10 | 1.4 | 22 | 28 |
| 3 | 22 | 21 | .1 | 0 | .2 | .1 | .1 | 21 | 9.5 | 1.3 | 22 | 29 |
| 4 | 22 | 21 | .1 | 0 | .2 | .1 | .1 | 29 | 10 | 1.3 | 22 | 29 |
| 5 | 26 | 21 | 0 | 0 | .2 | .1 | .3 | 27 | 9.5 | 8 | 25 | 27 |
| 6 | 27 | 21 | 0 | 0 | .2 | .1 | .2 | 23 | 9 | 12 | 28 | 25 |
| 7 | 27 | 21 | 0 | 0 | .2 | .3 | .2 | 14 | 9 | 11 | 28 | 23 |
| 8 | 28 | 21 | 0 | 0 | .1 | .3 | 19 | 5 | 7 | 15 | 30 | 23 |
| 9 | 28 | 21 | 0 | 0 | .1 | .2 | 35 | 2.1 | 1.9 | 20 | 34 | 23 |
| 10 | 27 | 21 | 0 | 0 | .1 | .2 | 15 | 2.2 | .7 | 21 | 33 | 25 |
| 11 | 27 | 21 | 0 | 0 | .1 | .2 | 0 | 1.4 | .7 | 20 | 32 | 27 |
| 12 | 27 | 21 | 0 | 0 | .1 | .2 | .3 | 1.8 | .7 | 20 | 33 | 27 |
| 13 | 27 | 21 | 0 | .1 | .1 | .2 | 1.1 | 3.9 | .8 | 20 | 34 | 27 |
| 14 | 27 | 21 | 0 | .2 | .2 | .2 | 1.2 | 6 | .9 | 20 | 34 | 27 |
| 15 | 27 | 20 | 0 | .2 | .2 | .2 | 2.2 | 8.5 | 1.2 | 20 | 33 | 27 |
| 16 | 27 | 20 | 0 | .2 | 4.9 | .2 | 2.0 | 10 | 3.8 | 19 | 31 | 27 |
| 17 | 26 | 20 | 0 | .2 | .2 | .2 | 1.2 | 11 | 7 | 18 | 31 | 26 |
| 18 | 24 | 21 | 0 | .2 | .2 | .1 | 1.3 | 10 | 5.5 | 18 | 31 | 25 |
| 19 | 22 | 20 | 0 | .2 | .1 | .1 | 1.7 | 9 | 4.4 | 19 | 32 | 24 |
| 20 | 22 | 20 | 0 | .2 | .1 | .1 | 1.3 | 9.5 | 2.3 | 19 | 30 | 25 |
| 21 | 22 | 20 | 0 | .2 | .1 | .1 | 1.2 | 7.5 | 1.3 | 19 | 28 | 26 |
| 22 | 22 | 20 | 0 | .2 | .1 | .1 | 3.2 | 6.5 | 1.4 | 22 | 28 | 26 |
| 23 | 22 | 19 | 0 | .2 | .1 | .1 | 23 | 6.5 | 1.6 | 24 | 29 | 28 |
| 24 | 22 | 10 | 0 | .2 | .1 | .1 | 27 | 7.5 | 1.6 | 26 | 29 | 28 |
| 25 | 22 | 2.0 | 0 | .2 | .1 | .1 | 21 | 7.5 | 1.7 | 27 | 29 | 27 |
| 26 | 22 | .1 | 0 | .5 | .2 | .2 | 20 | 6.5 | 1.7 | 26 | 27 | 27 |
| 27 | 22 | 0 | 0 | .2 | 1.2 | .2 | 21 | 6 | 1.6 | 26 | 27 | 27 |
| 28 | 22 | 0 | 0 | .2 | .6 | .1 | 22 | 5.5 | 1.6 | 26 | 27 | 27 |
| 29 | 22 | 0 | 0 | .2 | .2 | .9 | 25 | 5.5 | 1.6 | 26 | 27 | 27 |
| 30 | 22 | 0 | 0 | .2 | - | 1.4 | 22 | 8 | 1.6 | 23 | 27 | 27 |
| 31 | 22 | - | 0 | .2 | - | .2 | - | 13 | - | 22 | 27 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 749 | 28 | 22 | 24.2 | 1,490 | | |
| November..... | | | | | | 486.1 | 21 | 0 | 16.2 | 964 | | |
| December..... | | | | | | .4 | .1 | 0 | .01 | .8 | | |
| Calendar year 1939..... | | | | | | 4,289.5 | 36 | 0 | 11.8 | 8,510 | | |
| January..... | | | | | | 4.0 | .5 | 0 | .13 | 7.9 | | |
| February..... | | | | | | 10.6 | 4.9 | .1 | .37 | 21 | | |
| March..... | | | | | | 6.8 | 1.4 | .1 | .22 | 13 | | |
| April..... | | | | | | 267.9 | 35 | 0 | 8.93 | 551 | | |
| May..... | | | | | | 314.4 | 29 | 1.4 | 10.1 | 624 | | |
| June..... | | | | | | 122.6 | 13 | .7 | 4.09 | 243 | | |
| July..... | | | | | | 552.5 | 27 | 1.3 | 17.8 | 1,100 | | |
| August..... | | | | | | 892 | 34 | 22 | 28.8 | 1,770 | | |
| September..... | | | | | | 791 | 29 | 23 | 26.4 | 1,670 | | |
| Water year 1939-40..... | | | | | | 4,197.3 | 35 | 0 | 11.5 | 8,330 | | |

Middle Fork of Feather River near Cl10, Calif.

Location.- Water-stage recorder, lat. 39°45', long. 120°36', in E½ sec. 23, T. 22 N., R. 12 E., 0.3 mile upstream from Frazier Creek and 1.5 miles northwest of Cl10. Altitude of gage, about 4,350 feet (from topographic map).

Drainage area.- 699 square miles.

Records available.- October 1925 to September 1940.

Average discharge.- 15 years, 232 second-feet.

Extremes.- Maximum discharge during year, 8,070 second-feet Feb. 28 (gage height, 12.03 feet); minimum, 12 second-feet Aug. 17.

1925-40: Maximum discharge, 11,000 second-feet Mar. 26, 1928 (gage height, 12.0 feet), from rating curve extended above 7,000 second-feet; minimum, 4.3 second-feet Sept. 5, 1934.

Remarks.- Records good. Many small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-----|------|------|------|-------|
| 1 | 16 | 20 | 30 | 133 | 564 | 4,870 | 5,260 | 490 | 137 | 26 | 16 | 14 |
| 2 | 22 | 20 | 31 | 396 | 544 | 2,980 | 3,260 | 474 | 127 | 24 | 14 | 14 |
| 3 | 18 | 20 | 32 | 278 | 681 | 1,880 | 2,240 | 458 | 117 | 24 | 14 | 15 |
| 4 | 16 | 20 | 32 | 367 | 950 | 1,340 | 1,790 | 478 | 117 | 24 | 13 | 16 |
| 5 | 16 | 20 | 33 | 330 | 1,180 | 1,080 | 1,470 | 482 | 127 | 24 | 13 | 17 |
| 6 | 22 | 20 | 35 | 330 | 1,500 | 897 | 1,260 | 379 | 115 | 24 | 13 | 17 |
| 7 | 17 | 20 | 34 | 325 | 1,240 | 780 | 1,130 | 285 | 106 | 24 | 14 | 17 |
| 8 | 16 | 21 | 36 | 494 | 1,030 | 758 | 1,040 | 309 | 100 | 24 | 13 | 16 |
| 9 | 16 | 21 | 52 | 740 | 809 | 762 | 1,000 | 386 | 99 | 35 | 13 | 16 |
| 10 | 15 | 21 | 65 | 585 | 630 | 712 | 951 | 386 | 92 | 34 | 13 | 16 |
| 11 | 15 | 21 | 76 | 1,170 | 544 | 634 | 892 | 390 | 86 | 27 | 14 | 16 |
| 12 | 15 | 21 | 68 | 932 | 442 | 558 | 838 | 365 | 80 | 25 | 14 | 16 |
| 13 | 15 | 22 | 45 | 591 | 385 | 506 | 825 | 333 | 73 | 26 | 13 | 17 |
| 14 | 15 | 22 | 41 | 537 | 385 | 470 | 834 | 304 | 62 | 26 | 13 | 17 |
| 15 | 15 | 22 | 41 | 448 | 346 | 401 | 884 | 285 | 56 | 26 | 14 | 17 |
| 16 | 15 | 22 | 40 | 301 | 361 | 502 | 843 | 268 | 52 | 26 | 14 | 18 |
| 17 | 15 | 22 | 40 | 199 | 391 | 562 | 834 | 251 | 48 | 26 | 13 | 18 |
| 18 | 16 | 22 | 37 | 157 | 368 | 566 | 807 | 237 | 44 | 26 | 13 | 19 |
| 19 | 16 | 27 | 35 | 130 | 370 | 538 | 762 | 222 | 40 | 26 | 13 | 24 |
| 20 | 16 | 33 | 36 | 124 | 332 | 546 | 712 | 215 | 39 | 24 | 14 | 19 |
| 21 | 17 | 33 | 33 | 116 | 298 | 562 | 662 | 209 | 35 | 23 | 13 | 18 |
| 22 | 17 | 29 | 30 | 115 | 279 | 518 | 638 | 198 | 33 | 22 | 13 | 18 |
| 23 | 17 | 29 | 30 | 126 | 326 | 654 | 622 | 192 | 31 | 22 | 13 | 18 |
| 24 | 22 | 29 | 30 | 138 | 388 | 730 | 686 | 178 | 30 | 21 | 13 | 18 |
| 25 | 24 | 33 | 27 | 206 | 753 | 982 | 558 | 168 | 31 | 20 | 14 | 18 |
| 26 | 21 | 35 | 27 | 623 | 1,660 | 2,020 | 578 | 155 | 29 | 19 | 15 | 18 |
| 27 | 20 | 32 | 28 | 812 | 4,640 | 3,570 | 590 | 144 | 27 | 19 | 15 | 19 |
| 28 | 20 | 31 | 28 | 1,530 | 7,050 | 3,810 | 542 | 134 | 25 | 19 | 14 | 19 |
| 29 | 20 | 31 | 30 | 1,080 | 7,180 | 4,890 | 562 | 130 | 25 | 18 | 15 | 19 |
| 30 | 20 | 31 | 32 | 729 | - | 6,640 | 530 | 125 | 29 | 18 | 14 | 19 |
| 31 | 20 | - | 44 | 588 | - | 6,720 | - | 139 | - | 18 | 14 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 545 | 24 | 15 | 17.6 | 1,080 |
| November..... | 750 | 35 | 20 | 25.0 | 1,490 |
| December..... | 1,168 | 76 | 27 | 37.7 | 2,380 |
| Calendar year 1939..... | 24,529.5 | 521 | 6.5 | 67.2 | 48,650 |
| January..... | 14,651 | 1,530 | 116 | 473 | 29,060 |
| February..... | 35,646 | 7,180 | 279 | 1,229 | 70,700 |
| March..... | 52,438 | 6,720 | 401 | 1,692 | 104,000 |
| April..... | 33,500 | 5,260 | 530 | 1,117 | 66,460 |
| May..... | 8,769 | 490 | 125 | 283 | 17,390 |
| June..... | 2,012 | 137 | 25 | 67.1 | 3,990 |
| July..... | 740 | 35 | 18 | 25.9 | 1,470 |
| August..... | 424 | 16 | 13 | 13.7 | 841 |
| September..... | 523 | 24 | 14 | 17.4 | 1,040 |
| Water year 1939-40..... | 151,166 | 7,180 | 13 | 413 | 299,800 |

Peak discharge.- Jan. 11 (6 p.m.) 1,450 sec.-ft.; Jan. 28 (1 p.m.) 1,690 sec.-ft.; Feb. 6 (12 m.) 1,690 sec.-ft.; Feb. 28 (11 a.m.) 8,070 sec.-ft.; Mar. 27 (2 a.m.) 4,700 sec.-ft.; Mar. 30 (5:30 p.m.) 7,070 sec.-ft.

Middle Fork of Feather River at Bidwell Bar, Calif.

Location.- Water-stage recorder, lat. 39°33', long. 121°26', in NW¹/₄ sec. 32, T. 20 N., R. 5 E., at highway bridge at Bidwell Bar, 2 miles upstream from junction with North Fork and 7 miles northeast of Oroville. Altitude of gage, about 290 feet.

Drainage area.- 1,353 square miles.

Records available.- October 1911 to September 1940.

Average discharge.- 29 years, 1,731 second-feet.

Extremes.- Maximum discharge during year, 60,200 second-feet Feb. 27 (gage height, 20.15 feet); minimum, 142 second-feet Oct. 1.

1911-40: Maximum discharge, 93,000 second-feet Dec. 11, 1937 (gage height, 24.0 feet, from floodmarks), from rating curve extended above 25,000 second-feet on basis of velocity-area and A/V studies; minimum, 88 second-feet Jan. 8, 1937.

Remarks.- Records excellent except those for period of no gage-height record, which are fair. Reservoirs and diversions above station are comparatively small.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|--------|--------|--------|--------|-------|-------|------|------|-------|
| 1 | 150 | 198 | 206 | 2,520 | 3,050 | 18,900 | 21,000 | 2,870 | 1,650 | 497 | 258 | 190 |
| 2 | 245 | 196 | 204 | 3,470 | 2,890 | 13,500 | 14,900 | 3,040 | 1,550 | 473 | 256 | 200 |
| 3 | 224 | 198 | 202 | 3,680 | 5,280 | 9,700 | 11,500 | 3,420 | 1,440 | 453 | 249 | 210 |
| 4 | 196 | 198 | 202 | 4,840 | 7,420 | 7,540 | 9,440 | 3,500 | 1,550 | 434 | 242 | 230 |
| 5 | 178 | 190 | 202 | 2,850 | 8,120 | 6,220 | 7,830 | 3,200 | 1,280 | 424 | 238 | 240 |
| 6 | 289 | 180 | 222 | 2,020 | 8,270 | 5,360 | 6,760 | 2,920 | 1,210 | 410 | 236 | 250 |
| 7 | 360 | 180 | 224 | 1,910 | 7,460 | 4,750 | 6,320 | 2,640 | 1,140 | 400 | 230 | 220 |
| 8 | 251 | 178 | 220 | 7,660 | 5,680 | 4,540 | 6,060 | 2,520 | 1,090 | 392 | 230 | 220 |
| 9 | 208 | 178 | 339 | 8,990 | 4,640 | 4,380 | 5,680 | 2,620 | 1,030 | 382 | 230 | 220 |
| 10 | 190 | 178 | 871 | 6,030 | 3,910 | 4,120 | 5,300 | 2,810 | 981 | 378 | 230 | 220 |
| 11 | 182 | 178 | 1,700 | 7,000 | 3,480 | 3,520 | 5,050 | 2,920 | 945 | 382 | 230 | 220 |
| 12 | 176 | 178 | 770 | 6,900 | 3,020 | 3,490 | 4,380 | 2,880 | 921 | 372 | 220 | 250 |
| 13 | 172 | 178 | 509 | 4,370 | 2,990 | 3,230 | 4,870 | 2,730 | 893 | 360 | 220 | 240 |
| 14 | 170 | 178 | 406 | 3,190 | 3,640 | 3,040 | 4,900 | 2,570 | 855 | 357 | 220 | 230 |
| 15 | 170 | 176 | 351 | 2,630 | 2,920 | 2,890 | 4,930 | 2,510 | 825 | 357 | 220 | 220 |
| 16 | 168 | 176 | 324 | 2,210 | 2,560 | 2,990 | 4,480 | 2,310 | 800 | 351 | 210 | 220 |
| 17 | 164 | 176 | 315 | 1,870 | 2,880 | 3,160 | 4,180 | 2,240 | 775 | 348 | 210 | 230 |
| 18 | 162 | 178 | 324 | 1,640 | 2,760 | 2,980 | 4,080 | 2,080 | 745 | 342 | 210 | 240 |
| 19 | 164 | 180 | 303 | 1,470 | 2,460 | 2,890 | 4,040 | 2,000 | 720 | 342 | 200 | 240 |
| 20 | 164 | 180 | 303 | 1,340 | 2,270 | 2,870 | 4,050 | 1,920 | 700 | 339 | 200 | 230 |
| 21 | 162 | 182 | 300 | 1,240 | 2,130 | 2,890 | 3,960 | 1,910 | 670 | 333 | 200 | 230 |
| 22 | 162 | 192 | 275 | 1,160 | 2,020 | 2,930 | 3,880 | 1,870 | 633 | 324 | 200 | 220 |
| 23 | 160 | 192 | 268 | 1,120 | 1,970 | 3,060 | 3,820 | 1,820 | 606 | 312 | 200 | 220 |
| 24 | 234 | 190 | 265 | 1,140 | 2,240 | 3,400 | 3,640 | 1,800 | 584 | 303 | 200 | 210 |
| 25 | 315 | 200 | 258 | 2,170 | 3,630 | 4,340 | 3,460 | 1,710 | 561 | 294 | 200 | 200 |
| 26 | 245 | 260 | 247 | 10,000 | 10,800 | 12,300 | 3,310 | 1,630 | 548 | 288 | 190 | 200 |
| 27 | 214 | 238 | 245 | 6,880 | 43,900 | 18,400 | 3,170 | 1,580 | 525 | 282 | 190 | 190 |
| 28 | 206 | 222 | 242 | 5,250 | 49,400 | 12,600 | 2,980 | 1,540 | 505 | 278 | 190 | 190 |
| 29 | 204 | 210 | 278 | 4,610 | 29,800 | 25,300 | 3,030 | 1,480 | 489 | 275 | 190 | 180 |
| 30 | 198 | 208 | 342 | 3,680 | - | 52,800 | 2,890 | 1,440 | 497 | 272 | 190 | 180 |
| 31 | 202 | - | 469 | 3,230 | - | 33,800 | - | 1,670 | - | 265 | 190 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 6,285 | 360 | 150 | 203 | 12,470 |
| November..... | 5,746 | 260 | 176 | 192 | 11,400 |
| December..... | 11,386 | 1,700 | 202 | 367 | 22,580 |
| Calendar year 1939..... | 233,925 | 3,030 | 107 | 641 | 463,900 |
| January..... | 122,070 | 10,000 | 1,120 | 3,938 | 242,100 |
| February..... | 231,490 | 49,400 | 1,970 | 7,982 | 459,200 |
| March..... | 289,210 | 59,800 | 2,870 | 9,104 | 559,800 |
| April..... | 174,390 | 21,000 | 2,690 | 5,613 | 345,900 |
| May..... | 72,150 | 5,500 | 1,440 | 2,327 | 143,100 |
| June..... | 26,518 | 1,650 | 489 | 884 | 52,600 |
| July..... | 11,019 | 497 | 265 | 355 | 21,860 |
| August..... | 6,679 | 258 | - | 215 | 13,250 |
| September..... | 6,500 | 240 | - | 217 | 12,890 |
| Water year 1939-40..... | 956,443 | 52,800 | 150 | 2,613 | 1,897,000 |

Peak discharge.- Jan. 9 (5:30 a.m.) 10,900 sec.-ft.; Jan. 26 (12 m.) 14,200 sec.-ft.; Feb. 6 (5 p.m.) 10,300 sec.-ft.; Feb. 27 (11 p.m.) 60,200 sec.-ft.; Mar. 27 (2 a.m.) 25,900 sec.-ft.; Mar. 30 (9 a.m.) 57,600 sec.-ft.

Note.- We gage-height record Aug. 7 to Sept. 30; discharge computed on basis of combined flow of South Fork of Feather River and Palermo canal at Enterprise, weather records, and records of low flow in former years.

South Fork of Feather River at Enterprise, Calif.

Location.- Water-stage recorder, lat. 39°32', long. 121°21', in SW¹/₄ sec. 6, T. 19 N., R. 6 E., 0.8 mile upstream from McCabe Creek and 1 mile upstream from highway bridge at Enterprise. Altitude of gage, about 550 feet.

Drainage area.- 134 square miles.

Records available.- September 1930 to September 1940. October 1911 to September 1930, at site half a mile downstream.

Average discharge.- 29 years, 291 second-feet.

Extremes.- Maximum discharge during year, 13,800 second-feet Feb. 27 (gage height, 18.3 feet); minimum, 0.5 second-foot Oct. 1.

1911-40: Maximum discharge, 17,300 second-feet Dec. 10, 1937 (gage height, 20.4 feet), from rating curve extended above 4,000 second-feet on basis of velocity-area and A/V studies; minimum, 0.2 second-foot Aug. 11, 1917.

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by storage and diversions above station for irrigation. See record for Palermo canal at Enterprise.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|--------|-------|-----|------|------|------|-------|
| 1 | 0.6 | 20 | 15 | 270 | 532 | 2,540 | 3,110 | 332 | 146 | 23 | 2.3 | 1.8 |
| 2 | 5.5 | 20 | 15 | 2,000 | 494 | 1,940 | 2,180 | 352 | 118 | 20 | 2.5 | 1.8 |
| 3 | 7.5 | 20 | 15 | 750 | 1,220 | 1,570 | 1,730 | 399 | 103 | 17 | 2.6 | 1.8 |
| 4 | 6 | 19 | 15 | 1,000 | 1,680 | 1,340 | 1,520 | 427 | 97 | 16 | 2.8 | 2.5 |
| 5 | 4.8 | 11 | 15 | 550 | 1,780 | 1,110 | 1,260 | 386 | 92 | 16 | 2.9 | 2.9 |
| 6 | 18 | 8 | 20 | 400 | 1,700 | 959 | 1,050 | 342 | 83 | 14 | 2.1 | 2.1 |
| 7 | 28 | 8 | 20 | 350 | 1,390 | 850 | 1,000 | 311 | 78 | 16 | 2.3 | 2.0 |
| 8 | 14 | 7.5 | 20 | 1,800 | 975 | 785 | 955 | 297 | 72 | 12 | 2.4 | 1.9 |
| 9 | 12 | 7.5 | 30 | 2,150 | 774 | 739 | 890 | 299 | 65 | 11 | 2.3 | 1.9 |
| 10 | 11 | 8 | 150 | 1,300 | 673 | 690 | 792 | 304 | 63 | 11 | 2.2 | 1.9 |
| 11 | 10 | 8 | 290 | 1,600 | 603 | 652 | 739 | 304 | 59 | 10 | 2.2 | 1.9 |
| 12 | 10 | 8 | 120 | 1,500 | 517 | 598 | 703 | 284 | 57 | 10 | 2.2 | 1.9 |
| 13 | 9.5 | 8 | 60 | 900 | 547 | 560 | 680 | 258 | 54 | 9.5 | 2.2 | 3.2 |
| 14 | 9.5 | 8 | 50 | 632 | 707 | 523 | 664 | 240 | 52 | 8.5 | 2.0 | 2.3 |
| 15 | 9 | 8 | 40 | 517 | 553 | 501 | 649 | 235 | 51 | 9 | 1.9 | 2.1 |
| 16 | 6.5 | 8 | 35 | 432 | 463 | 526 | 592 | 215 | 47 | 8.5 | 1.9 | 2.3 |
| 17 | 5 | 9 | 35 | 372 | 550 | 540 | 543 | 189 | 45 | 8.5 | 1.9 | 2.2 |
| 18 | 5 | 12 | 35 | 327 | 514 | 492 | 518 | 146 | 42 | 8.5 | 1.8 | 2.6 |
| 19 | 5 | 12 | 30 | 291 | 444 | 476 | 501 | 140 | 39 | 8 | 1.8 | 4.0 |
| 20 | 5 | 12 | 30 | 263 | 395 | 470 | 492 | 135 | 38 | 7.5 | 1.8 | 3.4 |
| 21 | 5 | 12 | 30 | 237 | 367 | 459 | 476 | 134 | 37 | 7 | 1.8 | 3.8 |
| 22 | 5 | 12 | 30 | 219 | 346 | 462 | 464 | 127 | 35 | 6.5 | 1.8 | 3.5 |
| 23 | 5 | 13 | 25 | 208 | 336 | 462 | 451 | 127 | 34 | 6 | 1.9 | 3.3 |
| 24 | 11 | 12 | 25 | 210 | 377 | 484 | 427 | 119 | 35 | 5 | 1.9 | 3.2 |
| 25 | 15 | 17 | 25 | 493 | 656 | 628 | 414 | 122 | 32 | 4.8 | 1.8 | 3.0 |
| 26 | 11 | 24 | 25 | 2,610 | 2,780 | 2,600 | 417 | 123 | 29 | 4.5 | 1.8 | 3.0 |
| 27 | 9 | 19 | 25 | 1,500 | 11,200 | 2,960 | 386 | 119 | 28 | 4.3 | 1.8 | 3.3 |
| 28 | 8.5 | 16 | 20 | 946 | 9,750 | 1,940 | 359 | 126 | 25 | 4.5 | 1.6 | 3.5 |
| 29 | 8 | 15 | 25 | 725 | 4,680 | 4,990 | 378 | 114 | 24 | 3.9 | 1.8 | 3.5 |
| 30 | 12 | 15 | 35 | 616 | - | 11,100 | 347 | 134 | 24 | 2.7 | 1.8 | 3.3 |
| 31 | 20 | - | 55 | 553 | - | 6,140 | - | 182 | - | 2.3 | 1.8 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 291.4 | 28 | 0.6 | 9.40 | 578 |
| November..... | 377 | 24 | 7.5 | 12.6 | 748 |
| December..... | 1,360 | 290 | 15 | 43.9 | 2,700 |
| Calendar year 1939..... | 35,439.9 | 629 | .5 | 97.1 | 70,300 |
| January..... | 25,721 | 2,610 | 208 | 830 | 51,020 |
| February..... | 47,003 | 11,200 | 336 | 1,621 | 93,230 |
| March..... | 50,086 | 11,100 | 459 | 1,616 | 99,340 |
| April..... | 24,681 | 3,110 | 347 | 823 | 48,950 |
| May..... | 7,022 | 427 | 114 | 227 | 15,930 |
| June..... | 1,700 | 146 | 24 | 56.7 | 3,370 |
| July..... | 295.5 | 23 | 2.3 | 9.53 | 586 |
| August..... | 64.1 | 2.9 | 1.8 | 2.07 | 127 |
| September..... | 79.9 | 4.0 | 1.8 | 2.66 | 158 |
| Water year 1939-40..... | 158,680.9 | 11,200 | .5 | 434 | 314,700 |

Peak discharge.- Jan. 26 (12 m.) 3,850 sec.-ft.; Feb. 27 (9 p.m.) 13,800 sec.-ft.; Mar. 26 (9 p.m.) 5,840 sec.-ft.; Mar. 30 (8:30 a.m.) 12,900 sec.-ft.

Note.- No gage-height record Nov. 29 to Jan. 13; discharge computed on basis of records for Middle Fork of Feather River at Bidwell Bar and Palermo canal at Enterprise.

Lost Creek near Clipper Mills, Calif.

Location.- Water-stage recorder, lat. 39°34', long. 121°09', in sec. 24, T. 20 N., R. 7 E., 1,000 feet downstream from Lost Creek Dam and 2 miles north of town of Clipper Mills. Altitude of gage, about 3,050 feet.

Drainage area.- 30.1 square miles.

Records available.- October 1927 to September 1940.

Average discharge.- 13 years, 58.0 second-feet.

Extremes.- Maximum discharge during year, 2,800 second-feet Feb. 27 (gage height, 6.30 feet); no flow July 30 and parts of July 29 and 31.
1927-40: Maximum discharge, 3,380 second-feet Dec. 10, 1937 (gage height, 6.80 feet), computed from peak flow over Lost Creek Dam; no flow July 30 and parts of July 29 and 31, 1940.

Remarks.- Records good except those for period of incomplete gage-height record, which are fair. Storage in Lost Creek Reservoir above station was 1,840 acre-feet on Sept. 30, 1940. Forbestown ditch diverts water a quarter of a mile above station (see following page).

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|------|-----|------|------|------|-------|
| 1 | 0.2 | 0.9 | 0.4 | 1.7 | 136 | 600 | 800 | 100 | 41 | 2.3 | 0.8 | 0.6 |
| 2 | .3 | .9 | .4 | 2.2 | 136 | 500 | 550 | 100 | 34 | 2.3 | .8 | .6 |
| 3 | .2 | .4 | .4 | .8 | 360 | 450 | 470 | 100 | 28 | 2.2 | .8 | .7 |
| 4 | .2 | .5 | .4 | 1.1 | 507 | 400 | 420 | 110 | 24 | 2.3 | .8 | .8 |
| 5 | .2 | .4 | .4 | .6 | 512 | 360 | 370 | 110 | 20 | 2.2 | .8 | .8 |
| 6 | .3 | .4 | .4 | .5 | 447 | 330 | 320 | 100 | 15 | 2.2 | .8 | .8 |
| 7 | .2 | .4 | .4 | .9 | 371 | 310 | 300 | 100 | 13 | 2.1 | .8 | .8 |
| 8 | .2 | .3 | .4 | 280 | 279 | 280 | 280 | 90 | 12 | 2.1 | .8 | .8 |
| 9 | .2 | .3 | .4 | 656 | 223 | 260 | 250 | 80 | 12 | 2.0 | .8 | .7 |
| 10 | .2 | .3 | .9 | 394 | 202 | 240 | 230 | 83 | 12 | 2.0 | .8 | .7 |
| 11 | .2 | .3 | .5 | 483 | 182 | 220 | 210 | 80 | 10 | 1.9 | .7 | .7 |
| 12 | .2 | .3 | .4 | 390 | 157 | 210 | 200 | 77 | 9 | 1.8 | .6 | .7 |
| 13 | .2 | .4 | .4 | 236 | 157 | 200 | 190 | 76 | 8 | 1.6 | .6 | .6 |
| 14 | .2 | .4 | .4 | 170 | 162 | 190 | 170 | 74 | 8.5 | 1.6 | .6 | .6 |
| 15 | .2 | .4 | .4 | 139 | 132 | 180 | 160 | 65 | 6 | 1.5 | .6 | .6 |
| 16 | .2 | .4 | .4 | 116 | 121 | 180 | 160 | 67 | 4.9 | 1.5 | .6 | .7 |
| 17 | .2 | .4 | .4 | 103 | 144 | 170 | 150 | 26 | 4.6 | 1.4 | .5 | .7 |
| 18 | .2 | .4 | .3 | 93 | 127 | 140 | 140 | 6 | 4.2 | 1.4 | .5 | .7 |
| 19 | .2 | .4 | .4 | 86 | 116 | 130 | 140 | 8.5 | 3.9 | 1.4 | .5 | .6 |
| 20 | .2 | .4 | .4 | 79 | 110 | 130 | 130 | 10 | 3.6 | 1.2 | .5 | .6 |
| 21 | .2 | .4 | .4 | 74 | 109 | 130 | 130 | 12 | 3.3 | 1.1 | .5 | .6 |
| 22 | .2 | .4 | .4 | 69 | 105 | 130 | 120 | 13 | 3.0 | 1.0 | .5 | .6 |
| 23 | .2 | .4 | .4 | 67 | 110 | 130 | 120 | 15 | 2.7 | 1.0 | .5 | .6 |
| 24 | .4 | .4 | .4 | 73 | 125 | 140 | 110 | 13 | 2.6 | .9 | .5 | .6 |
| 25 | .2 | .5 | .4 | 189 | 266 | 170 | 110 | 29 | 2.5 | .8 | .6 | .6 |
| 26 | .2 | .4 | .4 | 718 | 877 | 400 | 110 | 34 | 2.4 | .7 | .6 | .6 |
| 27 | .2 | .4 | .4 | 364 | 2,480 | 600 | 110 | 33 | 2.4 | .6 | .6 | .6 |
| 28 | .5 | .4 | .4 | 239 | 2,180 | 450 | 110 | 31 | 2.4 | .4 | .6 | .6 |
| 29 | .9 | .4 | .4 | 187 | 1,100 | 1,000 | 110 | 31 | 2.4 | .1 | .6 | .6 |
| 30 | .9 | .4 | .5 | 159 | - | 2,400 | 100 | 42 | 2.3 | 0 | .6 | .6 |
| 31 | .9 | - | .6 | 146 | - | 1,300 | - | 54 | - | .2 | .6 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 9.0 | 0.9 | 0.2 | 0.29 | 18 |
| November..... | 12.7 | .9 | .3 | .42 | 25 |
| December..... | 13.2 | .9 | .3 | .43 | 26 |
| Calendar year 1939..... | 7,253.0 | 202 | .1 | 19.9 | 14,400 |
| January..... | 5,497.8 | 718 | .5 | 177 | 10,900 |
| February..... | 11,933 | 2,480 | 105 | 411 | 23,670 |
| March..... | 12,530 | 2,400 | 130 | 398 | 24,460 |
| April..... | 6,770 | 800 | 100 | 226 | 13,430 |
| May..... | 1,769.5 | 110 | 6 | 57.1 | 3,510 |
| June..... | 299.7 | 41 | 2.3 | 9.99 | 594 |
| July..... | 43.8 | 2.3 | 0 | 1.41 | 87 |
| August..... | 19.9 | .8 | .5 | .64 | 39 |
| September..... | 19.8 | .8 | .6 | .66 | 39 |
| Water year 1939-40..... | 38,718.4 | 2,480 | 0 | 106 | 76,800 |

Peak discharge.- Jan. 8 (6 p.m.) 845 sec.-ft.; Jan. 26 (9 a.m.) 1,020 sec.-ft.; Feb. 27 (10 p.m.) 2,800 sec.-ft.

Note.- Gage-height record incomplete Feb. 29 to May 7; discharge computed on basis of weekly staff-gage readings Feb. 29 to Mar. 25, daily readings Mar. 26 to May 7, and comparison with records for South Fork of Feather River at Enterprise.

Forbestown ditch near Clipper Mills, Calif.

Location.— Staff gage and Parshall flume, lat. 39°34', long. 121°09', in SW $\frac{1}{4}$ sec. 24, T. 20 N., R. 7 E., at outlet of diversion tunnel, 1,100 feet downstream from Lost Creek Dam and 2 miles north of Clipper Mills.

Records available.— October 1927 to September 1940.

Average discharge.— 13 years, 20.7 second-feet.

Extremes.— Maximum daily discharge during year, 42 second-feet June 5-9, June 12 to Aug. 22; no flow at times.

1927-40: Maximum daily discharge, 43 second-feet Aug. 9 to Sept. 9, 1937; no flow at times.

Remarks.— Records fair. Staff gage read once daily. The ditch, which is on left bank of Lost Creek, diverts from Lost Creek Reservoir. Water is used for irrigation in Oroville-Wyandotte irrigation district, in Butte County.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 27 | 2.7 | 16 | 14 | 6 | | 0 | 2.4 | 25 | 42 | 42 | 35 |
| 2 | 27 | 0 | 14 | 14 | 6 | | 0 | 2.4 | 35 | 42 | 42 | 35 |
| 3 | 27 | 0 | 14 | 14 | 6 | | 0 | 2.4 | 35 | 42 | 42 | 35 |
| 4 | 27 | 0 | 14 | 7 | 6 | | 0 | 2.4 | 35 | 42 | 42 | 35 |
| 5 | 27 | 15 | 14 | 7 | 6 | | 0 | 2.4 | 42 | 42 | 42 | 35 |
| 6 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.4 | 42 | 42 | 42 | 35 |
| 7 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.4 | 42 | 42 | 42 | 35 |
| 8 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.4 | 42 | 42 | 42 | 35 |
| 9 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.2 | 42 | 42 | 42 | 35 |
| 10 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.2 | 38 | 42 | 42 | 35 |
| 11 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.4 | 38 | 42 | 42 | 35 |
| 12 | 27 | 21 | 14 | 7 | 6 | | 0 | 2.3 | 42 | 42 | 42 | 35 |
| 13 | 27 | 21 | 14 | 5.5 | 6 | | 0 | 2.3 | 42 | 42 | 42 | 35 |
| 14 | 27 | 21 | 14 | 5.5 | 6 | | 0 | 2.3 | 42 | 42 | 42 | 35 |
| 15 | 27 | 21 | 14 | 5.5 | 6 | | 0 | 2.3 | 42 | 42 | 42 | 35 |
| 16 | 21 | 21 | 14 | 6 | 6 | | 0 | 2.4 | 42 | 42 | 42 | 35 |
| 17 | 21 | 21 | 14 | 6 | 6 | | 2.1 | 2.4 | 42 | 42 | 42 | 35 |
| 18 | 21 | 21 | 14 | 6 | 6 | | 14 | 2.4 | 42 | 42 | 42 | 35 |
| 19 | 21 | 21 | 14 | 6 | 6 | | 3.8 | 2.4 | 42 | 42 | 42 | 35 |
| 20 | 21 | 21 | 14 | 6 | 6 | | 3.8 | 2.4 | 42 | 42 | 42 | 35 |
| 21 | 21 | 21 | 14 | 6 | 6 | | 3.8 | 2.4 | 42 | 42 | 42 | 35 |
| 22 | 21 | 21 | 14 | 6 | 6 | | 3.8 | 2.4 | 42 | 42 | 42 | 35 |
| 23 | 21 | 21 | 14 | 6 | 6 | | 3.8 | 2.4 | 42 | 42 | 42 | 35 |
| 24 | 21 | 21 | 14 | 6 | 6 | | 2.4 | 25 | 42 | 42 | 36 | 35 |
| 25 | 21 | 21 | 14 | 6 | 6 | | 2.4 | 25 | 42 | 42 | 36 | 35 |
| 26 | 21 | 21 | 14 | 6 | 6 | | 2.4 | 25 | 42 | 42 | 35 | 35 |
| 27 | 6 | 21 | 14 | 6 | 0 | | 2.4 | 25 | 42 | 42 | 35 | 35 |
| 28 | 0 | 21 | 14 | 6 | 0 | | 2.4 | 25 | 42 | 42 | 35 | 35 |
| 29 | 6.5 | 21 | 14 | 6 | 0 | | 2.4 | 25 | 42 | 42 | 35 | 31 |
| 30 | 9 | 21 | 14 | 6 | - | | 2.4 | 25 | 42 | 42 | 35 | 31 |
| 31 | 9 | - | 14 | 6 | - | | - | 25 | - | 42 | 35 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 666.5 | 27 | 0 | 21.5 | 1,320 |
| November..... | 542.7 | 21 | 0 | 18.1 | 1,080 |
| December..... | 436 | 16 | 14 | 14.1 | 665 |
| Calendar year 1939..... | 8,099.2 | 37 | 0 | 22.2 | 16,080 |
| January..... | 217.5 | 14 | 5.5 | 7.02 | 431 |
| February..... | 166 | 6 | 0 | 5.38 | 308 |
| March..... | 0 | 0 | 0 | 0 | 0 |
| April..... | 51.9 | 14 | 0 | 1.73 | 103 |
| May..... | 254.4 | 25 | 2.2 | 8.21 | 505 |
| June..... | 1,214 | 42 | 25 | 40.5 | 2,410 |
| July..... | 1,302 | 42 | 42 | 42.0 | 2,580 |
| August..... | 1,242 | 42 | 35 | 40.1 | 2,460 |
| September..... | 1,042 | 35 | 31 | 34.7 | 2,070 |
| Water year 1939-40..... | 7,125.0 | 42 | 0 | 19.5 | 14,130 |

Palermo canal at Enterprise, Calif.

Location.— Water-stage recorder and Parshall flume, lat. 39°32', long. 121°21', in SW¼ sec. 6, T. 19 N., R. 6 E., 400 feet downstream from intake at diversion dam on South Fork of Feather River, 1 mile upstream from McCabe Creek, and 1 mile southeast of Enterprise.

Records available.— October 1911 to September 1940.

Average discharge.— 29 years, 18.6 second-feet.

Extremes.— Maximum daily discharge during year, 32 second-feet July 3; no flow Feb. 29 to Mar. 6, Mar. 31 to Apr. 16.
1911-40: Maximum discharge recorded, 43 second-feet July 25, 1927; no flow for periods in each year except 1939.

Remarks.— Records excellent except those for periods of no gage-height record, which are good. Canal diverts from left bank of South Fork of Feather River 1 mile above Enterprise. Water is used for irrigation near Oroville.

Cooperation.— Gage-height record collected in cooperation with Oroville-Wyandotte Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 19 | 0.4 | 6.5 | a5.5 | 5 | 0 | 0 | 9 | 30 | 29 | a28 | 23 |
| 2 | 23 | .4 | 6.5 | a5 | 5 | 0 | 0 | 9 | 30 | 30 | a28 | 23 |
| 3 | 21 | .3 | 6.5 | a4.5 | 5.5 | 0 | 0 | 9 | 30 | 32 | a28 | 23 |
| 4 | 18 | .3 | 6.5 | a3.5 | 6 | 0 | 0 | 9 | 29 | 31 | a28 | 27 |
| 5 | 16 | 9 | 6.5 | a3.5 | 6 | 0 | 0 | 9 | 29 | 31 | a28 | 28 |
| 6 | 23 | 17 | 6.5 | a3.5 | 6 | 0 | 0 | 8.5 | 29 | 31 | a28 | 27 |
| 7 | 27 | 13 | 7 | 3.5 | 5.5 | 3.7 | 0 | 8 | 28 | 31 | 30 | 26 |
| 8 | 18 | 13 | 7 | a4.5 | 5.5 | 6 | 0 | 8 | 28 | 31 | 30 | 25 |
| 9 | 13 | 13 | 5 | a5.5 | 5.5 | 6 | 0 | 8 | 29 | 30 | 29 | 25 |
| 10 | 12 | a13 | 7.5 | a5 | 5.5 | 6 | 0 | 8 | 31 | 30 | 29 | 24 |
| 11 | 11 | a13 | 8 | a5 | 5 | 6 | 0 | 8 | 30 | 30 | 29 | 25 |
| 12 | 10 | a13 | 7.5 | a5 | 5 | 5.5 | 0 | 13 | 30 | 30 | 28 | 24 |
| 13 | 10 | a13 | 7 | a5 | 5.5 | 5.5 | 0 | 24 | 29 | 30 | 28 | 28 |
| 14 | 10 | a13 | 7 | 5 | 5.5 | 5.5 | 0 | 28 | 29 | 30 | 28 | 27 |
| 15 | 10 | a13 | 7 | 4.9 | 5 | 5.5 | 0 | 28 | 29 | 31 | 28 | 27 |
| 16 | 12 | a13 | 7 | 4.9 | a5 | 5.5 | 0 | 27 | 29 | 30 | 28 | 27 |
| 17 | 14 | a13 | 7 | 4.8 | a5 | 5.5 | 4.2 | 27 | 29 | 30 | 28 | 27 |
| 18 | 13 | a13 | 7 | 4.9 | 4.9 | 5.5 | 9 | 27 | 28 | 30 | 28 | 28 |
| 19 | 13 | a9 | 7 | 4.8 | 4.9 | 5.5 | 9 | 27 | 29 | 30 | 28 | 29 |
| 20 | 14 | a9 | 7 | 4.8 | 4.9 | 5.5 | 9 | 27 | 30 | 29 | 27 | 26 |
| 21 | 13 | a8 | 7 | 4.8 | 4.9 | 5.5 | 9 | 27 | 30 | 29 | 27 | 24 |
| 22 | 13 | 8 | 7 | 4.8 | 4.9 | 5.5 | 9 | 27 | 29 | 29 | 27 | 24 |
| 23 | 13 | 7.5 | 7 | 4.8 | 4.9 | 8.5 | 9 | 28 | 29 | 28 | 27 | 23 |
| 24 | 20 | 7 | 7 | 4.8 | 4.9 | 17 | 9 | 28 | 29 | 28 | 26 | 23 |
| 25 | 23 | 7 | 7 | 5 | 5 | 17 | 9 | 28 | 29 | 28 | 25 | 23 |
| 26 | 17 | 7 | 7 | 6 | 5.5 | 15 | 9 | 28 | 29 | 28 | 25 | 23 |
| 27 | 15 | 7 | 6.5 | 5.5 | 5 | 10 | 9 | 30 | 29 | 28 | 24 | 24 |
| 28 | 14 | 6.5 | 6.5 | 5.5 | .1 | 8.5 | 9 | 30 | 29 | 28 | 23 | 24 |
| 29 | 14 | 6.5 | 7 | 5.5 | 0 | 7.5 | 9 | 29 | 30 | a28 | 23 | 24 |
| 30 | 7 | 6.5 | 7 | 5.5 | - | .4 | 9 | 30 | 30 | a28 | 23 | 24 |
| 31 | .5 | - | 7 | 5 | - | 0 | - | 30 | - | a28 | 23 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 456.5 | 27 | 0.5 | 14.7 | 906 | | |
| November..... | | | | | | 272.4 | 17 | .3 | 9.08 | 540 | | |
| December..... | | | | | | 215.0 | 8 | 6.5 | 6.94 | 426 | | |
| Calendar year 1939..... | | | | | | 5,319.1 | 28 | .3 | 14.6 | 10,560 | | |
| January..... | | | | | | 150.2 | 6 | 3.5 | 4.85 | 298 | | |
| February..... | | | | | | 141.4 | 6 | 0 | 4.88 | 280 | | |
| March..... | | | | | | 172.1 | 17 | 0 | 5.55 | 341 | | |
| April..... | | | | | | 121.2 | 9 | 0 | 4.04 | 240 | | |
| May..... | | | | | | 636.5 | 30 | 8 | 20.5 | 1,260 | | |
| June..... | | | | | | 878 | 31 | 28 | 29.3 | 1,740 | | |
| July..... | | | | | | 916 | 32 | 28 | 29.5 | 1,820 | | |
| August..... | | | | | | 839 | 30 | 25 | 27.1 | 1,660 | | |
| September..... | | | | | | 755 | 29 | 25 | 25.2 | 1,500 | | |
| Water year 1939-40..... | | | | | | 5,553.3 | 32 | 0 | 15.2 | 11,010 | | |

a No gage-height record; discharge computed on basis of observer's notes or interpolated.

FEATHER RIVER BASIN

Middle Fork of Yuba River at Milton, Calif.

Location.— Water-stage recorder, lat. 39°31'22", long. 120°35'01", 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, 8 miles upstream from South Fork of Middle Fork. Altitude of gage, 5,700 feet (from topographic map).

Drainage area.— 41 square miles.

Records available.— October 1928 to September 1934, October 1935 to September 1940. December 1925 to September 1928, at site 0.2 mile downstream.

Average discharge.— 12 years (1926-30, 1931-34, 1935-40), 103 second-feet (based on combined flow of Middle Fork at this station and Milton-Bowman tunnel at outlet).

Extremes.— Maximum discharge during year, 2,110 second-feet Mar. 26 (gage height, 2.04 feet); no flow over dam for long periods.
1925-34, 1935-40: Maximum discharge, 6,800 second-feet Dec. 11, 1937 (gage height, 4.18 feet), from rating curve extended above 1,500 second-feet by weir formula; practically all low flow diverted after May 23, 1928.

Remarks.— Records good except those for periods of no gage-height record, which are poor. Milton-Bowman tunnel diverts water above station to Bowman Lake (see p. 299).

Cooperation.— Water-stage recorder graph furnished by Nevada Irrigation District.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|----|----|-----|-----|-----|-----|-----|-------|
| 0 | 0 | 0.4 | 143 | 0.8 | 440 | 1.3 | 1,000 |
| .1 | 9 | .5 | 207 | .9 | 535 | 1.5 | 1,270 |
| .2 | 42 | .6 | 277 | 1.0 | 640 | 1.8 | 1,720 |
| .3 | 88 | .7 | 354 | 1.1 | 750 | 2.1 | 2,210 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | | | | a2 | 0 | 0 | 12 | 354 | 54 | | | |
| 2 | | | | a150 | 0 | 0 | 0 | 598 | 8 | | | |
| 3 | | | | a3 | 0 | 0 | 0 | 640 | 0 | | | |
| 4 | | | | 0 | 0 | 0 | 0 | 506 | 0 | | | |
| 5 | | | | 0 | 0 | 0 | 0 | 346 | 0 | | | |
| 6 | | | | 0 | 0 | 0 | 0 | 323 | 0 | | | |
| 7 | | | | 0 | 0 | 0 | 0 | 371 | 0 | | | |
| 8 | | | | 0 | 0 | 0 | 0 | 488 | 0 | | | |
| 9 | | | | 0 | 0 | 0 | 0 | 640 | 0 | | | |
| 10 | | | | 0 | 0 | 0 | 0 | 759 | 0 | | | |
| 11 | | | | 0 | 0 | 0 | 0 | 651 | 0 | | | |
| 12 | | | | 0 | 0 | 0 | 25 | 468 | 0 | | | |
| 13 | | | | 0 | 0 | 0 | 126 | 388 | 0 | | | |
| 14 | | | | 0 | 0 | 0 | 169 | 363 | 0 | | | |
| 15 | | | | 0 | 0 | 0 | 116 | 285 | 0 | | | |
| 16 | | | | 0 | 0 | 0 | 13 | 282 | 0 | | | |
| 17 | | | | 0 | 0 | 0 | 16 | 300 | 0 | | | |
| 18 | | | | 0 | 0 | 0 | 188 | 263 | 0 | | | |
| 19 | | | | 0 | 0 | 0 | 397 | 242 | 0 | | | |
| 20 | | | | 0 | 0 | 0 | 431 | 256 | 0 | | | |
| 21 | | | | 0 | 0 | 0 | 468 | 285 | 0 | | | |
| 22 | | | | 0 | 0 | 0 | 516 | 292 | 0 | | | |
| 23 | | | | 0 | 0 | 0 | 506 | 285 | 0 | | | |
| 24 | | | | 0 | 0 | 0 | 423 | 256 | 0 | | | |
| 25 | | | | 0 | 0 | 15 | 339 | 181 | 0 | | | |
| 26 | | | | 24 | 0 | 814 | 270 | 132 | 0 | | | |
| 27 | | | | 10 | 54 | 782 | 249 | 104 | 0 | | | |
| 28 | | | | 0 | 285 | 126 | 228 | 83 | 0 | | | |
| 29 | | | | 0 | 24 | 343 | 214 | 39 | 0 | | | |
| 30 | | | | 0 | - | 662 | 235 | 34 | 0 | | | |
| 31 | | | | 0 | - | 182 | - | 126 | - | | | |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 0 | 0 | 0 | 0 | 0 |
| November..... | 0 | 0 | 0 | 0 | 0 |
| December..... | 0 | 0 | 0 | 0 | 0 |
| Calendar year 1939..... | 0 | 0 | 0 | 0 | 0 |
| January..... | 189 | 150 | 0 | 6.10 | 375 |
| February..... | 363 | 285 | 0 | 12.5 | 720 |
| March..... | 2,924 | 814 | 0 | 94.3 | 5,800 |
| April..... | 4,941 | 516 | 0 | 165 | 9,800 |
| May..... | 10,331 | 739 | 35 | 335 | 20,490 |
| June..... | 62 | 54 | 0 | 2.07 | 123 |
| July..... | 0 | 0 | 0 | 0 | 0 |
| August..... | 0 | 0 | 0 | 0 | 0 |
| September..... | 0 | 0 | 0 | 0 | 0 |
| Water year 1939-40..... | 18,810 | 814 | 0 | 51.4 | 37,310 |

Peak discharge.— Mar. 26 (9 p.m.) 2,110 sec.-ft.; May 10 (3 p.m.) 1,010 sec.-ft.

No gage-height record; discharge computed on basis of records for nearby streams and engineer's notes of visits to station on Jan. 2, 3.

Middle Fork of Yuba River near North San Juan, Calif.

Location.- Water-stage recorder, lat. 39°23', long. 121°06', in NE $\frac{1}{4}$ sec. 32, T. 18 N., R. 8 E., 1 mile downstream from Oregon Creek and 1 mile north of North San Juan.

Datum of gage is 1,400.62 feet above mean sea level (general adjustment of 1929).

Drainage area.- 207 square miles.

Records available.- October 1930 to September 1940. July to October 1900 and October 1910 to October 1930, at site 0.4 mile upstream.

Average discharge.- 28 years (1911-30, 1931-40) 461 second-feet, including flow of Milton-Bowman tunnel at outlet.

Extremes.- Maximum discharge during year, 13,500 second-feet Mar. 30 (gage height, 10.5 feet); minimum, 26 second-feet Oct. 1.

1910-40: Maximum discharge, about 26,000 second-feet Mar. 25, 1928 (gage height, 15.3 feet, former site and datum, from floodmarks), from rating curve extended above 1,200 second-feet; minimum, 14 second-feet Aug. 24-28, 1931.

Remarks.- Records good except those for September, which are fair. Milton-Bowman tunnel (see p. 295), above station, has diverted water to Bowman Lake since 1928. Some small diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|--------|-------|-------|------|------|------|-------|
| 1 | 67 | 36 | 36 | 290 | 520 | 3,250 | 3,890 | 738 | 321 | 63 | 45 | 33 |
| 2 | 117 | 36 | 36 | 2,100 | 471 | 2,230 | 2,510 | 1,010 | 238 | 60 | 44 | 32 |
| 3 | 71 | 35 | 35 | 676 | 732 | 1,730 | 1,960 | 1,270 | 198 | 58 | 44 | 33 |
| 4 | 44 | 35 | 34 | 955 | 1,870 | 1,390 | 1,620 | 1,260 | 182 | 57 | 43 | 43 |
| 5 | 38 | 34 | 34 | 520 | 1,900 | 1,160 | 1,350 | 926 | 173 | 56 | 42 | 41 |
| 6 | 132 | 33 | 40 | 336 | 1,740 | 1,010 | 1,150 | 805 | 162 | 55 | 41 | 38 |
| 7 | 102 | 34 | 38 | 336 | 1,560 | 889 | 1,080 | 784 | 153 | 54 | 41 | 36 |
| 8 | 57 | 34 | 36 | 1,870 | 1,100 | 840 | 1,040 | 854 | 145 | 52 | 40 | 35 |
| 9 | 46 | 34 | 40 | 2,190 | 855 | 619 | 966 | 1,010 | 135 | 51 | 39 | 34 |
| 10 | 41 | 34 | 83 | 1,080 | 746 | 750 | 862 | 1,210 | 128 | 51 | 38 | 33 |
| 11 | 38 | 34 | 227 | 2,320 | 682 | 681 | 840 | 1,270 | 123 | 51 | 38 | 33 |
| 12 | 35 | 34 | 106 | 1,720 | 580 | 603 | 812 | 1,020 | 114 | 50 | 37 | 33 |
| 13 | 35 | 34 | 74 | 925 | 552 | 546 | 889 | 942 | 108 | 50 | 36 | 36 |
| 14 | 34 | 34 | 60 | 646 | 841 | 508 | 990 | 833 | 102 | 49 | 36 | 35 |
| 15 | 34 | 34 | 53 | 490 | 658 | 480 | 1,010 | 812 | 97 | 49 | 35 | 35 |
| 16 | 33 | 34 | 49 | 399 | 548 | 524 | 764 | 657 | 91 | 49 | 36 | 36 |
| 17 | 33 | 34 | 48 | 359 | 612 | 524 | 657 | 738 | 88 | 49 | 36 | 36 |
| 18 | 33 | 34 | 46 | 300 | 802 | 498 | 681 | 653 | 94 | 49 | 36 | 41 |
| 19 | 33 | 34 | 45 | 273 | 515 | 465 | 1,010 | 615 | 85 | 49 | 36 | 44 |
| 20 | 33 | 33 | 46 | 243 | 462 | 460 | 1,100 | 585 | 82 | 48 | 35 | 39 |
| 21 | 33 | 33 | 45 | 220 | 430 | 455 | 1,090 | 627 | 77 | 47 | 34 | 36 |
| 22 | 32 | 34 | 43 | 205 | 417 | 460 | 1,160 | 609 | 74 | 46 | 34 | 34 |
| 23 | 32 | 34 | 44 | 193 | 495 | 475 | 1,200 | 609 | 71 | 45 | 34 | 33 |
| 24 | 58 | 33 | 44 | 193 | 748 | 497 | 1,100 | 574 | 70 | 44 | 34 | 33 |
| 25 | 71 | 43 | 42 | 501 | 1,430 | 738 | 958 | 497 | 67 | 44 | 34 | 33 |
| 26 | 48 | 60 | 41 | 2,860 | 3,160 | 4,070 | 854 | 390 | 66 | 43 | 34 | 34 |
| 27 | 43 | 44 | 41 | 1,780 | 8,080 | 5,630 | 744 | 334 | 65 | 53 | 34 | 36 |
| 28 | 42 | 40 | 40 | 1,060 | 8,630 | 2,660 | 681 | 298 | 64 | 70 | 33 | 35 |
| 29 | 41 | 37 | 49 | 796 | 6,260 | 6,310 | 693 | 261 | 64 | 49 | 33 | 35 |
| 30 | 40 | 37 | 57 | 658 | - | 12,100 | 654 | 231 | 66 | 47 | 33 | 34 |
| 31 | 37 | - | 64 | 574 | - | 7,320 | - | 326 | - | 44 | 34 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,533 | 132 | 32 | 49.5 | 3,040 |
| November..... | 1,079 | 60 | 33 | 36.0 | 2,140 |
| December..... | 1,696 | 227 | 34 | 54.7 | 3,360 |
| Calendar year 1939..... | 49,169 | 1,020 | 20 | 135 | 97,520 |
| January..... | 27,050 | 2,860 | 193 | 873 | 53,650 |
| February..... | 47,246 | 8,630 | 417 | 1,329 | 93,710 |
| March..... | 60,060 | 12,100 | 455 | 1,937 | 119,100 |
| April..... | 34,332 | 3,890 | 651 | 1,144 | 68,100 |
| May..... | 22,758 | 1,270 | 231 | 754 | 48,140 |
| June..... | 3,491 | 321 | 64 | 115 | 6,920 |
| July..... | 1,562 | 70 | 43 | 51.0 | 3,140 |
| August..... | 1,149 | 45 | 33 | 37.1 | 2,280 |
| September..... | 1,071 | 44 | 32 | 35.7 | 2,120 |
| Water year 1939-40..... | 203,047 | 12,100 | 32 | 555 | 402,700 |

Peak discharge.- Jan. 9 (5 a.m.) 3,460 sec.-ft.; Jan. 11 (5 p.m.) 3,550 sec.-ft.; Jan. 26 (2 p.m.) 4,120 sec.-ft.; Feb. 27 (10:30 p.m.) 10,100 sec.-ft.; Mar. 26 (10 p.m.) 11,600 sec.-ft.; Mar. 30 (4:30 p.m.) 13,500 sec.-ft.

Note.- No gage-height record Sept. 1-30; discharge computed on basis of range of stage indicated by recorder, rainfall records, and records for North Fork of Yuba River below Goodyears Bar.

Yuba River at Smartville, Calif.

Location.- Water-stage recorder, lat. $39^{\circ}13'$, long. $121^{\circ}18'$, in $5\frac{1}{4}$ sec. 22, T. 16 N., R. 8 E., at Narrows, 1 mile downstream from Deer Creek and 1 mile north of Smartville. Datum of gage is 264.17 feet above mean sea level (general adjustment of 1912).

Drainage area.- 1,201 square miles.

Records available.- June 1903 to September 1940.

Average discharge.- 37 years, 2,919 second-feet.

Extremes.- Maximum discharge during year, 64,700 second-feet Mar. 30 (gage height, 20.1 feet); minimum, 70 second-feet (regulated) Oct. 11, 1903-40: Maximum discharge, about 120,000 second-feet Mar. 26, 1928 (gage height, 31.2 feet, present datum, from floodmarks), by slope-area method; maximum gage height, 29.2 feet, former datum, or 34.4 feet, present datum, Mar. 19, 1907; minimum, that of Oct. 11, 1939.

Remarks.- Records good. Several diversions above station for power and irrigation. Flow regulated by Lake Spaulding (capacity, 70,500 acre-feet), Bowman Lake (p. 299), Fordyce Lake (capacity, 42,000 acre-feet), and many smaller reservoirs. Narrows Dam for debris storage is under construction 1 mile above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|--------|--------|--------|--------|-------|--------|------|------|-------|
| 1 | 192 | 249 | 232 | 641 | 3,980 | 17,600 | 23,500 | 3,780 | 4,980 | 579 | 300 | 282 |
| 2 | 300 | 216 | 227 | 8,440 | 3,780 | 12,700 | 13,000 | 5,160 | 3,980 | 537 | 300 | 278 |
| 3 | 313 | 216 | 227 | 6,020 | 4,630 | 9,680 | 12,100 | 7,920 | 3,190 | 518 | 296 | 278 |
| 4 | 300 | 216 | 222 | 6,060 | 8,410 | 9,080 | 10,100 | 7,780 | 2,720 | 488 | 296 | 296 |
| 5 | 266 | 211 | 227 | 3,870 | 9,400 | 6,860 | 8,640 | 6,700 | 3,120 | 476 | 292 | 310 |
| 6 | 350 | 211 | 243 | 2,320 | 8,320 | 5,970 | 7,660 | 5,680 | 2,710 | 470 | 287 | 558 |
| 7 | 459 | 190 | 243 | 2,070 | 6,030 | 5,390 | 7,200 | 4,770 | 2,760 | 458 | 287 | 656 |
| 8 | 342 | 175 | 243 | 9,680 | 6,070 | 5,130 | 7,130 | 4,980 | 2,550 | 458 | 282 | 663 |
| 9 | 236 | 157 | 243 | 13,300 | 4,970 | 5,100 | 6,780 | 6,270 | 2,440 | 446 | 282 | 656 |
| 10 | 94 | 139 | 288 | 7,600 | 4,380 | 4,830 | 6,330 | 7,660 | a2,300 | 394 | 282 | 649 |
| 11 | 77 | 190 | 548 | 11,300 | 4,200 | 4,480 | 6,380 | 8,100 | a2,200 | 388 | 282 | 600 |
| 12 | 271 | 222 | 463 | 10,200 | 3,780 | 3,890 | 6,410 | 8,810 | a1,800 | 399 | 282 | 306 |
| 13 | 277 | 211 | 324 | 5,680 | 3,730 | 3,530 | 6,860 | 8,640 | a1,100 | 399 | 278 | 296 |
| 14 | 277 | 201 | 277 | 3,930 | 6,410 | 3,290 | 7,460 | 7,130 | a900 | 377 | 278 | 296 |
| 15 | 271 | 196 | 271 | 3,010 | 4,310 | 3,150 | 7,680 | 6,980 | a800 | 382 | 278 | 292 |
| 16 | 243 | 201 | 330 | 2,500 | 3,680 | 3,240 | 6,620 | 6,270 | 650 | 382 | 278 | 296 |
| 17 | 232 | 190 | 342 | 2,150 | 4,080 | 3,430 | 5,500 | 6,270 | 774 | 372 | 278 | 300 |
| 18 | 232 | 190 | 342 | 1,690 | 3,880 | 3,150 | 5,360 | 6,030 | 893 | 360 | 274 | 300 |
| 19 | 227 | 180 | 330 | 1,710 | 3,340 | 3,050 | 6,250 | 5,710 | 893 | 360 | 278 | 305 |
| 20 | 216 | 185 | 300 | 1,530 | 2,990 | 3,020 | 6,860 | 4,680 | 830 | 360 | 278 | 197 |
| 21 | 185 | 190 | 324 | 1,380 | 2,760 | 3,020 | 7,250 | 5,550 | 830 | 355 | 278 | 177 |
| 22 | 196 | 196 | 306 | 1,220 | 2,640 | 3,080 | 7,340 | 6,280 | 718 | 345 | 274 | 287 |
| 23 | 201 | 206 | 312 | 1,140 | 2,740 | 3,210 | 7,340 | 6,140 | 726 | 320 | 278 | 287 |
| 24 | 254 | 201 | 324 | 1,110 | 3,380 | 3,320 | 6,860 | 5,490 | 656 | 310 | 278 | 300 |
| 25 | 342 | 211 | 312 | 2,670 | 6,300 | 4,490 | 5,930 | 5,680 | 635 | 305 | 282 | 274 |
| 26 | 300 | 271 | 312 | 12,600 | 12,600 | 13,500 | 5,070 | 4,940 | 642 | 300 | 292 | 287 |
| 27 | 268 | 277 | 306 | 10,400 | 48,300 | 30,200 | 4,330 | 4,130 | 642 | 296 | 278 | 296 |
| 28 | 282 | 254 | 312 | 6,740 | 52,200 | 15,200 | 3,910 | 3,980 | 642 | 325 | 278 | 300 |
| 29 | 277 | 243 | 336 | 5,350 | 33,100 | 25,800 | 3,730 | 4,060 | 600 | 325 | 282 | 296 |
| 30 | 277 | 232 | 348 | 4,630 | - | 61,500 | 3,640 | 4,060 | 572 | 292 | 278 | 296 |
| 31 | 271 | - | 381 | 4,220 | - | 43,300 | - | 4,330 | - | 300 | 278 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 8,048 | 459 | 77 | 260 | 15,960 |
| November..... | 6,217 | 277 | 139 | 207 | 12,330 |
| December..... | 9,495 | 548 | 222 | 306 | 18,830 |
| Calendar year 1939..... | 295,364 | 5,040 | 77 | 809 | 585,800 |
| January..... | 155,371 | 13,300 | 641 | 5,012 | 308,200 |
| February..... | 266,370 | 52,200 | 2,640 | 9,185 | 528,300 |
| March..... | 322,180 | 61,500 | 3,020 | 10,390 | 639,000 |
| April..... | 273,220 | 23,500 | 3,640 | 7,441 | 442,800 |
| May..... | 184,160 | 8,810 | 3,780 | 5,941 | 365,300 |
| June..... | 48,253 | 4,980 | 572 | 1,808 | 95,710 |
| July..... | 12,076 | 579 | 292 | 390 | 23,950 |
| August..... | 8,764 | 300 | 274 | 285 | 17,380 |
| September..... | 10,613 | 663 | 177 | 354 | 21,050 |
| Water year 1939-40..... | 1,254,747 | 61,500 | 77 | 3,428 | 2,489,000 |

Peak discharge.- Jan. 2 (8 p.m.) 15,600 sec.-ft.; Jan. 9 (5 a.m.) 16,200 sec.-ft.; Jan. 26 (4 p.m.) 17,600 sec.-ft.; Feb. 27 (12 p.m.) 59,000 sec.-ft.; Mar. 26 (12 p.m.) 49,500 sec.-ft.; Mar. 30 (10 a.m., 12 m., 4 p.m.) 64,700 sec.-ft.

a No gage-height record; discharge computed on basis of unpublished records for North Fork of Yuba River at Bullard's Bar.

Milton-Bowman tunnel at outlet, Calif.

Location.- Water-stage recorder, lat. 39°28', long. 120°37', in sec. 3, T. 18 N., R. 12 E., near upper end of Bowman Lake. Altitude of gage, 5,600 feet (from topographic map).

Records available.- May 1928 to September 1930, October 1931 to September 1940.

Average discharge.- 11 years (1928-30, 1931-40), 65.6 second-feet.

Extremes.- Maximum daily discharge during year, 472 second-foot Mar. 29, 30; minimum daily, 2.3 second-foot Oct. 1.

1928-30, 1931-40: Maximum daily discharge, that of Mar. 29, 30, 1940; minimum daily, 1.3 second-foot Sept. 28, 29, 1937, and Sept. 24, 1939.

Remarks.- Records good above about 20 second-feet; fair below. Tunnel diverts water from Middle Fork of Yuba River at Milton, in sec. 12, T. 19 N., R. 12 E., and discharges it into Bowman Lake, from which it is conveyed to Lake Spaulding. During low and medium stages practically entire flow of Middle Fork of Yuba River is diverted.

Cooperation.- Water-stage recorder graph and results of nine discharge measurements furnished by Nevada Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 2.3 | 5 | 4.1 | 28 | 115 | 277 | 400 | 80 | 360 | 36 | 2.9 | 2.4 |
| 2 | 2.6 | 4.8 | 4.1 | 144 | 106 | 206 | 324 | 86 | a335 | 23 | 2.9 | 2.4 |
| 3 | 2.4 | 4.5 | 3.8 | 175 | 115 | 162 | 340 | 88 | 312 | 11 | 2.7 | 2.6 |
| 4 | 2.4 | 4.2 | 3.8 | 233 | 122 | 134 | 285 | 87 | 312 | 11 | 2.7 | 2.7 |
| 5 | 3.5 | 4.0 | 3.8 | 126 | 112 | 128 | 247 | 84 | 285 | 12 | 2.7 | 2.6 |
| 6 | 7.5 | 4.0 | 4.5 | 72 | 154 | 122 | 243 | 83 | 270 | 12 | 2.6 | 2.6 |
| 7 | 12 | 4.0 | 6 | 59 | 169 | 121 | 247 | 83 | 251 | 12 | 2.6 | 2.6 |
| 8 | 10 | 4.1 | 6.5 | 57 | 122 | 132 | 262 | 84 | 235 | 11 | 2.6 | 2.6 |
| 9 | 9 | 4.1 | 9 | 67 | 102 | 142 | 285 | 85 | 206 | 11 | 2.6 | 2.6 |
| 10 | 7.5 | 4.1 | 13 | 63 | 97 | 130 | 324 | 87 | 168 | 13 | 2.6 | 2.4 |
| 11 | 6.5 | 4.1 | 25 | 100 | 92 | 117 | 368 | 225 | 195 | 14 | 2.7 | 2.4 |
| 12 | 5.5 | 4.1 | 19 | 199 | 85 | 104 | 316 | 380 | 185 | 14 | 2.7 | 2.4 |
| 13 | 5.5 | 3.8 | 14 | 121 | 79 | 98 | 332 | 372 | 162 | 14 | 2.7 | 2.4 |
| 14 | 4.8 | 3.8 | 11 | 90 | 70 | 97 | 356 | 360 | 144 | 13 | 2.7 | 2.6 |
| 15 | 4.8 | 3.6 | 8.5 | 74 | 74 | 98 | 324 | 344 | 128 | 13 | 2.7 | 2.6 |
| 16 | 4.5 | 3.6 | 7.5 | 65 | 73 | 107 | 304 | 328 | 121 | 12 | 2.4 | 2.6 |
| 17 | 4.5 | 3.6 | 7 | 58 | 66 | 119 | 296 | 312 | 113 | 12 | 2.6 | 2.4 |
| 18 | 4.2 | 3.6 | 6.5 | 54 | 65 | 117 | 212 | 308 | 101 | 11 | 2.6 | 4.3 |
| 19 | 4.2 | 3.6 | 6 | 50 | 62 | 122 | 83 | 304 | 91 | 11 | 2.6 | 5.5 |
| 20 | 16 | 3.6 | 5.5 | 47 | 61 | 142 | 84 | 300 | 83 | 11 | 2.7 | 5.5 |
| 21 | 17 | 3.4 | 5 | 44 | 62 | 159 | 84 | 300 | 76 | 10 | 2.7 | 5.5 |
| 22 | 7.5 | 3.4 | 4.8 | 42 | 59 | 210 | 85 | 298 | 69 | 10 | 2.7 | 5 |
| 23 | 5.5 | 3.4 | 5 | 40 | 61 | 243 | 85 | 292 | 62 | 10 | 2.7 | 4.8 |
| 24 | 5.5 | 3.4 | 5 | 39 | 74 | 281 | 84 | 285 | 56 | 10 | 2.7 | 4.8 |
| 25 | 5.5 | 4.1 | 4.8 | 44 | 91 | 380 | 82 | 277 | 51 | 49 | 2.6 | 5 |
| 26 | 5 | 4.8 | 5 | 265 | 137 | 424 | 80 | 270 | 48 | 26 | 2.6 | 4.8 |
| 27 | 5 | 4.5 | 5 | 372 | 262 | 428 | 79 | 262 | 43 | 3.4 | 2.4 | 4.8 |
| 28 | 5.5 | 4.3 | 5 | 251 | 396 | 416 | 78 | 262 | 40 | 3.2 | 2.4 | 5 |
| 29 | 6 | 4.1 | 7 | 162 | 348 | 472 | 78 | 344 | 37 | 3.2 | 2.4 | 5 |
| 30 | 5.5 | 4.1 | 11 | 132 | - | 472 | 79 | 344 | 39 | 2.9 | 2.4 | 5 |
| 31 | 5.5 | - | 14 | 122 | - | 440 | - | 328 | - | 2.9 | 2.6 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 193.2 | 17 | 2.3 | 6.23 | 383 |
| November..... | 119.7 | 5 | 3.4 | 3.99 | 237 |
| December..... | 240.2 | 25 | 3.8 | 7.75 | 476 |
| Calendar year 1939..... | 14,976.5 | 341 | 1.3 | 41.0 | 29,710 |
| January..... | 3,395 | 372 | 28 | 110 | 6,730 |
| February..... | 3,429 | 396 | 59 | 118 | 6,800 |
| March..... | 6,600 | 472 | 97 | 213 | 13,090 |
| April..... | 6,426 | 400 | 78 | 214 | 12,750 |
| May..... | 7,340 | 360 | 80 | 237 | 14,560 |
| June..... | 4,598 | 360 | 37 | 153 | 9,120 |
| July..... | 407.6 | 49 | 2.9 | 13.1 | 808 |
| August..... | 81.5 | 2.9 | 2.4 | 2.63 | 162 |
| September..... | 107.9 | 5.5 | 2.4 | 3.60 | 214 |
| Water year 1939-40..... | 32,938.1 | 472 | 2.3 | 90.0 | 65,330 |

a No gage-height record; discharge interpolated.

FEATHER RIVER BASIN

Oregon Creek near North San Juan, Calif.

Location.- Water-stage recorder, lat. 39°24', long. 121°05', in SW $\frac{1}{4}$ sec. 22, T. 18 N., R. 8 E., 1 mile upstream from mouth and 3 miles northeast of North San Juan. Altitude of gage, about 1,500 feet (from topographic map).

Drainage area.- 35.1 square miles.

Records available.- October 1933 to September 1940. October 1910 to September 1933 at site 0.7 mile downstream.

Average discharge.- 29 years (1911-40), 71.9 second-feet.

Extremes.- Maximum discharge during year, 2,430 second-feet Mar. 30 (gage height, 8.80 feet); minimum, 1.6 second-feet Aug. 24, 29 (gage height, 1.50 feet).

1910-40: Maximum discharge observed, about 4,000 second-feet Mar. 25, 1928 (gage height, 9.5 feet, site and datum then in use), from rating curve extended above 600 second-feet; minimum discharge, 0.7 second-foot several days in July and August 1931 and September 1934.

Remarks.- Records excellent. Small diversions above station for irrigation and mining.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | 6.5 | 6.5 | 6.5 | 78 | 97 | 786 | 833 | 44 | 24 | 7 | 3.0 | 2.4 |
| 2 | 18 | 6.5 | 6.5 | 283 | 90 | 552 | 535 | 42 | 22 | 6 | 3.2 | 2.7 |
| 3 | 9 | 6 | 5.5 | 103 | 187 | 407 | 404 | 41 | 20 | 6 | 3.0 | 2.6 |
| 4 | 5 | 6 | 5.5 | 197 | 572 | 318 | 318 | 58 | 18 | 6 | 2.9 | 2.6 |
| 5 | 4.4 | 6 | 5.5 | 105 | 535 | 260 | 260 | 49 | 17 | 6 | 2.7 | 2.7 |
| 6 | 28 | 5 | 6.5 | 66 | 467 | 224 | 224 | 44 | 17 | 6 | 2.6 | 2.4 |
| 7 | 18 | 6.5 | 6 | 68 | 385 | 196 | 207 | 40 | 16 | 5.5 | 2.4 | 2.2 |
| 8 | 10 | 7 | 5.5 | 429 | 268 | 176 | 188 | 38 | 16 | 5.5 | 2.6 | 2.4 |
| 9 | 9 | 7.5 | 5.5 | 525 | 206 | 161 | 170 | 36 | 15 | 4.6 | 2.6 | 2.6 |
| 10 | 7.5 | 7 | 14 | 287 | 174. | 148 | 151 | 35 | 15 | 4.4 | 2.4 | 2.7 |
| 11 | 6.5 | 7 | 36 | 542 | 160 | 136 | 136 | 31 | 14 | 4.8 | 2.6 | 2.9 |
| 12 | 6.5 | 7.5 | 17 | 388 | 133 | 124 | 124 | 30 | 14 | 4.6 | 2.4 | 2.9 |
| 13 | 7 | 7 | 12 | 219 | 131 | 113 | 114 | 30 | 13 | 4.8 | 2.4 | 3.0 |
| 14 | 7 | 7 | 11 | 152 | 206 | 103 | 105 | 31 | 12 | 4.8 | 2.4 | 3.9 |
| 15 | 6.5 | 7 | 9.5 | 113 | 145 | 96 | 102 | 29 | 11 | 4.8 | 2.4 | 3.7 |
| 16 | 6.5 | 7 | 8 | 89 | 120 | 102 | 91 | 29 | 10 | 4.8 | 2.4 | 3.4 |
| 17 | 6.5 | 7 | 8 | 72 | 137 | 92 | 83 | 30 | 10 | 4.8 | 2.6 | 3.2 |
| 18 | 6.5 | 7 | 7.5 | 62 | 132 | 87 | 78 | 28 | 10 | 4.6 | 2.4 | 3.7 |
| 19 | 6.5 | 6.5 | 8 | 55 | 116 | 82 | 73 | 26 | 9.5 | 4.4 | 2.2 | 3.9 |
| 20 | 6 | 6.5 | 8 | 49 | 103 | 78 | 69 | 24 | 9.5 | 4.1 | 2.2 | 3.4 |
| 21 | 6 | 6.5 | 8 | 44 | 95 | 73 | 64 | 24 | 9 | 3.9 | 2.4 | 3.4 |
| 22 | 5.5 | 6.5 | 7.5 | 40 | 93 | 71 | 60 | 22 | 8.5 | 3.9 | 2.4 | 3.4 |
| 23 | 6 | 6 | 7.5 | 37 | 113 | 68 | 56 | 21 | 8.5 | 3.2 | 2.2 | 3.4 |
| 24 | 14 | 6 | 7.5 | 38 | 173 | 71 | 54 | 22 | 8 | 3.7 | 2.1 | 3.4 |
| 25 | 15 | 8.5 | 7 | 161 | 408 | 78 | 55 | 21 | 7.5 | 3.2 | 2.4 | 3.4 |
| 26 | 10 | 11 | 7 | 636 | 883 | 683 | 59 | 21 | 7 | 3.0 | 2.4 | 3.2 |
| 27 | 9.5 | 7.5 | 6.5 | 367 | 2,080 | 994 | 54 | 20 | 7.5 | 3.0 | 2.4 | 3.4 |
| 28 | 9 | 6.5 | 6.5 | 224 | 1,900 | 637 | 49 | 20 | 7.5 | 2.9 | 2.4 | 3.7 |
| 29 | 8 | 6.5 | 8 | 166 | 1,480 | 1,620 | 50 | 19 | 7.5 | 2.7 | 2.4 | 3.4 |
| 30 | 7.5 | 6.5 | 9 | 132 | - | 2,330 | 46 | 21 | 7.5 | 3.0 | 2.2 | 3.2 |
| 31 | 7.5 | - | 17 | 114 | - | 1,590 | - | 29 | - | 3.2 | 2.4 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 276.9 | | 25 | 4.4 | 8.93 | 549 | | | |
| November..... | | | | 205.0 | | 11 | 5 | 6.83 | 407 | | | |
| December..... | | | | 283.5 | | 36 | 5.5 | 9.15 | 562 | | | |
| Calendar year 1939..... | | | | 9,250.9 | | 313 | 1.2 | 25.3 | 18,340 | | | |
| January..... | | | | 5,851 | | 636 | 37 | 189 | 11,610 | | | |
| February..... | | | | 11,569 | | 2,080 | 90 | 399 | 22,960 | | | |
| March..... | | | | 12,356 | | 2,330 | 68 | 399 | 24,510 | | | |
| April..... | | | | 4,812 | | 833 | 46 | 160 | 9,540 | | | |
| May..... | | | | 955 | | 58 | 19 | 30.5 | 1,890 | | | |
| June..... | | | | 371.5 | | 24 | 7 | 12.4 | 737 | | | |
| July..... | | | | 159.2 | | 7 | 2.7 | 4.49 | 276 | | | |
| August..... | | | | 77.1 | | 3.2 | 2.1 | 2.49 | 153 | | | |
| September..... | | | | 93.2 | | 3.9 | 2.2 | 3.11 | 185 | | | |
| Water year 1939-40..... | | | | 36,989.4 | | 2,330 | 2.1 | 101 | 73,370 | | | |

Peak discharge.- Jan. 9 (5 a.m.) 750 sec.-ft.; Jan. 26 (12:30 p.m.) 792 sec.-ft.; Feb. 4 (7 p.m.) 788 sec.-ft.; Feb. 27 (8 p.m.) 2,350 sec.-ft.; Mar. 26 (10 p.m.) 2,060 sec.-ft.; Mar. 30 (9 a.m.) 2,430 sec.-ft.

North Fork of Yuba River near Sierra City, Calif.

Location.- Water-stage recorder, lat. $39^{\circ}34'$, long. $120^{\circ}40'$, in NW $\frac{1}{4}$ sec. 32, T. 20 N., R. 12 E., $1\frac{1}{2}$ miles west of Sierra City and $2\frac{1}{2}$ miles downstream from South Fork of North Fork. Altitude of gage, about 4,100 feet (from topographic map).

Drainage area.- 91.3 square miles.

Records available.- 1911-13 (fragmentary), December 1923 to September 1940.

Average discharge.- 16 years (1924-40), 214 second-feet.

Extremes.- Maximum discharge during year, 3,170 second-feet Mar. 26 (gage height, 5.28 feet); minimum, 37 second-feet Nov. 20.

1923-40: Maximum discharge, 9,800 second-feet Dec. 11, 1937 (gage height, 10.0 feet), from rating curve extended above 2,500 second-feet; minimum, 26 second-feet Oct. 15, 1931, Aug. 22, 23, 1934.

Remarks.- Records good. Small diversions above station for mining.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 59 | 44 | 42 | 228 | 249 | 597 | 967 | 779 | 730 | 155 | 74 | 42 |
| 2 | 68 | 44 | 43 | 987 | 230 | 484 | 774 | 1,040 | 660 | 145 | 72 | 41 |
| 3 | 53 | 43 | 42 | 300 | 291 | 410 | 655 | 1,150 | 630 | 138 | 70 | 46 |
| 4 | 51 | 43 | 43 | 418 | 318 | 363 | 575 | 1,010 | 610 | 134 | 68 | 76 |
| 5 | 50 | 43 | 43 | 235 | 318 | 334 | 512 | 808 | 625 | 127 | 66 | 70 |
| 6 | 70 | 41 | 49 | 169 | 438 | 309 | 485 | 740 | 580 | 123 | 66 | 62 |
| 7 | 58 | 41 | 48 | 155 | 370 | 306 | 498 | 762 | 550 | 118 | 64 | 58 |
| 8 | 54 | 41 | 47 | 221 | 306 | 325 | 516 | 870 | 503 | 114 | 62 | 52 |
| 9 | 52 | 41 | 65 | 294 | 270 | 328 | 535 | 1,040 | 465 | 109 | 62 | 50 |
| 10 | 48 | 41 | 89 | 211 | 249 | 309 | 560 | 1,220 | 449 | 107 | 62 | 50 |
| 11 | 47 | 41 | 97 | 424 | 230 | 285 | 605 | 1,310 | 441 | 105 | 60 | 48 |
| 12 | 45 | 41 | 64 | 400 | 208 | 261 | 686 | 1,340 | 429 | 103 | 60 | 48 |
| 13 | 44 | 41 | 57 | 267 | 201 | 244 | 796 | 1,290 | 402 | 103 | 58 | 54 |
| 14 | 44 | 41 | 53 | 216 | 198 | 232 | 870 | 1,260 | 380 | 103 | 58 | 54 |
| 15 | 43 | 40 | 52 | 183 | 183 | 232 | 832 | 1,150 | 360 | 103 | 58 | 54 |
| 16 | 43 | 40 | 50 | 164 | 169 | 267 | 691 | 1,120 | 350 | 101 | 58 | 58 |
| 17 | 42 | 40 | 51 | 151 | 169 | 270 | 670 | 1,320 | 330 | 101 | 58 | 56 |
| 18 | 42 | 40 | 51 | 141 | 160 | 258 | 748 | 1,090 | 312 | 99 | 56 | 76 |
| 19 | 42 | 39 | 50 | 133 | 149 | 264 | 820 | 1,040 | 295 | 97 | 54 | 74 |
| 20 | 42 | 39 | 48 | 126 | 147 | 285 | 896 | 1,060 | 275 | 94 | 52 | 62 |
| 21 | 42 | 39 | 46 | 120 | 143 | 309 | 934 | 1,070 | 256 | 92 | 50 | 58 |
| 22 | 42 | 39 | 44 | 115 | 141 | 350 | 1,000 | 1,060 | 234 | 90 | 50 | 54 |
| 23 | 42 | 39 | 47 | 113 | 158 | 383 | 1,000 | 1,070 | 219 | 86 | 50 | 52 |
| 24 | 47 | 39 | 47 | 111 | 196 | 462 | 902 | 1,050 | 208 | 82 | 52 | 52 |
| 25 | 46 | 46 | 44 | 137 | 276 | 718 | 790 | 980 | 196 | 82 | 52 | 52 |
| 26 | 46 | 43 | 45 | 676 | 440 | 1,650 | 691 | 896 | 186 | 82 | 50 | 56 |
| 27 | 51 | 41 | 44 | 516 | 1,200 | 1,940 | 610 | 832 | 176 | 80 | 50 | 60 |
| 28 | 53 | 42 | 46 | 360 | 1,570 | 1,100 | 580 | 779 | 169 | 80 | 48 | 62 |
| 29 | 50 | 40 | 68 | 306 | 899 | 1,490 | 600 | 730 | 167 | 78 | 46 | 62 |
| 30 | 48 | 42 | 68 | 276 | - | 2,100 | 625 | 708 | 169 | 76 | 44 | 60 |
| 31 | 46 | - | 82 | 261 | - | 1,340 | - | 820 | - | 74 | 44 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 1,510 | 70 | 42 | 48.7 | 3,000 | | |
| November..... | | | | | | 1,234 | 46 | 39 | 41.1 | 2,450 | | |
| December..... | | | | | | 1,665 | 97 | 42 | 53.7 | 3,300 | | |
| Calendar year 1939..... | | | | | | 38,431 | 500 | 36 | 105 | 76,230 | | |
| January..... | | | | | | 8,314 | 887 | 111 | 268 | 16,490 | | |
| February..... | | | | | | 9,876 | 1,570 | 141 | 341 | 19,590 | | |
| March..... | | | | | | 18,205 | 2,100 | 232 | 587 | 36,110 | | |
| April..... | | | | | | 21,421 | 1,000 | 485 | 714 | 42,490 | | |
| May..... | | | | | | 31,194 | 1,340 | 708 | 1,006 | 61,870 | | |
| June..... | | | | | | 11,356 | 750 | 187 | 379 | 22,520 | | |
| July..... | | | | | | 3,181 | 155 | 74 | 103 | 6,310 | | |
| August..... | | | | | | 1,774 | 74 | 44 | 57.2 | 3,520 | | |
| September..... | | | | | | 1,699 | 76 | 41 | 56.6 | 3,370 | | |
| Water year 1939-40..... | | | | | | 111,429 | 2,100 | 39 | 304 | 221,000 | | |

Peak discharge.- Feb. 27 (11 p.m.) 1,920 sec.-ft.; Mar. 26 (11:30 p.m.) 3,170 sec.-ft.; May 12 (7:30 p.m.) 1,620 sec.-ft.

FEATHER RIVER BASIN

North Fork of Yuba River below Goodyears Bar, Calif.

Location.— Water-stage recorder, lat. 39°32', long. 120°56', in SW¼ sec. 11, T. 19 N., R. 9 E., 3½ miles downstream from Goodyears Creek and about 4 miles southwest of Goodyears Bar. Altitude of gage, about 2,450 feet (from topographic map).

Drainage area.— 244 square miles.

Records available.— December 1930 to November 1937, December 1938 to September 1940.

Extremes.— Maximum discharge during year, 13,100 second-feet Mar. 26 and 30 (gage height, 14.0 feet); minimum, 98 second-feet Nov. 21.

1930-40: Maximum discharge, 26,000 second-feet Dec. 11, 1937 (gage height, 19.0 feet, from floodmarks), from rating curve extended above 6,000 second-feet on basis of drift-velocity measurement at 18,000 second-feet; minimum, 69 second-feet Aug. 26, 1931.

Remarks.— Records excellent except those for period of no gage-height record, which are good. Several small diversions above station for irrigation and mining.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|--------|-------|--------|-------|-------|-------|------|------|-------|
| 1 | 143 | 114 | 109 | a700 | 896 | 3,470 | 4,670 | 1,580 | 1,320 | 341 | 186 | 140 |
| 2 | 200 | 112 | 108 | a3,200 | 832 | 2,580 | 3,470 | 2,140 | 1,190 | 324 | 184 | 139 |
| 3 | 145 | 110 | 108 | a1,700 | 1,320 | 2,130 | 2,830 | 2,350 | 1,110 | 313 | 183 | 142 |
| 4 | 124 | 110 | 108 | a2,400 | 2,020 | 1,810 | 2,430 | 2,130 | 1,080 | 302 | 179 | 180 |
| 5 | 120 | 108 | 110 | a900 | 1,270 | 1,590 | 2,130 | 1,680 | 1,080 | 294 | 177 | 171 |
| 6 | 235 | 108 | 120 | 587 | 2,130 | 1,440 | 1,930 | 1,530 | 1,020 | 285 | 174 | 160 |
| 7 | 173 | 108 | 119 | 598 | 1,820 | 1,350 | 1,930 | 1,510 | 980 | 277 | 171 | 155 |
| 8 | 140 | 107 | 116 | 1,890 | 1,400 | 1,360 | 1,910 | 1,670 | 925 | 267 | 170 | 150 |
| 9 | 129 | 107 | 213 | 2,060 | 1,170 | 1,340 | 1,860 | 2,000 | 854 | 261 | 166 | 149 |
| 10 | 120 | 107 | 291 | 1,240 | 1,070 | 1,250 | 1,820 | 2,300 | 826 | 256 | 164 | 147 |
| 11 | 116 | 107 | 417 | 2,520 | 995 | 1,150 | 1,850 | 2,510 | 808 | 252 | 162 | 146 |
| 12 | 113 | 106 | 202 | 1,850 | 876 | 1,050 | 1,950 | 2,510 | 786 | 248 | 160 | 144 |
| 13 | 111 | 106 | 163 | 1,160 | 840 | 990 | 2,120 | 2,370 | 751 | 243 | 158 | 158 |
| 14 | 108 | 106 | 145 | 881 | 895 | 945 | 2,220 | 2,300 | 706 | 240 | 155 | 153 |
| 15 | 109 | 105 | 138 | 730 | 814 | 920 | 2,160 | 2,140 | 674 | 238 | 155 | 153 |
| 16 | 108 | 104 | 133 | 638 | 746 | 1,010 | 1,820 | 2,050 | 652 | 233 | 155 | 157 |
| 17 | 107 | 105 | 134 | 573 | 818 | 985 | 1,720 | 2,060 | 626 | 233 | 155 | 160 |
| 18 | 107 | 104 | 133 | 532 | 774 | 950 | 1,790 | 1,960 | 591 | 231 | 153 | 160 |
| 19 | 107 | 104 | 130 | 490 | 706 | 945 | 1,920 | 1,870 | 564 | 229 | 150 | 164 |
| 20 | 106 | 104 | 133 | 447 | 667 | 975 | 2,060 | 1,900 | 532 | 224 | 149 | 159 |
| 21 | 104 | 103 | 123 | 419 | 645 | 1,020 | 2,100 | 1,940 | 498 | 221 | 148 | 153 |
| 22 | 104 | 104 | 118 | 400 | 630 | 1,090 | 2,190 | 1,890 | 465 | 214 | 147 | 149 |
| 23 | 104 | 103 | 122 | 389 | 706 | 1,170 | 2,170 | 1,880 | 439 | 206 | 148 | 146 |
| 24 | 146 | 104 | 122 | 378 | 918 | 1,310 | 1,990 | 1,830 | 419 | 202 | 149 | 143 |
| 25 | 135 | 132 | 116 | 702 | 1,470 | 1,840 | 1,780 | 1,700 | 401 | 200 | 150 | 145 |
| 26 | 121 | 126 | 118 | 3,510 | 3,110 | 5,930 | 1,600 | 1,550 | 366 | 198 | 149 | 146 |
| 27 | 122 | 114 | 117 | 2,100 | 9,310 | 6,900 | 1,430 | 1,450 | 372 | 198 | 147 | 159 |
| 28 | 133 | 111 | 118 | 1,410 | 9,740 | 3,900 | 1,340 | 1,360 | 360 | 197 | 144 | 152 |
| 29 | 126 | 109 | 163 | 1,130 | 5,660 | 7,120 | 1,360 | 1,290 | 355 | 196 | 143 | 152 |
| 30 | 120 | 110 | 174 | 995 | - | 12,400 | 1,350 | 1,260 | 365 | 191 | 141 | 150 |
| 31 | 118 | - | 228 | 922 | - | 7,670 | - | 1,510 | - | 188 | 141 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 3,954 | 235 | 104 | 128 | 7,840 |
| November..... | 3,258 | 132 | 103 | 109 | 6,460 |
| December..... | 4,649 | 417 | 108 | 150 | 9,220 |
| Calendar year 1939..... | 110,301 | 1,370 | 93 | 302 | 218,800 |
| January..... | 37,251 | 3,510 | 378 | 1,202 | 73,890 |
| February..... | 54,838 | 9,740 | 630 | 1,891 | 108,800 |
| March..... | 78,600 | 12,400 | 920 | 2,535 | 155,900 |
| April..... | 61,900 | 4,670 | 1,340 | 2,063 | 122,800 |
| May..... | 58,220 | 2,510 | 1,260 | 1,878 | 115,500 |
| June..... | 21,135 | 1,320 | 355 | 704 | 41,920 |
| July..... | 7,502 | 341 | 183 | 242 | 14,880 |
| August..... | 4,913 | 186 | 141 | 158 | 9,740 |
| September..... | 4,620 | 184 | 139 | 154 | 9,160 |
| Water year 1939-40..... | 340,840 | 12,400 | 103 | 931 | 676,100 |

Peak discharge.— Jan. 2 (6 p.m.) 4,630 sec.-ft.; Jan. 4 (8 a.m.) 4,300 sec.-ft.; Jan. 26 (11 a.m.) 4,800 sec.-ft.; Feb. 27 (10:30 p.m.) 12,400 sec.-ft.; Mar. 26 (8:30 p.m.) 13,100 sec.-ft.; Mar. 30 (2 p.m.) 13,100 sec.-ft.

a No gage-height record; discharge computed on basis of records for station near Sierra City and Middle Fork of Yuba River near North San Juan.

Bowman Lake near Graniteville, Calif.

Location.- Staff gage, lat. 39°27', long. 120°39', in SW¹ sec. 5, T. 18 N., R. 12 E., at Bowman Dam on Canyon Creek, 4 miles east of Graniteville. Datum of gage is 5,000.0 feet above mean sea level; gage readings have been reduced to elevations above mean sea level.

Drainage area.- 30 square miles.

Records available.- December 1926 to September 1940.

Extremes.- Maximum contents during year, 70,100 acre-feet May 23, 24, and 28 (elevation, 5,565.4 feet); minimum, 8,800 acre-feet Dec. 25-27 (elevation, 5,466.5 feet).
1926-40: Maximum contents, 70,500 acre-feet June 16, 17, 1937 (elevation, 5,565.9 feet); contents less than 1,000 acre-feet and therefore doubtful at times during 1926, 1928-31, 1933-35, 1937, 1939.

Remarks.- Lake is formed by one rock-fill and one concrete arch dam; completed and storage began in November 1926. Capacity, 68,200 acre-feet between elevations 5,400 feet (bottom of outlet tunnel) and 5,563 feet (crest of concrete arch dam) above mean sea level. Flashboards are occasionally added, increasing elevation to 5,564.5 feet and capacity to 69,400 acre-feet. Lake receives water from Middle Fork of Yuba River through Milton-Bowman tunnel (see p. 295), and releases it through Bowman-Spaulling canal (see p. 301) which conveys it to reservoirs of Pacific Gas & Electric Co. Water is eventually used for irrigation by Nevada Irrigation District. Record of daily contents, computed from gage readings made at odd times, shows total contents, all of which is available for release.

Cooperation.- Record of daily gage heights furnished by Nevada Irrigation District.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 15,300 | 12,900 | 10,300 | 9,200 | 19,400 | 31,100 | 55,200 | 65,600 | 70,000 | 69,000 | 57,700 | 44,200 |
| 2 | 15,300 | 12,800 | 10,200 | 10,900 | 19,600 | 31,900 | 59,000 | 66,000 | 70,000 | 68,800 | 57,200 | 43,800 |
| 3 | 15,200 | 12,700 | 10,100 | 11,500 | 20,000 | 32,400 | 59,600 | 66,000 | 70,000 | 68,400 | 56,800 | 43,400 |
| 4 | 15,200 | 12,600 | 10,000 | 12,000 | 20,000 | 32,800 | 60,100 | 65,800 | 70,000 | 68,000 | 56,400 | 42,900 |
| 5 | 15,200 | 12,400 | 9,800 | 12,200 | 21,200 | 33,200 | 60,400 | 65,400 | 70,000 | 67,700 | 56,000 | 42,500 |
| 6 | 15,200 | 12,300 | 9,700 | 12,500 | 21,800 | 33,400 | 60,600 | 65,200 | 70,000 | 67,300 | 55,600 | 42,100 |
| 7 | 15,200 | 12,200 | 9,600 | 12,500 | 22,600 | 33,800 | 60,900 | 65,300 | 70,000 | 67,000 | 55,100 | 41,600 |
| 8 | 15,200 | 12,100 | 9,500 | 12,700 | 23,000 | 34,100 | 61,300 | 65,500 | 70,000 | 66,700 | 54,700 | 41,200 |
| 9 | 15,200 | 11,900 | 9,400 | 13,100 | 23,200 | 34,500 | 61,700 | 65,800 | 70,000 | 66,300 | 54,200 | 40,700 |
| 10 | 15,100 | 11,800 | - | 13,200 | 23,400 | 35,000 | 62,000 | 66,400 | 70,000 | 65,900 | 53,700 | 40,300 |
| 11 | 15,100 | 11,700 | 9,500 | 13,600 | 23,600 | 35,300 | 62,600 | 67,200 | 70,000 | 65,600 | 53,300 | 40,000 |
| 12 | 15,100 | 11,600 | 9,500 | 14,700 | 23,800 | 35,400 | 63,300 | 67,600 | 70,000 | 65,200 | 52,800 | 39,600 |
| 13 | 15,000 | 11,500 | 9,500 | 14,900 | 23,900 | 35,600 | 63,800 | 67,600 | 70,000 | 64,800 | 52,400 | 39,000 |
| 14 | 15,000 | - | 9,500 | 15,100 | 24,000 | 35,700 | 64,800 | 67,300 | 70,000 | 64,400 | 52,000 | 38,500 |
| 15 | 14,900 | - | 9,400 | 15,200 | 24,100 | 35,900 | 65,500 | 67,400 | 70,000 | 64,000 | 51,600 | 38,000 |
| 16 | 14,800 | 11,500 | 9,300 | 15,200 | 24,100 | 36,100 | 65,200 | 67,600 | 70,000 | 63,600 | 51,100 | 37,600 |
| 17 | 14,600 | 11,500 | 9,200 | 15,200 | 24,100 | 36,200 | 65,000 | 68,000 | 70,000 | 63,200 | 50,600 | 37,100 |
| 18 | 14,400 | 11,500 | 9,200 | 15,200 | 24,100 | 36,400 | 65,000 | 68,200 | 70,000 | 63,000 | 50,100 | 36,800 |
| 19 | 14,300 | 11,500 | 9,100 | 15,100 | 24,100 | 36,700 | 64,800 | 69,200 | 70,000 | 62,900 | 49,700 | - |
| 20 | 14,200 | 11,500 | 9,000 | 15,000 | 23,900 | 37,000 | 64,700 | 69,600 | 70,000 | 62,400 | 49,300 | 36,100 |
| 21 | 14,100 | 11,500 | - | 15,000 | 23,800 | 37,300 | 64,700 | 69,700 | 70,000 | 62,000 | 48,900 | 35,900 |
| 22 | 14,000 | 11,400 | 8,900 | 14,900 | 23,600 | 37,800 | 64,700 | 69,700 | 69,800 | 61,600 | 48,500 | 35,600 |
| 23 | 13,900 | 11,300 | 8,900 | 14,700 | 23,600 | 38,400 | 64,800 | 70,100 | 69,600 | 61,200 | 48,000 | 35,400 |
| 24 | 13,800 | 11,200 | 8,900 | 14,600 | 23,700 | 39,000 | 64,700 | 70,100 | 69,300 | 60,800 | 47,600 | 35,000 |
| 25 | 13,700 | 11,000 | 8,800 | 14,500 | 24,000 | 40,300 | 64,600 | 69,900 | 69,200 | 60,500 | 47,200 | 34,700 |
| 26 | 13,600 | 10,900 | 8,800 | 15,700 | 24,800 | 42,400 | 64,400 | 69,900 | 69,200 | 60,300 | 46,800 | 34,400 |
| 27 | 13,400 | - | 8,800 | 17,200 | 26,200 | 46,800 | 64,300 | 70,000 | 69,400 | 59,800 | 46,400 | 34,200 |
| 28 | 13,400 | 10,700 | 8,900 | 17,800 | 28,700 | 48,800 | 64,400 | 70,100 | 69,600 | 59,400 | 46,000 | - |
| 29 | 13,300 | 10,600 | 8,900 | 18,400 | 23,000 | 51,000 | 64,900 | 70,000 | 69,700 | 59,000 | 45,500 | 33,600 |
| 30 | 13,200 | 10,400 | 9,000 | 18,900 | - | 55,200 | 65,300 | 70,000 | 69,300 | 57,800 | 45,100 | 33,300 |
| 31 | 13,000 | - | 9,000 | 19,100 | - | 57,200 | - | 70,000 | - | 55,100 | 44,600 | - |

†Interpolated.

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 5,482.7 | 15,300 | - |
| Oct. 31..... | 5,477.1 | 13,000 | -2,300 |
| Nov. 30..... | 5,470.6 | 10,400 | -2,600 |
| Dec. 31..... | 5,467.1 | 9,000 | -1,400 |
| Calendar year 1939..... | - | - | -5,400 |
| Jan. 31..... | 5,490.4 | 19,100 | +10,100 |
| Feb. 29..... | - | 130,000 | +10,900 |
| Mar. 31..... | 5,549.3 | 57,200 | +27,200 |
| Apr. 30..... | 5,559.4 | 65,300 | +8,100 |
| May 31..... | 5,565.3 | 70,000 | +4,700 |
| June 30..... | 5,564.4 | 69,300 | -700 |
| July 31..... | 5,550.4 | 65,100 | -11,200 |
| Aug. 31..... | 5,532.6 | 44,600 | -13,500 |
| Sept. 30..... | 5,515.5 | 33,300 | -11,300 |
| Water year 1939-40..... | - | - | +18,000 |

†Interpolated.

FEATHER RIVER BASIN

Canyon Creek below Bowman Lake, Calif.

Location.— Water-stage recorder and concrete control, lat. 39°26', long. 120°40', in SE¼ sec. 7, T. 13 N., R. 12 E., 1 mile downstream from Bowman Lake and 3 miles upstream from Texas Creek. Altitude of gage, about 5,100 feet (from topographic map).

Drainage area.— 31.7 square miles.

Records available.— January 1927 to September 1940.

Average discharge.— 13 years, 26.8 second-feet.

Extremes.— Maximum discharge during year, 802 second-feet May 24 (gage height, 4.61 feet); no flow Aug. 3-21.
1927-40: Maximum discharge, 1,460 second-feet June 6, 1936 (gage height, 5.98 feet), from rating curve extended above 700 second-feet; no flow at times when there is no leakage from dams above station.

Remarks.— Records good. Flow regulated by Bowman Lake (see p. 299) and diversion into Bowman-Spaulding canal (see p. 301).

Cooperation.— Water-stage recorder graph and results of five discharge measurements furnished by Nevada Irrigation District.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|------|-----|------|-----|-----|-----|-----|
| 1.0 | 0.05 | 1.5 | 5.1 | 2.0 | 19 | 2.8 | 160 |
| 1.1 | .7 | 1.6 | 6.5 | 2.1 | 28 | 5.0 | 205 |
| 1.2 | 1.7 | 1.7 | 8.2 | 2.2 | 40 | 5.4 | 306 |
| 1.3 | 2.8 | 1.8 | 10.5 | 2.4 | 75 | 4.0 | 536 |
| 1.4 | 3.9 | 1.9 | 13.5 | 2.6 | 116 | 4.6 | 875 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 0.8 | 0.2 | 0.2 | 9 | 2.0 | 2.8 | 233 | 170 | 464 | 0.3 | 0.1 | 1.3 |
| 2 | 1.0 | .2 | .3 | 20 | 1.9 | 3.2 | 257 | 419 | 422 | .2 | .1 | 1.3 |
| 3 | .4 | .1 | .3 | 3.6 | 8.5 | 2.6 | 255 | 645 | 468 | .3 | 0 | 1.6 |
| 4 | .3 | .1 | .3 | 7 | 7 | 2.2 | 247 | 629 | 377 | .2 | 0 | 1.9 |
| 5 | .2 | .2 | .3 | 2.4 | 6 | 2.1 | 245 | 508 | 324 | .2 | 0 | 1.6 |
| 6 | 2.2 | .2 | .4 | 1.7 | 8 | 2.0 | 252 | 324 | 286 | .2 | 0 | 1.4 |
| 7 | .5 | .2 | .4 | 1.8 | 3.2 | 2.6 | 255 | 275 | 298 | .2 | 0 | 1.2 |
| 8 | .2 | .2 | .2 | 10 | 2.0 | 3.1 | 252 | 270 | 265 | .1 | 0 | 1.2 |
| 9 | .1 | .2 | .3 | 8.5 | 1.7 | 2.5 | 252 | 250 | 200 | .2 | 0 | 1.3 |
| 10 | .1 | .2 | 2.9 | 5 | 1.9 | 2.0 | 250 | 240 | 85 | .1 | 0 | 1.3 |
| 11 | .1 | .2 | 2.5 | 21 | 1.8 | 1.7 | 250 | 297 | 21 | .1 | 0 | 1.3 |
| 12 | .2 | .2 | .7 | 4.7 | 1.4 | 1.5 | 250 | 732 | 47 | .1 | 0 | 1.3 |
| 13 | .2 | .2 | .6 | 2.7 | 1.3 | 1.4 | 250 | 856 | 59 | .1 | 0 | 1.3 |
| 14 | .2 | .3 | .4 | 2.0 | 1.5 | 1.4 | 295 | 836 | 45 | .1 | 0 | 1.3 |
| 15 | .2 | .2 | .4 | 1.5 | 1.2 | 1.4 | 555 | 661 | 25 | .1 | 0 | 1.4 |
| 16 | .2 | .1 | .4 | 1.3 | 1.1 | 3.5 | 662 | 518 | 13 | .1 | 0 | 1.4 |
| 17 | .2 | .1 | .4 | 1.1 | 1.3 | 2.5 | 574 | 624 | 8 | .1 | 0 | 1.4 |
| 18 | .2 | .2 | .5 | 1.0 | 1.3 | 2.2 | 536 | 468 | 4.1 | .1 | 0 | 1.4 |
| 19 | .2 | .2 | .4 | 1.0 | 1.1 | 2.0 | 477 | 171 | 2.8 | .1 | 0 | 1.4 |
| 20 | .2 | .2 | .4 | 1.0 | 1.1 | 1.8 | 438 | 480 | 8 | .1 | 0 | 1.5 |
| 21 | .2 | .2 | .3 | 1.0 | 1.1 | 1.7 | 422 | 594 | 2.9 | .1 | 0 | 1.3 |
| 22 | .3 | .2 | .2 | 1.0 | 1.1 | 1.7 | 426 | 546 | 1.7 | .1 | 1.0 | 1.3 |
| 23 | .2 | .1 | .4 | 1.0 | 5.9 | 1.6 | 434 | 450 | .4 | .1 | 1.7 | 1.1 |
| 24 | .4 | .1 | .4 | 1.2 | 3.8 | 3.2 | 422 | 690 | .2 | .1 | 1.5 | 1.1 |
| 25 | .4 | .2 | .4 | 7 | 9 | 3.4 | 395 | 527 | 2.0 | .1 | 1.9 | 1.2 |
| 26 | .3 | .3 | .3 | 21 | 14 | 34 | 350 | 292 | 5 | .1 | 2.7 | 1.0 |
| 27 | .3 | .2 | .2 | 4.5 | 34 | 7 | 312 | 324 | 3.4 | .1 | .9 | 1.0 |
| 28 | .4 | .2 | .3 | 2.6 | 16 | 5.5 | 108 | 508 | 6.5 | .1 | 1.3 | 1.4 |
| 29 | .3 | .2 | .9 | 2.1 | 4.6 | 23 | 10 | 518 | 4.3 | .1 | 1.3 | 1.1 |
| 30 | .2 | .2 | .7 | 2.0 | - | 30 | 100 | 370 | .6 | .1 | 1.4 | 1.1 |
| 31 | .2 | - | 1.8 | 2.0 | - | 88 | - | 384 | - | .1 | 1.3 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 10.9 | 2.2 | 0.1 | 0.35 | 22 |
| November..... | 5.6 | .3 | .1 | .19 | 11 |
| December..... | 18.2 | 2.9 | .2 | .59 | 36 |
| Calendar year 1939..... | 636.5 | 13 | 0 | 1.74 | 1,260 |
| January..... | 151.7 | 21 | 1.0 | 4.89 | 301 |
| February..... | 142.8 | 34 | 1.1 | 4.92 | 283 |
| March..... | 243.6 | 88 | 1.4 | 7.86 | 483 |
| April..... | 9,764 | 662 | 10 | 325 | 19,370 |
| May..... | 14,566 | 856 | 170 | 470 | 28,590 |
| June..... | 3,448.9 | 468 | .2 | 115 | 6,840 |
| July..... | 4.1 | .3 | .1 | .13 | 8.1 |
| August..... | 15.2 | 2.7 | 0 | .49 | 30 |
| September..... | 39.4 | 1.9 | 1.0 | 1.31 | 78 |
| Water year 1939-40..... | 28,410.4 | 856 | 0 | 77.6 | 56,350 |

Bowman-Spaulding canal at intake, Calif.

Location.- Water-stage recorder, lat. $39^{\circ}27'$, long. $120^{\circ}39'$, in sec. 8, T. 18 N., R. 12 E., 150 feet downstream from intake and a quarter of a mile downstream from Bowman Dam. Altitude of gage, about 5,400 feet (from topographic map).

Records available.- October 1927 to September 1940.

Average discharge.- 13 years, 135 second-feet.

Extremes.- Maximum daily discharge during year, 248 second-feet June 12; no flow April 6-25, June 27, 28.

1927-40: Maximum daily discharge, 262 second-feet Aug. 2-9, 29, Sept. 10-13, 1928; no flow at times in each year.

Remarks.- Records excellent. Canal diverts from left bank of Canyon Creek below Bowman Lake. Water is delivered to Fuller Lake, then to Lake Spaulding, and after passing through several powerhouses is used for irrigation by Nevada Irrigation District.

Cooperation.- Water-stage recorder graph and results of 14 discharge measurements furnished by Nevada Irrigation District.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-------------------------|------|------|------|------|------------------|------|---------|-----|---------|------|------|-------|----------------------|--|
| 1 | 141 | 72 | 72 | 18 | 158 | 38 | 1.4 | 0.2 | 198 | 228 | 234 | 232 | | |
| 2 | 147 | 72 | 72 | 51 | 158 | 41 | 1.5 | .2 | 73 | 238 | 234 | 232 | | |
| 3 | 152 | 71 | 71 | 156 | 29 | 93 | 1.4 | .4 | 62 | 232 | 234 | 231 | | |
| 4 | 124 | 72 | 71 | 138 | 84 | 124 | 8 | .5 | 62 | 234 | 234 | 230 | | |
| 5 | 106 | 72 | 71 | 214 | 57 | 131 | 9 | .6 | 59 | 237 | 233 | 230 | | |
| 6 | 106 | 71 | 71 | 226 | 28 | 131 | 0 | .4 | 59 | 237 | 233 | 231 | | |
| 7 | 105 | 72 | 70 | 226 | 77 | 133 | 0 | .3 | 64 | 237 | 232 | 231 | | |
| 8 | 101 | 73 | 70 | 174 | 120 | 127 | 0 | .2 | 212 | 237 | 234 | 232 | | |
| 9 | 99 | 72 | 70 | 134 | 145 | 111 | 0 | .1 | 230 | 236 | 236 | 232 | | |
| 10 | 100 | 71 | 72 | 190 | 150 | 121 | 0 | .1 | 240 | 235 | 235 | 231 | | |
| 11 | 100 | 72 | 71 | 73 | 158 | 141 | 0 | .1 | 244 | 235 | 235 | 231 | | |
| 12 | 100 | 72 | 70 | 113 | 172 | 131 | 0 | .2 | 248 | 235 | 234 | 230 | | |
| 13 | 100 | 31 | 70 | 178 | 185 | 165 | 0 | .2 | 243 | 238 | 234 | 232 | | |
| 14 | 99 | 7.5 | 70 | 192 | 192 | 165 | 0 | .2 | 234 | 240 | 233 | 234 | | |
| 15 | 99 | 7 | 70 | 202 | 192 | 165 | 0 | .2 | 236 | 239 | 233 | 234 | | |
| 16 | 99 | 7.5 | 70 | 208 | 198 | 149 | 0 | 19 | 237 | 188 | 232 | 234 | | |
| 17 | 99 | 7.5 | 70 | 212 | 199 | 147 | 0 | 25 | 235 | 157 | 230 | 234 | | |
| 18 | 98 | 7.5 | 70 | 217 | 201 | 158 | 0 | 23 | 201 | 232 | 231 | 233 | | |
| 19 | 85 | 7.5 | 70 | 216 | 208 | 158 | 0 | 104 | 167 | 231 | 234 | 232 | | |
| 20 | 71 | 7.5 | 70 | 217 | 214 | 150 | 0 | 75 | 147 | 232 | 234 | 230 | | |
| 21 | 71 | 7.5 | 47 | 219 | 214 | 134 | 0 | 161 | 141 | 235 | 232 | 233 | | |
| 22 | 56 | 49 | 18 | 220 | 214 | 133 | 0 | 160 | 236 | 234 | 233 | 234 | | |
| 23 | 75 | 72 | 49 | 223 | 179 | 113 | 0 | 137 | 235 | 234 | 234 | 234 | | |
| 24 | 74 | 72 | 20 | 222 | 155 | 91 | 0 | 132 | 235 | 233 | 233 | 234 | | |
| 25 | 73 | 73 | 16 | 165 | 85 | 40 | 0 | 189 | 117 | 235 | 232 | 233 | | |
| 26 | 73 | 72 | 16 | 12 | 23 | 20 | | .6 | 189 | 2 | 234 | 232 | | |
| 27 | 72 | 72 | 16 | 86 | 17 | 13 | | .6 | 189 | 0 | 234 | 233 | | |
| 28 | 72 | 72 | 16 | 131 | 10 | 24 | | .4 | 82 | 0 | 234 | 234 | | |
| 29 | 72 | 72 | 16 | 135 | 23 | 24 | | .4 | 101 | 70 | 233 | 233 | | |
| 30 | 72 | 72 | 16 | 148 | - | 20 | | .4 | 209 | 223 | 232 | 233 | | |
| 31 | 72 | - | 17 | 157 | - | 6 | | - | 182 | - | 231 | 233 | | |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | | | | | 2,913 | | 152 | | 56 | | 94.0 | | 5,780 | |
| November..... | | | | | 1,578.5 | | 73 | | 7 | | 52.6 | | 3,130 | |
| December..... | | | | | 1,658 | | 72 | | 16 | | 53.6 | | 3,290 | |
| Calendar year 1939..... | | | | | 37,733.7 | | 230 | | 0 | | 103 | | 74,840 | |
| January..... | | | | | 5,073 | | 226 | | 12 | | 164 | | 10,060 | |
| February..... | | | | | 3,845 | | 214 | | 10 | | 133 | | 7,630 | |
| March..... | | | | | 3,227 | | 165 | | 6 | | 104 | | 6,400 | |
| April..... | | | | | 23.7 | | 9 | | 0 | | .79 | | 47 | |
| May..... | | | | | 1,980.9 | | 209 | | .1 | | 63.9 | | 3,930 | |
| June..... | | | | | 4,710.0 | | 248 | | 0 | | 157 | | 9,340 | |
| July..... | | | | | 7,147 | | 240 | | 157 | | 231 | | 14,180 | |
| August..... | | | | | 7,232 | | 236 | | 230 | | 233 | | 14,340 | |
| September..... | | | | | 6,971 | | 234 | | 230 | | 232 | | 13,930 | |
| Water year 1939-40..... | | | | | 46,359.1 | | 248 | | 0 | | 127 | | 91,960 | |

Deer Creek near Smartville, Calif.

Location.- Water-stage recorder, lat. 39°13'20", long. 121°16'00", in sec. 23, T. 16 N., R. 6 E., 1 mile upstream from mouth and 2 miles northeast of Smartville. Altitude of gage, about 500 feet (from topographic map).

Drainage area.- 83.5 square miles.

Records available.- June 1935 to September 1940.

Extremes.- Maximum discharge during year, 6,210 second-feet Mar. 30 (gage height, 10.44 feet); minimum, 0.1 second-foot Aug. 4-6, and 15.
1935-40: Maximum discharge, 10,800 second-feet Dec. 11, 1937 (gage height, 13.2 feet, from floodmarks), from rating curve extended above 3,500 second-feet on basis of AWD method and velocity-area studies; minimum, that of Aug. 4-6, and 15, 1940.

Remarks.- Records good except those for period of no gage-height record, which are fair. Storage reservoirs and diversions above station; maximum amount diverted, about 40 second-feet. At times, water from South Fork of Yuba River is diverted into Deer Creek above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|--------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 0.7 | 1.3 | 4.9 | 151 | 140 | 1,150 | 1,260 | 44 | 40 | 0.8 | 0.3 | 0.9 |
| 2 | 1.5 | 1.5 | 4.3 | 1,100 | 139 | 777 | 752 | 40 | 20 | .6 | .3 | .6 |
| 3 | 1.9 | 1.4 | 2.8 | 180 | 222 | 590 | 586 | 40 | 16 | .6 | .2 | .5 |
| 4 | 1.8 | 1.2 | 3.0 | 390 | 365 | 481 | 478 | 74 | 12 | .5 | .1 | .6 |
| 5 | 1.6 | .8 | 5.5 | 98 | 371 | 415 | 400 | 70 | 11 | .5 | .1 | .6 |
| 6 | 6 | .5 | 6.5 | 48 | 446 | 373 | 332 | 43 | 11 | .4 | .1 | .4 |
| 7 | 6 | .4 | 4.6 | 187 | 338 | 358 | 290 | 36 | 6.5 | .4 | .2 | .3 |
| 8 | 8 | .4 | 6.5 | a1,800 | 246 | 298 | 258 | 35 | 3.0 | .4 | .2 | .3 |
| 9 | 6 | .3 | 6.5 | a1,900 | 196 | 258 | 214 | 38 | 2.6 | .5 | .2 | .4 |
| 10 | 1.2 | .2 | 11 | a550 | 168 | 244 | 183 | 34 | 1.8 | .5 | .3 | .5 |
| 11 | .6 | .4 | 15 | a2,100 | 147 | 224 | 144 | 30 | 1.6 | .6 | .2 | .5 |
| 12 | .6 | 1.1 | 20 | a900 | 142 | 222 | 119 | 27 | 2.0 | .4 | .2 | .5 |
| 13 | .7 | .9 | 7 | a300 | 276 | 216 | 99 | 26 | 1.1 | .3 | .2 | .6 |
| 14 | .7 | .8 | 1.8 | 187 | 1,440 | 205 | 90 | 22 | .9 | .3 | .2 | .4 |
| 15 | .5 | .7 | 2.2 | 113 | 350 | 196 | 91 | 20 | .9 | .3 | .1 | .3 |
| 16 | .5 | .6 | 2.1 | 70 | 226 | 199 | 77 | 20 | .9 | .3 | .2 | .3 |
| 17 | .4 | .3 | 1.5 | 72 | 619 | 188 | 64 | 16 | .9 | .4 | .2 | .5 |
| 18 | 1.0 | .3 | .5 | 62 | 320 | 176 | 55 | 14 | .8 | .3 | .2 | .8 |
| 19 | 2.2 | .3 | 3.2 | 59 | 236 | 168 | 47 | 12 | .8 | .2 | .2 | .8 |
| 20 | 1.0 | .4 | 4.6 | 53 | 181 | 160 | 45 | 11 | .7 | .2 | .2 | .5 |
| 21 | .7 | 1.5 | 3.5 | 50 | 166 | 145 | 47 | 11 | .6 | .2 | .4 | .5 |
| 22 | .4 | 1.6 | 4.9 | 47 | 156 | 132 | 46 | 12 | .7 | .3 | .3 | .6 |
| 23 | .4 | 2.6 | 6.5 | 44 | 187 | 156 | 42 | 12 | .7 | .2 | .5 | .6 |
| 24 | 4.1 | 3.9 | 9.5 | 47 | 224 | 125 | 46 | 13 | .7 | .2 | .6 | .6 |
| 25 | 4.9 | 5.5 | 11 | 580 | 932 | 145 | 61 | 12 | .7 | .2 | .5 | .5 |
| 26 | 6 | 5.5 | 10 | 1,190 | 1,650 | 1,470 | 49 | 30 | .8 | .2 | .5 | .6 |
| 27 | 2.6 | 9.5 | 9.5 | 502 | 4,810 | 977 | 45 | 20 | .9 | .2 | .6 | .8 |
| 28 | 1.6 | 8 | 9.5 | 292 | 3,400 | 662 | 42 | 19 | .7 | .4 | .5 | .8 |
| 29 | 1.3 | 9 | 11 | 230 | 2,420 | 2,850 | 58 | 17 | .7 | .3 | .7 | .8 |
| 30 | 1.2 | 6.5 | 11 | 192 | - | 5,140 | 48 | 18 | .8 | .3 | .9 | .7 |
| 31 | 1.5 | - | 16 | 156 | - | 2,450 | - | 27 | - | .3 | .9 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 67.6 | 8 | 0.4 | 2.18 | 134 | | |
| November..... | | | | | | 67.4 | 9.5 | .2 | 2.25 | 134 | | |
| December..... | | | | | | 215.9 | 20 | .5 | 6.96 | 428 | | |
| Calendar year 1939..... | | | | | | 11,032.0 | 1,520 | .2 | 30.2 | 21,890 | | |
| January..... | | | | | | 13,950 | 2,100 | 44 | 450 | 27,670 | | |
| February..... | | | | | | 20,393 | 4,810 | 159 | 703 | 40,450 | | |
| March..... | | | | | | 21,090 | 5,140 | 125 | 680 | 41,850 | | |
| April..... | | | | | | 6,068 | 1,260 | 42 | 202 | 12,040 | | |
| May..... | | | | | | 843 | 74 | 11 | 27.2 | 1,670 | | |
| June..... | | | | | | 141.8 | 40 | .6 | 4.73 | 281 | | |
| July..... | | | | | | 11.3 | .8 | .2 | .56 | 22 | | |
| August..... | | | | | | 10.3 | .9 | .1 | .33 | 20 | | |
| September..... | | | | | | 16.8 | .9 | .3 | .56 | 35 | | |
| Water year 1939-40..... | | | | | | 62,875.1 | 5,140 | .1 | 172 | 124,700 | | |

Peak discharge.- Jan. 2 (1 p.m.) 2,020 sec.-ft.; Feb. 14 (3:30 a.m.) 3,880 sec.-ft.; Feb. 27 (8 a.m.) 5,540 sec.-ft.; Mar. 26 (7 p.m.) 4,250 sec.-ft.; Mar. 30 (9 a.m.) 6,210 sec.-ft.
a No gage-height record; discharge computed on basis of precipitation records and records for Oregon Creek near North San Juan.

Bear River near Wheatland, Calif.

Location.- Water-stage recorder, lat. 39°00', long. 121°25', in sec. 3, T. 13 N., R. 5 E., 100 feet downstream from bridge on U. S. Highway 99 E, 1 mile southeast of Wheatland, and 6½ miles downstream from Rock Creek. Altitude of gage, about 85 feet (from topographic map).

Drainage area.- 295 square miles.

Records available.- October 1928 to September 1940.

Average discharge.- 11 years (1929-40), 363 second-feet.

Extremes.- Maximum discharge during year, 16,500 second-feet Mar. 30 (gage height, 14.46 feet); minimum, 0.5 second-foot Aug. 18.

1928-40: Maximum discharge, 21,600 second-feet Apr. 8, 1935 (gage height, 15.15 feet); no flow May 8, Sept. 18-25, 1939.

Maximum discharge recorded, 29,600 second-feet Jan. 14, 1909, at site 8 miles upstream.

Remarks.- Records fair Oct. 1 to May 8, and poor May 9 to Sept. 30. River receives inflow from Yuba River Basin above gage; flow regulated by storage reservoirs and many diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|--------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 1.2 | 21 | 28 | 49 | 890 | 3,870 | 4,260 | 452 | 3 | 5.5 | 7 | 5.5 |
| 2 | 2.1 | 22 | 28 | 914 | 870 | 2,450 | 2,680 | 394 | 3 | 6 | 6.5 | 3.3 |
| 3 | 2.5 | 22 | 27 | 860 | 939 | 1,900 | 2,080 | 355 | 3 | 6 | 4.5 | 5.5 |
| 4 | 3.0 | 24 | 24 | 615 | 1,000 | 1,640 | 1,830 | 315 | 3 | 6 | 7 | 3.9 |
| 5 | 2.8 | 22 | 22 | 444 | 1,020 | 1,430 | 1,600 | 305 | 2.8 | 4.4 | 6.5 | 4.9 |
| 6 | 3.1 | 20 | 28 | 362 | 1,080 | 1,310 | 1,420 | 305 | 2.8 | 2.6 | 7 | 5.5 |
| 7 | 11 | 16 | 28 | 330 | 1,060 | 1,120 | 1,230 | 237 | 3.0 | 4.6 | 7.5 | 5.5 |
| 8 | 13 | 24 | 32 | 1,410 | 974 | 956 | 1,120 | 108 | 2.4 | 3.2 | 5.5 | 4.4 |
| 9 | 12 | 21 | 30 | 2,370 | 939 | 865 | 1,210 | 15 | 2.0 | 4.8 | 4.2 | 4.7 |
| 10 | 10 | 16 | 33 | 1,750 | 925 | 802 | 1,190 | 10 | 5 | 5 | 4.1 | 3.8 |
| 11 | 14 | 16 | 78 | 2,410 | 911 | 781 | 1,110 | 9 | 6 | 4.5 | 6.5 | 4.7 |
| 12 | 10 | 16 | 51 | 2,970 | 890 | 858 | 1,060 | 8 | 6.5 | 6 | 3.9 | 5 |
| 13 | 8 | 10 | 39 | 1,440 | 911 | 935 | 1,030 | 7 | 9 | 7.5 | 4 | 6 |
| 14 | 8.5 | 15 | 36 | 1,000 | 3,240 | 963 | 994 | 6 | 9 | 10 | 2.6 | 6.5 |
| 15 | 8.5 | 24 | 33 | 932 | 2,040 | 767 | 956 | 5 | 9 | 9 | 3.2 | 6.5 |
| 16 | 8.5 | 24 | 32 | 911 | 1,500 | 728 | 991 | 4.5 | 9 | 12 | 2.4 | 7 |
| 17 | 7.5 | 24 | 35 | 890 | 1,780 | 708 | 1,120 | 4.3 | 9 | 12 | 2.1 | 6 |
| 18 | 7.5 | 22 | 32 | 877 | 1,620 | 688 | 1,080 | 4 | 3.3 | 8 | 2.6 | 5.5 |
| 19 | 8.5 | 22 | 30 | 868 | 1,300 | 682 | 879 | 4 | 3.8 | 8 | 2.6 | 6.5 |
| 20 | 8 | 21 | 33 | 838 | 1,190 | 669 | 362 | 4 | 4.2 | 8 | 3.2 | 8 |
| 21 | 7 | 21 | 28 | 812 | 1,140 | 662 | 58 | 4 | 3.5 | 7 | 3.3 | 7.5 |
| 22 | 6 | 24 | 27 | 780 | 1,070 | 662 | 46 | 4 | 3.5 | 6.5 | 4.6 | 7.5 |
| 23 | 5 | 24 | 28 | 766 | 1,080 | 643 | 879 | 4 | 3.8 | 7 | 4.6 | 7.5 |
| 24 | 7 | 24 | 27 | 742 | 1,270 | 662 | 779 | 4 | 3.2 | 6.5 | 4.6 | 7 |
| 25 | 32 | 24 | 21 | 1,210 | 2,090 | 688 | 595 | 3 | 4.2 | 4.6 | 3.5 | 6.5 |
| 26 | 30 | 33 | 20 | 2,440 | 3,330 | 1,680 | 614 | 3 | 3.8 | 4.6 | 3.4 | 6.5 |
| 27 | 27 | 30 | 22 | 1,330 | 13,600 | 3,680 | 488 | 3 | 4.2 | 4.4 | 5 | 6 |
| 28 | 27 | 24 | 26 | 1,030 | 12,000 | 2,300 | 355 | 3 | 4.6 | 5.5 | 4.5 | 6 |
| 29 | 26 | 27 | 33 | 932 | 8,270 | 4,620 | 335 | 3 | 4.6 | 4.9 | 3.6 | 6 |
| 30 | 22 | 26 | 30 | 904 | - | 15,600 | 350 | 3 | 6.5 | 6 | 3.2 | 5.5 |
| 31 | 16 | - | 32 | 884 | - | 11,100 | - | 3 | - | 7.5 | 2.0 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 355.0 | | 32 | 1.2 | 11.5 | 704 | | | |
| November..... | | | | 659 | | 33 | 10 | 22.0 | 1,310 | | | |
| December..... | | | | 973 | | 78 | 20 | 31.4 | 1,950 | | | |
| Calendar year 1939..... | | | | 31,695.6 | | 2,250 | 0 | 86.8 | 62,860 | | | |
| January..... | | | | 33,780 | | 2,970 | 49 | 1,090 | 67,000 | | | |
| February..... | | | | 68,899 | | 13,600 | 870 | 2,376 | 136,700 | | | |
| March..... | | | | 66,419 | | 15,600 | 643 | 2,143 | 131,700 | | | |
| April..... | | | | 32,691 | | 4,260 | 46 | 1,090 | 64,840 | | | |
| May..... | | | | 2,568.8 | | 452 | 3 | 82.9 | 5,100 | | | |
| June..... | | | | 140.7 | | 9 | 2.0 | 4.69 | 279 | | | |
| July..... | | | | 197.6 | | 12 | 2.6 | 6.37 | 362 | | | |
| August..... | | | | 135.4 | | 7.5 | 2.0 | 4.37 | 269 | | | |
| September..... | | | | 174.7 | | 8 | 3.3 | 5.82 | 347 | | | |
| Water year 1939-40..... | | | | 206,993.2 | | 15,600 | 1.2 | 566 | 410,600 | | | |

Peak discharge.- Feb. 27 (9:30 p.m.) 15,500 sec.-ft.; Mar. 30 (2 p.m.) 16,500 sec.-ft.

Bear River canal near Colfax, Calif.

Location.- Water-stage recorder, lat. 39°07', long. 120°58', in sec. 28, T. 15 N., R. 9 E., just downstream from lower spillway gates, 1½ miles downstream from diversion dam on Bear River, and 2 miles northwest of Colfax. Altitude of gage, about 1,950 feet.

Records available.- January 1912 to September 1940.

Average discharge.- 26 years (1914-40), 222 second-feet.

Extremes.- Maximum daily discharge during year, 469 second-feet July 20; no flow Feb. 18-23 and Apr. 3-23.

1912-40: Maximum daily discharge recorded, 476 second-feet July 17, Oct. 29, 1937; no flow at times.

Remarks.- Canal diverts from left bank of Bear River in sec. 22, T. 15 N., R. 9 E. Water is first used to develop power at Halsey and Wise powerhouses; part of it is then distributed for irrigation and part is eventually spilled into North Fork of American River.

Cooperation.- Records of daily discharge furnished by Pacific Gas & Electric Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 165 | 257 | 296 | 233 | 400 | 151 | 5 | 430 | 347 | 441 | 457 | 445 |
| 2 | 173 | 264 | 289 | 290 | 403 | 256 | 4 | 462 | 345 | 398 | 457 | 446 |
| 3 | 168 | 273 | 277 | 286 | 398 | 250 | 0 | 464 | 328 | 416 | 457 | 446 |
| 4 | 122 | 275 | 274 | 354 | 374 | 305 | 0 | 466 | 330 | 345 | 457 | 407 |
| 5 | 132 | 268 | 267 | 392 | 378 | 296 | 0 | 370 | 340 | 361 | 457 | 448 |
| 6 | 173 | 270 | 270 | 385 | 369 | 300 | 0 | 227 | 338 | 435 | 459 | 447 |
| 7 | 121 | 266 | 267 | 370 | 380 | 360 | 0 | 216 | 366 | 427 | 463 | 451 |
| 8 | 113 | 269 | 269 | 350 | 400 | 350 | 0 | 198 | 334 | 446 | 463 | 288 |
| 9 | 108 | 261 | 228 | 263 | 420 | 380 | 0 | 187 | 311 | 436 | 459 | 391 |
| 10 | 105 | 267 | 162 | 320 | 300 | 220 | 0 | 180 | 355 | 435 | 446 | 446 |
| 11 | 109 | 266 | 220 | 328 | 2 | 3 | 0 | 175 | 376 | 446 | 446 | 446 |
| 12 | 137 | 161 | 235 | 318 | 1 | 2 | 0 | 167 | 401 | 444 | 441 | 443 |
| 13 | 158 | 223 | 277 | 362 | 3 | 2 | 0 | 161 | 413 | 450 | 444 | 443 |
| 14 | 155 | 283 | 271 | 321 | 5 | 167 | 0 | 178 | 443 | 446 | 444 | 442 |
| 15 | 97 | 289 | 266 | 378 | 2 | 284 | 0 | 186 | 419 | 443 | 445 | 351 |
| 16 | 142 | 282 | 188 | 410 | 1 | 290 | 0 | 172 | 420 | 445 | 448 | 435 |
| 17 | 176 | 282 | 175 | 313 | 3 | 292 | 0 | 148 | 427 | 442 | 450 | 432 |
| 18 | 202 | 274 | 425 | 425 | 0 | 289 | 0 | 130 | 441 | 456 | 452 | 433 |
| 19 | 170 | 287 | 278 | 433 | 0 | 290 | 0 | 129 | 437 | 463 | 444 | 433 |
| 20 | 215 | 283 | 277 | 432 | 0 | 342 | 0 | 377 | 430 | 469 | 446 | 433 |
| 21 | 234 | 290 | 277 | 430 | 0 | 355 | 0 | 335 | 437 | 464 | 448 | 438 |
| 22 | 225 | 284 | 287 | 437 | 0 | 361 | 0 | 345 | 442 | 458 | 445 | 433 |
| 23 | 210 | 283 | 275 | 452 | 0 | 364 | 0 | 342 | 441 | 464 | 452 | 432 |
| 24 | 245 | 276 | 224 | 428 | 53 | 374 | 0 | 342 | 444 | 465 | 369 | 432 |
| 25 | 266 | 308 | 264 | 336 | 233 | 354 | 0 | 346 | 443 | 463 | 368 | 432 |
| 26 | 260 | 298 | 292 | 330 | 205 | 283 | 0 | 337 | 445 | 466 | 437 | 432 |
| 27 | 255 | 295 | 298 | 376 | 109 | 157 | 0 | 330 | 442 | 462 | 455 | 432 |
| 28 | 85 | 263 | 297 | 401 | 10 | 328 | 0 | 323 | 437 | 467 | 312 | 373 |
| 29 | 43 | 297 | 267 | 402 | 68 | 212 | 166 | 309 | 438 | 457 | 452 | 412 |
| 30 | 122 | 293 | 241 | 405 | - | 24 | 378 | 292 | 385 | 457 | 455 | 437 |
| 31 | 254 | - | 210 | 402 | - | 12 | - | 371 | - | 457 | 450 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 5,140 | 266 | 43 | 166 | 10,200 | | |
| November..... | | | | | | 8,231 | 308 | 161 | 274 | 16,330 | | |
| December..... | | | | | | 7,992 | 298 | 162 | 258 | 15,850 | | |
| Calendar year 1939..... | | | | | | 98,863 | 450 | 40 | 271 | 196,100 | | |
| January..... | | | | | | 11,342 | 452 | 233 | 366 | 22,500 | | |
| February..... | | | | | | 4,517 | 420 | 0 | 156 | 8,960 | | |
| March..... | | | | | | 7,633 | 360 | 2 | 246 | 15,140 | | |
| April..... | | | | | | 553 | 378 | 0 | 18.4 | 1,100 | | |
| May..... | | | | | | 8,696 | 466 | 129 | 281 | 17,250 | | |
| June..... | | | | | | 11,932 | 445 | 311 | 398 | 23,670 | | |
| July..... | | | | | | 13,719 | 469 | 345 | 443 | 27,210 | | |
| August..... | | | | | | 13,678 | 463 | 312 | 441 | 27,130 | | |
| September..... | | | | | | 12,739 | 448 | 288 | 425 | 25,270 | | |
| Water year 1939-40..... | | | | | | 106,172 | 469 | 0 | 290 | 210,600 | | |

North Fork of American River near Colfax, Calif.

Location.- Water-stage recorder, lat. 39°02', long. 120°54', in NW¼ sec. 30, T. 14 N., R. 10 E., 50 feet downstream from bridge on Colfax-Forest Hill road, 200 feet downstream from Shirltail Canyon Creek, and 5 miles southeast of Colfax. Datum of gage is 897.29 feet above mean sea level (general adjustment of 1929).

Drainage area.- 308 square miles.

Records available.- August 1911 to September 1940.

Average discharge.- 28 years (1911-15, 1914-39), 636 second-feet.

Extremes.- Maximum discharge during year, 17,600 second-feet Mar. 30 (gage height, 14.6 feet); minimum, 37 second-feet Oct. 1.
1911-40: Maximum discharge, about 37,000 second-feet Mar. 25, 1928 (gage height, 25.2 feet, from floodmarks, present datum), by slope-area method; minimum, 15 second-feet July 22 to Aug. 7, Aug. 12-15, 1924, Aug. 28, 1931.

Remarks.- Records good. A little storage and a few diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|--------|-------|-------|------|------|------|-------|
| 1 | 46 | 48 | 45 | 206 | 1,090 | 5,180 | 5,960 | 1,370 | 903 | 167 | a62 | 41 |
| 2 | 115 | 47 | 45 | 3,250 | 995 | 3,900 | 4,310 | 1,970 | 745 | 154 | a60 | 41 |
| 3 | 98 | 47 | 45 | 1,150 | 1,450 | 3,020 | 3,400 | 1,990 | 684 | 144 | a58 | 41 |
| 4 | 69 | 46 | 44 | 1,570 | 2,210 | 2,360 | 2,860 | 1,910 | 674 | 140 | 257 | 48 |
| 5 | 57 | 45 | 45 | 883 | 2,310 | 1,960 | 2,360 | 1,420 | 643 | 132 | a55 | 48 |
| 6 | 71 | 45 | 52 | 555 | 2,530 | 1,710 | 2,080 | 1,270 | 638 | 127 | a54 | 46 |
| 7 | 132 | 45 | 52 | 592 | 2,210 | 1,600 | 2,050 | 1,290 | 607 | 121 | a52 | 45 |
| 8 | 84 | 46 | 50 | 2,590 | 1,650 | 1,880 | 1,970 | 1,480 | 568 | 114 | a51 | 44 |
| 9 | 71 | 44 | 49 | 3,590 | 1,400 | 1,540 | 1,900 | 1,800 | 492 | 108 | a51 | 42 |
| 10 | 63 | 44 | 74 | 1,730 | 1,240 | 1,340 | 1,850 | 2,000 | 476 | 105 | a50 | 41 |
| 11 | 58 | 43 | 317 | 3,440 | 1,150 | 1,220 | 1,880 | 2,160 | 484 | 103 | a50 | 41 |
| 12 | 54 | 43 | 151 | 3,260 | 1,050 | 1,080 | 1,930 | 2,140 | 472 | 99 | 50 | 41 |
| 13 | 52 | 43 | 101 | 1,580 | 959 | 1,000 | 2,140 | 1,970 | 444 | 96 | 49 | 42 |
| 14 | 49 | 43 | 84 | 1,140 | 1,320 | 934 | 2,240 | 1,780 | 413 | 95 | 48 | 43 |
| 15 | 49 | 42 | 74 | 900 | 1,270 | 910 | 2,160 | 1,690 | 385 | 95 | 48 | 42 |
| 16 | 48 | 42 | 69 | 762 | 1,070 | 958 | 1,630 | 1,560 | 354 | 91 | 47 | 43 |
| 17 | 47 | 42 | 68 | 663 | 1,090 | 1,010 | 1,460 | 1,540 | 364 | 88 | 47 | 44 |
| 18 | 46 | 41 | 66 | 595 | 1,150 | 964 | 1,590 | 1,480 | 324 | e8 | 47 | 45 |
| 19 | 46 | 41 | 67 | 535 | 1,020 | 916 | 1,780 | 1,390 | 305 | 87 | 47 | 45 |
| 20 | 45 | 41 | 67 | 480 | 935 | 970 | 1,850 | 1,360 | 280 | 84 | 46 | 45 |
| 21 | 44 | 41 | 66 | 444 | 883 | 1,000 | 1,840 | 1,430 | 280 | 80 | 45 | 43 |
| 22 | 43 | 41 | 62 | 417 | 844 | 1,070 | 2,000 | 1,400 | 252 | 78 | 44 | 42 |
| 23 | 43 | 41 | 62 | 390 | 1,180 | 1,160 | 1,960 | 1,360 | 225 | 74 | 45 | 41 |
| 24 | 60 | 40 | 62 | 377 | 1,760 | 1,280 | 1,770 | 1,280 | 217 | 72 | 45 | 40 |
| 25 | 74 | 50 | 60 | 750 | 2,240 | 1,970 | 1,550 | 1,160 | 214 | 69 | 45 | 40 |
| 26 | 56 | 73 | 56 | 5,820 | 3,920 | 5,760 | 1,360 | 1,000 | 197 | 67 | 44 | 40 |
| 27 | 52 | 60 | 56 | 3,190 | 11,400 | 8,360 | 1,190 | 931 | 187 | 66 | 43 | 42 |
| 28 | 50 | 49 | 56 | 1,820 | 11,300 | 4,780 | 1,080 | 886 | 185 | 66 | 42 | 42 |
| 29 | 55 | 46 | 70 | 1,410 | 8,080 | 8,290 | 1,090 | 832 | 178 | 65 | 42 | 41 |
| 30 | 52 | 45 | 128 | 1,220 | - | 15,600 | 1,060 | 785 | 182 | 65 | 42 | 41 |
| 31 | 49 | - | 114 | 1,130 | - | 10,100 | - | 1,030 | - | a64 | 42 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,878 | 132 | 43 | 60.6 | 3,720 |
| November..... | 1,364 | 73 | 40 | 45.5 | 2,710 |
| December..... | 2,357 | 317 | 44 | 76.0 | 4,680 |
| Calendar year 1939..... | 95,428 | 1,590 | 28 | 261 | 189,300 |
| January..... | 46,439 | 5,620 | 206 | 1,498 | 92,110 |
| February..... | 69,696 | 11,400 | 844 | 2,403 | 138,200 |
| March..... | 93,462 | 15,600 | 910 | 3,015 | 165,400 |
| April..... | 62,290 | 5,960 | 1,060 | 2,076 | 123,600 |
| May..... | 45,654 | 2,160 | 765 | 1,474 | 90,610 |
| June..... | 12,372 | 903 | 178 | 412 | 24,540 |
| July..... | 3,004 | 167 | 64 | 96.9 | 5,960 |
| August..... | 1,508 | 62 | 42 | 48.6 | 2,990 |
| September..... | 1,280 | 48 | 40 | 42.7 | 2,540 |
| Water year 1939-40..... | 341,334 | 15,600 | 40 | 933 | 677,100 |

Peak discharge.- Jan. 2 (6 p.m.) 6,110 sec.-ft.; Jan. 11 (10 p.m.) 6,060 sec.-ft.; Jan. 26 (2:30 p.m.) 8,220 sec.-ft.; Feb. 27 (11:30 p.m.) 14,000 sec.-ft.; Mar. 26 (11:30 p.m.) 15,600 sec.-ft.; Mar. 30 (4 p.m.) 17,600 sec.-ft.

a No gage-height record; discharge computed on basis of records for Middle Fork of American River near Auburn.

North Fork of American River at Rattlesnake Bridge, Calif.

Location.—Water-stage recorder, lat. $38^{\circ}49'$, long. $121^{\circ}06'$, in SW $\frac{1}{4}$ sec. 9, T. 11 N., R. 8 E., 800 feet downstream from Rattlesnake Bridge, 3 miles downstream from Pilot Creek, and 6 miles south of Auburn. Altitude of gage, about 350 feet (from topographic map).

Drainage area.—999 square miles.

Records available.—November 1930 to September 1937, December 1938 to September 1940.

Extremes.—Maximum discharge during year, 54,000 second-feet Mar. 30 (gage height, 21.50 feet); minimum discharge recorded, 86 second-feet Sept. 9, 16.

1930-40: Maximum discharge, 78,000 second-feet Dec. 11, 1937 (gage height, 25.9 feet, from floodmarks), from rating curve extended above 25,000 second-feet; minimum, 6.5 second-feet (regulated) Aug. 15, 1931.

Remarks.—Records good Oct. 14 to Jan. 1 and Apr. 3 to Sept. 30; fair to poor for remainder of year. Storage, diversion, and regulation above station; low flow greatly affected by diversions into North Fork ditch and inflow from Bear and Yuba River Basins through South canal of Pacific Gas & Electric Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|--------|--------|------------------|---------|---------|-------|------|----------------------|-------|
| 1 | 130 | 337 | 301 | 686 | 3,920 | 15,400 | 19,900 | 4,360 | 3,700 | 754 | 316 | 288 |
| 2 | 250 | 366 | 332 | 7,100 | 3,530 | 10,800 | 13,500 | 6,020 | 3,010 | 742 | 342 | 177 |
| 3 | 300 | 331 | 312 | 6,660 | 3,950 | 8,250 | 10,300 | 7,100 | 2,650 | 688 | 288 | 242 |
| 4 | 320 | 342 | 300 | 4,710 | 6,440 | 6,760 | 8,760 | 6,600 | 2,620 | 580 | 262 | 292 |
| 5 | 270 | 342 | 315 | 3,550 | 7,340 | 5,800 | 7,520 | 5,240 | 2,800 | 595 | 273 | 296 |
| 6 | 250 | 351 | 362 | 2,170 | 6,820 | 5,290 | 6,620 | 4,340 | 2,550 | 565 | 320 | 259 |
| 7 | 470 | 300 | 360 | 1,940 | 7,320 | 4,920 | 6,260 | 4,240 | 2,500 | 530 | 316 | 252 |
| 8 | 380 | 342 | 348 | 6,260 | 5,540 | 5,060 | 6,280 | 4,720 | 2,280 | 520 | 316 | 153 |
| 9 | 340 | 321 | 357 | 11,000 | 4,650 | 5,060 | 5,980 | 5,680 | 2,130 | 505 | 308 | 203 |
| 10 | 280 | 323 | 330 | 6,120 | 3,980 | 4,390 | 5,820 | 6,340 | 1,960 | 540 | 252 | 235 |
| 11 | 240 | 320 | 774 | 8,830 | 3,380 | 3,880 | 6,000 | 6,800 | 2,040 | 515 | 245 | 300 |
| 12 | 220 | 193 | 926 | 12,300 | 2,960 | 3,430 | 6,080 | 7,040 | 2,070 | 495 | 238 | 245 |
| 13 | 220 | 266 | 688 | 5,980 | 2,680 | 3,140 | 6,640 | 6,700 | 2,040 | 460 | 256 | 252 |
| 14 | 218 | 348 | 572 | 4,190 | 4,250 | 2,980 | 7,180 | 5,900 | 1,970 | 420 | 245 | 304 |
| 15 | 186 | 305 | 494 | 3,170 | 3,760 | 3,040 | 7,000 | 5,780 | 1,860 | 415 | 292 | 238 |
| 16 | 200 | 330 | 428 | 2,650 | 3,050 | 2,990 | 5,520 | 5,240 | 1,740 | 420 | 256 | 228 |
| 17 | 219 | 377 | 283 | 2,270 | 3,240 | 3,380 | 4,780 | 5,360 | 1,720 | 445 | 252 | 316 |
| 18 | 240 | 343 | 440 | 2,160 | 3,320 | 3,290 | 5,000 | 4,920 | 1,660 | 490 | 177 | 393 |
| 19 | 254 | 345 | 454 | 2,000 | 2,860 | 3,130 | 5,740 | 4,680 | 1,850 | 500 | 245 | 530 |
| 20 | 272 | 310 | 481 | 1,850 | 2,560 | 3,290 | 6,020 | 4,480 | 1,440 | 320 | 288 | 410 |
| 21 | 250 | 302 | 448 | 1,720 | 2,380 | 3,400 | 5,900 | 4,780 | 1,350 | 296 | 235 | 378 |
| 22 | 298 | 326 | 478 | 1,670 | 2,250 | 3,590 | 6,280 | 4,840 | 1,240 | 378 | 232 | 411 |
| 23 | 229 | 314 | 411 | 1,620 | 3,500 | 3,870 | 6,600 | 4,680 | 1,040 | 401 | 284 | 304 |
| 24 | 310 | 321 | 380 | 1,580 | 6,270 | 4,040 | 6,100 | 4,660 | 1,000 | 392 | 171 | 329 |
| 25 | 394 | 354 | 316 | 2,060 | 6,090 | 6,290 | 5,360 | 4,340 | 1,050 | 383 | 155 | 324 |
| 26 | 394 | 358 | 377 | 14,300 | 9,440 | 12,300 | 4,640 | 3,780 | 1,000 | 370 | 228 | 329 |
| 27 | 250 | 327 | 402 | 12,300 | 29,800 | 29,700 | 4,040 | 3,390 | 916 | 365 | 225 | 276 |
| 28 | 196 | 351 | 422 | 6,750 | 37,200 | 14,100 | 3,740 | 3,210 | 892 | 296 | 235 | 265 |
| 29 | 162 | 353 | 412 | 5,170 | 25,200 | 18,100 | 3,620 | 3,130 | 876 | 316 | 235 | 242 |
| 30 | 242 | 322 | 542 | 4,430 | - | 45,200 | 3,540 | 2,810 | 811 | 365 | 288 | 334 |
| 31 | 328 | - | 654 | 4,040 | - | 36,000 | - | 3,100 | - | 360 | 288 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 8,312 | 470 | 130 | 268 | | 16,490 | |
| November..... | | | | | | 9,800 | 377 | 193 | 327 | | 19,440 | |
| December..... | | | | | | 13,699 | 926 | 283 | 442 | | 27,170 | |
| Calendar year 1939..... | | | | | | 331,286 | 5,140 | 10 | 908 | | 657,100 | |
| January..... | | | | | | 151,236 | 14,300 | 686 | 4,879 | | 300,000 | |
| February..... | | | | | | 207,680 | 37,200 | 2,250 | 7,161 | | 411,900 | |
| March..... | | | | | | 280,870 | 45,200 | 2,980 | 9,060 | | 557,100 | |
| April..... | | | | | | 200,720 | 19,900 | 3,540 | 6,691 | | 398,100 | |
| May..... | | | | | | 154,260 | 7,100 | 2,810 | 4,976 | | 306,000 | |
| June..... | | | | | | 54,145 | 3,700 | 811 | 1,805 | | 107,400 | |
| July..... | | | | | | 14,421 | 754 | 296 | 465 | | 28,600 | |
| August..... | | | | | | 8,063 | 342 | 155 | 260 | | 15,990 | |
| September..... | | | | | | 8,805 | 530 | 153 | 294 | | 17,460 | |
| Water year 1939-40..... | | | | | | 1,112,011 | 45,200 | 130 | 3,038 | | 2,206,000 | |

Peak discharge.—Jan. 2 (9:30 p.m.) 17,200 sec.-ft.; Jan. 12 (2 a.m.) 17,700 sec.-ft.; Jan. 26 (6 p.m.) 22,500 sec.-ft.; Feb. 28 (1 a.m.) 43,000 sec.-ft.; Mar. 27 (3 a.m.) 45,000 sec.-ft.; Mar. 30 (7 p.m.) 54,000 sec.-ft.

Note.—No gage-height record Oct. 1-13; discharge computed on basis of records for station on American River at Fair Oaks and stations on other forks of American River.

American River at Fair Oaks, Calif.

Location.- Water-stage recorder, lat. 38°38'15", long. 121°15'55", just upstream from highway bridge at Fair Oaks, Sacramento County, and 10 miles downstream from South Fork. Altitude of gage, about 72 feet (from topographic map).

Drainage area.- 1,921 square miles.

Records available.- November 1904 to September 1940 (at several sites near highway bridge).

Average discharge.- 35 years (1905-40), 3,667 second-feet.

Extremes.- Maximum discharge during year, 89,200 second-feet Mar. 30 (gage height, 25.27 feet); minimum, 83 second-feet Oct. 1.

1904-40: Maximum discharge, 140,000 second-feet Mar. 19, 1907, Mar. 25, 1928 (gage height, 31.4 feet, present datum), from rating curve extended above 75,000 second-feet; minimum, 3.6 second-feet (regulated) Aug. 16, 1924.

Remarks.- Records good. Flow regulated by storage, many diversions, and power plants above station. Some inflow from Bear and Yuba River Basins.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|-------|--------|--------|------------------|---------|---------|--------|-------|----------------------|-------|
| 1 | 172 | 544 | 572 | 1,060 | 5,180 | 23,200 | 29,800 | 6,330 | 6,240 | 1,410 | 471 | 397 |
| 2 | 214 | 554 | 588 | 6,820 | 4,710 | 16,800 | 20,000 | 8,650 | 5,530 | 1,330 | 486 | 340 |
| 3 | 394 | 531 | 570 | 13,400 | 4,310 | 13,300 | 16,000 | 10,800 | 4,890 | 1,200 | 437 | 297 |
| 4 | 628 | 554 | 510 | 6,900 | 6,240 | 11,000 | 13,900 | 9,990 | 4,620 | 1,080 | 425 | 350 |
| 5 | 515 | 536 | 519 | 5,720 | 10,700 | 9,380 | 12,200 | 8,210 | 4,410 | 962 | 414 | 403 |
| 6 | 414 | 559 | 568 | 3,300 | 8,940 | 8,450 | 10,700 | 6,780 | 4,380 | 962 | 463 | 384 |
| 7 | 532 | 498 | 565 | 2,830 | 11,100 | 7,800 | 10,100 | 6,560 | 4,240 | 878 | 480 | 354 |
| 8 | 876 | 514 | 566 | 9,390 | 7,840 | 7,720 | 9,990 | 7,180 | 4,030 | 830 | 467 | 347 |
| 9 | 637 | 516 | 569 | 23,000 | 6,420 | 7,760 | 9,520 | 8,540 | 3,810 | 820 | 456 | f280 |
| 10 | 556 | 504 | 562 | 11,600 | 5,580 | 7,080 | 9,280 | 9,810 | 3,490 | 825 | 399 | f310 |
| 11 | 488 | 540 | 587 | 13,600 | 4,780 | 6,270 | 9,400 | 10,700 | 3,530 | 785 | 384 | 422 |
| 12 | 424 | 510 | 1,550 | 24,300 | 4,280 | 5,630 | 9,470 | 11,300 | 3,530 | 745 | 350 | 354 |
| 13 | 427 | 372 | 1,130 | 10,400 | 3,930 | 5,040 | 10,200 | 10,500 | 3,480 | 690 | 384 | 369 |
| 14 | 402 | 424 | 884 | 6,470 | 6,980 | 4,680 | 10,800 | 9,680 | 3,380 | 642 | 384 | 410 |
| 15 | 412 | 465 | 671 | 4,740 | 5,340 | 4,650 | 11,000 | 9,350 | 3,300 | 626 | 418 | 406 |
| 16 | 370 | 408 | 700 | 3,990 | 4,600 | 4,620 | 9,110 | 8,670 | 3,150 | 622 | 369 | 322 |
| 17 | 372 | 530 | 577 | 3,310 | 5,090 | 5,160 | 7,800 | 8,820 | 3,040 | 642 | 351 | 425 |
| 18 | 356 | 446 | 594 | 3,070 | 5,370 | 5,000 | 7,860 | 8,180 | 2,980 | 606 | 351 | 444 |
| 19 | 394 | 470 | 682 | 2,800 | 4,470 | 4,720 | 8,730 | 7,760 | 2,800 | 775 | 333 | 618 |
| 20 | 398 | 468 | 704 | 2,600 | 3,970 | 4,880 | 9,140 | 7,400 | 2,680 | 558 | 406 | 578 |
| 21 | 403 | 494 | 690 | 2,400 | 3,640 | 5,100 | 9,040 | 7,900 | 2,490 | 502 | 354 | 526 |
| 22 | 501 | 517 | 707 | 2,270 | 3,460 | 5,320 | 9,450 | 8,010 | 2,440 | 542 | 344 | 456 |
| 23 | 369 | 528 | 662 | 2,210 | 4,730 | 5,790 | 10,000 | 7,800 | 2,200 | 570 | 387 | 482 |
| 24 | 415 | 501 | 664 | 2,130 | 9,620 | 6,110 | 9,520 | 7,720 | 2,000 | 562 | 336 | 441 |
| 25 | 568 | 492 | 566 | 2,660 | 9,380 | 8,490 | 8,580 | 7,420 | 1,980 | 542 | 290 | 441 |
| 26 | 664 | 606 | 489 | 18,900 | 13,400 | 12,700 | 7,620 | 6,760 | 1,930 | 538 | 279 | 437 |
| 27 | 516 | 736 | 568 | 22,300 | 46,600 | 47,400 | 6,760 | 6,110 | 1,750 | 526 | 333 | 418 |
| 28 | 469 | 616 | 642 | 10,600 | 57,500 | 20,200 | 6,000 | 5,880 | 1,640 | 479 | 351 | 456 |
| 29 | 378 | 520 | 654 | 7,400 | 39,700 | 22,200 | 5,760 | 5,660 | 1,570 | 462 | 344 | 328 |
| 30 | 446 | 518 | 668 | 6,090 | - | 69,600 | 5,580 | 5,320 | 1,510 | 506 | 362 | 444 |
| 31 | 516 | - | 1,130 | 5,450 | - | 61,200 | - | 5,240 | - | 514 | 384 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 14,206 | 876 | 172 | 458 | | 28,180 | |
| November..... | | | | | | 15,471 | 736 | 372 | 516 | | 30,690 | |
| December..... | | | | | | 21,408 | 1,550 | 489 | 691 | | 42,460 | |
| Calendar year 1939..... | | | | | | 518,310 | 8,500 | 37 | 1,420 | | 1,028,000 | |
| January..... | | | | | | 241,740 | 24,300 | 1,060 | 7,798 | | 479,500 | |
| February..... | | | | | | 308,840 | 57,500 | 3,460 | 10,650 | | 612,600 | |
| March..... | | | | | | 427,050 | 69,600 | 4,620 | 13,780 | | 847,000 | |
| April..... | | | | | | 313,410 | 29,800 | 5,580 | 10,450 | | 621,600 | |
| May..... | | | | | | 249,230 | 11,300 | 5,240 | 8,040 | | 494,300 | |
| June..... | | | | | | 96,980 | 6,240 | 1,510 | 3,233 | | 192,400 | |
| July..... | | | | | | 22,751 | 1,410 | 479 | 734 | | 45,130 | |
| August..... | | | | | | 12,002 | 486 | 279 | 387 | | 23,810 | |
| September..... | | | | | | 12,287 | 618 | 280 | 410 | | 24,370 | |
| Water year 1939-40..... | | | | | | 1,735,375 | 69,600 | 172 | 4,741 | | 3,442,000 | |

Peak discharge.- Jan. 9 (8 a.m.) 28,100 sec.-ft.; Jan. 12 (5 a.m.) 32,700 sec.-ft.; Jan. 28 (10 p.m.) 36,000 sec.-ft.; Feb. 28 (3 a.m.) 68,100 sec.-ft.; Mar. 27 (7 a.m.) 71,100 sec.-ft.; Mar. 30 (11 p.m.) 89,200 sec.-ft.

f Discharge computed on basis of partial gage-height record and records for station at Sacramento.

AMERICAN RIVER BASIN

American River at Sacramento, Calif.

Location.- Water-stage recorder, lat. 38°34'05", long. 121°25'20", at H Street Bridge, just west of Sacramento, Sacramento County, 6½ miles upstream from mouth. Zero of gage is set to datum of Corps of Engineers, U. S. Army.

Records available.- July to October 1921, October 1929 to October 1932, and May 1934 to October 1940 (low-water periods only) in reports of Geological Survey. 1926-40 (gage heights for high-water periods) in reports of Division of Water Resources, Department of Public Works, State of California.

Extremes.- Maximum discharge during period June to October 1940, 179 second-feet Oct. 20 (gage height, 19.19 feet).
1921, 1929-32, 1934-40: Minimum discharge recorded, 21 second-feet Aug. 14, 1931.

Remarks.- Records excellent except those for days of no gage-height record, which are good. Flow regulated by reservoirs, many diversions, and power plants above station. Some inflow from Bear and Yuba River Basins.

Discharge, in second-feet, 1939-40

| Day | Oct. | | | | | | June | July | Aug. | Sept. | Oct. |
|-----------------|------|--|--|--|--|--|------------------|---------|---------|-------|----------------------|
| 1 | 194 | | | | | | 5,820 | 1,240 | 446 | 372 | 432 |
| 2 | 204 | | | | | | 5,240 | 1,190 | 450 | 368 | 417 |
| 3 | 333 | | | | | | 4,570 | 1,090 | 427 | 293 | 422 |
| 4 | 550 | | | | | | 4,330 | 1,010 | 413 | 343 | 417 |
| 5 | 552 | | | | | | 4,210 | 893 | 386 | 386 | 432 |
| 6 | 424 | | | | | | 4,130 | 914 | 422 | 399 | 450 |
| 7 | 439 | | | | | | 4,040 | 865 | 436 | 376 | 480 |
| 8 | 837 | | | | | | 3,890 | 754 | 441 | 372 | 460 |
| 9 | 670 | | | | | | 3,640 | 761 | 436 | 293 | 450 |
| 10 | 576 | | | | | | 3,370 | 768 | 404 | 327 | 470 |
| 11 | 493 | | | | | | 3,350 | 735 | 376 | 372 | 475 |
| 12 | 458 | | | | | | 3,400 | 681 | 355 | 390 | 470 |
| 13 | 444 | | | | | | 3,350 | 633 | 347 | 359 | 475 |
| 14 | 415 | | | | | | 3,250 | 598 | 351 | 372 | 386 |
| 15 | 424 | | | | | | 3,190 | 582 | 376 | 404 | 390 |
| 16 | 401 | | | | | | 3,070 | 552 | 376 | 343 | 278 |
| 17 | 396 | | | | | | 2,840 | 593 | 339 | 363 | 224 |
| 18 | 392 | | | | | | 2,860 | 566 | 351 | 422 | 224 |
| 19 | 410 | | | | | | 2,600 | 693 | 312 | 544 | 204 |
| 20 | 415 | | | | | | 2,500 | 571 | 372 | 560 | 188 |
| 21 | 401 | | | | | | 2,490 | 475 | 372 | 516 | 228 |
| 22 | 463 | | | | | | 2,280 | 495 | 343 | 455 | 368 |
| 23 | 401 | | | | | | 1,990 | 538 | 347 | 505 | 490 |
| 24 | 405 | | | | | | 1,710 | 532 | 372 | a460 | 516 |
| 25 | 498 | | | | | | 1,700 | 516 | 293 | a450 | 554 |
| 26 | 631 | | | | | | 1,650 | 500 | 274 | a450 | 465 |
| 27 | 565 | | | | | | 1,470 | 495 | 331 | 413 | 465 |
| 28 | 458 | | | | | | 1,390 | 465 | 335 | a480 | 381 |
| 29 | 401 | | | | | | 1,350 | 441 | 335 | 381 | 465 |
| 30 | 420 | | | | | | 1,300 | 480 | 347 | a460 | 576 |
| 31 | 463 | | | | | | - | 475 | 355 | - | 688 |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| 1939 | | | | | | | 14,163 | 837 | 194 | 457 | 25,090 |
| 1940 | | | | | | | | | | | |
| June..... | | | | | | | 90,980 | 5,820 | 1,300 | 3,033 | 180,500 |
| July..... | | | | | | | 21,131 | 1,240 | 441 | 652 | 41,910 |
| August..... | | | | | | | 11,520 | 450 | 274 | 372 | 22,850 |
| September..... | | | | | | | 12,228 | 560 | 295 | 408 | 24,250 |
| October..... | | | | | | | 12,840 | 588 | 188 | 414 | 25,470 |
| The period..... | | | | | | | - | - | - | - | 295,000 |

a No gage-height record; discharge computed on basis of records for station at Fair Oaks.

Middle Fork of American River near Auburn, Calif.

Location.- Water-stage recorder, lat. 38°55', long. 121°00', in NW¼ sec. 5, T. 12 N., R. 9 E., at Mountain Quarry Co.'s plant, 1.7 miles upstream from confluence with North Fork of American River and 3½ miles northeast of Auburn. Altitude of gage, about 580 feet (from topographic map).

Drainage area.- 619 square miles.

Records available.- December 1930 to September 1940. October 1911 to December 1930, at site half a mile downstream.

Average discharge.- 29 years, 1,342 second-feet.

Extremes.- Maximum discharge during year, 35,600 second-feet Mar. 30 (gage height, 23.2 feet); minimum, 60 second-feet Oct. 1, Sept. 25, 26, 30.
1911-40: Maximum discharge, about 62,000 second-feet Mar. 25, 1928 (gage height, 35.6 feet, former site and datum; 33.4 feet, present site and datum, from floodmarks); minimum, 20 second-feet Sept. 6, 1931, Sept. 19, 1934.

Remarks.- Records good. Small storage reservoirs and diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|--------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 66 | 131 | 90 | 400 | 2,000 | 8,140 | 10,900 | 2,960 | 2,670 | 575 | 140 | 64 |
| 2 | 114 | 122 | 87 | 5,700 | 1,900 | 6,000 | 7,630 | 4,500 | 2,150 | 530 | 131 | 53 |
| 3 | 178 | 113 | 86 | 4,600 | 2,400 | 4,800 | 6,380 | 4,750 | 1,940 | 490 | 125 | 63 |
| 4 | 200 | 106 | 86 | 2,700 | 3,760 | 4,040 | 5,480 | 4,620 | 1,920 | 462 | 122 | 63 |
| 5 | 146 | 101 | 88 | 1,900 | 4,450 | 3,580 | 4,700 | 3,470 | 1,830 | 450 | 120 | 66 |
| 6 | 134 | 97 | 94 | 1,200 | 4,550 | 3,270 | 4,180 | 3,030 | 1,880 | 410 | 115 | 67 |
| 7 | 334 | 94 | 98 | 1,200 | 3,600 | 3,100 | 4,080 | 3,040 | 1,860 | 374 | 110 | 68 |
| 8 | 268 | 91 | 101 | 3,600 | 2,650 | 3,160 | 4,030 | 3,350 | 1,770 | 368 | 102 | 67 |
| 9 | 209 | 90 | 119 | 5,600 | 2,300 | 3,270 | 3,890 | 4,030 | 1,580 | 338 | 100 | 66 |
| 10 | 172 | 87 | 129 | 3,350 | 2,150 | 2,940 | 3,850 | 4,620 | 1,470 | 330 | 98 | 64 |
| 11 | 153 | 84 | 449 | 6,200 | 2,000 | 2,620 | 4,020 | 4,920 | 1,540 | 310 | 96 | 64 |
| 12 | 138 | 83 | 464 | 8,200 | 1,850 | 2,320 | 4,110 | 5,140 | 1,550 | 294 | 96 | 63 |
| 13 | 127 | 82 | 291 | 3,350 | 1,750 | 2,140 | 4,490 | 4,750 | 1,540 | 253 | 89 | 63 |
| 14 | 121 | 81 | 212 | 2,200 | 2,100 | 2,000 | 4,870 | 4,190 | 1,460 | 272 | 84 | 63 |
| 15 | 115 | 79 | 178 | 1,650 | 1,800 | 1,960 | 4,700 | 4,080 | 1,390 | 266 | 80 | 66 |
| 16 | 107 | 78 | 158 | 1,330 | 1,700 | 2,060 | 3,680 | 3,710 | 1,260 | 258 | 79 | 66 |
| 17 | 104 | 77 | 149 | 1,120 | 1,800 | 2,310 | 3,260 | 3,800 | 1,300 | 241 | 74 | 67 |
| 18 | 100 | 76 | 148 | 992 | 1,900 | 2,200 | 3,490 | 3,480 | 1,180 | 238 | 79 | 67 |
| 19 | 96 | 75 | 143 | 912 | 1,750 | 2,150 | 4,000 | 3,350 | 1,120 | 227 | 76 | 67 |
| 20 | 92 | 73 | 146 | 835 | 1,650 | 2,240 | 4,190 | 3,260 | 1,020 | 220 | 74 | 68 |
| 21 | 89 | 72 | 142 | 800 | 1,450 | 2,360 | 4,190 | 3,430 | 990 | 213 | 74 | 70 |
| 22 | 85 | 71 | 134 | 750 | 1,400 | 2,540 | 4,450 | 3,450 | 935 | 199 | 73 | 68 |
| 23 | 82 | 70 | 126 | 750 | 2,600 | 2,770 | 4,660 | 4,410 | 827 | 188 | 70 | 64 |
| 24 | 93 | 69 | 121 | 700 | 4,050 | 2,900 | 4,370 | 3,280 | 768 | 185 | 68 | 62 |
| 25 | 136 | 78 | 121 | 1,000 | 3,700 | 4,810 | 3,840 | 3,080 | 782 | 173 | 70 | 60 |
| 26 | 122 | 122 | 114 | 11,400 | 5,630 | 12,100 | 3,280 | 2,720 | 728 | 161 | 70 | 60 |
| 27 | 106 | 130 | 108 | 8,600 | 19,900 | 18,500 | 2,840 | 2,450 | 674 | 155 | 68 | 62 |
| 28 | 111 | 104 | 111 | 4,000 | 22,200 | 7,880 | 2,640 | 2,340 | 656 | 122 | 68 | 62 |
| 29 | 130 | 95 | 114 | 2,900 | 14,000 | 13,800 | 2,580 | 2,270 | 642 | 149 | 67 | 62 |
| 30 | 151 | 92 | 288 | 2,400 | - | 30,400 | 2,500 | 2,070 | 647 | 149 | 66 | 60 |
| 31 | 143 | - | 350 | 2,100 | - | 19,800 | - | 2,320 | - | 146 | 66 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 4,222 | 334 | 60 | 136 | 8,370 | | |
| November..... | | | | | | 2,723 | 131 | 59 | 90.8 | 5,400 | | |
| December..... | | | | | | 5,045 | 464 | 86 | 163 | 10,010 | | |
| Calendar year 1939..... | | | | | | 200,656 | 3,380 | 36 | 550 | 398,000 | | |
| January..... | | | | | | 92,839 | 11,800 | 400 | 2,995 | 184,100 | | |
| February..... | | | | | | 122,880 | 22,200 | 1,400 | 4,237 | 243,700 | | |
| March..... | | | | | | 182,190 | 30,400 | 1,960 | 5,877 | 361,400 | | |
| April..... | | | | | | 131,280 | 10,900 | 2,500 | 4,376 | 260,400 | | |
| May..... | | | | | | 109,420 | 5,140 | 2,070 | 3,530 | 217,000 | | |
| June..... | | | | | | 40,069 | 2,670 | 642 | 1,336 | 79,480 | | |
| July..... | | | | | | 8,798 | 575 | 146 | 284 | 17,450 | | |
| August..... | | | | | | 2,752 | 140 | 66 | 88.8 | 5,460 | | |
| September..... | | | | | | 1,935 | 70 | 60 | 64.5 | 3,840 | | |
| Water year 1939-40..... | | | | | | 704,161 | 30,400 | 60 | 1,924 | 1,397,000 | | |

Peak discharge.- Jan. 2 (about 8 p.m.) 14,400 sec.-ft.; Jan. 11 (about 12 p.m.) 13,300 sec.-ft.; Jan. 26 (about 4 p.m.) 17,900 sec.-ft.; Feb. 27 (11 to 12 p.m.) 27,100 sec.-ft.; Mar. 26 (12 p.m.) 34,600 sec.-ft.; Mar. 30 (3 to 4 p.m.) 35,600 sec.-ft.

Note.- Discharge Dec. 31 to Jan. 13 and Jan. 21 to Feb. 23 computed from estimated stage-graph based on partial recorder record, floodmarks and records for North Fork of American River near Colfax and at Rattlesnake Bridge.

South Fork of American River near Kyburz, Calif.

Location.— Water-stage recorder, lat. 38°46', long. 120°19', in S $\frac{1}{4}$ sec. 29, T. 11 N., R. 15 E., beside Lincoln Highway, 0.5 mile downstream from Silver Fork of South Fork and 2 miles west of Kyburz. Altitude of gage, about 4,030 feet (from topographic map).

Drainage area.— 196 square miles.

Records available.— August to December 1907, October 1922 to September 1940.

Average discharge.— 18 years (1922-39), 249 second-feet.

Extremes.— Maximum discharge during year, 4,900 second-feet Mar. 26 (gage height, 7.00 feet); minimum, 0.4 second-foot Oct. 19.

1922-40: Maximum discharge, 9,700 second-feet Dec. 11, 1937 (gage height, 8.55 feet), from rating curve extended above 4,000 second-feet on basis of velocity-area studies; minimum, 0.3 second-foot Nov. 9-11, 1929.

Remarks.— Records good above 10 second-feet and fair below. Flow regulated by storage and diversions. (See record for El Dorado canal, which diverts half a mile above station.)

Cooperation.— Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|---------|-------|---------|-------|-------|-------|----------------------|------|-------|
| 1 | 6 | 1.0 | 1.7 | 21 | 237 | 501 | 1,190 | 1,280 | 1,540 | 130 | 2.0 | 2.5 |
| 2 | 44 | .8 | 1.4 | 1,060 | 204 | 438 | 983 | 1,810 | 1,250 | 102 | 2.0 | 3.1 |
| 3 | 5.5 | 1.0 | 2.0 | 282 | 251 | 374 | 999 | 1,780 | 1,090 | 94 | 1.9 | 10 |
| 4 | 3.1 | 1.0 | 2.4 | 255 | 269 | 336 | 999 | 1,610 | 1,030 | 90 | 1.3 | 12 |
| 5 | 6 | 1.1 | 2.1 | 160 | 237 | 329 | 915 | 1,250 | 1,020 | 70 | 1.6 | 2.4 |
| 6 | 11 | 1.5 | 2.4 | 110 | 329 | 318 | 878 | 1,200 | 908 | 59 | 1.1 | 3.1 |
| 7 | 15 | 1.4 | 2.0 | 122 | 291 | 348 | 908 | 1,250 | 878 | 54 | 1.3 | 2.4 |
| 8 | 3.2 | 1.1 | 1.5 | 192 | 224 | 412 | 870 | 1,500 | 519 | 46 | 1.5 | 2.5 |
| 9 | 5 | 1.0 | 2.0 | 229 | 197 | 434 | 876 | 1,740 | 723 | 24 | 1.8 | 2.5 |
| 10 | 3.7 | 1.2 | 2.8 | 224 | 185 | 363 | 945 | 1,960 | 723 | 3.6 | 1.6 | 2.9 |
| 11 | 4.7 | 1.2 | 61 | 374 | 177 | 315 | 1,030 | 2,170 | 703 | 1.8 | 1.3 | 3.3 |
| 12 | 3.8 | 1.0 | 5.5 | 366 | 153 | 275 | 1,150 | 2,220 | 671 | 1.7 | 1.0 | 3.3 |
| 13 | 4.0 | 1.2 | 2.1 | 216 | 145 | 254 | 1,350 | 2,110 | 653 | 2.4 | 1.1 | 3.4 |
| 14 | 3.4 | 32 | 1.6 | 168 | 143 | 245 | 1,410 | 1,970 | 690 | 2.5 | 1.3 | 3.3 |
| 15 | 2.8 | 28 | 2.5 | 141 | 154 | 257 | 1,280 | 1,880 | 671 | 2.0 | 1.6 | 3.1 |
| 16 | 3.1 | 24 | 2.1 | 127 | 122 | 298 | 908 | 1,900 | 653 | 2.2 | 2.2 | 3.1 |
| 17 | 3.0 | 16 | 2.0 | 115 | 123 | 318 | 878 | 1,790 | 570 | 13 | 1.5 | 3.4 |
| 18 | 10 | 2.2 | 2.1 | 102 | 115 | 318 | 1,060 | 1,670 | 511 | 5 | 1.6 | 3.3 |
| 19 | 1.5 | 2.5 | 2.3 | 90 | 107 | 329 | 1,180 | 1,630 | 476 | 1.4 | 1.3 | 2.4 |
| 20 | 1.2 | 3.1 | 2.4 | 79 | 102 | 352 | 1,200 | 1,700 | 420 | 2.4 | 1.8 | 2.4 |
| 21 | 1.1 | 2.5 | 1.9 | 68 | 108 | 420 | 1,280 | 1,760 | 403 | 2.5 | 1.3 | 2.4 |
| 22 | 1.3 | 1.8 | 1.8 | 62 | 107 | 506 | 1,490 | 1,790 | 355 | 2.4 | 2.4 | 3.3 |
| 23 | 1.5 | 1.5 | 3.4 | 49 | 206 | 593 | 1,540 | 1,800 | 301 | 1.7 | 2.2 | 2.9 |
| 24 | 1.9 | 2.0 | 2.3 | 39 | 232 | 653 | 1,470 | 1,740 | 266 | 1.7 | 2.4 | 2.7 |
| 25 | 1.2 | 3.0 | 2.1 | 175 | 216 | 1,180 | 1,310 | 1,750 | 209 | 1.9 | 1.9 | 2.5 |
| 26 | 1.5 | 2.0 | 10 | 1,180 | 258 | 2,170 | 1,090 | 1,580 | 170 | 1.8 | 1.8 | 2.4 |
| 27 | 1.4 | 37 | 2.4 | 671 | 519 | 2,080 | 952 | 1,490 | 157 | 2.0 | 1.7 | 2.4 |
| 28 | 4.5 | 20 | 2.6 | 582 | 1,120 | 1,190 | 878 | 1,440 | 160 | 2.2 | 2.0 | 2.4 |
| 29 | 1.1 | 2.0 | 76 | 308 | 723 | 1,420 | 845 | 1,350 | 170 | 1.7 | 2.0 | 2.5 |
| 30 | 1.2 | 2.1 | 35 | 260 | - | 2,340 | 900 | 1,210 | 162 | 1.4 | 2.0 | 2.2 |
| 31 | 1.0 | - | 3.2 | 237 | - | 1,600 | - | 1,500 | - | 1.6 | 2.2 | - |
| Month | Second-foot-days | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | |
| October..... | 157.8 | | | 44 | | 1.0 | | 5.09 | | 313 | | |
| November..... | 196.3 | | | 37 | | .5 | | 6.54 | | 389 | | |
| December..... | 244.6 | | | 76 | | 1.4 | | 7.89 | | 485 | | |
| Calendar year 1939..... | 39,436.2 | | | 835 | | .8 | | 105 | | 76,240 | | |
| January..... | 7,914 | | | 1,180 | | 21 | | 255 | | 15,700 | | |
| February..... | 7,564 | | | 1,120 | | 102 | | 261 | | 15,000 | | |
| March..... | 20,999 | | | 2,540 | | 245 | | 677 | | 41,650 | | |
| April..... | 32,769 | | | 1,540 | | 848 | | 1,092 | | 66,000 | | |
| May..... | 51,640 | | | 2,220 | | 1,200 | | 1,666 | | 102,400 | | |
| June..... | 18,142 | | | 1,540 | | 157 | | 605 | | 35,980 | | |
| July..... | 728.1 | | | 130 | | 1.4 | | 23.5 | | 1,440 | | |
| August..... | 64.3 | | | 13 | | 1.0 | | 2.07 | | 128 | | |
| September..... | 100.1 | | | 12 | | 2.2 | | 5.34 | | 199 | | |
| Water year 1939-40..... | 140,519.2 | | | 2,340 | | .8 | | 384 | | 278,700 | | |

Peak discharge.— Mar. 26 (10:30 p.m.) 4,900 sec.-ft.; Mar. 30 (2 p.m.) 2,970 sec.-ft.; May 11 (9 p.m.) 2,800 sec.-ft.

South Fork of American River near Camino, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}46'$, long. $120^{\circ}42'$, in SW $\frac{1}{4}$ sec. 25, T. 11 N., R. 11 E., 300 feet upstream from Iowa Canyon Creek, 1 mile downstream from intake of American River flume, and 3 miles northwest of Camino. Altitude of gage, about 1,640 feet (from topographic map).

Drainage area.- 497 square miles.

Records available.- October 1922 to September 1940.

Average discharge.- 18 years, 721 second-feet.

Extremes.- Maximum discharge during year, 15,400 second-feet Mar. 27 (gage height, 18.55 feet); minimum, 1.5 second-feet Nov. 17, 18.
1922-40: Maximum discharge, 25,600 second-feet Dec. 11, 1937 (gage height, 25.5 feet, from floodmark in house), from rating curve extended above 8,000 second-feet; minimum, 1.2 second-feet Aug. 24, 1931.

Remarks.- Records excellent. Flow regulated by four reservoirs and several diversions above station. (See records for American River flume and El Dorado canal.)

Cooperation.- Water-stage recorder graph and results of four discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-------|-----|--------|
| 0.2 | 0.8 | 1.4 | 43 | 3.5 | 324 | 6.0 | 1,230 | 9.0 | 3,280 |
| .4 | 2.5 | 1.8 | 74 | 4.0 | 436 | 6.5 | 1,530 | 10 | 4,220 |
| .6 | 6 | 2.2 | 116 | 4.5 | 570 | 7.0 | 1,830 | 12 | 6,460 |
| .8 | 12 | 2.6 | 170 | 5.0 | 740 | 7.5 | 2,150 | 14 | 9,050 |
| 1.0 | 21 | 3.0 | 232 | 5.5 | 970 | 8.0 | 2,500 | 16 | 11,800 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|--------|-------|-------|-------|------|------|-------|
| 1 | 10 | 25 | 19 | 142 | 1,020 | 3,600 | 5,990 | 2,110 | 2,290 | 300 | 27 | 10 |
| 2 | 53 | 23 | 32 | 2,800 | 870 | 2,810 | 4,470 | 3,440 | 1,990 | 266 | 28 | 7.5 |
| 3 | 160 | 21 | 15 | 1,510 | 1,070 | 2,280 | 3,820 | 3,500 | 1,750 | 252 | 28 | 7 |
| 4 | 34 | 14 | 15 | 1,350 | 1,890 | 1,910 | 3,550 | 3,320 | 1,690 | 224 | 29 | 11 |
| 5 | 23 | 29 | 18 | 710 | 1,840 | 1,740 | 3,100 | 2,270 | 1,630 | 224 | 26 | 15 |
| 6 | 105 | 17 | 26 | 441 | 1,970 | 1,580 | 2,770 | 2,040 | 1,550 | 184 | 20 | 9.5 |
| 7 | 182 | 17 | 28 | 405 | 1,930 | 1,550 | 2,700 | 2,120 | 1,480 | 166 | 18 | 11 |
| 8 | 109 | 18 | 35 | 1,390 | 1,420 | 1,580 | 2,560 | 2,600 | 1,450 | 167 | 15 | 10 |
| 9 | 41 | 18 | 26 | 2,650 | 1,170 | 1,640 | 2,400 | 3,320 | 1,290 | 133 | 15 | 9 |
| 10 | 32 | 27 | 35 | 1,660 | 1,020 | 1,460 | 2,440 | 3,680 | 1,250 | 106 | 12 | 10 |
| 11 | 36 | 21 | 162 | 3,100 | 920 | 1,420 | 2,540 | 4,160 | 1,280 | 89 | 10 | 9.5 |
| 12 | 50 | 7.5 | 160 | 3,450 | 768 | 1,270 | 2,690 | 4,240 | 1,250 | 64 | 11 | 10 |
| 13 | 37 | 6.5 | 74 | 1,610 | 732 | 1,210 | 3,070 | 4,070 | 1,180 | 58 | 15 | 11 |
| 14 | 42 | 10 | 50 | 1,050 | 852 | 1,160 | 3,350 | 3,660 | 1,190 | 64 | 9 | 11 |
| 15 | 32 | 1.9 | 33 | 756 | 752 | 1,140 | 3,170 | 3,510 | 1,180 | 71 | 11 | 11 |
| 16 | 16 | 1.8 | 42 | 610 | 663 | 1,220 | 2,270 | 3,480 | 1,040 | 66 | 9 | 11 |
| 17 | 15 | 1.8 | 31 | 520 | 740 | 1,280 | 2,000 | 3,370 | 1,010 | 70 | 11 | 11 |
| 18 | 12 | 7 | 27 | 473 | 702 | 1,240 | 2,320 | 3,120 | 890 | 79 | 9.5 | 18 |
| 19 | 7 | 12 | 34 | 434 | 626 | 1,130 | 2,690 | 2,940 | 806 | 72 | 9.5 | 20 |
| 20 | 9 | 14 | 40 | 381 | 600 | 1,170 | 2,720 | 2,940 | 710 | 64 | 9 | 15 |
| 21 | 10 | 16 | 29 | 333 | 570 | 1,210 | 2,780 | 3,200 | 744 | 54 | 9.5 | 13 |
| 22 | 11 | 13 | 26 | 328 | 552 | 1,340 | 3,050 | 3,120 | 646 | 52 | 11 | 10 |
| 23 | 5 | 12 | 25 | 312 | 1,540 | 1,540 | 3,180 | 3,090 | 543 | 45 | 11 | 11 |
| 24 | 17 | 8.5 | 26 | 298 | 1,900 | 1,630 | 3,060 | 3,040 | 512 | 48 | 9.5 | 10 |
| 25 | 41 | 34 | 10 | 546 | 1,540 | 2,920 | 2,620 | 2,990 | 465 | 48 | 8.5 | 11 |
| 26 | 25 | 66 | 10 | 5,040 | 2,180 | 5,930 | 2,120 | 2,600 | 401 | 35 | 10 | 17 |
| 27 | 23 | 15 | 23 | 3,750 | 7,840 | 9,350 | 1,800 | 2,370 | 364 | 38 | 11 | 21 |
| 28 | 54 | 3.6 | 30 | 2,050 | 8,290 | 4,950 | 1,670 | 2,290 | 350 | 33 | 16 | 13 |
| 29 | 67 | 14 | 31 | 1,510 | 5,620 | 6,270 | 1,570 | 2,120 | 350 | 33 | 8.5 | 12 |
| 30 | 52 | 22 | 255 | 1,210 | - | 11,900 | 1,550 | 2,000 | 350 | 35 | 10 | 11 |
| 31 | 32 | - | 174 | 1,050 | - | 9,550 | - | 2,060 | - | 33 | 10 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 1,322 | 182 | 5 | 42.6 | 2,620 |
| November..... | 496.6 | 66 | 1.8 | 16.6 | 985 |
| December..... | 1,541 | 255 | 10 | 49.7 | 3,060 |
| Calendar year 1939..... | 108,420.7 | 2,140 | 1.8 | 297 | 215,100 |
| January..... | 41,849 | 5,040 | 142 | 1,350 | 83,010 |
| February..... | 51,587 | 8,290 | 552 | 1,779 | 102,300 |
| March..... | 88,980 | 11,900 | 1,130 | 2,870 | 176,500 |
| April..... | 84,020 | 5,990 | 1,550 | 2,801 | 166,700 |
| May..... | 92,760 | 4,240 | 2,000 | 2,992 | 184,000 |
| June..... | 31,601 | 2,290 | 350 | 1,053 | 62,680 |
| July..... | 5,173 | 300 | 33 | 102 | 6,290 |
| August..... | 437.0 | 29 | 8.5 | 14.1 | 867 |
| September..... | 356.5 | 21 | 7 | 11.9 | 707 |
| Water year 1939-40..... | 398,123.1 | 11,900 | 1.8 | 1,088 | 789,700 |

Peak discharge.- Jan. 2 (7 p.m.) 6,280 sec.-ft.; Jan. 26 (6 to 7 p.m.) 6,840 sec.-ft.; Feb. 27 (9 p.m.) 10,500 sec.-ft.; Feb. 28 (12 m.) 9,440 sec.-ft.; Mar. 27 (1 a.m.) 15,400 sec.-ft.; May 30 (5 p.m.) 14,300 sec.-ft.

AMERICAN RIVER BASIN

South Fork of American River at Coloma, Calif.

Location.- Water-stage recorder, lat. 38°48', long. 120°53', in SW¼ sec. 17, T. 11 N., R. 10 E., at highway bridge at Coloma and 0.6 mile downstream from Irish Creek. Datum of gage is 730.64 feet above mean sea level (general adjustment of 1929).

Drainage area.- 635 square miles.

Records available.- October 1929 to September 1940.

Average discharge.- 11 years, 946 second-feet.

Extremes.- Maximum discharge during year, 22,000 second-feet Mar. 27 and 30 (gage height, 18.10 feet); minimum, 77 second-feet Sept. 3.
1929-40: Maximum discharge, 27,000 second-feet Dec. 11, 1937 (gage height, 20.5 feet), from rating curve extended above 13,000 second-feet; minimum, 17 second-feet Aug. 25, 1931.

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by four reservoirs, diversions for irrigation, and two power plants above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-------------------------|------|------|------|-------|------------------|--------|---------|-------|---------|------|-------|-------|----------------------|--|
| 1 | 104 | 189 | 192 | 335 | 1,300 | 5,180 | 7,860 | 2,360 | 2,650 | 517 | 177 | 152 | | |
| 2 | 150 | 184 | 195 | 3,110 | 1,160 | 3,790 | 5,500 | 3,630 | 2,310 | 466 | 172 | 133 | | |
| 3 | 274 | 187 | 192 | 2,200 | 1,390 | 3,030 | a4,500 | 4,060 | 2,040 | 434 | 174 | 128 | | |
| 4 | 232 | 176 | 173 | 1,770 | 2,300 | 2,540 | a4,000 | 3,770 | 1,960 | 414 | 174 | 161 | | |
| 5 | 170 | 184 | 181 | 1,080 | 2,440 | 2,270 | a5,500 | 2,690 | 1,910 | 410 | 180 | 166 | | |
| 6 | 181 | 189 | 198 | 730 | 2,430 | 2,060 | 3,220 | 2,400 | 1,820 | 383 | 188 | 154 | | |
| 7 | 369 | 184 | 206 | 698 | 2,460 | 1,980 | 3,160 | 2,450 | 1,760 | 327 | 191 | 166 | | |
| 8 | 302 | 181 | 203 | 2,160 | 1,810 | 1,970 | 3,070 | 2,960 | 1,720 | 166 | 188 | 159 | | |
| 9 | 226 | 181 | 200 | 4,360 | 1,520 | 2,030 | 2,830 | 3,620 | 1,550 | 306 | 180 | 149 | | |
| 10 | 200 | 187 | 244 | 2,280 | 1,340 | 1,840 | 2,890 | 4,090 | 1,500 | 306 | 166 | 156 | | |
| 11 | 195 | 195 | 358 | 4,570 | 1,220 | 1,680 | 2,970 | 4,560 | 1,510 | 270 | 161 | 147 | | |
| 12 | 195 | 170 | 400 | 5,260 | 1,080 | 1,490 | 3,100 | 4,680 | 1,460 | 242 | 154 | 156 | | |
| 13 | 189 | 158 | 278 | 2,190 | 1,040 | 1,420 | 3,440 | 4,480 | 1,420 | 233 | 177 | 166 | | |
| 14 | 198 | 158 | 244 | 1,460 | 1,550 | 1,350 | 3,790 | 4,040 | 1,410 | 236 | 161 | 164 | | |
| 15 | 209 | 102 | 217 | 1,110 | 1,260 | 1,340 | 3,690 | 3,930 | 1,420 | 227 | 169 | 164 | | |
| 16 | 160 | 95 | 212 | 929 | 1,070 | 1,380 | 2,740 | 3,790 | 1,280 | 227 | 152 | 166 | | |
| 17 | 168 | 88 | 217 | 796 | 1,290 | 1,470 | 2,420 | 3,830 | 1,270 | 230 | 172 | 164 | | |
| 18 | 158 | 100 | 189 | 756 | 1,300 | 1,420 | 2,690 | 3,470 | 1,140 | 235 | 159 | 166 | | |
| 19 | 136 | 160 | 200 | 678 | 1,090 | 1,390 | 3,100 | 3,290 | 1,080 | 242 | 152 | 186 | | |
| 20 | 145 | 176 | 209 | 612 | 1,000 | 1,460 | 3,140 | 3,200 | 987 | 227 | 152 | 177 | | |
| 21 | 158 | 184 | 209 | 555 | 929 | 1,520 | 3,150 | 3,490 | 987 | 224 | 140 | 174 | | |
| 22 | 165 | 173 | 195 | 538 | 884 | 1,660 | 3,400 | 3,490 | 915 | 200 | 142 | 161 | | |
| 23 | 131 | 173 | 195 | 516 | 2,110 | 1,820 | 3,620 | 3,400 | 803 | 206 | 149 | 166 | | |
| 24 | 158 | 136 | 203 | 495 | 2,680 | 1,930 | 3,460 | 3,360 | 748 | 197 | 144 | 161 | | |
| 25 | 220 | 189 | 178 | 960 | 2,270 | 3,160 | 3,040 | 3,300 | 705 | 197 | 142 | 164 | | |
| 26 | 200 | 257 | 133 | 6,170 | 2,960 | 6,160 | 2,550 | 2,950 | 625 | 188 | 142 | 183 | | |
| 27 | 187 | 195 | 187 | 4,840 | 12,100 | 13,300 | 2,210 | 2,680 | 575 | 186 | 142 | 191 | | |
| 28 | 203 | 133 | 206 | 2,500 | 21,500 | 6,060 | 2,030 | 2,600 | 570 | 194 | 152 | 174 | | |
| 29 | 244 | 136 | 206 | 1,860 | 9,160 | 7,520 | 1,910 | 2,450 | 570 | 194 | 133 | 164 | | |
| 30 | 220 | 187 | 366 | 1,530 | - | 18,000 | 1,900 | 2,320 | 595 | 186 | 144 | 161 | | |
| 31 | 212 | - | 377 | 1,360 | - | 14,700 | - | 2,330 | - | 186 | 149 | - | | |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October..... | | | | | 6,059 | | 369 | | 104 | | 195 | | 12,020 | |
| November..... | | | | | 4,987 | | 257 | | 88 | | 166 | | 9,590 | |
| December..... | | | | | 6,963 | | 400 | | 133 | | 225 | | 13,610 | |
| Calendar year 1939..... | | | | | 168,615 | | 2,320 | | 43 | | 462 | | 334,500 | |
| January..... | | | | | 58,388 | | 6,170 | | 335 | | 1,883 | | 115,800 | |
| February..... | | | | | 75,643 | | 12,500 | | 884 | | 2,608 | | 150,000 | |
| March..... | | | | | 116,920 | | 18,000 | | 1,340 | | 3,772 | | 231,900 | |
| April..... | | | | | 98,870 | | 7,860 | | 1,900 | | 3,296 | | 196,100 | |
| May..... | | | | | 103,570 | | 4,680 | | 2,320 | | 3,341 | | 205,400 | |
| June..... | | | | | 39,290 | | 2,650 | | 570 | | 1,310 | | 77,930 | |
| July..... | | | | | 8,254 | | 517 | | 166 | | 266 | | 16,370 | |
| August..... | | | | | 4,378 | | 191 | | 133 | | 161 | | 9,870 | |
| September..... | | | | | 4,879 | | 191 | | 128 | | 163 | | 9,680 | |
| Water year 1939-40..... | | | | | 528,801 | | 18,000 | | 88 | | 1,445 | | 1,049,000 | |

Peak discharge.- Jan. 2 (9 p.m.) 7,250 sec.-ft.; Jan. 11 (10 p.m.) 8,740 sec.-ft.; Jan. 26 (7 p.m.) 8,500 sec.-ft.; Feb. 27 (10 p.m.) 15,900 sec.-ft.; Mar. 27 (3 a.m.) 22,000 sec.-ft.; Mar. 30 (7 p.m.) 22,000 sec.-ft.

a No gage-height record; discharge computed on basis of records for station at Camino and American River at Fair Oaks.

Echo Lake flume near Vade, Calif.

Location.- Water-stage recorder, lat. 38°50', long. 120°02', in NW¼ sec. 6, T. 11 N., R. 18 E., half a mile downstream from intake and 2 miles northeast of Vade post office. Altitude of gage, about 7,500 feet (from topographic map).

Records available.- August 1923 to November 1940.

Extremes.- Maximum daily discharge during season, 26 second-feet Sept. 12, 13, 15, 16, and 22; no flow during most of year.
- 1923-40: Maximum daily discharge, 27 second-feet Sept. 13-15, 19, 1938; no flow during most of each year.

Remarks.- Records good. Flume diverts water from Echo Lake, in Truckee River Basin, into basin of South Fork of American River for power development. Practically no available contents in Echo Lake on Nov. 8, 1940.

Discharge, in second-feet, 1940

| Day | Sept. | Oct. | Nov. | | | | | | | | | |
|---------------------|-------|------|------|------------------|---------|---------|------|----------------------|--|--|--|--|
| 1 | 0 | 18 | 2.0 | | | | | | | | | |
| 2 | 0 | 17 | 3.5 | | | | | | | | | |
| 3 | 0 | 16 | 3.4 | | | | | | | | | |
| 4 | 0 | 15 | 3.2 | | | | | | | | | |
| 5 | 0 | 14 | 2.8 | | | | | | | | | |
| 6 | 0 | 13 | 3.4 | | | | | | | | | |
| 7 | 0 | 12 | 4.3 | | | | | | | | | |
| 8 | 0 | 11 | 2.0 | | | | | | | | | |
| 9 | 0 | 11 | 0 | | | | | | | | | |
| 10 | 16 | 10 | 0 | | | | | | | | | |
| 11 | | 24 | 9 | 0 | | | | | | | | |
| 12 | 26 | 8.5 | 0 | | | | | | | | | |
| 13 | 26 | 7.5 | 0 | | | | | | | | | |
| 14 | 25 | 7 | 0 | | | | | | | | | |
| 15 | 26 | 6.5 | 0 | | | | | | | | | |
| 16 | 26 | 6 | 0 | | | | | | | | | |
| 17 | 25 | 5.5 | 0 | | | | | | | | | |
| 18 | 25 | 5 | 0 | | | | | | | | | |
| 19 | 25 | 4.8 | 0 | | | | | | | | | |
| 20 | 25 | 4.6 | 0 | | | | | | | | | |
| 21 | 25 | 4.1 | 0 | | | | | | | | | |
| 22 | 26 | 3.9 | 0 | | | | | | | | | |
| 23 | 25 | 3.5 | 0 | | | | | | | | | |
| 24 | 24 | 3.3 | 0 | | | | | | | | | |
| 25 | 24 | 4.0 | 0 | | | | | | | | | |
| 26 | 23 | 3.7 | 0 | | | | | | | | | |
| 27 | 22 | 3.3 | 0 | | | | | | | | | |
| 28 | 21 | 2.7 | 0 | | | | | | | | | |
| 29 | 20 | 2.6 | 0 | | | | | | | | | |
| 30 | 19 | 2.3 | 0 | | | | | | | | | |
| 31 | - | 2.0 | - | | | | | | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| September 1940..... | | | | 498 | 26 | 0 | 16.6 | 988 | | | | |
| October..... | | | | 236.8 | 18 | 2.0 | 7.64 | 470 | | | | |
| November..... | | | | 24.6 | 4.3 | 0 | .82 | 49 | | | | |
| The period..... | | | | - | - | - | - | 1,510 | | | | |

Note.- No flow during 1940 calendar year except as shown.

Medley Lakes outlet near Vade, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}51'$, long. $120^{\circ}08'$, in SW $\frac{1}{4}$ sec. 29, T. 12 N., R. 17 E., 1 mile downstream from main dam at Medley Lakes and 5 miles northwest of Vade post office. Altitude of gage, about 8,100 feet (from topographic map).

Drainage area.- 6.2 square miles.

Records available.- September 1922 to September 1940 (None for winter in most years).

Average discharge.- 18 years, 15.9 second-feet.

Extremes.- Maximum discharge during year, 93 second-feet June 16 (gage height, 2.32 feet); minimum not determined.

1922-40: Maximum discharge, 202 second-feet June 15, 16, 1929 (gage height, 3.42 feet); no flow at times in most years.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Practically no available contents in Medley Lakes, above station, on Sept. 30, 1939, and on Sept. 30, 1940.

Cooperation.- Water-stage recorder graph and results of one discharge measurement furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|----|-----|----|
| 0.1 | 0.1 | 0.5 | 1.8 | 0.9 | 9 | 1.6 | 40 |
| .2 | .3 | .6 | 2.8 | 1.0 | 12 | 1.8 | 52 |
| .3 | .5 | .7 | 4.5 | 1.2 | 19 | 2.0 | 67 |
| .4 | 1.0 | .8 | 6.5 | 1.4 | 29 | 2.2 | S3 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | a3 | 8.5 | 1.7 | 15 | | | | b18 | 57 | 46 | 78 | a4.9 |
| 2 | a3 | 8 | a1.7 | 22 | | | | b20 | 50 | 45 | 85 | a4.9 |
| 3 | a3 | 8 | a1.6 | 31 | | | | b22 | 51 | 44 | 84 | a4.7 |
| 4 | 3.3 | 7 | 1.6 | 28 | | | | b24 | 52 | 43 | 82 | a4.7 |
| 5 | 3.0 | 7 | 1.6 | 26 | | | | b26 | 52 | 40 | 81 | a4.7 |
| 6 | 3.6 | 6 | 1.9 | 26 | | | | b28 | 52 | 36 | 81 | 4.7 |
| 7 | 3.5 | 4.5 | 2.5 | 26 | | | | b30 | 54 | 35 | 80 | 4.5 |
| 8 | 2.8 | 4.3 | 2.4 | 27 | | | | b32 | 53 | 35 | 78 | 4.5 |
| 9 | 6.5 | 4.0 | 2.4 | 28 | | | | b34 | 54 | 30 | 77 | 4.5 |
| 10 | 30 | 3.6 | 2.4 | 28 | | | | b36 | 55 | 26 | 77 | 4.5 |
| 11 | 30 | 3.3 | 5.5 | 28 | | | | b38 | 55 | 24 | 76 | 4.3 |
| 12 | 32 | 3.0 | 6.5 | 29 | | | | b40 | 55 | 34 | 74 | 4.2 |
| 13 | 34 | 2.6 | 6.5 | 28 | | | | 31 | 55 | 43 | 73 | 4.2 |
| 14 | 35 | 2.4 | 6 | a27 | | | | 11 | 69 | 37 | 72 | 4.2 |
| 15 | 39 | 2.3 | 5.5 | a26 | | | | 8 | 80 | 32 | 71 | 4.2 |
| 16 | | | | | a10 | | a14 | | | | | |
| 17 | 44 | 2.2 | 5 | a25 | | | | 9 | 82 | 43 | 69 | 4.2 |
| 18 | 37 | 2.2 | 4.5 | 23 | | | | 9.5 | 81 | 53 | 68 | 4.3 |
| 19 | 26 | 2.1 | 4.3 | | | | | 9.5 | 81 | 52 | 66 | 4.3 |
| 20 | 60 | 1.6 | 4.2 | | | | | 9.5 | 80 | 51 | 65 | 4.5 |
| 21 | 58 | a1.5 | 4.0 | | | | | 8 | 79 | 51 | 34 | 4.5 |
| 22 | | | | | | | | | | | | |
| 23 | 50 | a1.5 | 3.8 | | | | | 10 | 79 | 51 | 6 | 4.3 |
| 24 | 45 | a1.5 | 3.6 | | | | | 21 | 77 | 50 | 4.9 | 4.2 |
| 25 | 44 | a1.4 | 3.5 | | | | | 23 | 77 | 64 | 4.9 | 4.2 |
| 26 | 41 | 1.4 | 3.3 | | | | | 41 | 39 | 74 | a4.9 | 4.0 |
| 27 | 34 | 1.5 | a3 | a20 | | | | 53 | 6 | 73 | a4.9 | 4.0 |
| 28 | | | | | | | | | | | | |
| 29 | 22 | 1.8 | a3 | | | | | 52 | 7 | 72 | a4.9 | 3.5 |
| 30 | 15 | 1.9 | a3 | | | | | 51 | 24 | 72 | a4.9 | 2.2 |
| 31 | 13 | 1.8 | a3 | | | | | 51 | 42 | 71 | a4.9 | 2.5 |
| 32 | 13 | 1.7 | 8.5 | | | | | 53 | 40 | 70 | 4.9 | 3.0 |
| 33 | 12 | 1.7 | 12 | | | | | 50 | 47 | 70 | 4.9 | 3.1 |
| 34 | 10 | - | 14 | | | | | 60 | - | 70 | 4.9 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 755.7 | 60 | 2.8 | 24.4 | 1,500 |
| November..... | 100.3 | 8.5 | 1.4 | 33.4 | 199 |
| December..... | 132.5 | 14 | 1.6 | 4.27 | 263 |
| Calendar year 1939..... | 4,002.5 | 81 | - | 11.0 | 7,930 |
| January..... | 732 | - | - | 23.3 | 1,430 |
| February..... | 290 | - | - | 10 | 575 |
| March..... | 341 | - | - | 11 | 676 |
| April..... | 420 | - | - | 14 | 833 |
| May..... | 908.5 | 60 | 8 | 28.3 | 1,800 |
| June..... | 1,693 | 82 | 6 | 56.4 | 3,360 |
| July..... | 1,535 | 74 | 24 | 49.5 | 3,040 |
| August..... | 1,526.0 | 85 | 4.9 | 49.2 | 3,030 |
| September..... | 124.5 | 4.9 | 2.2 | 4.15 | 247 |
| Water year 1939-40..... | 8,549.5 | 85 | 1.4 | 23.4 | 16,950 |

a No gage-height record; discharge computed on basis of records for station at Silver Lake outlet, and a discharge measurement on Apr. 30.

b Stage-discharge relation affected by ice.

Silver Lake outlet near Kirkwood, Calif.

Location.- Water-stage recorder, lat. 38°40', long. 120°08', in SW¼ sec. 32, T. 10 N., R. 17 E., 1,000 feet downstream from Silver Lake Dam and 3 miles southwest of Kirkwood. Altitude of gage, about 7,200 feet (from topographic map).

Drainage area.- 14.9 square miles.

Records available.- September 1922 to September 1940.

Average discharge.- 18 years, 30.5 second-foot.

Extremes.- Maximum discharge during year, 321 second-feet May 12 (gage height, 3.92 feet); minimum, 0.4 second-foot Nov. 14-16.

1922-40: Maximum discharge, 504 second-feet Dec. 11, 1937 (gage height, 5.10 feet), from rating curve extended above 190 second-feet; minimum, 0.1 second-foot during periods when reservoir gate was closed.

Remarks.- Records excellent. Contents in Silver Lake was 3,520 acre-feet on Sept. 30, 1939, and 1,850 acre-feet on Sept. 30, 1940. In addition to the water released through dam and over spillway some escapes from Silver Lake through porous rock formation. The discharge at this station combined with seepage from Silver Lake near Kirkwood (see following page) represents practically entire outflow from Silver Lake.

Cooperation.- Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|------|-----|-----|-----|-----|
| 0.5 | 0.2 | 0.9 | 9.5 | 1.6 | 56 | 2.6 | 151 |
| .6 | 1.0 | 1.0 | 14.0 | 1.8 | 74 | 3.0 | 196 |
| .7 | 3.0 | 1.2 | 25 | 2.0 | 92 | 3.4 | 248 |
| .8 | 6.0 | 1.4 | 40 | 2.2 | 110 | 3.8 | 304 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | 23 | 67 | 25 | 7 | 28 | 13 | 48 | 98 | 164 | 1.8 | 3.6 | 2.4 |
| 2 | 10 | 72 | 21 | 23 | 27 | 18 | 49 | 194 | 156 | 1.6 | 3.6 | 14 |
| 3 | .7 | 74 | 18 | 34 | 26 | 17 | 49 | 251 | 97 | 1.6 | 3.6 | 76 |
| 4 | .7 | 72 | 16 | 34 | 26 | 16 | 48 | 237 | 53 | 2.0 | 3.3 | 109 |
| 5 | .7 | 70 | 14 | 34 | 25 | 16 | 47 | 176 | 14 | 1.4 | 3.3 | 107 |
| 6 | .8 | 69 | 13 | 33 | 26 | 15 | 47 | 147 | 6.5 | .9 | 3.3 | 107 |
| 7 | .7 | 67 | 12 | 32 | 25 | 15 | 46 | 148 | 6 | 1.0 | 3.3 | 106 |
| 8 | .7 | 65 | 11 | 32 | 24 | 15 | 46 | 184 | 3.9 | 1.0 | 3.0 | 105 |
| 9 | .7 | 63 | 11 | 32 | 24 | 16 | 46 | 238 | 4.5 | .9 | 3.0 | 90 |
| 10 | 5.5 | 61 | 10 | 31 | 23 | 16 | 46 | 280 | 5 | .9 | 3.0 | 83 |
| 11 | 19 | 60 | 12 | 31 | 22 | 16 | 48 | 301 | 5.5 | .9 | 3.0 | 81 |
| 12 | 19 | 58 | 12 | 31 | 23 | 16 | 50 | 308 | 4.2 | .8 | 3.0 | 80 |
| 13 | 19 | 38 | 11 | 29 | 21 | 16 | 52 | 304 | 5.5 | .8 | 3.0 | 78 |
| 14 | 19 | .4 | 10 | 28 | 20 | 16 | 55 | 293 | 20 | .8 | 2.8 | 77 |
| 15 | 19 | .4 | 10 | 28 | 18 | 16 | 58 | 286 | 52 | .8 | 2.8 | 76 |
| 16 | 19 | .4 | 9.5 | 26 | 16 | 16 | 58 | 259 | 40 | .8 | 2.8 | 74 |
| 17 | 16 | 54 | 9 | 25 | 15 | 17 | 60 | 254 | 14 | .8 | 2.6 | 72 |
| 18 | 19 | 53 | 8.6 | 24 | 14 | 18 | 61 | 252 | 8 | .8 | 2.6 | 70 |
| 19 | 19 | 50 | 8 | 23 | 13 | 23 | 64 | 247 | 6.5 | .8 | 2.6 | 69 |
| 20 | 19 | 49 | 7.5 | 21 | 14 | 24 | 66 | 251 | 6 | .8 | 2.6 | 67 |
| 21 | 19 | 46 | 5 | 21 | 13 | 24 | 68 | 266 | 21 | .8 | 2.6 | 66 |
| 22 | 19 | 44 | 4.2 | 20 | 14 | 26 | 71 | 277 | 27 | .7 | 2.4 | 63 |
| 23 | 19 | 42 | 6.5 | 19 | 14 | 27 | 81 | 279 | 16 | .6 | 2.4 | 61 |
| 24 | 19 | 38 | 6 | 18 | 14 | 29 | 124 | 276 | 18 | .6 | 2.4 | 59 |
| 25 | 26 | 37 | 5.5 | 20 | 14 | 31 | 139 | 262 | 20 | .6 | 2.4 | 57 |
| 26 | 38 | 24 | 5.5 | 24 | 14 | 35 | 118 | 235 | 14 | 2.0 | 2.4 | 54 |
| 27 | 46 | 5 | 5 | 28 | 12 | 42 | 97 | 213 | 4.2 | 3.6 | 2.4 | 53 |
| 28 | 39 | 19 | 4.8 | 29 | 27 | 43 | 83 | 208 | 2.0 | 3.6 | 2.4 | 50 |
| 29 | 35 | 31 | 4.5 | 29 | 31 | 45 | 76 | 188 | 1.8 | 3.6 | a2.4 | 49 |
| 30 | 40 | 28 | 5 | 28 | - | 46 | 76 | 173 | 1.8 | 3.6 | a2.4 | 46 |
| 31 | 56 | - | 5.5 | 28 | - | 47 | - | 155 | - | 3.6 | a2.4 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 586.5 | 56 | 0.7 | 18.9 | 1,180 | | | | |
| November..... | | | | 1,352.8 | 74 | .4 | 45.1 | 2,680 | | | | |
| December..... | | | | 306.0 | 25 | 4.2 | 9.87 | 607 | | | | |
| Calendar year 1939..... | | | | 4,989.6 | 94 | .1 | 13.7 | 9,900 | | | | |
| January..... | | | | 822 | 34 | 7 | 26.5 | 1,630 | | | | |
| February..... | | | | 583 | 31 | 12 | 20.1 | 1,160 | | | | |
| March..... | | | | 735 | 47 | 15 | 23.7 | 1,460 | | | | |
| April..... | | | | 1,977 | 139 | 46 | 65.9 | 3,920 | | | | |
| May..... | | | | 7,235 | 308 | 98 | 233 | 14,350 | | | | |
| June..... | | | | 797.4 | 164 | 1.8 | 26.6 | 1,580 | | | | |
| July..... | | | | 44.5 | 3.6 | .6 | 1.44 | 88 | | | | |
| August..... | | | | 87.4 | 3.6 | 2.4 | 2.62 | 173 | | | | |
| September..... | | | | 2,100.4 | 109 | 2.4 | 70.0 | 4,170 | | | | |
| Water year 1939-40..... | | | | 16,627.0 | 308 | .4 | 45.4 | 32,980 | | | | |

a No gage-height record; discharge interpolated.

AMERICAN RIVER BASIN

Seepage from Silver Lake near Kirkwood, Calif.

Location.- Staff gage, lat. $38^{\circ}40'$, long. $120^{\circ}07'$, in SW $\frac{1}{4}$ sec. 32, T. 10 N., R. 17 E., just upstream from road crossing and half a mile northeast of Silver Lake Dam. Altitude of gage, about 7,200 feet (from topographic map).

Records available.- October 1929 to September 1940.

Average discharge.- 11 years, 3.68 second-feet.

Extremes.- Maximum discharge observed during year, 18 second-feet June 18 to July 5; no flow during most of year.

1929-40: Maximum discharge observed, 25 second-feet June 9, 1930; no flow during most of each year.

Remarks.- Records good. Gage read once daily. No flow when Silver Lake gage height is below 14.0 feet. This record represents largest amount of seepage from Silver Lake through porous rock formation; other seepage from Silver Lake is of little or no consequence. The discharge at this station combined with that for Silver Lake outlet near Kirkwood (see preceding page) represents practically entire outflow from Silver Lake.

Cooperation.- Water-stage recorder graph and results of two discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|------|-----|------|
| 1.0 | 0 | 1.5 | 3.8 | 1.9 | 15.8 |
| 1.2 | .4 | 1.6 | 6.0 | 2.0 | 19.6 |
| 1.3 | 1.0 | 1.7 | 9.0 | | |
| 1.4 | 2.1 | 1.8 | 12.4 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | | | | | | | | | 1.1 | 18 | 12 | 6 |
| 2 | | | | | | | | | 1.2 | 18 | a12 | a6 |
| 3 | | | | | | | | | 1.3 | 18 | a11 | 5.5 |
| 4 | | | | | | | | | 1.3 | 18 | a11 | 5 |
| 5 | | | | | | | | | 2.1 | 18 | 11 | 4.0 |
| 6 | | | | | | | | | 4.2 | 17 | a11 | 3.1 |
| 7 | | | | | | | | | 5.5 | 17 | a10 | 2.1 |
| 8 | | | | | | | | | 6 | 17 | 10 | 1.7 |
| 9 | | | | | | | | | 7 | 17 | a10 | 1.0 |
| 10 | | | | | | | | | 8.5 | 16 | a10 | .5 |
| 11 | | | | | | | | | 9.5 | 16 | a9 | 0 |
| 12 | | | | | | | | | 11 | 16 | 9 | 0 |
| 13 | | | | | | | | | 12 | a16 | a9 | 0 |
| 14 | | | | | | | | | 14 | a16 | a8 | 0 |
| 15 | | | | | | | | | 14 | 16 | a8 | 0 |
| 16 | | | | | | | | | 16 | a15 | 8 | 0 |
| 17 | | | | | | | | | 17 | a15 | a8 | 0 |
| 18 | | | | | | | | | 18 | a15 | a7 | 0 |
| 19 | | | | | | | | | 18 | 14 | 7 | 0 |
| 20 | | | | | | | | | 18 | a14 | a7 | 0 |
| 21 | | | | | | | | | 18 | a14 | a6.5 | 0 |
| 22 | | | | | | | | | 18 | 14 | 6.5 | 0 |
| 23 | | | | | | | | | 18 | a14 | a6.5 | 0 |
| 24 | | | | | | | | | 18 | a13 | a6 | 0 |
| 25 | | | | | | | | | 18 | a13 | a6 | 0 |
| 26 | | | | | | | | | 18 | 13 | 6 | 0 |
| 27 | | | | | | | | | 18 | a13 | 6 | 0 |
| 28 | | | | | | | | | 18 | a12 | a6 | 0 |
| 29 | | | | | | | | | 18 | 12 | 6 | 0 |
| 30 | | | | | | | | | 18 | a12 | a6 | 0 |
| 31 | | | | | | | | | - | a12 | a6 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 0 | 0 | 0 | 0 | 0 |
| November..... | 0 | 0 | 0 | 0 | 0 |
| December..... | 0 | 0 | 0 | 0 | 0 |
| Calendar year 1939..... | 1,554.9 | 15 | 0 | 3.71 | 2,690 |
| January..... | 0 | 0 | 0 | 0 | 0 |
| February..... | 0 | 0 | 0 | 0 | 0 |
| March..... | 0 | 0 | 0 | 0 | 0 |
| April..... | 0 | 0 | 0 | 0 | 0 |
| May..... | 0 | 0 | 0 | 0 | 0 |
| June..... | 365.7 | 18 | 1.1 | 12.2 | 725 |
| July..... | 469 | 18 | 12 | 15.1 | 930 |
| August..... | 255.5 | 12 | 6 | 8.24 | 507 |
| September..... | 34.9 | 6 | 0 | 1.16 | 69 |
| Water year 1939-40..... | 1,125.1 | 18 | 0 | 3.07 | 2,230 |

a No gage-height record; discharge interpolated.

Silver Fork of South Fork of American River near Kyburz, Calif.

Location.- Water-stage recorder, lat. 38°45', long. 120°17', in NE¼ sec. 34, T. 11 N., R. 15 E., 2 miles upstream from mouth and 2 miles southeast of Kyburz. Altitude of gage, about 4,850 feet (from topographic map).

Drainage area.- 108 square miles.

Records available.- August 1924 to September 1940.

Average discharge.- 16 years, 191 second-feet.

Extremes.- Maximum discharge during year, 3,400 second-feet Mar. 26 (gage height, 6.70 feet); minimum, 9.5 second-feet part of Nov. 16 and 17 (gage height, 1.13 feet).

1924-40: Maximum discharge, 5,450 second-feet Dec. 11, 1937 (gage height, 6.30 feet), from rating curve extended above 2,500 second-feet on basis of velocity-area studies; minimum, 1.4 second-feet Dec. 6, 1929.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow regulated by Twin Lakes (capacity, 21,250 acre-feet) and Silver Lake (capacity, 8,900 acre-feet).

Cooperation.- Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|------|-----|-----|-----|-------|
| 1.0 | 6 | 1.8 | 48 | 3.2 | 350 |
| 1.2 | 11.5 | 2.0 | 69 | 3.6 | 525 |
| 1.4 | 20 | 2.4 | 126 | 4.5 | 1,150 |
| 1.6 | 32 | 2.6 | 220 | 5.5 | 2,060 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|------|-------|------|------|------|-------|
| 1 | 39 | 75 | 102 | 64 | 204 | 325 | 776 | 696 | 722 | 150 | 50 | 123 |
| 2 | 58 | 79 | 97 | 658 | 177 | 290 | 614 | 1,030 | a700 | 112 | 44 | 124 |
| 3 | 31 | 85 | 94 | 184 | 212 | 254 | 703 | 1,030 | a620 | 108 | 42 | 142 |
| 4 | 22 | 96 | 100 | 210 | 220 | 228 | 722 | 925 | a570 | 104 | 42 | 140 |
| 5 | 18 | 97 | 98 | 126 | 197 | 226 | 648 | 678 | a690 | 102 | 42 | 123 |
| 6 | 26 | 98 | 100 | 102 | 254 | 226 | 624 | 642 | a460 | 98 | 45 | 128 |
| 7 | 38 | 98 | 97 | 111 | 228 | 245 | 654 | 672 | a440 | 96 | 47 | 121 |
| 8 | 24 | 100 | 96 | 155 | 187 | 290 | 650 | 818 | a420 | 95 | 50 | 123 |
| 9 | 18 | 103 | 89 | 168 | 165 | 290 | 654 | 1,010 | a400 | 81 | 51 | 126 |
| 10 | 16 | 94 | 67 | 168 | 156 | 254 | 716 | 1,140 | a370 | 70 | 53 | 124 |
| 11 | 24 | 91 | 124 | 261 | 161 | 223 | 776 | 1,240 | a330 | 52 | 53 | 118 |
| 12 | 32 | 91 | 82 | 264 | 136 | 199 | 860 | 1,260 | a320 | 49 | 55 | 108 |
| 13 | 32 | 91 | 77 | 175 | 150 | 189 | 978 | 1,200 | 340 | 51 | 56 | 106 |
| 14 | 32 | 91 | 91 | 148 | 123 | 187 | 986 | 1,110 | 380 | 52 | 56 | 104 |
| 15 | 32 | 12 | 91 | 140 | 121 | 192 | 895 | 1,040 | 370 | 61 | 58 | 103 |
| 16 | 31 | 9.5 | 96 | a130 | 114 | 231 | 602 | 1,020 | 310 | 73 | 59 | 102 |
| 17 | 31 | 30 | 94 | a120 | 112 | 248 | 602 | 948 | 280 | 73 | 59 | 102 |
| 18 | 26 | 82 | 94 | a105 | 106 | 248 | 716 | 888 | 270 | 61 | 58 | 102 |
| 19 | 29 | 103 | 97 | a95 | 112 | 261 | 762 | 839 | 270 | 56 | 60 | 98 |
| 20 | 29 | 103 | 98 | a85 | 111 | 297 | 755 | 853 | 251 | 54 | 67 | 96 |
| 21 | 29 | 106 | 94 | a80 | 112 | 325 | 811 | 881 | 245 | 54 | 121 | 94 |
| 22 | 29 | 104 | 90 | a75 | 104 | 374 | 874 | 932 | 237 | 59 | 114 | 102 |
| 23 | 29 | 102 | 91 | a75 | 160 | 412 | 867 | 932 | 207 | 59 | 118 | 100 |
| 24 | 31 | 103 | 75 | 71 | 184 | 444 | 859 | 881 | 180 | 46 | 121 | 98 |
| 25 | 34 | 106 | 74 | 144 | 170 | 825 | 748 | 955 | 189 | 45 | 121 | 98 |
| 26 | 47 | 89 | 104 | 818 | 217 | 1,530 | 586 | 895 | 180 | 45 | 121 | 88 |
| 27 | 60 | 37 | 96 | 476 | 525 | 1,470 | 498 | 855 | 165 | 46 | 121 | 85 |
| 28 | 66 | 36 | 96 | 274 | 755 | 790 | 453 | 832 | 156 | 46 | 121 | 82 |
| 29 | 54 | 106 | 103 | 228 | 462 | 970 | 435 | 762 | 156 | 46 | 121 | 81 |
| 30 | 53 | 104 | 76 | 202 | - | 1,770 | 471 | 696 | 146 | 46 | 123 | 79 |
| 31 | 62 | - | 50 | 194 | - | 1,100 | - | 690 | - | 49 | 123 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,082 | 66 | 16 | 34.9 | 2,150 |
| November..... | 2,462.5 | 106 | 9.5 | 82.1 | 4,890 |
| December..... | 2,631 | 124 | 50 | 91.3 | 5,620 |
| Calendar year 1939..... | 41,567.5 | 466 | 9.5 | 114 | 82,440 |
| January..... | 6,104 | 818 | 64 | 197 | 12,110 |
| February..... | 5,905 | 755 | 104 | 204 | 11,710 |
| March..... | 14,813 | 1,770 | 187 | 481 | 29,580 |
| April..... | 21,255 | 986 | 435 | 708 | 42,180 |
| May..... | 28,348 | 1,260 | 642 | 814 | 56,230 |
| June..... | 10,374 | 722 | 145 | 339 | 20,180 |
| July..... | 2,117 | 130 | 45 | 68.3 | 4,200 |
| August..... | 2,372 | 123 | 42 | 76.5 | 4,700 |
| September..... | 3,220 | 142 | 79 | 107 | 6,390 |
| Water year 1939-40..... | 100,783.5 | 1,770 | 9.5 | 275 | 199,900 |

Peak discharge.- Mar. 26 (10 p.m.) 3,400 sec.-ft.; Mar. 30 (1 p.m.) 2,320 sec.-ft.; May 11 (10 p.m.) 1,640 sec.-ft.

a No gage-height record; discharge computed on basis of records for South Fork of American River near Kyburz and regulation at Twin and Silver Lakes.

Twin Lakes outlet near Kirkwood, Calif.

Location.- Water-stage recorder and concrete control, lat. 38°42', long. 120°03', in SW¹ sec. 18, T. 10 N., R. 18 E., 500 feet downstream from main dam and outlet gate of Twin Lakes and 1 mile east of Kirkwood. Altitude of gage, about 7,900 feet.

Drainage area.- 12.4 square miles.

Records available.- September 1922 to September 1940 (October 1934 to September 1940 include flow over Twin Lakes spillway).

Average discharge.- 18 years, 31.0 second-feet (including flow over Twin Lakes spillway).

Extremes.- Maximum combined daily discharge during year for outlet and spillway, 198 second-feet Apr. 4; minimum, 1.3 second-feet Oct. 18-22, Nov. 27.

1922-40: Maximum combined daily discharge for outlet and spillway, 269 second-feet June 9, 10, 1938; minimum, 0.2 second-foot (leakage) at various times.

Remarks.- Records excellent. No diversions. Contents in Twin Lakes was 14,250 acre-feet on Sept. 30, 1939, and 15,320 acre-feet on Sept. 30, 1940. No flow over Twin Lakes spillway during water year 1939-40.

Cooperation.- Water-stage recorder graph and results of two discharge measurements furnished by the Pacific Gas & Electric Co., in connection with a Federal Power Commission project.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | | | | | |
|-----|-----|-----|------|-----|------|-----|----|-----|-----|-----|-----|-----|-----|
| 0.1 | 0.4 | 0.4 | 7.0 | 0.7 | 23.5 | 1.0 | 50 | 1.3 | 82 | 1.6 | 120 | 1.9 | 167 |
| .2 | 1.5 | .5 | 11.5 | .8 | 31.0 | 1.1 | 60 | 1.4 | 94 | 1.7 | 135 | 2.0 | 185 |
| .3 | 3.8 | .6 | 17.0 | .9 | 40 | 1.2 | 71 | 1.5 | 106 | 1.8 | 151 | 2.1 | 203 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 1.5 | 1.5 | 69 | 23 | 1.5 | 1.5 | 1.5 | 2.0 | 157 | 55 | 19 | 106 |
| 2 | 2.0 | 5 | 69 | 16 | 1.5 | 1.5 | 36 | 2.0 | 157 | 49 | 17 | 99 |
| 3 | 2.0 | 15 | 73 | 11 | 1.5 | 1.5 | 167 | 2.0 | 156 | 49 | 16 | 43 |
| 4 | 2.0 | 20 | 78 | 11 | 1.5 | 1.5 | 198 | 1.5 | 156 | 49 | 17 | 1.5 |
| 5 | 2.0 | 22 | 80 | 10 | 1.5 | 1.5 | 192 | 1.5 | 135 | 49 | 19 | 1.5 |
| 6 | 2.0 | 26 | 80 | 16 | 1.5 | 1.5 | 187 | 1.5 | 120 | 49 | 24 | 1.5 |
| 7 | 2.0 | 28 | 80 | 32 | 1.5 | 1.5 | 183 | 2.0 | 120 | 49 | 24 | 5 |
| 8 | 1.7 | 33 | 80 | 31 | 1.5 | 1.5 | 178 | 2.0 | 120 | 40 | 27 | 15 |
| 9 | 1.5 | 32 | 50 | 31 | 1.5 | 1.5 | 174 | 2.0 | 120 | 27 | 28 | 25 |
| 10 | 1.5 | 24 | 47 | 31 | 1.5 | 1.5 | 171 | 2.0 | 94 | 9 | 31 | 31 |
| 11 | 1.5 | 26 | 60 | 31 | 1.5 | 1.5 | 165 | 2.0 | 76 | 4.8 | 32 | 19 |
| 12 | 1.5 | 28 | 50 | 31 | 1.5 | 1.5 | 161 | 2.0 | 76 | 9 | 36 | 16 |
| 13 | 1.5 | 21 | 56 | 30 | 1.5 | 1.5 | 157 | 2.0 | 113 | 11 | 36 | 16 |
| 14 | 1.4 | 1.5 | 70 | 30 | 1.5 | 1.5 | 154 | 2.0 | 154 | 20 | 37 | 16 |
| 15 | 1.4 | 1.5 | 72 | 31 | 1.5 | 1.5 | 122 | 2.0 | 141 | 31 | 40 | 16 |
| 16 | 1.4 | 1.5 | 76 | 31 | 1.5 | 1.5 | 59 | 2.0 | 114 | 36 | 40 | 19 |
| 17 | 1.4 | 14 | 75 | 25 | 1.5 | 1.5 | 55 | 2.0 | 116 | 28 | 40 | 20 |
| 18 | 1.3 | 51 | 76 | 12 | 1.5 | 1.5 | 24 | 2.0 | 126 | 20 | 42 | 20 |
| 19 | 1.3 | 53 | 81 | 11 | 1.5 | 1.5 | 1.7 | 1.7 | 126 | 19 | 48 | 20 |
| 20 | 1.3 | 54 | 81 | 10 | 1.5 | 1.5 | 2.0 | 1.7 | 117 | 20 | 78 | 20 |
| 21 | 1.3 | 57 | 80 | 10 | 1.5 | 1.5 | 2.0 | 1.7 | 106 | 27 | 105 | 26 |
| 22 | 1.3 | 57 | 84 | 10 | 1.5 | 1.5 | 2.0 | 1.7 | 99 | 31 | 101 | 30 |
| 23 | 1.4 | 58 | 69 | 10 | 1.5 | 1.5 | 1.7 | 2.0 | 80 | 22 | 106 | 30 |
| 24 | 1.5 | 63 | 59 | 10 | 1.5 | 1.7 | 1.5 | 25 | 68 | 17 | 106 | 34 |
| 25 | 1.5 | 62 | 76 | 10 | 1.5 | 2.0 | 1.5 | 154 | 76 | 17 | 106 | 30 |
| 26 | 1.5 | 34 | 90 | 10 | 1.5 | 2.4 | 1.5 | 159 | 76 | 17 | 106 | 25 |
| 27 | 1.5 | 1.3 | 86 | 10 | 1.5 | 2.0 | 1.5 | 159 | 76 | 17 | 105 | 25 |
| 28 | 1.5 | 67 | 86 | 10 | 1.5 | 1.5 | 1.5 | 159 | 76 | 17 | 105 | 25 |
| 29 | 1.5 | 69 | 69 | 8 | 1.5 | 1.5 | 1.5 | 157 | 76 | 17 | 106 | 25 |
| 30 | 1.5 | 69 | 33 | 1.7 | - | 1.5 | 2.0 | 157 | 71 | 22 | 106 | 20 |
| 31 | 1.5 | - | 23 | 1.5 | - | 1.5 | - | 156 | - | 24 | 106 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 48.2 | 2.0 | 1.3 | 1.55 | 96 |
| November..... | 985.3 | 69 | 1.3 | 32.8 | 1,950 |
| December..... | 2,158 | 90 | 23 | 69.6 | 4,280 |
| Calendar year 1939..... | 11,563.4 | 110 | 1.0 | 31.7 | 22,920 |
| January..... | 545.2 | 32 | 1.5 | 17.6 | 1,080 |
| February..... | 43.5 | 1.5 | 1.5 | 1.50 | 86 |
| March..... | 48.6 | 2.4 | 1.5 | 1.57 | 96 |
| April..... | 2,404.9 | 198 | 1.5 | 80.2 | 4,770 |
| May..... | 1,169.3 | 159 | 68 | 37.7 | 2,320 |
| June..... | 3,298 | 157 | 110 | 110 | 6,540 |
| July..... | 551.8 | 55 | 4.8 | 27.5 | 1,680 |
| August..... | 1,809 | 106 | 16 | 58.4 | 3,590 |
| September..... | 780.5 | 106 | 1.5 | 26.0 | 1,550 |
| Water year 1939-40..... | 14,142.3 | 198 | 1.3 | 38.6 | 28,050 |

El Dorado canal near Kyburz, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}46'$, long. $120^{\circ}19'$, in SE $\frac{1}{4}$ sec. 29, T. 11 N., R. 15 E., 400 feet downstream from intake and 2 miles west of Kyburz. Altitude of gage, about 4,100 feet (from topographic map).

Records available.- October 1922 to September 1940.

Average discharge.- 18 years, 97.4 second-feet.

Extremes.- Maximum daily discharge during year, 156 second-feet July 4; no flow Nov. 15 and 16.

1922-40: Maximum daily discharge, 165 second-feet June 24, 27, 28, and 30, 1938; no flow at times in most years.

Remarks.- Records excellent. Canal diverts from left bank of South Fork of American River just below Silver Fork of South Fork and 2 miles below Kyburz; water used for power and irrigation.

Cooperation.- Water-stage recorder graph and results of two discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 65 | 114 | 122 | 120 | 98 | 87 | 67 | 3 | 137 | 151 | 141 | 140 |
| 2 | 104 | 116 | 120 | 104 | 98 | 88 | 67 | 3 | 137 | 154 | 147 | 140 |
| 3 | 91 | 123 | 114 | 110 | 98 | 88 | 67 | 3 | 136 | 155 | 146 | 150 |
| 4 | 65 | 130 | 120 | 99 | 98 | 86 | 67 | 3 | 137 | 156 | 144 | 153 |
| 5 | 54 | 128 | 119 | 98 | 97 | 86 | 74 | 3 | 137 | 154 | 142 | 140 |
| 6 | 94 | 129 | 122 | 99 | 98 | 86 | 77 | 3 | 137 | 155 | 144 | 148 |
| 7 | 104 | 127 | 123 | 99 | 98 | 86 | 84 | 3 | 137 | 155 | 143 | 138 |
| 8 | 74 | 129 | 119 | 99 | 98 | 87 | 86 | 52 | 136 | 154 | 144 | 138 |
| 9 | 66 | 130 | 121 | 98 | 98 | 86 | 94 | 98 | 136 | 155 | 142 | 145 |
| 10 | 73 | 119 | 86 | 98 | 98 | 86 | 98 | 99 | 136 | 152 | 144 | 138 |
| 11 | 92 | 116 | 119 | 98 | 98 | 86 | 106 | 107 | 137 | 134 | 143 | 145 |
| 12 | 102 | 114 | 116 | 98 | 98 | 86 | 110 | 116 | 138 | 124 | 144 | 146 |
| 13 | 112 | 113 | 107 | 98 | 98 | 86 | 110 | 119 | 141 | 139 | 144 | 144 |
| 14 | 111 | 22 | 115 | 98 | 98 | 87 | 112 | 126 | 147 | 139 | 141 | 143 |
| 15 | 107 | 0 | 115 | 98 | 98 | 87 | 113 | 133 | 149 | 141 | 142 | 142 |
| 16 | 103 | 0 | 121 | 98 | 98 | 86 | 112 | 134 | 148 | 149 | 143 | 140 |
| 17 | 99 | 22 | 116 | 98 | 98 | 84 | 113 | 134 | 149 | 155 | 142 | 151 |
| 18 | 66 | 92 | 117 | 90 | 98 | 84 | 115 | 134 | 150 | 154 | 139 | 150 |
| 19 | 95 | 116 | 120 | 87 | 98 | 85 | 114 | 134 | 150 | 149 | 139 | 144 |
| 20 | 107 | 114 | 123 | 87 | 98 | 87 | 114 | 134 | 149 | 144 | 139 | 140 |
| 21 | 102 | 117 | 117 | 87 | 98 | 86 | 114 | 134 | 149 | 140 | 155 | 137 |
| 22 | 96 | 117 | 108 | 87 | 99 | 86 | 31 | 136 | 149 | 145 | 143 | 144 |
| 23 | 92 | 113 | 117 | 95 | 98 | 87 | 3 | 137 | 148 | 146 | 142 | 143 |
| 24 | 85 | 114 | 92 | 98 | 98 | 87 | 3 | 136 | 148 | 151 | 145 | 140 |
| 25 | 99 | 125 | 84 | 97 | 98 | 87 | 3 | 136 | 151 | 146 | 148 | 141 |
| 26 | 102 | 107 | 120 | 88 | 98 | 84 | 3 | 136 | 154 | 144 | 146 | 126 |
| 27 | 113 | 26 | 117 | 86 | 93 | 76 | 3 | 136 | 154 | 144 | 144 | 120 |
| 28 | 126 | 21 | 119 | 87 | 88 | 77 | 3 | 136 | 155 | 144 | 144 | 116 |
| 29 | 109 | 130 | 123 | 87 | 86 | 77 | 3 | 136 | 153 | 144 | 144 | 113 |
| 30 | 98 | 125 | 123 | 94 | - | 69 | 3 | 136 | 149 | 140 | 144 | 110 |
| 31 | 102 | - | 117 | 98 | - | 66 | - | 137 | - | 142 | 143 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 2,926 | 126 | 64 | 94.4 | 5,800 | | |
| November..... | | | | | | 2,949 | 130 | 0 | 98.3 | 5,850 | | |
| December..... | | | | | | 3,574 | 123 | 84 | 115 | 7,090 | | |
| Calendar year 1939..... | | | | | | 38,449 | 152 | 0 | 105 | 76,250 | | |
| January..... | | | | | | 2,978 | 120 | 86 | 96.1 | 5,910 | | |
| February..... | | | | | | 2,815 | 98 | 86 | 97.1 | 5,580 | | |
| March..... | | | | | | 2,606 | 88 | 66 | 84.1 | 5,170 | | |
| April..... | | | | | | 2,069 | 115 | 3 | 69.0 | 4,100 | | |
| May..... | | | | | | 3,037 | 137 | 3 | 98.0 | 6,020 | | |
| June..... | | | | | | 4,334 | 155 | 136 | 144 | 8,600 | | |
| July..... | | | | | | 4,555 | 156 | 124 | 147 | 9,030 | | |
| August..... | | | | | | 4,451 | 155 | 139 | 144 | 8,830 | | |
| September..... | | | | | | 4,165 | 155 | 110 | 139 | 8,260 | | |
| Water year 1939-40..... | | | | | | 40,457 | 156 | 0 | 111 | 80,240 | | |

Note.- No gage-height record Apr. 23 to May 7; discharge computed on basis of discharge measurement made Apr. 29.

Alder Creek near Whitehall, Calif.

Location.- Water-stage recorder, lat. 38°45', long. 120°22', in Sw $\frac{1}{4}$ sec. 36, T. 11 N., R. 14 E., three-quarters of a mile upstream from mouth and 2 miles southeast of Whitehall. Altitude of gage, about 4,000 feet (from topographic map).

Drainage area.- 22.8 square miles.

Records available.- October 1922 to September 1940. Published records include diversions by pipe line.

Average discharge.- 18 years, 30.1 second-feet.

Extremes.- Maximum discharge during year, 770 second-feet Mar. 26 (gage height, 4.70 feet); minimum, 0.1 second-foot at times during October, November, December, and June.

1922-40: Maximum discharge, about 1,760 second-feet Mar. 25, 1928 (gage height, 7.1 feet, from floodmark); minimum, 0.1 second-foot at times in 1924, 1926, 1931, 1933-40.

Extremes do not include flow in feeder pipe line.

Remarks.- Records fair October to December and for June, good for remainder of year.

Records include computed flow in feeder pipe line that diverted just above station into El Dorado canal, Oct. 2 to June 24.

Cooperation.- Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0.4 | 1.3 | 1.3 | 6.5 | 102 | 254 | 380 | 68 | 14 | 2.2 | 0.4 | 0.2 |
| 2 | 2.4 | 1.2 | 1.3 | 71 | 88 | 213 | 313 | 74 | 14 | 1.8 | .4 | .2 |
| 3 | 1.6 | 1.2 | 1.3 | 50 | 120 | 180 | 266 | 77 | 13 | 1.5 | .4 | .2 |
| 4 | 1.0 | 1.2 | 1.3 | 98 | 136 | 156 | 231 | 82 | 12 | 1.5 | .4 | .2 |
| 5 | .8 | 1.1 | 1.3 | 48 | 134 | 138 | 198 | 77 | 11 | 1.3 | .4 | .2 |
| 6 | 2.0 | 1.1 | 1.4 | 27 | 160 | 127 | 176 | 73 | 11 | 1.3 | .4 | .2 |
| 7 | 2.5 | 1.1 | 1.5 | 31 | 150 | 125 | 168 | 68 | 10 | 1.0 | .3 | .2 |
| 8 | 1.5 | 1.1 | 1.6 | 105 | 127 | 125 | 154 | 66 | 10 | 1.0 | .3 | .2 |
| 9 | .9 | 1.1 | 1.6 | 154 | 109 | 125 | 144 | 66 | 9 | .8 | .3 | .2 |
| 10 | .6 | 1.1 | 2.8 | 144 | 97 | 116 | 136 | 69 | 8 | .8 | .3 | .2 |
| 11 | .4 | 1.1 | 9.5 | 188 | 85 | 106 | 133 | 69 | 7 | .8 | .3 | .2 |
| 12 | .4 | 1.1 | 6.5 | 197 | 75 | 95 | 133 | 68 | 6 | .8 | .3 | .2 |
| 13 | .4 | 1.1 | 6.5 | 116 | 69 | 98 | 134 | 63 | 4.6 | .8 | .3 | .2 |
| 14 | .4 | 1.1 | 6 | 82 | 66 | 82 | 140 | 58 | 4.5 | .8 | .3 | .2 |
| 15 | .4 | 1.1 | 6 | 61 | 58 | 80 | 138 | 53 | 4.5 | .8 | .3 | .2 |
| 16 | .4 | 1.1 | 5.5 | 48 | 53 | 95 | 124 | 53 | 4.6 | .7 | .3 | .2 |
| 17 | .4 | 1.1 | 5.5 | 40 | 53 | 88 | 115 | 46 | 4.1 | .7 | .3 | .2 |
| 18 | .4 | 1.1 | 5.5 | 35 | 47 | 87 | 115 | 41 | 4.1 | .7 | .3 | .3 |
| 19 | .4 | 1.1 | 5 | 32 | 43 | 85 | 115 | 39 | 3.6 | .7 | .3 | .3 |
| 20 | .4 | 1.0 | 5 | 29 | 43 | 85 | 113 | 35 | 3.1 | .7 | .3 | .3 |
| 21 | .4 | 1.0 | 5 | 26 | 43 | 85 | 113 | 34 | 3.1 | .6 | .2 | .2 |
| 22 | .4 | 1.0 | 5 | 24 | 43 | 87 | 115 | 34 | 2.6 | .6 | .2 | .2 |
| 23 | .4 | 1.0 | 4.5 | 23 | 111 | 92 | 115 | 28 | 2.6 | .6 | .2 | .2 |
| 24 | .4 | 1.0 | 4.5 | 22 | 124 | 100 | 107 | 26 | 2.7 | .6 | .2 | .2 |
| 25 | 1.4 | 1.3 | 4.5 | 75 | 120 | 168 | 101 | 24 | 2.7 | .4 | .2 | .2 |
| 26 | 1.4 | 1.6 | 4.5 | 355 | 152 | 354 | 94 | 21 | 2.7 | .4 | .2 | .2 |
| 27 | 1.3 | 1.4 | 4 | 256 | 388 | 486 | 85 | 20 | 2.5 | .4 | .2 | .2 |
| 28 | 1.4 | 1.3 | 4 | 180 | 450 | 357 | 77 | 15 | 2.5 | .4 | .2 | .2 |
| 29 | 1.4 | 1.2 | 4 | 142 | 358 | 402 | 71 | 17 | 2.7 | .4 | .2 | .2 |
| 30 | 1.4 | 1.2 | 4 | 124 | - | 606 | 68 | 16 | 2.7 | .4 | .2 | .2 |
| 31 | 1.3 | - | 4 | 111 | - | 492 | - | 16 | - | .4 | .2 | - |
| Month | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | 28.9 | | 2.5 | 0.4 | 0.93 | 57 | | |
| November..... | | | | | 34.4 | | 1.6 | 1.0 | 1.15 | 68 | | |
| December..... | | | | | 124.4 | | 9.5 | 1.3 | 4.01 | 247 | | |
| Calendar year 1939..... | | | | | 3,973.8 | | 106 | .1 | 10.9 | 7,890 | | |
| January..... | | | | | 2,900.5 | | 355 | 6.5 | 93.6 | 5,750 | | |
| February..... | | | | | 3,584 | | 450 | 43 | 124 | 7,110 | | |
| March..... | | | | | 5,679 | | 606 | 80 | 183 | 11,260 | | |
| April..... | | | | | 4,373 | | 380 | 68 | 146 | 8,670 | | |
| May..... | | | | | 1,499 | | 82 | 16 | 48.4 | 2,970 | | |
| June..... | | | | | 164.9 | | 14 | 2.5 | 6.16 | 367 | | |
| July..... | | | | | 25.9 | | 2.2 | .4 | .84 | 51 | | |
| August..... | | | | | 8.8 | | .4 | .2 | .28 | 17 | | |
| September..... | | | | | 6.4 | | .3 | .2 | .21 | 13 | | |
| Water year 1939-40..... | | | | | 18,449.2 | | 606 | .2 | 50.4 | 36,580 | | |

Peak discharge.- Jan. 12 (2 a.m.) 252 sec.-ft.; Jan. 26 (1 p.m.) 426 sec.-ft.; Feb. 27 (6 p.m.) 459 sec.-ft.; Feb. 28 (10 a.m.) 492 sec.-ft.; Mar. 26 (10:30 p.m.) 770 sec.-ft.; Mar. 30 (3 p.m.) 716 sec.-ft.

Note.- Record incomplete and partly estimated, Oct. 10-24, Nov. 3-24, Dec. 14-31, June 3-12, 16-23, Aug. 4-9.

Silver Creek at Union Valley, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}52'$, long. $120^{\circ}28'$, in SE $\frac{1}{4}$ sec. 20, T. 12 N., R. 14 E., 1 mile downstream from confluence of North and Middle Forks, near lower end of Union Valley. Altitude of gage, about 4,530 feet.

Drainage area.- 82.7 square miles.

Records available.- October 1924 to September 1940.

Average discharge.- 15 years (1924-27, 1928-40), 190 second-feet.

Extremes.- Maximum discharge during year, 5,800 second-feet Mar. 26 (gage height, 12.0 feet); minimum, 4.2 second-feet Aug. 30 to Sept. 2.

1924-40: Maximum discharge, 8,560 second-feet Dec. 11, 1937 (gage height, 15.28 feet), from rating curve extended above 2,200 second-feet on basis of velocity-area studies; minimum, 1.9 second-feet Aug. 27, 28, 1931.

Remarks.- Records good except those for period of no gage-height record, which are fair. No diversions above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-----|-----|-------|
| 0.4 | 2.4 | 1.8 | 114 | 4.5 | 856 |
| .6 | 7.2 | 2.0 | 144 | 5.0 | 1,070 |
| .8 | 17 | 2.4 | 216 | 5.5 | 1,310 |
| 1.0 | 31 | 2.8 | 304 | 6.0 | 1,580 |
| 1.2 | 46 | 3.2 | 410 | 7.0 | 2,160 |
| 1.4 | 65 | 3.6 | 534 | 8.0 | 2,800 |
| 1.6 | 87 | 4.0 | 668 | 9.0 | 3,500 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|------|-------|------|------|------|-------|
| 1 | 8.5 | 23 | 16 | 90 | 309 | 590 | 992 | 726 | 512 | 66 | 9 | 4.2 |
| 2 | 37 | 18 | 18 | 1,410 | 269 | 518 | 789 | 1,120 | 399 | 59 | 8.5 | 4.2 |
| 3 | 41 | 16 | 18 | 434 | 401 | 446 | 697 | 946 | 376 | 53 | 8 | 4.5 |
| 4 | 40 | 15 | 17 | 426 | 502 | 396 | 661 | 828 | 371 | 51 | 7.5 | 5 |
| 5 | 45 | 14 | 17 | 214 | 402 | 388 | 576 | 550 | 362 | 45 | 7 | 5.5 |
| 6 | 100 | 13 | 22 | 147 | 580 | 374 | 540 | 521 | 362 | 41 | 7 | 5.5 |
| 7 | 74 | 13 | 26 | 127 | 446 | 399 | 603 | 634 | 354 | 38 | 6.5 | 5 |
| 8 | 68 | 12 | 27 | 271 | 318 | 428 | 590 | 816 | 344 | 36 | 6.5 | 4.8 |
| 9 | 60 | 11 | 27 | 416 | 276 | 452 | 573 | 1,010 | 306 | 34 | 6.5 | 4.5 |
| 10 | 42 | 11 | 32 | 328 | 262 | 382 | 627 | 1,080 | 321 | 32 | 6 | 4.5 |
| 11 | 37 | 11 | 88 | 690 | 254 | 336 | 700 | 1,140 | 321 | 29 | 6 | 4.5 |
| 12 | 33 | 10 | 55 | 823 | 226 | 294 | 786 | 1,100 | 304 | 27 | 5.5 | 4.5 |
| 13 | 30 | 10 | 40 | 374 | 216 | 280 | 909 | 989 | 282 | 25 | 5.5 | 4.5 |
| 14 | 25 | 10 | 34 | 260 | 204 | 276 | 942 | 942 | 262 | 25 | 5.5 | 4.8 |
| 15 | 22 | 10 | 30 | 202 | 210 | 287 | 816 | 890 | 236 | 23 | 5.5 | 4.8 |
| 16 | 19 | 9.5 | 30 | 178 | 192 | 338 | 560 | 938 | 222 | 22 | 5.5 | 5 |
| 17 | 16 | 9.5 | 29 | 165 | 189 | 354 | 540 | 836 | 216 | 20 | 5.5 | 6.5 |
| 18 | 15 | 9 | 30 | 164 | 183 | 344 | 708 | 789 | 187 | 20 | 5 | 7.5 |
| 19 | 13 | 9 | 29 | 142 | 178 | 351 | 828 | 735 | 180 | 19 | 5 | 6.5 |
| 20 | 12 | 9 | 28 | 136 | 171 | 402 | 808 | 767 | 155 | 18 | 4.8 | 6 |
| 21 | 12 | 9 | 24 | 120 | 171 | 425 | 836 | 840 | 164 | 16 | 4.8 | 5.5 |
| 22 | 10 | 9 | 20 | 110 | 171 | 489 | 930 | 751 | 138 | 15 | 4.5 | 5.5 |
| 23 | 9.5 | 9 | 24 | 110 | 434 | 544 | 925 | 740 | 111 | 14 | 4.5 | 5 |
| 24 | 13 | 8.5 | 23 | 110 | 440 | 586 | 828 | 697 | 120 | 13 | 4.5 | 5 |
| 25 | 18 | 13 | 16 | 200 | 365 | 1,160 | 654 | 627 | 113 | 12 | 4.5 | 4.8 |
| 26 | 23 | 19 | 23 | 1,750 | 566 | 2,470 | 505 | 534 | 92 | 11 | 4.8 | 4.8 |
| 27 | 31 | 16 | 21 | 1,000 | 1,510 | 2,740 | 434 | 483 | 91 | 10 | 4.5 | 4.8 |
| 28 | 60 | 17 | 21 | 600 | 1,680 | 1,140 | 407 | 458 | 86 | 10 | 4.5 | 4.8 |
| 29 | 44 | 16 | 95 | 400 | 877 | 1,940 | 388 | 425 | 82 | 10 | 4.5 | 4.8 |
| 30 | 35 | 16 | 111 | 350 | - | 3,290 | 434 | 396 | 77 | 10 | 4.2 | 4.8 |
| 31 | 28 | - | 77 | 310 | - | 1,620 | - | 583 | - | 9.5 | 4.2 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 1,021 | 100 | 8.5 | 32.9 | 2,030 |
| November..... | 374.5 | 23 | 8.5 | 12.5 | 743 |
| December..... | 1,070 | 111 | 16 | 34.5 | 2,120 |
| Calendar year 1939..... | 35,129.5 | 674. | 2.6 | 96.2 | 69,680 |
| January..... | 12,047 | 1,750 | 90 | 389 | 23,890 |
| February..... | 12,002 | 1,680 | 171 | 414 | 23,810 |
| March..... | 24,039 | 3,290 | 276 | 775 | 47,680 |
| April..... | 23,576 | 992 | 368 | 686 | 40,820 |
| May..... | 23,862 | 1,140 | 396 | 770 | 47,370 |
| June..... | 7,146 | 512 | 77 | 238 | 14,170 |
| July..... | 813.5 | 66 | 9.5 | 26.2 | 1,610 |
| August..... | 175.8 | 9 | 4.2 | 5.67 | 349 |
| September..... | 162.1 | 7.5 | 4.2 | 5.07 | 302 |
| Water year 1939-40..... | 103,298.9 | 3,290 | 4.2 | 282 | 204,900 |

Peak discharge.- Jan. 2 (6 p.m.) 2,770 sec.-ft.; Feb. 27 (9 p.m.) 2,470 sec.-ft.; Feb. 28 (11:30 a.m.) 2,080 sec.-ft.; Mar. 26 (11 p.m.) 5,800 sec.-ft.; Mar. 30 (3 p.m.) 4,020 sec.-ft.; May 10 (8 p.m.) 1,720 sec.-ft.

Note.- No gage-height record Jan. 21-30; discharge computed on basis of records for station near Placerville.

Silver Creek near Placerville, Calif.

Location.- Water-stage recorder, lat. $36^{\circ}47'$, long. $120^{\circ}55'$, in $SW\frac{1}{4}$ sec. 13, T. 11 N., R. 12 E., a quarter of a mile upstream from mouth and 12 miles northeast of Placerville. Altitude of gage, about 2,240 feet (from topographic map).

Drainage area.- 176 square miles.

Records available.- December 1921 to September 1940.

Average discharge.- 18 years (1922-40), 364 second-feet.

Extremes.- Maximum discharge during year, 9,040 second-feet Mar. 26 (gage height, 11.1 feet); minimum, 26 second-feet Nov. 17.

1921-40: Maximum discharge, 14,600 second-feet Dec. 11, 1937 (gage height, 13.8 feet), from rating curve extended above 3,800 second-feet on basis of velocity-area studies; minimum, 5.5 second-feet Sept. 18, 1934.

Remarks.- Records excellent. No diversions above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge in second-feet)

| | | | | | |
|-----|-----|-----|-------|------|-------|
| 1.5 | 27 | 3.0 | 246 | 6.0 | 1,780 |
| 1.7 | 40 | 3.5 | 400 | 7.0 | 2,730 |
| 2.0 | 65 | 4.0 | 590 | 8.0 | 3,950 |
| 2.3 | 102 | 4.5 | 820 | 9.0 | 5,410 |
| 2.6 | 154 | 5.0 | 1,100 | 10.0 | 7,050 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|-------|-------|------|------|------|-------|
| 1 | 31 | 52 | 42 | 149 | 611 | 1,680 | 2,620 | 1,100 | 920 | 215 | 55 | 38 |
| 2 | 82 | 46 | 41 | 1,910 | 542 | 1,380 | 1,970 | 1,720 | 730 | 183 | 54 | 38 |
| 3 | 101 | 41 | 40 | 735 | 745 | 1,160 | 1,660 | 1,640 | 650 | 168 | 53 | 39 |
| 4 | 80 | 39 | 39 | 610 | 1,160 | 1,010 | 1,530 | 1,520 | 650 | 164 | 52 | 42 |
| 5 | 84 | 37 | 40 | 425 | 1,030 | 936 | 1,340 | 1,020 | 619 | 160 | 49 | 43 |
| 6 | 178 | 34 | 46 | 294 | 1,180 | 860 | 1,220 | 920 | 632 | 143 | 48 | 44 |
| 7 | 196 | 33 | 46 | 288 | 1,090 | 860 | 1,260 | 1,000 | 611 | 131 | 45 | 43 |
| 8 | 147 | 32 | 48 | 820 | 845 | 870 | 1,220 | 1,270 | 603 | 127 | 44 | 43 |
| 9 | 127 | 31 | 48 | 1,350 | 720 | 881 | 1,160 | 1,580 | 562 | 118 | 44 | 42 |
| 10 | 110 | 31 | 57 | 930 | 654 | 800 | 1,160 | 1,720 | 534 | 116 | 41 | 41 |
| 11 | 95 | 31 | 154 | 1,660 | 611 | 720 | 1,250 | 1,810 | 590 | 112 | 39 | 40 |
| 12 | 83 | 31 | 104 | 1,110 | 550 | 645 | 1,310 | 1,800 | 554 | 101 | 38 | 40 |
| 13 | 81 | 31 | 76 | 892 | 530 | 619 | 1,490 | 1,700 | 546 | 98 | 36 | 41 |
| 14 | 75 | 31 | 65 | 607 | 538 | 590 | 1,610 | 1,560 | 518 | 96 | 34 | 41 |
| 15 | 68 | 31 | 58 | 472 | 510 | 598 | 1,480 | 1,480 | 491 | 95 | 34 | 40 |
| 16 | 61 | 31 | 58 | 397 | 472 | 658 | 1,070 | 1,540 | 443 | 88 | 34 | 40 |
| 17 | 58 | 30 | 57 | 356 | 491 | 678 | 980 | 1,490 | 468 | 86 | 34 | 39 |
| 18 | 56 | 31 | 56 | 317 | 465 | 650 | 1,160 | 1,370 | 422 | 82 | 34 | 50 |
| 19 | 50 | 31 | 56 | 294 | 436 | 650 | 1,380 | 1,300 | 404 | 77 | 34 | 46 |
| 20 | 47 | 31 | 56 | 274 | 418 | 694 | 1,380 | 1,320 | 366 | 75 | 34 | 41 |
| 21 | 44 | 31 | 52 | 252 | 407 | 720 | 1,380 | 1,420 | 393 | 74 | 34 | 39 |
| 22 | 41 | 31 | 41 | 246 | 407 | 795 | 1,480 | 1,350 | 349 | 70 | 34 | 36 |
| 23 | 39 | 31 | 51 | 230 | 979 | 860 | 1,550 | 1,300 | 298 | 70 | 34 | 36 |
| 24 | 46 | 31 | 51 | 228 | 1,070 | 925 | 1,440 | 1,240 | 291 | 68 | 35 | 36 |
| 25 | 56 | 39 | 42 | 510 | 898 | 1,640 | 1,220 | 1,210 | 302 | 65 | 35 | 36 |
| 26 | 53 | 60 | 44 | 3,040 | 1,310 | 3,690 | 964 | 1,020 | 296 | 64 | 36 | 36 |
| 27 | 56 | 47 | 42 | 1,580 | 4,260 | 5,000 | 830 | 914 | 254 | 63 | 36 | 38 |
| 28 | 91 | 44 | 44 | 1,100 | 4,350 | 2,410 | 790 | 845 | 249 | 62 | 36 | 39 |
| 29 | 88 | 41 | 82 | 830 | 2,610 | 3,460 | 755 | 805 | 235 | 61 | 36 | 39 |
| 30 | 76 | 42 | 194 | 694 | - | 6,620 | 755 | 775 | 233 | 60 | 36 | 40 |
| 31 | 63 | - | 138 | 632 | - | 4,470 | - | 835 | - | 58 | 37 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 2,453 | 196 | 31 | 79.1 | 4,870 |
| November..... | 1,082 | 60 | 30 | 36.1 | 2,150 |
| December..... | 1,968 | 194 | 39 | 63.5 | 3,900 |
| Calendar year 1939..... | 69,690 | 1,180 | 12 | 191 | 138,000 |
| January..... | 23,752 | 3,040 | 149 | 766 | 47,110 |
| February..... | 29,889 | 4,350 | 407 | 1,031 | 59,280 |
| March..... | 47,527 | 6,620 | 590 | 1,533 | 94,270 |
| April..... | 39,414 | 2,620 | 755 | 1,314 | 78,180 |
| May..... | 40,574 | 1,810 | 775 | 1,309 | 80,480 |
| June..... | 14,204 | 920 | 233 | 473 | 28,170 |
| July..... | 3,150 | 215 | 58 | 102 | 6,250 |
| August..... | 1,225 | 55 | 34 | 39.5 | 2,430 |
| September..... | 1,206 | 50 | 36 | 40.2 | 2,390 |
| Water year 1939-40..... | 206,444 | 6,620 | 30 | 564 | 409,600 |

Peak discharge.- Jan. 2 (2 p.m.) 3,690 sec.-ft.; Jan. 26 (3 p.m.) 3,810 sec.-ft.; Feb. 27 (9 p.m.) 6,050 sec.-ft.; Feb. 28 (12 m.) 5,110 sec.-ft.; Mar. 26 (11:30 p.m.) 9,040 sec.-ft.; Mar. 30 (5 p.m.) 7,950 sec.-ft.

South Fork of Silver Creek near Ice House, Calif.

Location.— Water-stage recorder, lat. $38^{\circ}49'$, long. $120^{\circ}22'$, in SW $\frac{1}{4}$ sec. 1, T. 11 N., R. 14 E., half a mile upstream from Peavine Creek, $1\frac{1}{2}$ miles northeast of Ice House, and 8 miles northeast of Riverton. Altitude of gage, about 5,300 feet (from topographic map).

Drainage area.— 28.4 square miles.

Records available.— October 1924 to September 1940. July to October 1922, at site 1 mile upstream.

Average discharge.— 16 years, 66.9 second-feet.

Extremes.— Maximum discharge during year, 942 second-feet Mar. 26 (gage height, 4.05 feet); minimum, 1.8 second-feet Aug. 26-29.

1924-40: Maximum discharge, 2,200 second-feet Dec. 11, 1937 (gage height, 5.80 feet), from rating curve extended above 540 second-feet on basis of velocity-area studies; minimum, 0.1 second-foot Aug. 21 to Sept. 6, 1931.

Remarks.— Records good. No diversions.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|
| 0.3 | 1.0 | 0.6 | 11 | 1.2 | 56 | 1.8 | 158 | 2.8 | 428 |
| .4 | 3.0 | .8 | 23 | 1.4 | 81 | 2.0 | 206 | 3.2 | 562 |
| .5 | 6.5 | 1.0 | 38 | 1.6 | 116 | 2.4 | 312 | 3.6 | 718 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 4.4 | 13 | 7 | 35 | 66 | 91 | 248 | 290 | 290 | 54 | 6.5 | 2.0 |
| 2 | 14 | 11 | 7 | 262 | 60 | 87 | 198 | 457 | 237 | 52 | 6 | 2.0 |
| 3 | 13 | 10 | 7.5 | 143 | 67 | 77 | 172 | 450 | 206 | 51 | 6 | 2.2 |
| 4 | 15 | 9 | 8 | 78 | 71 | 71 | 156 | 380 | 214 | 51 | 6.5 | 2.6 |
| 5 | 22 | 9 | 8.5 | 55 | 68 | 70 | 139 | 240 | 219 | 45 | 5 | 2.8 |
| 6 | 38 | 8.5 | 7.5 | 41 | 89 | 68 | 131 | 224 | 214 | 40 | 5 | 2.8 |
| 7 | 36 | 8 | 8 | 32 | 78 | 71 | 141 | 253 | 211 | 39 | 5 | 2.8 |
| 8 | 32 | 7.5 | 8 | 44 | 65 | 78 | 143 | 362 | 206 | 38 | 4.8 | 2.6 |
| 9 | 28 | 8 | 9 | 50 | 59 | 81 | 145 | 463 | 187 | 36 | 4.8 | 2.6 |
| 10 | 23 | 8 | 9 | 59 | 57 | 74 | 165 | 512 | 192 | 32 | 4.4 | 2.6 |
| 11 | 21 | 8 | 16 | 94 | 55 | 67 | 199 | 548 | 206 | 30 | 4.0 | 2.6 |
| 12 | 19 | 7.5 | 9.5 | 103 | 51 | 63 | 240 | 544 | 199 | 28 | 3.7 | 2.6 |
| 13 | 18 | 7 | 10 | 70 | 50 | 58 | 304 | 519 | 194 | 26 | 3.7 | 2.8 |
| 14 | 16 | 6.5 | 9 | 54 | 46 | 58 | 340 | 492 | 162 | 26 | 3.4 | 2.8 |
| 15 | 15 | 6.5 | 9 | 48 | 51 | 59 | 294 | 479 | 170 | 23 | 3.0 | 3.0 |
| 16 | 13 | 6.5 | 8 | 36 | 49 | 64 | 199 | 499 | 158 | 22 | 3.0 | 3.0 |
| 17 | 12 | 6 | 7.5 | 35 | 44 | 66 | 189 | 479 | 160 | 21 | 2.8 | 3.4 |
| 18 | 11 | 6 | 8.5 | 35 | 45 | 67 | 253 | 444 | 141 | 18 | 2.8 | 3.7 |
| 19 | 9.5 | 6 | 9 | 32 | 45 | 68 | 312 | 419 | 131 | 17 | 2.6 | 3.7 |
| 20 | 9 | 6 | 8.5 | 30 | 44 | 80 | 315 | 434 | 116 | 15 | 2.6 | 3.4 |
| 21 | 8 | 6 | 7 | 28 | 41 | 91 | 340 | 466 | 129 | 13 | 2.4 | 3.0 |
| 22 | 7.5 | 5.5 | 7 | 28 | 41 | 112 | 380 | 438 | 108 | 13 | 2.2 | 3.0 |
| 23 | 7 | 5 | 8.5 | 27 | 70 | 133 | 398 | 425 | 86 | 12 | 2.2 | 3.0 |
| 24 | 9 | 5 | 7.5 | 26 | 70 | 154 | 354 | 410 | 94 | 11 | 2.0 | 2.8 |
| 25 | 9.5 | 5.5 | 8 | 44 | 67 | 279 | 284 | 386 | 94 | 11 | 2.0 | 2.8 |
| 26 | 11 | 6.5 | 8.5 | 199 | 63 | 537 | 206 | 326 | 78 | 10 | 1.8 | 2.6 |
| 27 | 13 | 6 | 7.5 | 227 | 135 | 624 | 170 | 290 | 78 | 10 | 1.8 | 2.6 |
| 28 | 22 | 7 | 7.5 | 133 | 168 | 341 | 182 | 271 | 75 | 9 | 1.8 | 2.6 |
| 29 | 22 | 6 | 26 | 69 | 116 | 369 | 148 | 250 | 73 | 9 | 1.8 | 2.6 |
| 30 | 18 | 7 | 44 | 73 | - | 540 | 172 | 229 | 60 | 8.5 | 2.0 | 2.4 |
| 31 | 15 | - | 37 | 66 | - | 354 | - | 261 | - | 7.5 | 2.0 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 509.9 | 38 | 4.4 | 16.4 | 1,010 |
| November..... | 217.5 | 13 | 5 | 7.25 | 431 |
| December..... | 343.0 | 44 | 7 | 11.1 | 680 |
| Calendar year 1939..... | 13,454.3 | 255 | 1.2 | 36.9 | 26,690 |
| January..... | 2,266 | 262 | 26 | 73.1 | 4,490 |
| February..... | 1,948 | 165 | 41 | 67.2 | 3,860 |
| March..... | 4,971 | 624 | 58 | 160 | 9,860 |
| April..... | 6,877 | 398 | 131 | 229 | 13,640 |
| May..... | 12,240 | 548 | 224 | 395 | 24,280 |
| June..... | 4,708 | 290 | 60 | 157 | 9,340 |
| July..... | 778.0 | 54 | 7.5 | 25.1 | 1,540 |
| August..... | 106.6 | 6.5 | 1.8 | 3.44 | 211 |
| September..... | 83.4 | 3.7 | 2.0 | 2.78 | 165 |
| Water year 1939-40..... | 35,048.4 | 624 | 1.8 | 95.8 | 69,510 |

Peak discharge.— Mar. 26 (10 p.m.) 942 sec.-ft.; May 11 (10 p.m.) 684 sec.-ft.

American River flume near Camino, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}46'$, long. $120^{\circ}42'$, in SW $\frac{1}{4}$ sec. 25, T. 11 N., R. 11 E., 300 feet upstream from Iowa Canyon Creek, 1 mile downstream from diversion dam, and 3 miles northwest of Camino. Altitude of gage, about 1,710 feet (from topographic map).

Records available.- November 1922 to September 1940.

Average discharge.- 18 years, 95.1 second-feet.

Extremes.- Maximum daily discharge during year, 173 second-feet Mar. 22 and Apr. 21; no flow Mar. 11-18 and Apr. 5.

1922-40: Maximum daily discharge, 176 second-feet June 30, 1938, Feb. 24, 1939; no flow at times in each year.

Remarks.- Records good. Flume diverts water from South Fork of American River in SW $\frac{1}{4}$ sec. 24, T. 11 N., R. 11 E., which is used to develop power in SW $\frac{1}{4}$ sec. 20, T. 11 N., R. 11 E., just above Rock Creek, at which point water is returned to South Fork.

Cooperation.- Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|----------------------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | a100 | 156 | 162 | 168 | 167 | 164 | 37 | 170 | 162 | 159 | 140 | 146 |
| 2 | 122 | 158 | 166 | 168 | 167 | 164 | 38 | 170 | 162 | 156 | 139 | 128 |
| 3 | 134 | 158 | 162 | 167 | 168 | 164 | 43 | 170 | 162 | 154 | 142 | 124 |
| 4 | 140 | 156 | 166 | 167 | 167 | 164 | 17 | 168 | 161 | 160 | 138 | 162 |
| 5 | 143 | 166 | 154 | 168 | 167 | 164 | 0 | 166 | 161 | 180 | 143 | 158 |
| 6 | 151 | 156 | 163 | 164 | 167 | 164 | 38 | 168 | 161 | 145 | 142 | 136 |
| 7 | 156 | 162 | 163 | 160 | 168 | 164 | 80 | 168 | 161 | 141 | 143 | 160 |
| 8 | 156 | 160 | 164 | 166 | 168 | 164 | 117 | 166 | 161 | 148 | 144 | 154 |
| 9 | 160 | 162 | 158 | 165 | 168 | 164 | 130 | 166 | 161 | 157 | 144 | 144 |
| 10 | 161 | 166 | 165 | 164 | 167 | 144 | 142 | 164 | 161 | 161 | 129 | 149 |
| 11 | 158 | 164 | 167 | 166 | 167 | 0 | 164 | 166 | 162 | 157 | 131 | 144 |
| 12 | 154 | 144 | 167 | 165 | 166 | 0 | 171 | 167 | 163 | 160 | 128 | 162 |
| 13 | 158 | 137 | 166 | 166 | 166 | 0 | 172 | 166 | 163 | 161 | 135 | 162 |
| 14 | 164 | 124 | 163 | 166 | 166 | 0 | 170 | 166 | 162 | 160 | 124 | 164 |
| 15 | 162 | 89 | 156 | 166 | 165 | 0 | 170 | 166 | 162 | 160 | 138 | 160 |
| 16 | 140 | 87 | 167 | 166 | 165 | 0 | 166 | 165 | 162 | 147 | 124 | 154 |
| 17 | 154 | 86 | 165 | 166 | 165 | 0 | 170 | 164 | 162 | 147 | 138 | 160 |
| 18 | 149 | 123 | 160 | 167 | 165 | 0 | 172 | 164 | 162 | 147 | 128 | 154 |
| 19 | 127 | 151 | 161 | 166 | 166 | 78 | 172 | 163 | 162 | 148 | 128 | 152 |
| 20 | 143 | 164 | 164 | 160 | 166 | 146 | 172 | 164 | 160 | 145 | 127 | 148 |
| 21 | 146 | 164 | 167 | 166 | 166 | 165 | 173 | 164 | 160 | 142 | 127 | 162 |
| 22 | 153 | 156 | 160 | 166 | 166 | 173 | 172 | 163 | 157 | 139 | 136 | 139 |
| 23 | 120 | 152 | 162 | 154 | 166 | 167 | 172 | 162 | 152 | 138 | 136 | 147 |
| 24 | 140 | 138 | 161 | 164 | 165 | 164 | 172 | 162 | 162 | 150 | 132 | 140 |
| 25 | 162 | 166 | 143 | 160 | 165 | 150 | 171 | 162 | 149 | 142 | 130 | 144 |
| 26 | 154 | 166 | 156 | 166 | 165 | 137 | 170 | 162 | 145 | 140 | 134 | 160 |
| 27 | 155 | 146 | 166 | 167 | 162 | 122 | 170 | 163 | 152 | 144 | 138 | 161 |
| 28 | 165 | 111 | 169 | 166 | 156 | 107 | 170 | 163 | 158 | 146 | 135 | 144 |
| 29 | 166 | 138 | 166 | 166 | 162 | 113 | 170 | 163 | 161 | 142 | 125 | 144 |
| 30 | 163 | 162 | 168 | 168 | - | 74 | 170 | 163 | 162 | 138 | 142 | 141 |
| 31 | 158 | - | 168 | 167 | - | 33 | - | 163 | - | 148 | 145 | - |
| Month | | | | | | | | | | | | |
| | Second-foot-days | | | | | | | | | | | |
| October..... | 4,614 | | | | | | | | | | | |
| November..... | 4,368 | | | | | | | | | | | |
| December..... | 4,996 | | | | | | | | | | | |
| Calendar year 1939..... | 49,524 | | | | | | | | | | | |
| | Maximum | | | | | | | | | | | |
| January..... | 5,091 | | | | | | | | | | | |
| February..... | 4,804 | | | | | | | | | | | |
| March..... | 3,249 | | | | | | | | | | | |
| April..... | 4,051 | | | | | | | | | | | |
| May..... | 5,117 | | | | | | | | | | | |
| June..... | 4,781 | | | | | | | | | | | |
| July..... | 4,582 | | | | | | | | | | | |
| August..... | 4,185 | | | | | | | | | | | |
| September..... | 4,443 | | | | | | | | | | | |
| Water year 1939-40..... | 54,281 | | | | | | | | | | | |
| | Minimum | | | | | | | | | | | |
| October..... | 166 | | | | | | | | | | | |
| November..... | 166 | | | | | | | | | | | |
| December..... | 169 | | | | | | | | | | | |
| Calendar year 1939..... | 176 | | | | | | | | | | | |
| | Mean | | | | | | | | | | | |
| January..... | 168 | | | | | | | | | | | |
| February..... | 168 | | | | | | | | | | | |
| March..... | 173 | | | | | | | | | | | |
| April..... | 173 | | | | | | | | | | | |
| May..... | 170 | | | | | | | | | | | |
| June..... | 163 | | | | | | | | | | | |
| July..... | 161 | | | | | | | | | | | |
| August..... | 145 | | | | | | | | | | | |
| September..... | 162 | | | | | | | | | | | |
| Water year 1939-40..... | 173 | | | | | | | | | | | |
| | Run-off in acre-feet | | | | | | | | | | | |
| October..... | 9,150 | | | | | | | | | | | |
| November..... | 8,660 | | | | | | | | | | | |
| December..... | 9,910 | | | | | | | | | | | |
| Calendar year 1939..... | 98,230 | | | | | | | | | | | |
| January..... | 10,100 | | | | | | | | | | | |
| February..... | 9,530 | | | | | | | | | | | |
| March..... | 8,440 | | | | | | | | | | | |
| April..... | 8,040 | | | | | | | | | | | |
| May..... | 10,150 | | | | | | | | | | | |
| June..... | 9,480 | | | | | | | | | | | |
| July..... | 9,090 | | | | | | | | | | | |
| August..... | 8,300 | | | | | | | | | | | |
| September..... | 8,810 | | | | | | | | | | | |
| Water year 1939-40..... | 107,700 | | | | | | | | | | | |

a No gage-height record; discharge computed on basis of records of power-plant output.

Clear Lake at Lakeport, Calif.

Location.- Staff gage, lat. $39^{\circ}03'$, long. $122^{\circ}55'$, in SE $\frac{1}{4}$ sec. 24, T. 14 N., R. 10 W., at municipal wharf on north side of Third Street in Lakeport. Datum of gage is 1,318.59 feet above mean sea level (general adjustment of 1929).

Drainage area.- 420 square miles, including water surface of lake (65 square miles).

Records available.- 1874-1900 (incomplete) and January 1913 to September 1940.

Extremes.- Maximum gage height during year, 8.40 feet Mar. 2; minimum, -0.35 foot Nov. 22-29 and Dec. 1-10.

1913-40: Maximum gage height, 11.12 feet Jan. 28, 1914; minimum, -3.50 feet Sept. 24-27, 1920.

Remarks.- This natural lake is regulated by a concrete over-flow type dam at outlet, completed in 1915. Capacity between gage heights 0.00 and 7.56 feet (limits stipulated by court decree) about 319,000 acre-feet. Water is released down natural channel of Cache Creek and diverted for irrigation.

Cooperation.- Record of daily gage heights furnished by Clear Lake Water Co.

Gage height, in feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|------|------|------|------|------|------|------|------|-------|
| 1 | 0.10 | -0.20 | -0.35 | 0.00 | 2.85 | 8.30 | 8.20 | 7.25 | 6.65 | 5.68 | 4.40 | 3.35 |
| 2 | .10 | -.20 | -.35 | .32 | 2.90 | 8.40 | 8.20 | 7.25 | 6.62 | 5.60 | 4.35 | 3.28 |
| 3 | .05 | -.20 | -.35 | .40 | 2.95 | 8.30 | 8.20 | 7.25 | 6.60 | 5.58 | 4.35 | 3.25 |
| 4 | .02 | -.20 | -.35 | .52 | 3.10 | 8.30 | 8.10 | 7.25 | 6.55 | 5.52 | 4.30 | 3.22 |
| 5 | .00 | -.22 | -.35 | .60 | 3.22 | 8.20 | 8.00 | 7.28 | 6.50 | 5.50 | 4.25 | 3.20 |
| 6 | -.02 | -.22 | -.35 | .65 | 3.30 | 8.10 | 7.95 | 7.28 | 6.48 | 5.45 | 4.22 | 3.18 |
| 7 | -.05 | -.22 | -.35 | .90 | 3.40 | 7.95 | 7.82 | 7.28 | 6.45 | 5.40 | 4.20 | 3.15 |
| 8 | -.02 | -.28 | -.35 | 1.00 | 3.45 | 7.88 | 7.75 | 7.28 | 6.40 | 5.35 | 4.20 | 3.15 |
| 9 | -.02 | -.28 | -.35 | 1.35 | 3.50 | 7.70 | 7.65 | 7.25 | 6.40 | 5.30 | 4.15 | 3.10 |
| 10 | -.02 | -.28 | -.35 | 1.55 | 3.62 | 7.65 | 7.55 | 7.22 | 6.40 | 5.25 | 4.10 | 3.10 |
| 11 | -.05 | -.30 | -.30 | 1.65 | 3.55 | 7.55 | 7.50 | 7.20 | 6.32 | 5.22 | 4.10 | 3.08 |
| 12 | -.05 | -.30 | -.20 | 1.75 | 3.58 | 7.40 | 7.50 | 7.18 | 6.25 | 5.18 | 4.05 | 3.08 |
| 13 | -.05 | -.30 | -.18 | 1.82 | 3.60 | 7.30 | 7.50 | 7.15 | 6.25 | 5.15 | 4.00 | 3.05 |
| 14 | -.08 | -.30 | -.18 | 1.88 | 3.85 | 7.20 | 7.50 | 7.12 | 6.22 | 5.10 | 4.00 | 3.05 |
| 15 | -.08 | -.30 | -.15 | 1.90 | 3.95 | 7.15 | 7.50 | 7.10 | 6.22 | 5.05 | 3.95 | 3.02 |
| 16 | -.08 | -.30 | -.15 | 1.95 | 4.00 | 7.15 | 7.50 | 7.08 | 6.18 | 5.02 | 3.92 | 3.02 |
| 17 | -.08 | -.30 | -.15 | 1.95 | 4.30 | 7.12 | 7.52 | 7.05 | 6.12 | 4.98 | 3.90 | 3.02 |
| 18 | -.10 | -.30 | -.15 | 1.95 | 4.65 | 7.20 | 7.52 | 7.02 | 6.10 | 4.95 | 3.85 | 3.00 |
| 19 | -.12 | -.30 | -.15 | 1.95 | 4.65 | 7.25 | 7.50 | 7.00 | 6.05 | 4.90 | 3.80 | 3.00 |
| 20 | -.12 | -.30 | -.15 | 1.95 | 4.75 | 7.25 | 7.48 | 6.98 | 6.00 | 4.88 | 3.75 | 2.98 |
| 21 | -.12 | -.30 | -.15 | 1.95 | 4.78 | 7.22 | 7.45 | 6.95 | 5.95 | 4.82 | 3.72 | 2.98 |
| 22 | -.12 | -.35 | -.15 | 2.00 | 4.85 | 7.25 | 7.40 | 6.92 | 5.90 | 4.80 | 3.68 | 2.98 |
| 23 | -.12 | -.35 | -.15 | 2.00 | 4.88 | 7.25 | 7.40 | 6.90 | 5.90 | 4.78 | 3.68 | 2.98 |
| 24 | -.12 | -.35 | -.15 | 2.02 | 4.90 | 7.28 | 7.35 | 6.85 | 5.90 | 4.78 | 3.65 | 2.95 |
| 25 | -.15 | -.35 | -.15 | 2.05 | 4.95 | 7.30 | 7.36 | 6.80 | 5.88 | 4.70 | 3.62 | 2.92 |
| 26 | -.15 | -.35 | -.15 | 2.32 | 5.05 | 7.35 | 7.35 | 6.78 | 5.80 | 4.65 | 3.60 | 2.90 |
| 27 | -.15 | -.35 | -.15 | 2.50 | 5.92 | 7.45 | 7.35 | 6.75 | 5.80 | 4.60 | 3.55 | 2.90 |
| 28 | -.15 | -.35 | -.15 | 2.60 | 7.05 | 7.50 | 7.30 | 6.70 | 5.75 | 4.55 | 3.52 | 2.88 |
| 29 | -.18 | -.35 | -.15 | 2.70 | 8.05 | 7.50 | 7.28 | 6.68 | 5.72 | 4.52 | 3.50 | 2.88 |
| 30 | -.20 | -.30 | -.12 | 2.70 | - | 7.82 | 7.25 | 6.68 | 5.70 | 4.50 | 3.45 | 2.85 |
| 31 | -.20 | - | -.10 | 2.75 | - | 8.15 | - | 6.68 | - | 4.42 | 3.42 | - |

9-238 September 1937

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

U. S. GOVERNMENT PRINTING OFFICE 1608-0-7287

CACHE CREEK BASIN

Cache Creek at Yolo, Calif.

Location.- Water-stage recorder, lat. 38°43'30", long. 121°48'25", in Rio Jesus Maria grant, 800 feet upstream from highway bridge and half a mile south of Yolo, Yolo County. Altitude of gage, about 60 feet (from topographic map).

Drainage area.- 1,150 square miles.

Records available.- January 1903 to September 1940.

Average discharge.- 37 years, 506 second-feet.

Extremes.- Maximum discharge during year, 28,700 second-feet Feb. 28 (gage height, 29.0 feet); no flow for several months.

1903-40: Maximum discharge, that of Feb. 28, 1940; no flow during some periods in nearly every year.

Maximum stage observed, 29.8 feet, staff-gage reading, Feb. 2, 1915.

Remarks.- Records good except those for discharges above 6,000 second-feet, which are fair. Numerous diversions above station for irrigation; storage in Clear Lake.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|-------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | | | | 0 | 403 | 8,490 | 6,760 | 488 | 95 | | | |
| 2 | | | | 186 | 385 | 6,500 | 5,420 | 276 | 68 | | | |
| 3 | | | | 800 | 485 | 5,420 | 4,860 | 236 | 28 | | | |
| 4 | | | | 996 | 1,100 | 4,850 | 4,540 | 222 | .2 | | | |
| 5 | | | | 896 | 876 | 4,510 | 4,290 | 240 | 0 | | | |
| 6 | | | | 358 | 734 | 4,180 | 4,100 | 236 | 0 | | | |
| 7 | | | | 253 | 901 | 4,040 | 3,970 | 107 | 0 | | | |
| 8 | | | | 2,480 | 713 | 3,900 | 3,880 | 151 | 0 | | | |
| 9 | | | | 3,020 | 689 | 3,890 | 3,770 | 199 | 0 | | | |
| 10 | | | | 1,570 | 501 | 3,540 | 3,650 | 291 | 0 | | | |
| 11 | | | | 1,870 | 449 | 3,430 | 2,430 | 287 | 0 | | | |
| 12 | | | | 918 | 401 | 3,330 | a1,450 | 291 | 0 | | | |
| 13 | | | | 522 | 377 | 3,280 | a1,000 | 291 | 0 | | | |
| 14 | | | | 351 | 2,160 | 3,220 | a700 | 287 | 0 | | | |
| 15 | | | | 272 | 1,560 | a2,150 | 578 | 255 | 0 | | | |
| 16 | | | | 210 | 916 | a1,050 | 504 | 251 | 0 | | | |
| 17 | | | | 162 | 1,530 | 978 | 528 | 244 | 0 | | | |
| 18 | | | | 131 | 2,010 | 944 | 762 | 207 | 0 | | | |
| 19 | | | | 106 | 1,160 | 911 | 725 | 190 | 0 | | | |
| 20 | | | | 89 | 876 | 872 | 676 | 173 | 0 | | | |
| 21 | | | | 73 | 704 | 840 | 744 | 138 | 0 | | | |
| 22 | | | | 61 | 604 | 807 | 814 | 141 | 0 | | | |
| 23 | | | | 57 | 528 | 775 | 785 | 128 | 0 | | | |
| 24 | | | | 54 | 461 | 744 | 769 | 100 | 0 | | | |
| 25 | | | | 57 | 446 | 713 | 769 | 106 | 0 | | | |
| 26 | | | | 3,240 | 624 | 694 | 924 | 103 | 0 | | | |
| 27 | | | | 1,940 | 18,200 | 3,270 | 872 | 89 | 0 | | | |
| 28 | | | | 881 | 26,200 | 3,380 | 807 | 81 | 0 | | | |
| 29 | | | | 582 | 17,300 | 3,960 | 756 | 41 | 0 | | | |
| 30 | | | | 444 | - | 11,100 | 719 | 54 | 0 | | | |
| 31 | | | | 375 | - | 10,600 | - | 154 | - | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Calendar year 1939 | | | | | | 3,751.3 | 164 | 0 | 10.3 | 7,440 | | |
| January..... | | | | | | 22,964 | 3,240 | 0 | 741 | 45,550 | | |
| February..... | | | | | | 83,493 | 26,200 | 377 | 2,879 | 165,600 | | |
| March..... | | | | | | 106,168 | 11,100 | 694 | 3,425 | 210,600 | | |
| April..... | | | | | | 62,555 | 6,760 | 504 | 2,085 | 124,100 | | |
| May..... | | | | | | 6,157 | 488 | 41 | 199 | 12,210 | | |
| June..... | | | | | | 191.2 | 95 | 0 | 6.37 | 379 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| September..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| Water year 1939-40 | | | | | | 281,528.2 | 26,200 | 0 | 769 | 558,400 | | |

Peak discharge.- Jan. 8 (11 p.m.) 4,880 sec.-ft.; Jan. 26 (8 p.m.) 4,680 sec.-ft.; Feb. 17 (8 p.m.) 5,620 sec.-ft.; Feb. 28 (3 p.m.) 28,700 sec.-ft.; Mar. 27 (1 p.m.) 4,390 sec.-ft.; Mar. 30 (7 p.m.) 14,900 sec.-ft.

a Incomplete or no gage-height record; discharge computed on basis of partly or wholly estimated gage-height graph.

North Fork of Cache Creek near Lower Lake, Calif.

Location.- Water-stage recorder, lat. 39°01', long. 122°33', in NE¼ sec. 31, T. 14 N., R. 6 W., 500 feet upstream from Sweet Hollow Creek, 3 miles upstream from mouth, and 7 miles northeast of Lower Lake. Datum of gage is 1,035.43 feet above mean sea level (general adjustment of 1929).

Drainage area.- 214 square miles.

Records available.- July 1930 to September 1940.

Average discharge.- 10 years, 151 second-feet.

Extremes.- Maximum discharge during year, 20,000 second-feet Feb. 28 (gage height, 13.9 feet); by slope-area method and logarithmic plotting; minimum, 0.2 second-foot Oct. 1 to Dec. 1.

1930-40: Maximum discharge, that of Feb. 28, 1940; no flow at times in each year 1930 to 1936.

Remarks.- Records good. Several small diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|--------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 0.2 | 0.2 | 0.2 | 637 | 328 | 2,820 | 2,120 | 110 | 59 | 8 | 1.6 | 0.6 |
| 2 | .2 | .2 | .3 | 803 | 299 | 2,000 | 1,180 | 102 | 54 | 7.5 | 1.5 | .7 |
| 3 | .2 | .2 | .3 | 340 | 674 | 1,080 | 906 | 100 | 50 | 6.5 | 1.5 | .7 |
| 4 | .2 | .2 | .3 | 1,060 | 654 | 786 | 743 | 179 | 44 | 6 | 1.4 | .8 |
| 5 | .2 | .2 | .3 | 299 | 670 | 625 | 651 | 154 | 42 | 5.5 | 1.4 | .9 |
| 6 | .2 | .2 | .3 | 188 | 736 | 526 | 560 | 124 | 40 | 4.8 | 1.2 | 1.0 |
| 7 | .2 | .2 | .4 | 412 | 670 | 482 | 550 | 112 | 37 | 4.5 | 1.2 | 1.0 |
| 8 | .2 | .2 | .4 | 1,950 | 516 | 450 | 480 | 102 | 35 | 4.2 | 1.1 | .9 |
| 9 | .2 | .2 | .5 | 1,330 | 418 | 402 | 424 | 102 | 32 | 4.0 | 1.1 | .9 |
| 10 | .2 | .2 | 1.2 | 1,530 | 360 | 356 | 384 | 98 | 31 | 4.0 | 1.1 | .9 |
| 11 | .2 | .2 | 1.1 | 986 | 307 | 321 | 352 | 94 | 29 | 3.7 | 1.1 | .9 |
| 12 | .2 | .2 | .6 | 542 | 268 | 266 | 324 | 90 | 27 | 3.7 | 1.0 | .9 |
| 13 | .2 | .2 | .6 | 353 | 539 | 259 | 296 | 87 | 26 | 3.5 | 1.0 | .9 |
| 14 | .2 | .2 | .6 | 266 | 1,390 | 244 | 260 | 81 | 24 | 3.5 | .9 | .9 |
| 15 | .2 | .2 | .6 | 208 | 802 | 235 | 255 | 80 | 22 | 3.3 | 1.0 | .9 |
| 16 | .2 | .2 | .8 | 174 | 565 | 226 | 231 | 76 | 22 | 3.3 | 1.0 | 1.0 |
| 17 | .2 | .2 | .9 | 149 | 1,440 | 205 | 209 | 71 | 21 | 3.3 | .9 | 1.5 |
| 18 | .2 | .2 | .9 | 131 | 1,000 | 190 | 194 | 68 | 20 | 3.5 | .9 | 1.3 |
| 19 | .2 | .2 | 1.0 | 114 | 724 | 180 | 182 | 64 | 19 | 3.5 | 1.0 | 1.0 |
| 20 | .2 | .2 | 1.0 | 100 | 575 | 172 | 169 | 62 | 19 | 3.3 | .9 | .9 |
| 21 | .2 | .2 | 1.0 | 90 | 476 | 162 | 161 | 59 | 17 | 3.3 | .8 | .9 |
| 22 | .2 | .2 | 1.1 | 83 | 418 | 152 | 152 | 56 | 15 | 3.1 | .8 | .9 |
| 23 | .2 | .2 | 1.4 | 84 | 356 | 149 | 145 | 54 | 14 | 2.9 | .8 | .9 |
| 24 | .2 | .2 | 1.2 | 60 | 316 | 145 | 141 | 53 | 12 | 2.6 | .9 | .9 |
| 25 | .2 | .2 | 1.3 | 1,190 | 350 | 142 | 154 | 50 | 12 | 2.4 | .8 | .9 |
| 26 | .2 | .2 | 2.3 | 1,850 | 2,300 | 936 | 169 | 48 | 11 | 2.2 | .7 | .9 |
| 27 | .2 | .2 | 2.6 | 888 | 11,400 | 1,160 | 152 | 47 | 10 | 2.2 | .7 | .9 |
| 28 | .2 | .2 | 3.0 | 560 | 12,400 | 916 | 130 | 46 | 9.5 | 2.0 | .7 | .9 |
| 29 | .2 | .2 | 4.0 | 411 | 4,880 | 3,030 | 122 | 46 | 9 | 2.0 | .7 | .9 |
| 30 | .2 | .2 | 16 | 325 | - | 6,190 | 118 | 64 | 8.5 | 1.6 | .7 | .8 |
| 31 | .2 | - | 53 | 386 | - | 3,620 | - | 68 | - | 1.5 | .7 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 6.2 | | 0.2 | 0.2 | 0.2 | 12 | | | |
| November..... | | | | 6.0 | | .2 | .2 | .2 | 12 | | | |
| December..... | | | | 99.2 | | 53 | .2 | 3.20 | 197 | | | |
| Calendar year 1939..... | | | | 8,375.2 | | 278 | .1 | 22.9 | 16,610 | | | |
| January..... | | | | 17,519 | | 1,950 | 80 | 565 | 34,750 | | | |
| February..... | | | | 46,061 | | 12,400 | 268 | 1,588 | 91,340 | | | |
| March..... | | | | 28,446 | | 6,190 | 142 | 918 | 56,420 | | | |
| April..... | | | | 11,914 | | 2,120 | 118 | 397 | 23,630 | | | |
| May..... | | | | 2,547 | | 179 | 46 | 82.2 | 5,050 | | | |
| June..... | | | | 771.0 | | 59 | 8.5 | 25.7 | 1,530 | | | |
| July..... | | | | 115.4 | | 8 | 1.5 | 3.72 | 229 | | | |
| August..... | | | | 31.1 | | 1.6 | .7 | 1.00 | 62 | | | |
| September..... | | | | 27.5 | | 1.5 | .6 | .92 | 55 | | | |
| Water year 1939-40..... | | | | 107,533.4 | | 12,400 | .2 | 294 | 213,300 | | | |

Peak discharge.- Jan. 8 (11 a.m.) 3,340 sec.-ft.; Jan. 25 (9:30 p.m.) 2,910 sec.-ft.; Feb. 17 (10 a.m.) 2,700 sec.-ft.; Feb. 28 (5 a.m.) 20,000 sec.-ft.; Mar. 26 (8 p.m.) 3,260 sec.-ft.; Mar. 30 (6 a.m.) 6,640 sec.-ft.

PUTAH CREEK BASIN

Putah Creek near Guenoc, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}46'$, long. $122^{\circ}31'$, in sec. 22, T. 11 N., R. 6 W., just upstream from dam site and $3\frac{1}{2}$ miles downstream from highway bridge at Guenoc. Datum of gage is 913.4 feet above mean sea level (river-profile survey).

Drainage area.- 112 square miles.

Records available.- February 1904 to July 1906, July 1930 to September 1940.

Average discharge.- 10 years (1930-40) 171 second-feet.

Extremes.- Maximum discharge during year, 21,900 second-feet Feb. 27 (gage height, 21.5 feet); minimum, 0.8 second-foot July 26 (gage height, 1.05 feet).

1904-6, 1930-40: Maximum discharge observed, 24,600 second-feet Mar. 10, 1904 (gage height, 20.1 feet, datum then in use), from rating curve extended above 14,500 second-feet; minimum discharge, 0.6 second-foot Sept. 30, Oct. 4, 1932.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Small diversions above station.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Aug. 10 to Sept. 30)

| | | | | | | | |
|-----|------|-----|-----|------|-------|------|--------|
| 1.1 | 1.1 | 2.4 | 71 | 5.0 | 666 | 11.0 | 5,500 |
| 1.2 | 2.0 | 2.7 | 116 | 6.0 | 1,040 | 12.0 | 6,700 |
| 1.4 | 5.2 | 3.0 | 169 | 7.0 | 1,660 | 13.0 | 8,000 |
| 1.6 | 10.5 | 3.5 | 262 | 8.0 | 2,450 | 14.0 | 9,400 |
| 1.8 | 19 | 4.0 | 376 | 9.0 | 3,350 | 15.0 | 10,900 |
| 2.1 | 37 | 4.5 | 510 | 10.0 | 4,370 | 17.0 | 14,100 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|-------|-------|-----|------|------|------|-------|
| 1 | 2.4 | 1.8 | 2.0 | 2,180 | 418 | 2,400 | 1,070 | 92 | 47 | 14 | 7 | 4.6 |
| 2 | 2.4 | 1.8 | 2.0 | 2,480 | 326 | 1,100 | 752 | 90 | 45 | 13 | 7 | 4.6 |
| 3 | 2.3 | 1.8 | 2.0 | 838 | 1,130 | 800 | 629 | 90 | 40 | 12 | 7 | 4.6 |
| 4 | 2.3 | 1.8 | 2.0 | 1,750 | 669 | 649 | 510 | 142 | 36 | 11 | 7 | 4.4 |
| 5 | 2.3 | 1.8 | 2.0 | 510 | 495 | 537 | 426 | 123 | 33 | 10 | 7 | 4.4 |
| 6 | 2.3 | 1.8 | 2.0 | 436 | 570 | 455 | 371 | 102 | 31 | 10 | 7 | 4.4 |
| 7 | 2.1 | 1.8 | 2.0 | 1,470 | 458 | 398 | 376 | 91 | 29 | 10 | 6.5 | 4.4 |
| 8 | 2.1 | 1.8 | 2.1 | 4,460 | 369 | 357 | 376 | 84 | 28 | 9.5 | 6.5 | 4.2 |
| 9 | 2.0 | 1.8 | 2.1 | 2,500 | 310 | 317 | 376 | 79 | 27 | 9.5 | 6.5 | 4.2 |
| 10 | 2.0 | 1.8 | 402 | 1,600 | 269 | 284 | 280 | 74 | 26 | 9.5 | 6.5 | 4.2 |
| 11 | 1.9 | 1.8 | 295 | 1,160 | 237 | 252 | 252 | 70 | 25 | 9 | 6 | 4.2 |
| 12 | 1.9 | 1.8 | 43 | 763 | 214 | 230 | 232 | 67 | 23 | 9 | 6 | 4.0 |
| 13 | 1.9 | 1.8 | 18 | 498 | 1,160 | 213 | 214 | 63 | 22 | 8.5 | 6 | 4.0 |
| 14 | 1.9 | 1.8 | 10 | 366 | 1,830 | 196 | 200 | 61 | 20 | 8.5 | 6 | 4.0 |
| 15 | 1.9 | 1.8 | 7 | 286 | 707 | 185 | 185 | 58 | 20 | 8.5 | 6 | 4.0 |
| 16 | 1.9 | 1.8 | 5.5 | 234 | 504 | 180 | 173 | 56 | 20 | 8.5 | 6 | 3.8 |
| 17 | 1.9 | 1.8 | 4.7 | 200 | 2,560 | 164 | 162 | 52 | 20 | 8.5 | 6 | 3.8 |
| 18 | 1.9 | 1.8 | 4.3 | 174 | 858 | 149 | 155 | 50 | 20 | 8.5 | 6 | 3.8 |
| 19 | 1.9 | 1.8 | 4.1 | 155 | 610 | 140 | 142 | 48 | 20 | 8.5 | 6 | 3.8 |
| 20 | 1.9 | 1.7 | 4.1 | 137 | 480 | 130 | 133 | 46 | 18 | 8.5 | 5.5 | 3.9 |
| 21 | 1.8 | 1.7 | 3.9 | 124 | 403 | 121 | 128 | 44 | 18 | 8.5 | 5.5 | 3.9 |
| 22 | 1.8 | 1.7 | 4.1 | 114 | 347 | 114 | 121 | 42 | 17 | 8.5 | 5.5 | 3.8 |
| 23 | 1.8 | 1.8 | 4.8 | 113 | 299 | 108 | 118 | 42 | 16 | 8 | 5.5 | 3.8 |
| 24 | 1.9 | 1.8 | 5.5 | 108 | 271 | 105 | 114 | 41 | 16 | 8 | 5.5 | 3.9 |
| 25 | 1.9 | 2.0 | 5.5 | 2,310 | 390 | 103 | 137 | 38 | 16 | 7.5 | 5 | 3.9 |
| 26 | 1.9 | 2.1 | 5.5 | 3,670 | 6,010 | 1,470 | 162 | 36 | 15 | 5 | 5 | 3.9 |
| 27 | 1.9 | 2.0 | 6 | 974 | 14,100 | 1,110 | 128 | 35 | 14 | 7 | 4.8 | 3.9 |
| 28 | 1.9 | 2.0 | 6.5 | 600 | 11,200 | 710 | 113 | 34 | 14 | 7.5 | 4.8 | 3.9 |
| 29 | 1.8 | 2.0 | 12 | 439 | 3,900 | 3,180 | 105 | 34 | 14 | 7.5 | 4.8 | 3.9 |
| 30 | 1.8 | 2.0 | 27 | 354 | - | 5,430 | 98 | 49 | 14 | 7 | 4.8 | 3.8 |
| 31 | 1.8 | - | 174 | 442 | - | 2,190 | - | 56 | - | 7 | 4.6 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 61.5 | 2.4 | 1.8 | 1.98 | 122 |
| November..... | 55.0 | 2.0 | 1.7 | 1.83 | 109 |
| December..... | 1,070.7 | 402 | 2.0 | 34.5 | 2,120 |
| Calendar year 1939..... | 12,876.0 | 652 | 1.7 | 35.3 | 25,530 |
| January..... | 31,455 | 4,460 | 108 | 1,015 | 62,390 |
| February..... | 50,889 | 14,100 | 214 | 1,755 | 100,900 |
| March..... | 23,777 | 5,430 | 103 | 767 | 47,160 |
| April..... | 8,177 | 1,070 | 98 | 273 | 16,220 |
| May..... | 1,989 | 142 | 34 | 64.2 | 3,950 |
| June..... | 704 | 47 | 14 | 23.5 | 1,400 |
| July..... | 276.0 | 14 | 5 | 8.90 | 547 |
| August..... | 183.3 | 7 | 4.6 | 5.91 | 364 |
| September..... | 122.0 | 4.6 | 3.8 | 4.07 | 242 |
| Water year 1939-40..... | 118,759.5 | 14,100 | 1.7 | 324 | 235,500 |

Peak discharge.- Jan. 1 (10 p.m.) 5,520 sec.-ft.; Jan. 8 (10 a.m.) 7,920 sec.-ft.; Jan. 26 (6:30 a.m.) 6,100 sec.-ft.; Feb. 17 (6 a.m.) 5,280 sec.-ft.; Feb. 27 (3 a.m.) 21,900 sec.-ft.; Mar. 30 (8 a.m.) 7,280 sec.-ft.

Note.- No gage-height record Feb. 27 to Mar. 3, Aug. 24 to Sept. 18; discharge computed on basis of discharge measurements made on Mar. 3 and Aug. 27, range of stage, and records for stations near Winters and North Fork of Cache Creek near Lower Lake.

Putah Creek near Winters, Calif.

Location.- Water-stage recorder, lat. 38°31', long. 122°05', in NE¼ sec. 28, T. 8 N., R. 2 W., 6 miles west of Winters and 8 miles downstream from Capell Creek. Datum of gage is 160.75 feet above mean sea level. Prior to Feb. 29 at datum about 1 foot lower.

Drainage area.- 614 square miles.

Records available.- June 1930 to September 1940. 1905-31 at site at Winters, 6 miles downstream; records equivalent except for very low flows.

Average discharge.- 10 years (1930-40), 417 second-feet.

Extremes.- Maximum discharge during year, 70,500 second-feet Feb. 27 (gage height, 30.5 feet, present datum); minimum, 1.8 second-feet Oct. 13.

1905-40: Maximum discharge, that of Feb. 27, 1940; minimum (at present site), 0.3 second-foot Aug. 23, 24, 26, 27, 1931, and Aug. 7, Sept. 24, 25, 1939.

Revisions: The maximum discharge for the water year 1937 has been revised to 50,800 second-feet Feb. 4 (gage height, 25.4 feet), superseding figure published in Water-Supply Papers 831, 843, 861, and 881.

The maximum discharge for the water year 1938 has been revised to 48,100 second-feet Dec. 11 (gage height, 24.8 feet), superseding figure published in Water-Supply Papers 843 and 861.

Remarks.- Records excellent above 10 second-feet and good below. Several pumps above station divert water for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|--------|--------|------------------|---------|---------|-------|------|----------------------|-------|
| 1 | 4.3 | 3.1 | 4.3 | 62 | 880 | 4,880 | 4,230 | 293 | 157 | 27 | 8 | 11 |
| 2 | 4.4 | 3.4 | 4.1 | 4,900 | 718 | 3,140 | 2,680 | 274 | 136 | 26 | 8 | 10 |
| 3 | 4.6 | 3.6 | 4.1 | 2,060 | 1,520 | 2,390 | 2,110 | 266 | 126 | 24 | 7.5 | 10 |
| 4 | 4.8 | 3.8 | 3.8 | 3,330 | 1,970 | 1,940 | 1,800 | 298 | 117 | 24 | 7 | 11 |
| 5 | 4.8 | 4.6 | 3.8 | 1,240 | 1,220 | 1,620 | 1,520 | 346 | 107 | 26 | 7 | 11 |
| 6 | 5.5 | 4.8 | 4.0 | 802 | 1,070 | 1,440 | 1,320 | 300 | 100 | 23 | 6.5 | 12 |
| 7 | 5.5 | 4.8 | 5.5 | 1,050 | 1,200 | 1,240 | 1,200 | 262 | 94 | 22 | 6 | 12 |
| 8 | 4.1 | 4.8 | 6.5 | 11,400 | 860 | 1,100 | 1,200 | 244 | a90 | 21 | 5.5 | 11 |
| 9 | 3.1 | 5 | 7 | 7,030 | 722 | 988 | 1,080 | 232 | a85 | 19 | 4.6 | 10 |
| 10 | 2.5 | 5 | 9.5 | 3,400 | 630 | 888 | 947 | 217 | a78 | 17 | 6 | 10 |
| 11 | 2.2 | 4.8 | 161 | 3,290 | 558 | 808 | 856 | 208 | a72 | 16 | 6.5 | 11 |
| 12 | 1.9 | 5 | 197 | 2,060 | 489 | 735 | 789 | 200 | a70 | 14 | 7 | 11 |
| 13 | 1.8 | 6 | 79 | 1,220 | 480 | 675 | 728 | 193 | a66 | 13 | 10 | 11 |
| 14 | 2.3 | 5.5 | 39 | 844 | 7,400 | 628 | 675 | 183 | a62 | 12 | 10 | 11 |
| 15 | 2.6 | 5.5 | 23 | 648 | 2,270 | 597 | 625 | 170 | a60 | 14 | 11 | 10 |
| 16 | 2.8 | 5.5 | 16 | 528 | 1,400 | 573 | 577 | 164 | a58 | 12 | 11 | 11 |
| 17 | 3.3 | 5.5 | 14 | 441 | 4,860 | 536 | 533 | 160 | a57 | 12 | 11 | 11 |
| 18 | 3.3 | 5.5 | 13 | 378 | 2,960 | 488 | 498 | 152 | a56 | 10 | 11 | 11 |
| 19 | 3.0 | 5.5 | 12 | 330 | 1,660 | 458 | 473 | 143 | a54 | 9 | 11 | 10 |
| 20 | 3.0 | 5 | 11 | 298 | 1,260 | 428 | 437 | 137 | 52 | 10 | 10 | 10 |
| 21 | 3.0 | 5.5 | 11 | 256 | 1,040 | 404 | 413 | 132 | 47 | 11 | 10 | 10 |
| 22 | 3.7 | 5.5 | 11 | 234 | 896 | 378 | 392 | 128 | 46 | 11 | 10 | 10 |
| 23 | 4.0 | 5.5 | 11 | 222 | 778 | 356 | 375 | 126 | 43 | 11 | 11 | 10 |
| 24 | 4.1 | 5.5 | 11 | 216 | 690 | 338 | 361 | 122 | 39 | 9 | 11 | 11 |
| 25 | 3.7 | 5.5 | 11 | 1,990 | 718 | 338 | 372 | 120 | 36 | 9.5 | 11 | 11 |
| 26 | 3.1 | 5.5 | 10 | 13,400 | 4,490 | 526 | 524 | 115 | 34 | 10 | 11 | 10 |
| 27 | 3.7 | 5.5 | 10 | 3,530 | 54,500 | 4,310 | 464 | 108 | 33 | 10 | 11 | 8 |
| 28 | 4.1 | 6 | 10 | 1,670 | 43,900 | 1,610 | 378 | 106 | 30 | 9.5 | 11 | 6 |
| 29 | 4.0 | 4.8 | 11 | 1,150 | 16,000 | 5,500 | 335 | 101 | 30 | 11 | 10 | 6 |
| 30 | 3.4 | 4.4 | 11 | 880 | - | 26,100 | 312 | 122 | 28 | 10 | 10 | 5.5 |
| 31 | 3.1 | - | 11 | 774 | - | 9,850 | - | 173 | - | 8 | 11 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 109.7 | 5.5 | 1.8 | 3.54 | | 218 | |
| November..... | | | | | | 150.4 | 6 | 3.1 | 5.01 | | 298 | |
| December..... | | | | | | 735.6 | 197 | 3.8 | 23.7 | | 1,460 | |
| Calendar year 1939..... | | | | | | 18,906.6 | 1,140 | .3 | 51.8 | | 37,500 | |
| January..... | | | | | | 69,623 | 13,400 | 62 | 2,246 | | 138,100 | |
| February..... | | | | | | 157,139 | 54,500 | 480 | 5,419 | | 311,700 | |
| March..... | | | | | | 75,262 | 26,100 | 338 | 2,428 | | 149,300 | |
| April..... | | | | | | 28,204 | 4,230 | 312 | 940 | | 55,940 | |
| May..... | | | | | | 5,795 | 346 | 101 | 187 | | 11,490 | |
| June..... | | | | | | 2,063 | 157 | 28 | 68.8 | | 4,090 | |
| July..... | | | | | | 461.0 | 27 | 8 | 14.9 | | 914 | |
| August..... | | | | | | 281.6 | 11 | 4.6 | 9.08 | | 559 | |
| September..... | | | | | | 302.5 | 12 | 5.5 | 10.1 | | 600 | |
| Water year 1939-40..... | | | | | | 340,126.8 | 54,500 | 1.8 | 929 | | 674,700 | |

Peak discharge.- Jan. 8 (5 p.m.) 15,800 sec.-ft.; Jan. 26 (1:30 p.m.) 15,900 sec.-ft.; Feb. 14 (6 a.m.) 11,800 sec.-ft.; Feb. 17 (4 p.m.) 10,700 sec.-ft.; Feb. 27 (6 a.m.) 70,500 sec.-ft.; Mar. 30 (11:30 a.m.) 32,400 sec.-ft.

a No gage-height record; discharge computed on basis of records for station near Guenoc.

NAPA RIVER BASIN

Napa River near St. Helena, Calif.

Location.- Water-stage recorder, lat. 38°29'40", long. 122°25'50", in SE¼ sec. 32, T. 8 N., R. 5 W., a quarter of a mile upstream from highway bridge, 1.3 miles northeast of Zinfandel, and 2.5 miles east of St. Helena.

Drainage area.- 83.5 square miles.

Records available.- November 1929 to September 1932, November 1939 to September 1940.

Extremes.- Maximum discharge during period November 1939 to September 1940, 11,700 second-feet Feb. 27 (gage height, 14.5 feet); practically no flow part of July 23.

1929-32, 1939-40: Maximum discharge, that of Feb. 27, 1940; minimum, that of July 23, 1940.

Peak discharge for Feb. 27, 1940, probably exceeded any discharge during the period of no record 1933-38.

Remarks.- Records good. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|-------|-------|------|-----|------|------|------|-------|
| 1 | | | 0.2 | 159 | 128 | 845 | 744 | 31 | 20 | 7 | 4.0 | 1.4 |
| 2 | | - | .2 | 530 | 112 | 546 | 500 | 31 | 18 | 7 | 3.1 | 1.4 |
| 3 | | - | .2 | 172 | 338 | 394 | 383 | 30 | 17 | 7 | 3.4 | 1.3 |
| 4 | | - | .2 | 484 | 291 | 276 | 286 | 48 | 16 | 7.5 | 3.7 | 1.3 |
| 5 | | - | .2 | 109 | 227 | 210 | 229 | 36 | 15 | 6.5 | 4.0 | 1.3 |
| 6 | | - | .2 | 79 | 242 | 175 | 190 | 31 | 15 | 6.5 | 3.5 | 1.3 |
| 7 | | - | .2 | 313 | 205 | 150 | 180 | 29 | 14 | 7 | 2.5 | 1.3 |
| 8 | | - | .3 | 1,490 | 154 | 129 | 172 | 27 | 14 | 6 | 2.0 | 1.3 |
| 9 | | - | .3 | 868 | 123 | 113 | 168 | 25 | 14 | 5 | 2.0 | 1.3 |
| 10 | | - | .7 | 531 | 106 | 104 | 122 | 24 | 13 | 5.5 | 2.0 | 1.3 |
| 11 | | - | .3 | 475 | 92 | 112 | 109 | 23 | 13 | 4.9 | 2.5 | 1.3 |
| 12 | | - | .2 | 309 | 79 | 86 | 97 | 22 | 13 | 4.6 | 3.1 | 1.3 |
| 13 | | - | .2 | 162 | 572 | 76 | 86 | 22 | 12 | 4.6 | 3.1 | 1.3 |
| 14 | | - | .2 | 108 | 1,270 | 71 | 82 | 21 | 11 | 4.9 | 3.4 | 1.3 |
| 15 | | - | .2 | 79 | 387 | 68 | 76 | 20 | 12 | 4.3 | 3.4 | 1.3 |
| 16 | | - | .2 | 65 | 253 | 68 | 68 | 21 | 11 | 4.9 | 3.4 | 1.3 |
| 17 | | - | .2 | 55 | 1,200 | 61 | 62 | 20 | 11 | 4.6 | 3.4 | 1.3 |
| 18 | | - | .2 | 48 | 504 | 57 | 57 | 20 | 11 | 3.2 | 2.8 | 1.3 |
| 19 | | 0.1 | .2 | 42 | 513 | 51 | 52 | 19 | 9.5 | 4.1 | 2.5 | 1.2 |
| 20 | | .1 | .2 | 38 | 222 | 48 | 48 | 19 | 9.5 | 5.5 | 2.2 | 1.2 |
| 21 | | .2 | .2 | 35 | 177 | 48 | 46 | 19 | 8.5 | 4.0 | 2.0 | 1.2 |
| 22 | | .2 | .2 | 33 | 148 | 45 | 44 | 18 | 8.5 | 3.2 | 2.0 | 1.2 |
| 23 | | .2 | .2 | 57 | 127 | 42 | 42 | 18 | 8.5 | 2.6 | 1.9 | 1.2 |
| 24 | | .2 | .2 | 33 | 116 | 41 | 39 | 17 | 8 | 3.5 | 1.8 | 1.2 |
| 25 | | .2 | .2 | 738 | 170 | 41 | 55 | 16 | 8 | 4.0 | 1.8 | 1.2 |
| 26 | | .2 | .2 | 1,410 | 2,200 | 767 | 71 | 15 | 7.5 | 3.5 | 1.8 | 1.3 |
| 27 | | .2 | .2 | 435 | 8,520 | 685 | 52 | 14 | 7 | 4.3 | 1.8 | 1.2 |
| 28 | | .2 | .2 | 219 | 4,810 | 386 | 40 | 15 | 6.5 | 2.6 | 1.6 | 1.0 |
| 29 | | .2 | .3 | 170 | 1,960 | 1,990 | 38 | 16 | 6.5 | 3.2 | 1.6 | 1.0 |
| 30 | | .2 | .3 | 134 | - | 5,520 | 34 | 22 | 8 | 2.8 | 1.6 | 1.0 |
| 31 | | - | .3 | 146 | - | 1,840 | - | 20 | - | 3.0 | 1.6 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|---------------------|------------------|---------|---------|------|----------------------|
| October..... | - | - | - | - | - |
| November 19-30..... | 2.2 | 0.2 | 0.1 | 0.18 | 4.4 |
| December..... | 7.3 | .7 | .2 | .24 | 14 |
| Calendar year | - | - | - | - | - |
| January..... | 9,506 | 1,490 | 33 | 307 | 18,850 |
| February..... | 25,046 | 8,520 | 79 | 864 | 49,680 |
| March..... | 15,045 | 5,520 | 41 | 485 | 29,840 |
| April..... | 4,172 | 744 | 34 | 139 | 8,280 |
| May..... | 709 | 48 | 14 | 22.9 | 1,410 |
| June..... | 346.0 | 20 | 6.5 | 11.5 | 686 |
| July..... | 147.3 | 7.5 | 2.6 | 4.75 | 292 |
| August..... | 79.5 | 4.0 | 1.6 | 2.56 | 158 |
| September..... | 37.5 | 1.4 | 1.0 | 1.25 | 74 |
| The period..... | - | - | - | - | 109,300 |

Peak discharge.- Feb. 27 (6 a.m.) 11,700 sec.-ft.; Mar. 30 (8 a.m.) 7,070 sec.-ft.

Conn Creek near St. Helena, Calif.

Location.- Water-stage recorder, lat. $38^{\circ}29'$, long. $122^{\circ}24'$, in NW $\frac{1}{4}$ sec. 3, T. 7 N., R. 5 W., a quarter of a mile upstream from highway bridge, 4 miles southeast of St. Helena, and 6 miles upstream from mouth. Altitude of gage, about 180 feet (from topographic map).

Drainage area.- 52.0 square miles.

Records available.- November 1929 to September 1940.

Average discharge.- 10 years (1930-40) 27.5 second-feet.

Extremes.- Maximum discharge during year, 7,700 second-feet Feb. 27 (gage height, 11.80 feet), from rating curve extended above 6,000 second-feet; no flow for several months. 1930-40: Maximum discharge, that of Feb. 27, 1940; no flow for several months in each year.

Remarks.- Records good. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | 0 | 20 | 37 | 398 | 432 | 19 | 7.5 | 1.4 | | |
| 2 | | | 0 | 156 | 31 | 250 | 266 | 18 | 6.5 | 1.2 | | |
| 3 | | | 0 | 36 | 128 | 109 | 207 | 18 | 6 | .8 | | |
| 4 | | | 0 | 132 | 96 | 146 | 158 | 24 | 5.5 | .8 | | |
| 5 | | | 0 | 27 | 76 | 118 | 128 | 17 | 5 | .7 | | |
| 6 | | | 0 | 20 | 75 | 94 | 113 | 16 | a5 | .5 | | |
| 7 | | | 0 | 130 | 61 | 79 | 101 | 14 | a5 | .5 | | |
| 8 | | | 0 | 620 | 50 | 71 | 92 | 13 | a4.5 | .5 | | |
| 9 | | | 0 | 231 | 43 | 63 | 80 | 12 | a4.5 | .5 | | |
| 10 | | | 0 | 164 | 37 | 56 | 70 | 12 | a4.5 | .4 | | |
| 11 | | | 0 | 168 | 33 | 50 | 61 | 11 | a4.0 | .4 | | |
| 12 | | | 0 | 106 | 30 | 46 | 55 | 11 | a4.0 | .2 | | |
| 13 | | | 0 | 59 | 150 | 42 | 51 | 10 | 3.8 | .1 | | |
| 14 | | | 0 | 40 | 276 | 39 | 46 | 9.5 | a3.6 | .1 | | |
| 15 | | | 0 | 29 | 115 | 37 | 43 | 8.5 | a3.6 | .1 | | |
| 16 | | | 0 | 23 | 84 | 37 | 40 | 9.5 | a3.4 | .3 | | |
| 17 | | | 0 | 19 | 293 | 34 | 36 | 9.5 | a3.3 | .3 | | |
| 18 | | | 0 | 16 | 150 | 30 | 34 | 8.5 | a3.2 | .2 | | |
| 19 | | | 0 | 14 | 103 | 29 | 32 | 8 | a3.1 | .1 | | |
| 20 | | | 0 | 12 | 80 | 27 | 30 | 8 | a3.0 | .1 | | |
| 21 | | | 0 | 11 | 67 | 25 | 28 | 8.5 | a2.9 | 0 | | |
| 22 | | | 0 | 11 | 57 | 24 | 26 | 8.5 | a2.8 | 0 | | |
| 23 | | | 0 | 11 | 48 | 23 | 25 | 8.5 | a2.7 | 0 | | |
| 24 | | | 0 | 10 | 43 | 22 | 25 | 8.5 | a2.6 | 0 | | |
| 25 | | | 0 | 298 | 61 | 22 | 34 | 8.5 | 2.6 | 0 | | |
| 26 | | | 0 | 435 | 985 | 154 | 32 | 8 | 2.3 | 0 | | |
| 27 | | | 0 | 144 | 3,400 | 118 | 26 | 7.5 | 2.1 | 0 | | |
| 28 | | | 0 | 83 | 2,060 | 94 | 24 | 6.5 | 1.9 | 0 | | |
| 29 | | | 0 | 58 | 956 | 1,050 | 22 | 7.5 | 1.8 | 0 | | |
| 30 | | | .4 | 45 | - | 2,820 | 20 | 12 | 1.8 | 0 | | |
| 31 | | | .8 | 44 | - | 902 | - | 9.5 | - | 0 | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| November..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| December..... | | | | 1.2 | .8 | 0 | .04 | 2.4 | | | | |
| Calendar year 1939..... | | | | 618.8 | 82 | 0 | 1.70 | 1,230 | | | | |
| January..... | | | | 3,172 | 620 | 10 | 102 | 6,290 | | | | |
| February..... | | | | 9,625 | 3,400 | 30 | 332 | 19,080 | | | | |
| March..... | | | | 7,089 | 2,820 | 22 | 229 | 14,060 | | | | |
| April..... | | | | 2,337 | 432 | 20 | 77.9 | 4,640 | | | | |
| May..... | | | | 350.0 | 24 | 6.5 | 11.3 | 694 | | | | |
| June..... | | | | 112.3 | 7.5 | 1.8 | 3.74 | 223 | | | | |
| July..... | | | | 9.2 | 1.4 | 0 | .30 | 18 | | | | |
| August..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| September..... | | | | 0 | 0 | 0 | 0 | 0 | | | | |
| Water year 1939-40..... | | | | 22,695.7 | 3,400 | 0 | 62.0 | 45,020 | | | | |

Peak discharge.- Jan. 8 (6 a.m.) 1,680 sec.-ft.; Jan. 25 (5 p.m.) 835 sec.-ft.; Feb. 13 (9:30 p.m.) 808 sec.-ft.; Feb. 17 (7 a.m.) 808 sec.-ft.; Feb. 27 (3 a.m.) 7,700 sec.-ft.; Mar. 30 (7 a.m.) 4,100 sec.-ft.

a No gage-height record; discharge interpolated.

RUSSIAN RIVER BASIN

Russian River near Hopland, Calif.

Location.- Wire-weight gage, lat. 39°01'35", long. 123°07'45", in Rancho De Sanel grant, at highway bridge, a quarter of a mile downstream from McNab Creek, 4 miles north of Hopland, and about 17 miles upstream from Sulphur Creek. Datum of gage is 497.43 feet above mean sea level (general adjustment of 1929).

Drainage area.- 345 square miles.

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 34,100 second-feet Feb. 28 (gage height, 24.9 feet), from rating curve extended above 30,000 second-feet; minimum, 28 second-feet Dec. 4.

Flood of December 1937 reached a stage of about 30.0 feet from floodmarks.

Remarks.- Records good. Gage usually read twice daily. Flow affected by diversion from Eel River through Potter Valley power plant into East Fork of Russian River (see p. 341). Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|-------|------------------|--------|---------|---------|-------|----------------------|------|------|-------|
| 1 | | | 138 | 2,080 | 1,020 | 4,140 | 2,860 | 340 | 154 | 148 | 120 | 148 |
| 2 | | | 126 | 2,460 | 870 | 2,670 | 2,090 | 334 | 120 | 151 | 114 | 145 |
| 3 | | | 57 | 1,350 | 1,500 | 2,160 | 1,750 | 323 | 109 | 160 | 109 | 142 |
| 4 | | | 34 | 2,180 | 2,730 | 1,670 | 1,600 | 417 | 148 | 157 | 120 | 142 |
| 5 | | | 101 | 1,160 | 2,100 | 1,420 | 1,360 | 368 | 142 | 163 | 120 | 145 |
| 6 | | | 118 | 870 | 2,370 | 1,200 | 1,130 | 340 | 151 | 166 | 114 | 148 |
| 7 | | | 91 | 964 | 2,360 | 1,080 | 1,160 | 320 | 151 | 169 | 107 | 154 |
| 8 | | | 68 | 3,950 | 1,460 | 980 | 980 | 296 | 142 | 166 | 112 | 160 |
| 9 | | | 112 | 3,800 | 1,160 | 845 | 856 | 306 | 139 | 136 | 107 | 151 |
| 10 | | | 235 | 4,830 | 985 | 770 | 790 | 293 | 154 | 120 | 114 | 142 |
| 11 | | | 311 | 2,460 | 860 | 688 | 722 | 244 | 130 | 120 | 120 | 130 |
| 12 | | | 184 | 1,420 | 765 | 652 | 682 | 187 | 114 | 122 | 117 | 130 |
| 13 | | | 149 | 990 | 2,280 | 605 | 626 | 184 | 114 | 133 | 99 | 136 |
| 14 | | | 146 | 734 | 5,720 | 590 | 593 | 248 | 120 | 125 | 99 | 136 |
| 15 | | | 202 | 606 | 2,520 | 570 | 576 | 254 | 87 | 120 | 92 | 139 |
| 16 | | | 202 | 510 | 1,770 | 540 | 560 | 254 | 67 | 109 | 94 | 142 |
| 17 | | | 208 | 458 | 7,270 | 522 | 525 | 241 | 54 | 114 | 104 | 127 |
| 18 | | | 196 | 425 | 3,480 | 491 | 498 | 203 | 109 | 114 | 120 | 156 |
| 19 | | | 196 | 386 | 2,140 | 480 | 468 | 160 | 104 | 117 | 125 | 160 |
| 20 | | | 196 | 351 | 1,630 | 475 | 456 | 148 | 104 | 120 | 120 | 160 |
| 21 | | | 190 | 348 | 1,340 | 465 | 442 | 184 | 104 | 125 | 114 | 157 |
| 22 | | | 190 | 338 | 1,130 | 454 | 420 | 222 | 107 | 114 | 112 | 160 |
| 23 | | | 196 | 338 | 972 | 452 | 410 | 222 | 109 | 109 | 125 | 160 |
| 24 | | | 196 | 345 | 891 | 452 | 399 | 216 | 63 | 125 | 130 | 160 |
| 25 | | | 187 | 2,110 | 846 | 450 | 410 | 190 | 61 | 122 | 136 | 160 |
| 26 | | | 190 | 4,550 | 3,760 | 2,450 | 410 | 114 | 170 | 120 | 136 | 157 |
| 27 | | | 193 | 1,680 | 18,800 | 3,700 | 374 | 104 | 82 | 122 | 120 | 154 |
| 28 | | | 199 | 1,340 | 25,500 | 2,870 | 371 | 175 | 104 | 120 | 114 | 154 |
| 29 | | | 304 | 950 | 9,220 | 5,890 | 351 | 175 | 142 | 114 | 125 | 154 |
| 30 | | | 411 | 810 | - | 9,320 | 351 | 130 | 130 | 117 | 120 | 154 |
| 31 | | | 1,140 | 1,330 | - | 5,740 | - | 104 | - | 112 | 114 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | - | | - | - | - | - | | | |
| November..... | | | | - | | - | - | - | - | | | |
| December..... | | | | 6,486 | | 1,140 | 34 | 209 | 12,860 | | | |
| Calendar year | | | | - | | - | - | - | - | | | |
| January..... | | | | 46,323 | | 4,830 | 338 | 1,494 | 91,880 | | | |
| February..... | | | | 107,449 | | 25,500 | 765 | 3,705 | 213,100 | | | |
| March..... | | | | 54,994 | | 9,320 | 450 | 1,774 | 109,100 | | | |
| April..... | | | | 24,130 | | 22,860 | 351 | 804 | 47,860 | | | |
| May..... | | | | 7,296 | | 417 | 104 | 235 | 14,470 | | | |
| June..... | | | | 3,365 | | 154 | 54 | 113 | 6,710 | | | |
| July..... | | | | 4,030 | | 169 | 109 | 130 | 7,990 | | | |
| August..... | | | | 3,573 | | 136 | 92 | 115 | 7,090 | | | |
| September..... | | | | 4,473 | | 165 | 127 | 149 | 8,870 | | | |
| The period..... | | | | - | | - | - | - | 519,900 | | | |

a No gage-height record; discharge interpolated.

Russian River near Healdsburg, Calif.

Location.- Water-stage recorder, lat. 38°36'45", long. 122°50'05", in SE¼ sec. 22, T. 9 N., R. 9 W., 2 miles east of Healdsburg and 3½ miles upstream from Dry Creek. Datum of gage is 76.84 feet above mean sea level (general adjustment of 1929).

Drainage area.- 766 square miles.

Records available.- December 1939 to September 1940.

Extremes.- Maximum discharge during period, 67,000 second-feet Feb. 28 (gage height, 30.0 feet); minimum, 74 second-feet June 30 and Aug. 18.
Flood of December 1937 reached a stage of 30.8 feet, from floodmarks.

Remarks.- Records excellent except those for period of backwater, which are fair. Flow affected by diversion from Eel River through Potter Valley power plant into East Fork of Russian River (see p. 341). Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------|------|------|-------|--------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | | | - | 5,790 | 3,360 | 13,900 | 9,030 | 615 | 302 | 133 | 116 | 108 |
| 2 | | | - | 12,500 | 2,680 | 7,830 | 5,690 | 605 | 299 | 154 | 116 | 119 |
| 3 | | | - | 5,740 | 4,570 | 5,620 | 4,450 | 605 | 278 | 163 | 116 | 133 |
| 4 | | | - | 7,620 | 5,120 | 4,460 | 3,650 | 736 | 254 | 166 | 119 | 142 |
| 5 | | | - | 4,090 | 4,690 | 3,710 | 3,120 | 797 | 257 | 166 | 116 | 142 |
| 6 | | | 101 | 3,130 | 4,370 | 3,220 | 2,650 | 650 | 257 | 172 | 122 | 142 |
| 7 | | | 107 | 3,130 | 4,520 | 2,830 | 2,460 | 615 | 251 | 178 | 127 | 151 |
| 8 | | | 114 | 11,300 | 3,460 | 2,490 | 2,380 | 570 | 248 | 187 | 122 | 160 |
| 9 | | | 127 | 12,400 | 2,770 | 2,240 | 2,100 | 552 | 245 | 196 | 113 | 169 |
| 10 | | | 1,260 | 9,520 | 2,330 | 2,010 | 1,580 | 533 | 240 | 187 | 105 | 175 |
| 11 | | | 2,580 | 8,990 | 2,020 | 1,840 | 1,700 | 515 | 240 | 172 | 105 | 178 |
| 12 | | | 855 | 5,000 | 1,800 | 1,670 | 1,570 | 454 | 235 | 154 | 102 | 178 |
| 13 | | | 546 | 3,340 | 3,900 | 1,520 | 1,470 | 426 | 232 | 148 | 105 | 181 |
| 14 | | | 407 | 2,540 | 11,000 | 1,420 | 1,370 | 387 | 219 | 142 | 99 | 181 |
| 15 | | | 341 | 2,020 | 7,540 | 1,340 | 1,270 | 406 | 209 | 151 | 99 | 184 |
| 16 | | | 320 | 1,690 | 4,450 | 1,290 | 1,200 | 414 | 212 | 169 | 89 | 190 |
| 17 | | | 308 | 1,440 | 12,700 | 1,220 | 1,130 | 414 | 200 | 157 | 81 | 195 |
| 18 | | | 301 | 1,250 | 12,100 | 1,160 | 1,040 | 402 | 196 | 145 | 81 | 203 |
| 19 | | | 289 | 1,140 | 6,240 | 1,080 | 979 | 353 | 180 | 145 | 86 | 184 |
| 20 | | | 278 | 1,010 | 4,520 | 1,030 | 916 | 342 | 154 | 142 | 99 | 184 |
| 21 | | | 267 | 938 | 3,500 | 989 | 867 | 320 | 154 | 139 | 102 | 181 |
| 22 | | | 260 | 860 | 2,920 | 945 | 839 | 331 | 145 | 136 | 99 | 193 |
| 23 | | | 260 | 824 | 2,490 | 901 | 790 | 346 | 124 | 136 | 99 | 196 |
| 24 | | | 260 | 788 | 2,210 | 874 | 766 | 346 | 133 | 133 | 102 | 196 |
| 25 | | | 260 | 2,990 | 2,550 | 857 | 790 | 338 | 142 | 122 | 110 | 196 |
| 26 | | | 256 | 10,800 | 9,340 | 2,370 | 867 | 328 | 127 | 122 | 119 | 193 |
| 27 | | | 253 | 7,070 | 43,900 | 7,330 | 772 | 292 | 110 | 119 | 130 | 193 |
| 28 | | | 250 | 3,740 | 62,200 | 5,570 | 702 | 265 | 105 | 119 | 130 | 187 |
| 29 | | | 267 | 2,750 | 33,900 | 9,030 | 670 | 274 | 113 | 125 | 122 | 187 |
| 30 | | | 372 | 2,230 | - | 23,800 | 636 | 331 | 97 | 150 | 113 | 187 |
| 31 | | | 801 | 3,700 | - | 18,000 | - | 346 | - | 122 | 108 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December 6-31..... | | | | | | 11,440 | 2,580 | 101 | 440 | 22,690 | | |
| Calendar year..... | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 140,330 | 12,500 | 785 | 4,527 | 275,300 | | |
| February..... | | | | | | 266,950 | 62,200 | 1,800 | 9,205 | 529,500 | | |
| March..... | | | | | | 132,546 | 23,800 | 857 | 4,276 | 262,900 | | |
| April..... | | | | | | 57,754 | 9,030 | 636 | 1,925 | 114,600 | | |
| May..... | | | | | | 14,001 | 797 | 265 | 452 | 27,770 | | |
| June..... | | | | | | 5,958 | 302 | 97 | 199 | 111,820 | | |
| July..... | | | | | | 4,635 | 196 | 119 | 149 | 9,190 | | |
| August..... | | | | | | 3,552 | 130 | 81 | 108 | 6,650 | | |
| September..... | | | | | | 5,211 | 203 | 108 | 174 | 10,340 | | |
| The period..... | | | | | | - | - | - | - | 1,274,000 | | |

Peak discharge.- Jan. 8 (5:30 p.m.) 15,700 sec.-ft.; Feb. 28 (12 m.) 67,000 sec.-ft.; Mar. 30 (8:30 a.m.) 26,400 sec.-ft.

Note.- Backwater from dam at Healdsburg, June 9 to Sept. 30; discharge computed on basis of nine discharge measurements, record of gage heights and changes at dam.

Russian River at Guerneville, Calif.

Location.— Wire-weight gage, lat. 38°30'03", long. 122°59'36", in NW¼ sec. 32, T. 8 N., R. 10 W., at highway bridge in Guerneville, 6½ miles upstream from Austin Creek. Datum of gage is 8.66 feet above mean sea level (general adjustment of 1929).

Drainage area.— 1,330 square miles.

Records available.— December 1939 to September 1940.

Extremes.— Maximum discharge observed during period, 88,400 second-feet Feb. 28 (gage height, 46.87 feet); minimum observed, 88 second-feet, Aug. 19-20.
Flood of December 1937 reached a stage of 42.5 feet, from floodmarks.

Remarks.— Records good except those for period of backwater, which are fair. Gage read twice daily. Flow affected by diversion from Eel River through Potter Valley power plant into East Fork of Russian River (see p. 341). Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|--------|--------|--------|--------|-------|------|------|------|-------|
| 1 | | | 111 | 3,510 | 7,470 | 44,900 | 20,300 | 930 | 380 | 120 | 115 | 111 |
| 2 | | | 132 | 14,900 | 4,340 | 19,100 | 10,900 | 888 | 360 | 130 | 115 | 109 |
| 3 | | | 127 | 9,650 | 7,180 | 11,100 | 7,990 | 866 | 340 | 140 | 115 | 109 |
| 4 | | | 137 | 12,100 | 9,660 | 8,100 | 6,420 | 938 | 320 | 160 | 115 | 114 |
| 5 | | | 134 | 8,370 | 8,130 | 6,320 | 5,300 | 1,110 | 300 | 170 | 110 | 124 |
| 6 | | | 111 | 5,890 | 6,720 | 5,180 | 4,460 | 974 | 290 | 180 | 102 | 144 |
| 7 | | | 109 | 5,100 | 6,830 | 4,380 | 4,020 | 875 | 280 | 185 | 95 | 144 |
| 8 | | | 125 | 14,800 | 5,620 | 3,800 | 3,960 | 806 | 275 | 185 | 102 | 150 |
| 9 | | | 127 | 22,200 | 4,490 | 3,430 | 3,420 | 766 | 270 | 180 | 103 | 152 |
| 10 | | | 200 | 15,700 | 3,770 | 3,060 | 3,010 | 726 | 260 | 180 | 95 | 154 |
| 11 | | | 2,610 | 14,900 | 3,210 | 2,790 | 2,720 | 694 | 255 | 170 | 93 | 158 |
| 12 | | | 1,380 | 9,880 | 2,750 | 2,540 | 2,470 | 670 | 250 | 155 | 93 | 160 |
| 13 | | | 786 | 6,450 | 3,520 | 2,320 | 2,280 | 617 | 245 | 140 | 95 | 160 |
| 14 | | | 554 | 4,630 | 15,900 | 2,140 | 2,080 | 562 | 242 | 142 | 98 | 164 |
| 15 | | | 454 | 3,650 | 13,900 | 1,990 | 1,930 | 549 | 235 | 140 | 96 | 162 |
| 16 | | | 381 | 2,910 | 8,210 | 1,900 | 1,810 | 549 | 230 | 142 | 98 | 166 |
| 17 | | | 350 | 2,370 | 17,200 | 1,810 | 1,690 | 549 | 220 | 135 | 95 | 175 |
| 18 | | | 344 | 2,070 | 21,000 | 1,650 | 1,590 | 555 | 210 | 138 | 98 | 195 |
| 19 | | | 327 | 1,850 | 11,600 | 1,550 | 1,490 | 515 | 200 | 136 | 88 | 191 |
| 20 | | | 314 | 1,590 | 7,530 | 1,450 | 1,390 | 492 | 190 | 120 | 88 | 186 |
| 21 | | | 304 | 1,440 | 5,690 | 1,380 | 1,320 | 473 | 170 | 136 | 90 | 184 |
| 22 | | | 285 | 1,510 | 4,630 | 1,310 | 1,260 | 438 | 160 | 132 | 95 | 188 |
| 23 | | | 285 | 1,220 | 3,880 | 1,230 | 1,220 | 444 | 155 | 128 | 100 | 193 |
| 24 | | | 279 | 1,150 | 3,310 | 1,180 | 1,150 | 465 | 150 | 126 | 105 | 184 |
| 25 | | | 276 | 5,920 | 3,510 | 1,140 | 1,160 | 438 | 155 | 124 | 110 | 184 |
| 26 | | | 272 | 20,800 | 8,120 | 2,050 | 1,300 | 441 | 155 | 113 | 110 | 184 |
| 27 | | | 269 | 16,000 | 53,000 | 9,360 | 1,200 | 408 | 154 | 120 | 115 | 178 |
| 28 | | | 272 | 8,060 | 81,300 | 8,540 | 1,100 | 372 | 150 | 116 | 115 | 176 |
| 29 | | | 282 | 5,420 | 79,900 | 11,000 | 1,030 | 372 | 140 | 113 | 120 | 172 |
| 30 | | | 350 | 4,110 | - | 33,500 | 974 | 390 | 130 | 115 | 120 | 172 |
| 31 | | | 516 | 5,850 | - | 38,100 | - | 400 | - | 120 | 109 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|---------------------|------------------|---------|---------|--------|----------------------|
| October..... | - | - | - | - | - |
| November..... | - | - | - | - | - |
| December..... | 12,183 | 2,610 | 109 | 393 | 24,160 |
| Calendar year | - | - | - | - | - |
| January..... | 233,700 | 22,200 | 1,150 | 7,539 | 463,500 |
| February..... | 412,840 | 81,300 | 2,750 | 14,240 | 818,900 |
| March..... | 238,100 | 44,900 | 1,140 | 7,681 | 472,300 |
| April..... | 100,944 | 20,300 | 974 | 3,365 | 200,200 |
| May..... | 19,250 | 1,110 | 372 | 621 | 36,180 |
| June..... | 6,875 | 380 | 130 | 229 | 13,630 |
| July..... | 4,397 | 185 | 113 | 142 | 8,720 |
| August..... | 3,198 | 120 | 88 | 103 | 6,340 |
| September..... | 4,844 | 195 | 109 | 161 | 9,610 |
| The period..... | - | - | - | - | 2,056,000 |

Note.— Backwater from temporary dam, May 30 to Sept. 30; discharge computed on basis of eight discharge measurements and records for station near Healdsburg.

Dry Creek near Healdsburg, Calif.

Location.- Wire-weight gage, lat. $38^{\circ}43'15''$, long. $122^{\circ}59'50''$, near northwest corner of Tzabaco Rancho grant, at highway bridge, $\frac{1}{2}$ mile downstream from Warm Springs Creek, 10 miles northwest of Healdsburg, and about 11 miles upstream from Mill Creek. Datum of gage is 189.70 feet above mean sea level.

Drainage area.- 148 square miles.

Records available.- October 1939 to September 1940.

Extremes.- Maximum discharge during year, 22,500 second-feet Feb. 28 (gage height, 16.9 feet); no flow Oct. 1 to Dec. 8.

Remarks.- Records good, except those for short periods of high flow during February and low flow during the summer, which are fair. Gage read twice daily. No storage or diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | | | 0 | 2,560 | 753 | 2,010 | 1,440 | 85 | 47 | 7.5 | 1.3 | 1.1 |
| 2 | | | 0 | 1,410 | 898 | 1,320 | 944 | 88 | 44 | 7.5 | 1.3 | 1.1 |
| 3 | | | 0 | 1,060 | 1,640 | 1,000 | 788 | 82 | 40 | 7.5 | 1.1 | 1.1 |
| 4 | | | 0 | 2,070 | 1,180 | 910 | 598 | 133 | 37 | 5.5 | 1.1 | .9 |
| 5 | | | 0 | 714 | 938 | 605 | 498 | 96 | 35 | 3.9 | 1.2 | .9 |
| 6 | | | 0 | 596 | 1,030 | 478 | 416 | 82 | 33 | 3.9 | 1.2 | .9 |
| 7 | | | 0 | 810 | 734 | 416 | 430 | 75 | 31 | 3.6 | 1.2 | .9 |
| 8 | | | 0 | 4,040 | 607 | 366 | 376 | 71 | 29 | 4.7 | 1.2 | .9 |
| 9 | | | 18 | 2,110 | 498 | 319 | 332 | 67 | 26 | 4.7 | 1.2 | 1.1 |
| 10 | | | 684 | 1,750 | 390 | 296 | 306 | 64 | 23 | 4.2 | 1.1 | 1.2 |
| 11 | | | 269 | 1,320 | 330 | 258 | 276 | 62 | 23 | 4.2 | 1.1 | 1.1 |
| 12 | | | 71 | 806 | 270 | 222 | 248 | 60 | 20 | 4.2 | 1.1 | 1.1 |
| 13 | | | 48 | 518 | 1,180 | 196 | 235 | 55 | 18 | 3.9 | 1.1 | 1.1 |
| 14 | | | 32 | 376 | 1,480 | 178 | 196 | 53 | 18 | 3.6 | 1.1 | 1.1 |
| 15 | | | 22 | 310 | 930 | 170 | 190 | 82 | 16 | 2.8 | 1.1 | 1.1 |
| 16 | | | 18 | 248 | 668 | 183 | 179 | 48 | 14 | 4.2 | 1.1 | 1.1 |
| 17 | | | 24 | 207 | 3,670 | 160 | 168 | 47 | 15 | 4.2 | 1.1 | 1.1 |
| 18 | | | 21 | 181 | 1,560 | 146 | 168 | 46 | 15 | 5.5 | 1.1 | 1.1 |
| 19 | | | 18 | 183 | 1,040 | 141 | 144 | 41 | 15 | 4.2 | 1.1 | 1.1 |
| 20 | | | 16 | 136 | 768 | 132 | 140 | 40 | 16 | 3.9 | 1.1 | 1.1 |
| 21 | | | 13 | 125 | 551 | 127 | 120 | 39 | 14 | 4.2 | 1.2 | .9 |
| 22 | | | 15 | 102 | 463 | 122 | 122 | 39 | 13 | 3.6 | .9 | .9 |
| 23 | | | 16 | 112 | 364 | 108 | 110 | 39 | 11 | 3.3 | 1.1 | .8 |
| 24 | | | 13 | 103 | 310 | 112 | 110 | 39 | 12 | 2.8 | 1.1 | .8 |
| 25 | | | 13 | 2,050 | 419 | 108 | 137 | 36 | 11 | 2.2 | 1.0 | .9 |
| 26 | | | 13 | 3,070 | 3,230 | 1,370 | 118 | 33 | 10 | 1.9 | 1.1 | .8 |
| 27 | | | 12 | 1,230 | 12,100 | 1,140 | 102 | 32 | 9 | 1.9 | 1.1 | 1.1 |
| 28 | | | 13 | 734 | 13,400 | 959 | 96 | 33 | 8 | 1.3 | 1.1 | 1.0 |
| 29 | | | 101 | 534 | 3,970 | 2,950 | 92 | 32 | 8 | 1.3 | 1.2 | .9 |
| 30 | | | 101 | 431 | - | 4,420 | 88 | 73 | 8 | 1.3 | 1.2 | .9 |
| 31 | | | 610 | 1,220 | - | 2,690 | - | 53 | - | 1.3 | 1.1 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December..... | | | | | | 2,148 | 684 | 0 | 69.3 | 4,260 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 31,082 | 4,040 | 102 | 1,003 | 61,650 | | |
| February..... | | | | | | 55,248 | 13,400 | 270 | 1,905 | 109,600 | | |
| March..... | | | | | | 23,512 | 4,420 | 108 | 768 | 46,640 | | |
| April..... | | | | | | 9,157 | 1,440 | 88 | 306 | 18,160 | | |
| May..... | | | | | | 1,796 | 133 | 32 | 57.9 | 3,560 | | |
| June..... | | | | | | 619 | 47 | 8 | 20.6 | 1,230 | | |
| July..... | | | | | | 118.8 | 7.5 | 1.3 | 3.83 | 236 | | |
| August..... | | | | | | 34.9 | 1.3 | .9 | 1.13 | 69 | | |
| September..... | | | | | | 30.1 | 1.2 | .8 | 1.00 | 60 | | |
| Water year 1939-40..... | | | | | | 123,744.8 | 13,400 | 0 | 338 | 245,600 | | |

RUSSIAN RIVER BASIN

Santa Rosa Creek at Santa Rosa, Calif.

Location.— Staff gage, lat. 38°26'05", long. 122°43'00", in Cabeza de Santa Rosa grant, 30 feet downstream from A Street bridge in Santa Rosa. Datum of gage is 137.95 feet above mean sea level (general adjustment of 1929).

Drainage area.— 53 square miles.

Records available.— December 1939 to September 1940.

Extremes.— Maximum discharge during period, 9,080 second-feet Feb. 27 (gage height, 19.2 feet), from rating curve extended above 5,000 second-feet; no flow Dec. 1-7.
Flood during 1937 reached a stage of about 14.6 feet, from floodmarks.

Remarks.— Staff gage read twice daily, with extra readings during periods of high water.
Records fair.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1 | | | 0 | 32 | 66 | 388 | 456 | 17 | 5.5 | 1.1 | 0.3 | 0.3 |
| 2 | | | 0 | 500 | 49 | 251 | 254 | 17 | 4.8 | .9 | .3 | .3 |
| 3 | | | 0 | 170 | 358 | 176 | 169 | 17 | 4.5 | .8 | .3 | .3 |
| 4 | | | 0 | 340 | 143 | 132 | 139 | 26 | 3.8 | .8 | .3 | .3 |
| 5 | | | 0 | 60 | 113 | 106 | 108 | 17 | 3.4 | .8 | .3 | .3 |
| 6 | | | 0 | 70 | 133 | 87 | 88 | 15 | 3.1 | .8 | .3 | .2 |
| 7 | | | 0 | 300 | 102 | 72 | 88 | 13 | 2.6 | .9 | .3 | .2 |
| 8 | | | .1 | 1,060 | 66 | 62 | 83 | 12 | 2.6 | .8 | .3 | .2 |
| 9 | | | .5 | 699 | 52 | 54 | 66 | 11 | 2.6 | .8 | .3 | .1 |
| 10 | | | 1.0 | 370 | 46 | 45 | 54 | 10 | 2.4 | .7 | .3 | .1 |
| 11 | | | .3 | 559 | 38 | 42 | 46 | 9 | 2.3 | .7 | .3 | .2 |
| 12 | | | .2 | 180 | 34 | 36 | 41 | 9 | 2.2 | .8 | .3 | .4 |
| 13 | | | .2 | 95 | 604 | 32 | 36 | 8.5 | 2.1 | .7 | .3 | .2 |
| 14 | | | .2 | 62 | 572 | 30 | 33 | 8 | 2.1 | .7 | .3 | .1 |
| 15 | | | .1 | 47 | 164 | 28 | 31 | 7 | 1.8 | .7 | .2 | .2 |
| 16 | | | .1 | 36 | 123 | 31 | 27 | 7 | 1.8 | .7 | .2 | .2 |
| 17 | | | .1 | 30 | 960 | 26 | 26 | 6.5 | 1.8 | .7 | .2 | .2 |
| 18 | | | .1 | 25 | 222 | 23 | 24 | 6.5 | 1.6 | .7 | .2 | .2 |
| 19 | | | .1 | 19 | 138 | 21 | 22 | 6 | 1.6 | .7 | .2 | .2 |
| 20 | | | .1 | 16 | 104 | 19 | 20 | 6 | 1.4 | .7 | .2 | .2 |
| 21 | | | .1 | 14 | 83 | 19 | 22 | 6 | 1.5 | .6 | .2 | .2 |
| 22 | | | .1 | 13 | 71 | 17 | 20 | 5.5 | 1.6 | .6 | .2 | .2 |
| 23 | | | .4 | 15 | 58 | 16 | 20 | 5.5 | 1.5 | .5 | .2 | .2 |
| 24 | | | .2 | 14 | 50 | 18 | 18 | 5.5 | 1.5 | .4 | .2 | .2 |
| 25 | | | .1 | 559 | 126 | 18 | 27 | 6 | 1.5 | .4 | .2 | .2 |
| 26 | | | .1 | 515 | 1,890 | 425 | 57 | 5 | 1.4 | .4 | .2 | .2 |
| 27 | | | .1 | 171 | 4,830 | 254 | 26 | 5 | 1.4 | .4 | .2 | .2 |
| 28 | | | .3 | 94 | 2,890 | 212 | 23 | 5 | 1.2 | .3 | .2 | .1 |
| 29 | | | .2 | 70 | 948 | 1,850 | 20 | 4.3 | 1.2 | .4 | .2 | .1 |
| 30 | | | .1 | 60 | - | 4,530 | 20 | 9.5 | 1.1 | .4 | .2 | .1 |
| 31 | | | 2.0 | 141 | - | 956 | - | 7 | - | .4 | .3 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | - | - | - | - | - | | | | |
| November..... | | | | - | - | - | - | - | | | | |
| December..... | | | | 6.8 | 2.0 | 0 | 0.22 | 13 | | | | |
| Calendar year | | | | - | - | - | - | - | | | | |
| January..... | | | | 5,936 | 1,060 | 13 | 191 | 11,770 | | | | |
| February..... | | | | 15,033 | 4,830 | 34 | 518 | 29,820 | | | | |
| March..... | | | | 9,974 | 4,530 | 16 | 322 | 19,780 | | | | |
| April..... | | | | 2,084 | 456 | 18 | 69.5 | 4,130 | | | | |
| May..... | | | | 292.8 | 26 | 4.3 | 9.45 | 581 | | | | |
| June..... | | | | 67.9 | 5.5 | 1.1 | 2.26 | 135 | | | | |
| July..... | | | | 20.3 | 1.1 | .3 | .65 | 40 | | | | |
| August..... | | | | 7.7 | .3 | .2 | .25 | 15 | | | | |
| September..... | | | | 6.1 | .4 | .1 | .20 | 12 | | | | |
| The period..... | | | | - | - | - | - | 66,300 | | | | |

Lake Pillsbury at Hullville, Calif.

Location.- Staff gage, lat. 39°24', long. 122°57', on line between secs. 14 and 23, T. 18 N., R. 10 W., at Scott Dam on Eel River, at Hullville, 0.3 mile downstream from Rice Fork. Datum of gage is at mean sea level.

Drainage area.- 288 square miles.

Records available.- October 1922 to September 1940.

Extremes.- Maximum contents observed during year, 94,000 acre-feet June 3-6, 9 (elevation, 1,910.1 feet); minimum observed, 14,500 acre-feet Dec. 8 (elevation, 1,857.9 feet).
1922-40: Maximum contents, 95,600 acre-feet May 13, 16, 1925 (elevation, 1,910.8 feet); minimum, 10 acre-feet Dec. 9, 10, 1931 (elevation, 1,822.5 feet).

Remarks.- Reservoir is formed by concrete overflow type dam; storage began in December 1921. Capacity, 93,700 acre-feet between elevations 1,822.4 feet, (sill of outlet gate) and 1,910.0 feet (top of spillway gates) above mean sea level. Water is released down Eel River to Van Arsdale Reservoir, from which it is diverted through tunnel to Potter Valley powerhouse; part is then used for irrigation and remainder flows into East Fork of Russian River. Records, based on gage readings made at odd times, shows contents available for release.

Cooperation.- Gage-height records furnished by Pacific Gas & Electric Co., in connection with a Federal Power Commission project.

Contents, in acre-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | - | 23,800 | 15,500 | 41,600 | 75,100 | 78,200 | 78,000 | 92,300 | 93,700 | 90,900 | 81,000 | 70,900 |
| 2 | 34,900 | 23,600 | - | 51,100 | 76,300 | 78,000 | 78,600 | 92,300 | 93,700 | 90,500 | 80,500 | 70,500 |
| 3 | - | 23,500 | - | 59,000 | 79,300 | 78,400 | 78,800 | - | 94,000 | 90,000 | 80,300 | 70,500 |
| 4 | 34,100 | - | 15,200 | 66,600 | 83,600 | 79,300 | 80,700 | 93,300 | 94,000 | 89,600 | 79,900 | 69,900 |
| 5 | - | - | 14,900 | 70,300 | 82,500 | 79,700 | 81,800 | 93,300 | 94,000 | 89,300 | 79,500 | - |
| 6 | - | 22,500 | 14,800 | 72,400 | 84,000 | 80,100 | 84,000 | 92,800 | 94,000 | 88,900 | 79,000 | 69,100 |
| 7 | - | - | 14,600 | 73,500 | 83,600 | 82,200 | 86,000 | 92,300 | - | 88,700 | 78,600 | - |
| 8 | - | 21,700 | 14,600 | 76,300 | - | 84,000 | 87,800 | 91,600 | - | 88,200 | 78,400 | - |
| 9 | 32,400 | 21,300 | 17,600 | 76,900 | 83,100 | 84,600 | 89,100 | 91,200 | 94,000 | 88,000 | 78,200 | - |
| 10 | 32,100 | 21,100 | 22,100 | 76,900 | 83,600 | 85,100 | 90,300 | 90,900 | 93,700 | 87,800 | 77,800 | - |
| 11 | 31,600 | - | 26,600 | 75,700 | 83,800 | 85,500 | 91,400 | 91,400 | 93,700 | 87,300 | 77,400 | - |
| 12 | 31,300 | - | 27,500 | 74,700 | 84,200 | 86,200 | 92,600 | 91,900 | 93,700 | 87,100 | 76,700 | - |
| 13 | 30,900 | 19,900 | 26,000 | 74,300 | 85,800 | 87,100 | 92,600 | 91,900 | 93,700 | 86,900 | 76,500 | - |
| 14 | - | 19,700 | 28,100 | 73,900 | 86,600 | 88,000 | 92,800 | 92,100 | 93,700 | 86,600 | 76,100 | - |
| 15 | - | 19,300 | 27,900 | 73,500 | 85,800 | 88,700 | 93,000 | 92,100 | 93,600 | 86,400 | 75,700 | - |
| 16 | - | 18,800 | - | 73,100 | 86,400 | 89,300 | 93,000 | 92,100 | 93,300 | 86,200 | 75,300 | 65,200 |
| 17 | 29,500 | - | 27,700 | 73,100 | 87,500 | 89,800 | 93,000 | 92,300 | 93,300 | 86,000 | 74,900 | 65,000 |
| 18 | - | - | 27,600 | 73,100 | 86,200 | 90,300 | 93,300 | - | 93,000 | 86,800 | 75,900 | 64,700 |
| 19 | - | - | 27,600 | 72,900 | 86,200 | 90,000 | 93,300 | - | 93,000 | 85,500 | 75,700 | - |
| 20 | - | 18,100 | 27,400 | 72,900 | 87,100 | 89,800 | 93,500 | 93,000 | 92,800 | 85,300 | 75,700 | - |
| 21 | - | 17,800 | 27,300 | 72,700 | 87,300 | 89,600 | 93,300 | 93,000 | 92,800 | 85,100 | 75,500 | - |
| 22 | - | 17,400 | 26,900 | 72,700 | 86,200 | 89,600 | 93,300 | 93,000 | - | 84,200 | 75,300 | - |
| 23 | 28,100 | 17,200 | - | 72,900 | 86,400 | - | 92,600 | 93,000 | - | 84,000 | 73,700 | - |
| 24 | - | 17,000 | - | 72,900 | - | - | 91,900 | 93,000 | 92,300 | 83,800 | 73,300 | 62,800 |
| 25 | - | 16,800 | - | 75,700 | - | 89,300 | 91,400 | 93,300 | 92,100 | 83,600 | 72,900 | - |
| 26 | - | 16,800 | 26,100 | 77,200 | 88,700 | 89,100 | 91,400 | 93,300 | 92,100 | 83,100 | 72,900 | 61,900 |
| 27 | - | 16,600 | 25,700 | 77,600 | 89,600 | 79,800 | 91,600 | 93,300 | 91,900 | 82,900 | 72,900 | - |
| 28 | - | 16,400 | 25,600 | 76,100 | 88,400 | 76,800 | 91,900 | 93,300 | 91,600 | 82,000 | 72,700 | - |
| 29 | - | - | 26,900 | 74,100 | 81,400 | 81,200 | 92,100 | 93,000 | - | 81,800 | 72,400 | - |
| 30 | - | - | 29,000 | 75,500 | - | 81,400 | 92,100 | 93,300 | - | 81,400 | 71,600 | - |
| 31 | 23,900 | - | 33,600 | 74,100 | - | 79,300 | - | 93,500 | - | 81,200 | 71,200 | - |

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 1,878.2 | 35,800 | - |
| Oct. 31..... | 1,868.1 | 23,900 | -11,900 |
| Nov. 30..... | - | - | - |
| Dec. 31..... | 1,876.5 | 33,600 | - |
| Calendar year 1939..... | - | - | -24,300 |
| Jan. 31..... | 1,901.0 | 74,100 | +40,500 |
| Feb. 29..... | 1,904.5 | 81,400 | +7,300 |
| Mar. 31..... | 1,903.5 | 79,300 | -2,100 |
| Apr. 30..... | 1,909.3 | 92,100 | +12,800 |
| May 31..... | 1,909.9 | 93,500 | +1,400 |
| June 30..... | - | - | - |
| July 31..... | 1,904.4 | 91,200 | - |
| Aug. 31..... | 1,899.6 | 71,200 | -10,000 |
| Sept. 30..... | - | - | - |
| Water year 1939-40..... | - | - | - |

Eel River at Hullville, Calif.

Location.- Water-stage recorder, lat. 39°24', long. 122°58', in NE¼ sec. 22, T. 18 N., R. 10 W., half a mile downstream from Scott Dam, half a mile upstream from Soda Creek, and half a mile west of Hullville. Altitude of gage, about 1,800 feet (from topographic map).

Drainage area.- 289 square miles.

Records available.- November 1922 to September 1940.

Average discharge.- 17 years (1923-40), 428 second-feet.

Extremes.- Maximum discharge during year, 31,900 second-feet Feb. 28 (gage height, 20.5 feet from floodmarks), from rating curve extended above 3,000 second-feet on basis of computed flow over Scott Dam; minimum, 31 second-feet Nov. 3.

1922-40: Maximum discharge, 38,000 second-feet on basis of computed flow over Scott Dam; practically no flow at times.

Remarks.- Records good except those for period of no gage-height record, which are fair. Flow regulated by Lake Pillsbury (see p.337). No diversion above station.

Cooperation.- Water-stage recorder graph and results of five discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|--------|--------|-------|-----|------|------|------|-------|
| 1 | 182 | 159 | 114 | 66 | 488 | 6,300 | 3,610 | 297 | 80 | 182 | 148 | 210 |
| 2 | 184 | 36 | 40 | 66 | 268 | 3,780 | 1,860 | 245 | 82 | 187 | 152 | 206 |
| 3 | 185 | 113 | 37 | 66 | 353 | 2,490 | 1,360 | 245 | 100 | 183 | 154 | 200 |
| 4 | 166 | 177 | 133 | 66 | 3,960 | 1,740 | 1,030 | 335 | 106 | 178 | 152 | 198 |
| 5 | 184 | 177 | 129 | 67 | 3,530 | 1,710 | 581 | 558 | 110 | 178 | 152 | 198 |
| 6 | 184 | 177 | 102 | 175 | 3,010 | 895 | 227 | 620 | 110 | 178 | 148 | 191 |
| 7 | 182 | 182 | 79 | 854 | 3,170 | 252 | 238 | 685 | 112 | 178 | 146 | 183 |
| 8 | 182 | 182 | 96 | 3,650 | 2,080 | 555 | 250 | 675 | 110 | 154 | 144 | 183 |
| 9 | 180 | 170 | 62 | 5,430 | 1,410 | 800 | 227 | 610 | 114 | 136 | 156 | 183 |
| 10 | 180 | 153 | 62 | 5,340 | 1,010 | 822 | 212 | 234 | 158 | 152 | 164 | 183 |
| 11 | 180 | 182 | 54 | 3,770 | 728 | 584 | 216 | 61 | 111 | 153 | 159 | 183 |
| 12 | 180 | 182 | 47 | 2,280 | 780 | 361 | 433 | 110 | 111 | 154 | 184 | 183 |
| 13 | 182 | 180 | 90 | 1,530 | 1,760 | 223 | 590 | 223 | 110 | 153 | 150 | 183 |
| 14 | 182 | 178 | 158 | 1,120 | 3,660 | 227 | 580 | 154 | 108 | 153 | 147 | 183 |
| 15 | 182 | 189 | 170 | 592 | 2,080 | 231 | 551 | 156 | 107 | 154 | 141 | 183 |
| 16 | 182 | 174 | 169 | 736 | 1,410 | 236 | 568 | 159 | 107 | 154 | 139 | 159 |
| 17 | 184 | 146 | 164 | 622 | 4,640 | 334 | 424 | 126 | 108 | 153 | 133 | 145 |
| 18 | 185 | 46 | 160 | 538 | 2,970 | 514 | 396 | 58 | 108 | 153 | 134 | 180 |
| 19 | 184 | 46 | 161 | 473 | 1,550 | 650 | 472 | 50 | 111 | 154 | 164 | 185 |
| 20 | 184 | 150 | 164 | 414 | 1,100 | 645 | 468 | 148 | 117 | 154 | 156 | 187 |
| 21 | 184 | 156 | 169 | 367 | 1,470 | 590 | 468 | 173 | 117 | 153 | 148 | 191 |
| 22 | 184 | 156 | 177 | 334 | 1,190 | 440 | 540 | 175 | 117 | 153 | 141 | 191 |
| 23 | 185 | 154 | 172 | 347 | 776 | 440 | 762 | 170 | 116 | 152 | 139 | 192 |
| 24 | 187 | 144 | 170 | 377 | 776 | 440 | 750 | 130 | 100 | 152 | 159 | 204 |
| 25 | 185 | 49 | 170 | 2,300 | 874 | 440 | 630 | 58 | 100 | 152 | 152 | 214 |
| 26 | 185 | 37 | 170 | 7,200 | 7,210 | 8,290 | 370 | 51 | 119 | 152 | 146 | 204 |
| 27 | 185 | 146 | 172 | 4,050 | 24,800 | 6,660 | 223 | 143 | 126 | 152 | 143 | 191 |
| 28 | 184 | 157 | 126 | 2,180 | 24,600 | 3,520 | 216 | 165 | 152 | 152 | 176 | 191 |
| 29 | 184 | 153 | 69 | 1,530 | 11,900 | 7,510 | 216 | 143 | 185 | 152 | 170 | 189 |
| 30 | 184 | 153 | 67 | 1,200 | - | 10,600 | 231 | 80 | 183 | 152 | 155 | 187 |
| 31 | 182 | - | 66 | 899 | - | 7,520 | - | 80 | - | 153 | 208 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 5,663 | 187 | 166 | 183 | 11,230 |
| November..... | 4,304 | 189 | 36 | 143 | 8,540 |
| December..... | 3,717 | 177 | 37 | 120 | 7,370 |
| Calendar year 1939..... | 72,943 | 2,330 | 36 | 200 | 144,700 |
| January..... | 48,909 | 7,200 | 66 | 1,578 | 97,010 |
| February..... | 113,623 | 24,800 | 268 | 3,918 | 225,400 |
| March..... | 69,799 | 10,600 | 223 | 2,252 | 138,400 |
| April..... | 18,739 | 3,610 | 212 | 625 | 37,170 |
| May..... | 7,117 | 655 | 50 | 230 | 14,120 |
| June..... | 3,497 | 185 | 80 | 117 | 6,940 |
| July..... | 4,916 | 187 | 136 | 159 | 9,750 |
| August..... | 4,760 | 208 | 133 | 154 | 9,440 |
| September..... | 5,660 | 214 | 145 | 189 | 11,230 |
| Water year 1939-40..... | 290,704 | 24,800 | 36 | 794 | 576,600 |

a No gage-height record; discharge computed on basis of records at Scott and Van Arsdale Dams.

Eel River at Van Arsdale Dam, near Potter Valley, Calif.

Location.- Water-stage recorder, lat. 39°23', long. 123°07', in NE¼ sec. 30, T. 18 N., R. 11 W., 500 feet downstream from Van Arsdale Dam and 5 miles north of town of Potter Valley. Altitude of gage, about 1,400 feet (from topographic map).

Drainage area.- 347 square miles.

Records available.- October 1927 to September 1940. November 1909 to September 1922 (combined monthly discharge, only, of Eel River at this station and Snow Mountain Water & Power Co.'s tailrace near Potter Valley) and October 1922 to September 1927, from records of spill over dam.

Average discharge.- 17 years (1922-26, 1927-40), 288 second-feet.

Extremes.- Maximum discharge during year, 37,700 second-feet Feb. 28 (gage height, 26.6 feet); minimum, 0.3 second-foot Oct. 16, 17, Dec. 21, 22.

1909-40: Maximum discharge, about 40,000 second-feet Mar. 26, 1928 (gage height, 27.0 feet), from rating curve extended above 1,500 second-feet on basis of computed flow over Van Arsdale Dam; maximum gage height, 30.9 feet on Dec. 11, 1937; minimum discharge, that of Oct. 16, 17, Dec. 21, 22, 1939.

Remarks.- Records good. Water is diverted from Van Arsdale Reservoir through tunnel to power plant in Potter Valley, after which part is used for irrigation and remainder flows into East Fork of Russian River. Records show flow passing dam down Eel River.

Cooperation.- Water-stage recorder graph and results of five discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|--------|------------------|---------|---------|-------|----------------------|---------|-------|
| 1 | 4.2 | 4.0 | 4.4 | 663 | 458 | 7,130 | 4,480 | 162 | 6 | 4.1 | 4.1 | 7 |
| 2 | 2.8 | 9.5 | 5 | 528 | 221 | 4,160 | 2,670 | 113 | 11 | 3.6 | 3.6 | 8.5 |
| 3 | 2.2 | 11 | 4.4 | 248 | 400 | 2,680 | 1,830 | 107 | 10 | 3.4 | 3.6 | 7 |
| 4 | 3.7 | 7 | 3.7 | 344 | 4,160 | 1,860 | 1,020 | 209 | 8 | 3.1 | 4.1 | 7.5 |
| 5 | 2.7 | 2.5 | 2.2 | 143 | 3,960 | 1,680 | 746 | 359 | 8 | 3.1 | 3.7 | 6.5 |
| 6 | 4.2 | 1.8 | 1.2 | 69 | 3,380 | 1,090 | 286 | 407 | 6.5 | 2.5 | 3.7 | 5.5 |
| 7 | 3.2 | 1.2 | 1.4 | 598 | 3,370 | 341 | 329 | 470 | 6 | 2.4 | 3.9 | 4.5 |
| 8 | 2.2 | .8 | 2.2 | 3,960 | 2,320 | 497 | 273 | 457 | 6.5 | 2.2 | 3.1 | 4.1 |
| 9 | 1.2 | .8 | 59 | 6,270 | 1,410 | 701 | 242 | 432 | 6 | 2.4 | 2.9 | 3.7 |
| 10 | .8 | 2.4 | 65 | 6,270 | 1,000 | 689 | 202 | 162 | 4.6 | 2.2 | 4.3 | 3.2 |
| 11 | .7 | 1.8 | 40 | 4,130 | 573 | 555 | 186 | 185 | 6.5 | 2.4 | 4.8 | 3.1 |
| 12 | .6 | 1.4 | 2.4 | 2,480 | 555 | 344 | 300 | 58 | 4.6 | 3.6 | 4.6 | 2.9 |
| 13 | .6 | 1.2 | 1.0 | 1,520 | 1,760 | 197 | 480 | 4.6 | 3.9 | 3.9 | 4.1 | 2.9 |
| 14 | .8 | .8 | .8 | 1,020 | 4,320 | 186 | 470 | 12 | 3.4 | 3.9 | 4.6 | 2.6 |
| 15 | .5 | 1.2 | .5 | 724 | 2,440 | 169 | 454 | 6 | 4.5 | 3.7 | 4.3 | 2.6 |
| 16 | .3 | 2.5 | .6 | 548 | 1,410 | 238 | 441 | 10 | 11 | 3.9 | 4.1 | 2.4 |
| 17 | .5 | 1.6 | .9 | 436 | 4,900 | 230 | 341 | 6.6 | 12 | 4.5 | 3.9 | 2.5 |
| 18 | 1.3 | 5.5 | 1.2 | 362 | 3,260 | 363 | 296 | 4.6 | 10 | 5 | 2.6 | 2.5 |
| 19 | 1.6 | 7 | .5 | 297 | 1,790 | 473 | 344 | 4.3 | 8 | 4.6 | 3.9 | 2.2 |
| 20 | 1.6 | 8 | .4 | 245 | 1,160 | 464 | 338 | 5 | 7 | 3.9 | 4.5 | 2.6 |
| 21 | 2.4 | 7 | .3 | 221 | 1,390 | 441 | 335 | 7 | 4.8 | 4.5 | 5 | 2.6 |
| 22 | 1.8 | 6 | .3 | 198 | 1,230 | 299 | 350 | 9 | 4.3 | 4.1 | 4.5 | 2.9 |
| 23 | 1.2 | 7 | .4 | 158 | 630 | 312 | 552 | 6.5 | 6 | 3.6 | 2.9 | 3.6 |
| 24 | 1.3 | 5 | .5 | 213 | 623 | 283 | 541 | 5.5 | 10 | 3.9 | 2.2 | 3.2 |
| 25 | 2.0 | 5.5 | .5 | 2,840 | 700 | 301 | 503 | 10 | 7 | 4.1 | 2.6 | 4.3 |
| 26 | 1.4 | 5.5 | .5 | 9,190 | 8,380 | 7,920 | 273 | 18 | 4.8 | 3.9 | 2.8 | 5.5 |
| 27 | 1.6 | 4.4 | .5 | 4,140 | 28,900 | 7,730 | 111 | 12 | 4.3 | 3.6 | 2.2 | 5.5 |
| 28 | 1.4 | 7 | 1.2 | 2,250 | 31,100 | 3,680 | 92 | 2.4 | 5 | 3.7 | 2.4 | 4.5 |
| 29 | 1.2 | 6 | 49 | 1,540 | 14,900 | 8,430 | 89 | 3.9 | 4.1 | 3.7 | 4.5 | 4.3 |
| 30 | 1.1 | 5.5 | 46 | 1,080 | - | 13,400 | 84 | 3.4 | 5.5 | 3.7 | 4.1 | 3.9 |
| 31 | 3.6 | - | 323 | 834 | - | 9,190 | - | 5 | - | 3.9 | 5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 54.9 | 4.2 | | | 1.77 | 109 | |
| November..... | | | | | | 131.5 | 11 | | .8 | 4.38 | 261 | |
| December..... | | | | | | 619.0 | 323 | | .3 | 20.0 | 1,230 | |
| Calendar year 1939..... | | | | | | 25,787.9 | 2,850 | | .3 | 70.7 | 51,150 | |
| January..... | | | | | | 52,569 | 8,190 | 89 | 1,696 | 104,300 | | |
| February..... | | | | | | 130,690 | 31,100 | 221 | 4,507 | 259,200 | | |
| March..... | | | | | | 76,033 | 13,400 | 169 | 2,453 | 150,800 | | |
| April..... | | | | | | 18,658 | 4,480 | 84 | 622 | 37,010 | | |
| May..... | | | | | | 3,286.7 | 470 | 2.4 | 106 | 6,520 | | |
| June..... | | | | | | 199.2 | 12 | 3.4 | 6.64 | 395 | | |
| July..... | | | | | | 111.1 | 5 | 2.2 | 3.58 | 220 | | |
| August..... | | | | | | 116.9 | 5 | 2.2 | 3.77 | 232 | | |
| September..... | | | | | | 124.1 | 8.5 | 2.2 | 4.14 | 246 | | |
| Water year 1939-40..... | | | | | | 282,593.4 | 31,100 | | .3 | 772 | 560,500 | |

EEL RIVER BASIN

Eel River at Scotia, Calif.

Location.- Wire-weight gage, lat. 40°29', long. 124°06', in sec. 7, T. 1 N., R. 1 E., at Wildwood Bridge, half a mile north of Scotia and 6 miles upstream from Van Duzen River. Datum of gage is 36.21 feet above mean sea level.

Drainage area.- 3,070 square miles.

Records available.- December 1910 to February 1915, October 1916 to September 1940.

Average discharge.- 27 years (1911-14, 1916-40), 5,986 second-feet.

Extremes.- Maximum discharge during year, 305,000 second-feet Feb. 28 (gage height, 52.25 feet, gage reading of crest); minimum discharge observed, 40 second-feet parts of Oct. 1, 2, and 3.

1910-15; 1916-40: Maximum discharge, that of Feb. 28, 1940; maximum stage observed, 55.5 feet Feb. 2, 1915; minimum discharge observed, 10 second-feet Aug. 12-14, 1924.

Remarks.- Records good. Gage read twice daily, oftener during storm flows. Flow slightly regulated by Lake Pillsbury and diversions above station for power and irrigation near Potter Valley in Russian River Basin.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|--------|------------------|---------|---------|--------|----------------------|-------|------|------|-------|
| 1 | 42 | 77 | 129 | 62,100 | 11,600 | 76,000 | 54,000 | 2,630 | 1,500 | 401 | 156 | 91 |
| 2 | 42 | 74 | 125 | 71,200 | 9,840 | 49,800 | 33,500 | 2,600 | 1,500 | 369 | 156 | 104 |
| 3 | 42 | 71 | 125 | 54,700 | 10,100 | 34,800 | 24,600 | 2,630 | 1,410 | 345 | 156 | 113 |
| 4 | 46 | 68 | 125 | 58,700 | 32,200 | 25,400 | 21,800 | 3,880 | 1,310 | 339 | 156 | 110 |
| 5 | 51 | 68 | 125 | 42,600 | 53,900 | 20,300 | 17,900 | 6,990 | 1,190 | 339 | 156 | 104 |
| 6 | 46 | 71 | 125 | 29,100 | 41,600 | 17,100 | 15,100 | 5,210 | 1,060 | 321 | 152 | 116 |
| 7 | 51 | 71 | 125 | 20,200 | 45,100 | 14,800 | 13,700 | 4,300 | 955 | 309 | 148 | 107 |
| 8 | 51 | 77 | 159 | 23,200 | 29,500 | 12,800 | 14,200 | 3,990 | 947 | 291 | 148 | 107 |
| 9 | 51 | 71 | 4,810 | 58,600 | 22,500 | 11,100 | 11,800 | 3,730 | 909 | 286 | 148 | 104 |
| 10 | 51 | 71 | 45,400 | 67,900 | 17,700 | 10,100 | 10,400 | 3,410 | 856 | 280 | 140 | 91 |
| 11 | 46 | 74 | 43,700 | 51,900 | 15,300 | 9,320 | 9,200 | 3,180 | 822 | 286 | 132 | 94 |
| 12 | 51 | 74 | 14,400 | 32,900 | 12,500 | 8,320 | 8,490 | 2,810 | 789 | 291 | 124 | 100 |
| 13 | 51 | 74 | 6,820 | 22,100 | 21,300 | 7,210 | 7,790 | 2,680 | 757 | 280 | 118 | 113 |
| 14 | 51 | 77 | 4,800 | 16,600 | 59,600 | 6,420 | 7,330 | 2,410 | 695 | 268 | 116 | 120 |
| 15 | 56 | 77 | 3,470 | 13,100 | 39,900 | 5,840 | 6,970 | 2,190 | 636 | 251 | 128 | 124 |
| 16 | 66 | 81 | 3,030 | 10,500 | 27,200 | 5,730 | 6,420 | 2,100 | 636 | 240 | 124 | 120 |
| 17 | 66 | 84 | 5,020 | 8,930 | 49,300 | 5,820 | 5,960 | 1,980 | 608 | 234 | 116 | 116 |
| 18 | 66 | 77 | 6,420 | 7,680 | 58,600 | 5,420 | 5,480 | 1,870 | 580 | 234 | 116 | 124 |
| 19 | 66 | 84 | 4,960 | 6,610 | 33,400 | 5,000 | 5,020 | 1,660 | 552 | 218 | 116 | 132 |
| 20 | 90 | 77 | 4,330 | 5,940 | 24,600 | 4,840 | 4,790 | 1,620 | 531 | 213 | 110 | 136 |
| 21 | 84 | 77 | 4,140 | 5,210 | 18,700 | 4,640 | 4,580 | 1,530 | 517 | 218 | 104 | 132 |
| 22 | 90 | 81 | 3,710 | 4,710 | 16,200 | 4,490 | 4,260 | 1,490 | 496 | 213 | 104 | 132 |
| 23 | 90 | 77 | 3,050 | 4,490 | 14,700 | 4,300 | 4,110 | 1,380 | 510 | 213 | 104 | 132 |
| 24 | 93 | 81 | 2,790 | 4,510 | 12,200 | 4,090 | 4,030 | 1,350 | 496 | 202 | 104 | 132 |
| 25 | 84 | 84 | 2,670 | 7,760 | 13,100 | 4,140 | 4,010 | 1,290 | 447 | 202 | 110 | 132 |
| 26 | 100 | 125 | 2,450 | 46,500 | 20,400 | 16,300 | 4,030 | 1,240 | 427 | 202 | 110 | 132 |
| 27 | 125 | 148 | 2,100 | 39,200 | 147,000 | 72,700 | 3,770 | 1,130 | 420 | 202 | 104 | 124 |
| 28 | 103 | 140 | 2,490 | 22,800 | 261,000 | 44,200 | 3,280 | 1,120 | 394 | 184 | 104 | 132 |
| 29 | 90 | 133 | 13,900 | 17,100 | 170,000 | 55,500 | 2,980 | 1,130 | 401 | 184 | 88 | 124 |
| 30 | 87 | 133 | 26,500 | 14,000 | - | 126,000 | 2,790 | 1,160 | 388 | 170 | 88 | 116 |
| 31 | 84 | - | 53,500 | 12,500 | - | 94,600 | - | 1,290 | - | 165 | 91 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 2,112 | 125 | 42 | 68.1 | 4,190 | | | | |
| November..... | | | | 2,577 | 148 | 68 | 85.9 | 5,110 | | | | |
| December..... | | | | 265,308 | 53,500 | 125 | 8,568 | 526,200 | | | | |
| Calendar year 1939..... | | | | 1,202,701 | 53,500 | 42 | 3,295 | 2,386,000 | | | | |
| January..... | | | | 843,540 | 71,200 | 4,490 | 27,210 | 1,673,000 | | | | |
| February..... | | | | 1,284,740 | 261,000 | 9,840 | 44,300 | 2,548,000 | | | | |
| March..... | | | | 766,580 | 126,000 | 4,090 | 24,730 | 1,520,000 | | | | |
| April..... | | | | 322,290 | 54,000 | 2,790 | 10,740 | 639,300 | | | | |
| May..... | | | | 75,780 | 6,990 | 1,120 | 2,445 | 150,300 | | | | |
| June..... | | | | 22,769 | 1,500 | 388 | 759 | 45,160 | | | | |
| July..... | | | | 7,950 | 401 | 165 | 256 | 15,770 | | | | |
| August..... | | | | 3,825 | 166 | 88 | 123 | 7,590 | | | | |
| September..... | | | | 3,514 | 136 | 91 | 117 | 6,970 | | | | |
| Water year 1939-40..... | | | | 3,600,985 | 261,000 | 42 | 9,839 | 7,142,000 | | | | |

Note.- Discharge, Dec. 1 to Mar. 31, computed from graph based on gage readings.

Potter Valley powerhouse tailrace near Potter Valley, Calif.

Location.— Water-stage recorder and wooden control, lat. 39°21', long. 123°07', in NW¼ sec. 6, T. 17 N., R. 11 W., at powerhouse of Pacific Gas & Electric Co. and 3 miles northwest of town of Potter Valley. Altitude of gage, about 1,000 feet (from topographic map).

Records available.— October 1922 to September 1940.

Average discharge.— 18 years, 192 second-feet.

Extremes.— Maximum daily discharge during year, 210 second-feet Sept. 17; no flow Mar. 31, May 12 and 26.

1922-40: Maximum daily discharge, 321 second-feet Aug. 26, 1933; no flow at times in several years.

Remarks.— Records good. This water is diverted from Eel River above Van Arsdale dam; after passing through power plant, part of it is used for irrigation in Potter Valley and remainder flows into East Fork of Russian River. Water for irrigation diverted from tailrace just above gage is included in tables of discharge.

Cooperation.— Water-stage recorder graph and results of three discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 204 | 206 | 157 | 192 | 194 | 186 | 134 | 196 | 44 | 198 | 135 | 184 |
| 2 | 199 | 34 | 33 | 195 | 192 | 186 | 194 | 194 | 46 | 189 | 133 | 168 |
| 3 | 196 | 62 | 25 | 194 | 197 | 188 | 197 | 195 | 122 | 194 | 130 | 168 |
| 4 | 166 | 205 | 120 | 198 | 195 | 186 | 198 | 196 | 122 | 204 | 132 | 188 |
| 5 | 203 | 205 | 158 | 198 | 192 | 189 | 200 | 196 | 134 | 198 | 135 | 179 |
| 6 | 206 | 207 | 98 | 200 | 188 | 191 | 200 | 198 | 127 | 193 | 134 | 167 |
| 7 | 204 | 206 | 96 | 200 | 188 | 190 | 168 | 197 | 132 | 189 | 134 | 187 |
| 8 | 202 | 205 | 74 | 196 | 189 | 190 | 200 | 197 | 130 | 170 | 139 | 180 |
| 9 | 200 | 195 | 184 | 196 | 189 | 186 | 200 | 198 | 91 | 142 | 144 | 183 |
| 10 | 200 | 164 | 198 | 192 | 194 | 191 | 200 | 200 | 141 | 140 | 142 | 169 |
| 11 | 198 | 206 | 155 | 196 | 194 | 163 | 203 | 45 | 128 | 152 | 144 | 184 |
| 12 | 199 | 207 | 97 | 195 | 194 | 192 | 198 | 0 | 132 | 144 | 136 | 183 |
| 13 | 202 | 206 | 100 | 194 | 194 | 189 | 208 | 141 | 127 | 145 | 130 | 183 |
| 14 | 206 | 200 | 184 | 194 | 175 | 188 | 201 | 193 | 123 | 141 | 117 | 186 |
| 15 | 202 | 205 | 202 | 198 | 190 | 188 | 201 | 189 | 33 | 154 | 140 | 188 |
| 16 | 201 | 193 | 200 | 198 | 190 | 127 | 202 | 190 | 34 | 135 | 131 | 174 |
| 17 | 199 | 196 | 202 | 199 | 190 | 185 | 200 | 188 | 118 | 137 | 141 | 210 |
| 18 | 200 | 35 | 200 | 199 | 191 | 165 | 165 | 48 | 120 | 138 | 140 | 184 |
| 19 | 200 | 34 | 200 | 199 | 191 | 186 | 202 | 28 | 127 | 137 | 140 | 184 |
| 20 | 201 | 124 | 200 | 202 | 162 | 188 | 200 | 134 | 128 | 138 | 141 | 186 |
| 21 | 201 | 161 | 200 | 201 | 191 | 183 | 201 | 185 | 121 | 139 | 140 | 183 |
| 22 | 202 | 158 | 200 | 201 | 192 | 185 | 201 | 194 | 127 | 135 | 134 | 188 |
| 23 | 200 | 158 | 201 | 199 | 192 | 164 | 202 | 197 | 52 | 136 | 149 | 177 |
| 24 | 198 | 160 | 203 | 202 | 192 | 186 | 200 | 154 | 83 | 138 | 148 | 185 |
| 25 | 197 | 64 | 200 | 199 | 197 | 177 | 203 | 17 | 117 | 137 | 144 | 188 |
| 26 | 201 | 29 | 197 | 196 | 190 | 172 | 198 | 0 | 130 | 133 | 145 | 182 |
| 27 | 205 | 121 | 198 | 192 | 172 | 183 | 192 | 131 | 124 | 132 | 144 | 185 |
| 28 | 206 | 161 | 198 | 196 | 94 | 188 | 201 | 185 | 145 | 134 | 140 | 184 |
| 29 | 206 | 164 | 199 | 196 | 117 | 186 | 199 | 149 | 195 | 133 | 140 | 183 |
| 30 | 202 | 162 | 200 | 191 | - | 160 | 198 | 32 | 162 | 131 | 157 | 184 |
| 31 | 152 | - | 200 | 194 | - | 0 | - | 120 | - | 132 | 175 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 6,157 | 206 | 152 | 199 | 12,210 | | |
| November..... | | | | | | 4,631 | 207 | 29 | 154 | 9,190 | | |
| December..... | | | | | | 5,079 | 203 | 25 | 164 | 10,070 | | |
| Calendar year 1939..... | | | | | | 62,994.5 | 218 | 7 | 173 | 124,900 | | |
| January..... | | | | | | 6,042 | 202 | 136 | 195 | 11,980 | | |
| February..... | | | | | | 5,327 | 197 | 94 | 184 | 10,570 | | |
| March..... | | | | | | 5,438 | 192 | 0 | 175 | 10,790 | | |
| April..... | | | | | | 5,866 | 208 | 134 | 196 | 11,640 | | |
| May..... | | | | | | 4,487 | 200 | 0 | 145 | 8,900 | | |
| June..... | | | | | | 3,415 | 195 | 33 | 114 | 6,770 | | |
| July..... | | | | | | 4,698 | 204 | 131 | 152 | 9,820 | | |
| August..... | | | | | | 4,384 | 175 | 117 | 140 | 8,500 | | |
| September..... | | | | | | 5,492 | 210 | 167 | 183 | 10,890 | | |
| Water year 1939-40..... | | | | | | 60,966 | 210 | 0 | 167 | 120,900 | | |

South Fork of Eel River at Garberville, Calif.

Location.— Wire-weight gage (established by U. S. Weather Bureau), lat. 40°05'35", long. 123°47'55", in NW¼ sec. 25, T. 4 S., R. 3 E., three-fourths of a mile southwest of Garberville and 5 miles downstream from East Branch.

Drainage area.— 452 square miles.

Records available.— August 1911 to September 1913, December 1939 to May 1940 (discontinued).

Extremes.— Maximum discharge during period December 1939 to May 1940, 55,600 second-feet Feb. 28 (gage height, 19.4 feet); minimum discharge recorded, 22 second-feet Dec. 4, 1911-13, 1939-40: Maximum discharge recorded, that of Feb. 28, 1940; minimum recorded, that of Dec. 4, 1939.

The flood of December 1937 reached a stage of about 22 feet, gage datum, from floodmarks.

Remarks.— Records fair. Gage read twice daily, with extra readings during periods of high water. Flow regulated to some extent by Benbow power plant. Several small diversions.

Rating table, period December 1939 to May 1940 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-------|------|--------|----|--------|
| 0.8 | 27 | 2.5 | 228 | 5.0 | 1,360 | 9.0 | 6,820 | 13 | 20,000 |
| 1.0 | 41 | 3.0 | 340 | 6.0 | 2,200 | 10 | 9,180 | 15 | 30,000 |
| 1.5 | 87 | 3.5 | 508 | 7.0 | 3,340 | 11.0 | 12,100 | 17 | 41,000 |
| 2.0 | 147 | 4.0 | 740 | 8.0 | 4,880 | 12 | 15,600 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|--------|------------------|---------|---------|--------|----------------------|------|------|------|-------|
| 1 | | | 32 | 18,600 | 1,750 | 13,000 | 10,100 | 504 | | | | |
| 2 | | | 28 | 20,400 | 1,570 | 10,500 | 6,600 | 566 | | | | |
| 3 | | | 28 | 11,100 | 2,560 | 7,220 | 5,660 | 532 | | | | |
| 4 | | | 28 | 14,100 | 8,950 | 5,620 | 4,740 | 1,460 | | | | |
| 5 | | | 28 | 9,650 | 8,320 | 4,360 | 4,160 | 1,350 | | | | |
| 6 | | | 31 | 7,260 | 8,370 | 3,820 | 3,480 | 910 | | | | |
| 7 | | | 35 | 5,240 | 7,480 | 3,180 | 3,560 | 768 | | | | |
| 8 | | | 143 | 7,410 | 5,330 | 2,840 | 3,260 | 631 | | | | |
| 9 | | | 11,900 | 15,500 | 4,220 | 2,430 | 2,840 | 585 | | | | |
| 10 | | | 10,900 | 16,900 | 3,620 | 2,240 | 2,510 | 562 | | | | |
| 11 | | | 6,850 | 10,400 | 2,740 | 1,960 | 2,220 | 516 | | | | |
| 12 | | | 2,480 | 6,640 | 2,420 | 1,760 | 1,980 | 476 | | | | |
| 13 | | | 1,450 | 4,740 | 8,590 | 1,640 | 1,770 | 450 | | | | |
| 14 | | | 940 | 3,560 | 11,900 | 1,460 | 1,570 | 436 | | | | |
| 15 | | | 650 | 2,820 | 7,700 | 1,390 | 1,510 | 400 | | | | |
| 16 | | | 645 | 2,210 | 5,780 | 1,460 | 1,380 | 330 | | | | |
| 17 | | | 2,110 | 2,030 | 11,200 | 1,300 | 1,260 | 202 | | | | |
| 18 | | | 1,580 | 1,820 | 99,100 | 1,100 | 1,120 | 147 | | | | |
| 19 | | | 1,120 | 1,590 | 6,220 | 1,030 | 1,050 | 250 | | | | |
| 20 | | | 1,050 | 1,360 | 5,010 | 940 | 982 | 338 | | | | |
| 21 | | | 834 | 1,290 | 3,950 | 862 | 940 | 325 | | | | |
| 22 | | | 645 | 1,160 | 3,080 | 784 | 817 | - | | | | |
| 23 | | | 603 | 1,130 | 2,710 | 740 | 800 | - | | | | |
| 24 | | | 557 | 1,070 | 2,280 | 740 | 751 | - | | | | |
| 25 | | | 450 | 2,690 | 2,720 | 740 | 730 | - | | | | |
| 26 | | | 400 | 7,000 | 9,180 | 16,000 | 735 | - | | | | |
| 27 | | | 346 | 3,920 | 35,900 | 15,100 | 603 | - | | | | |
| 28 | | | 1,600 | 2,910 | 40,800 | 8,540 | 557 | - | | | | |
| 29 | | | 6,640 | 2,500 | 25,500 | 20,800 | 576 | - | | | | |
| 30 | | | 10,200 | 2,110 | - | 30,900 | 532 | - | | | | |
| 31 | | | 18,200 | 2,060 | - | 18,200 | - | - | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | - | - | - | - | - | | | | |
| November..... | | | | - | - | - | - | - | | | | |
| December..... | | | | 82,503 | 18,200 | 28 | 2,661 | 163,600 | | | | |
| Calendar year | | | | - | - | - | - | - | | | | |
| January..... | | | | 191,070 | 20,400 | 1,070 | 6,164 | 379,000 | | | | |
| February..... | | | | 248,960 | 40,800 | 1,570 | 8,585 | 493,800 | | | | |
| March..... | | | | 138,636 | 30,900 | 740 | 5,891 | 362,300 | | | | |
| April..... | | | | 68,793 | 10,100 | 532 | 2,293 | 136,400 | | | | |
| May 1-21..... | | | | 11,738 | 1,460 | 147 | 559 | 23,280 | | | | |
| June..... | | | | - | - | - | - | - | | | | |
| July..... | | | | - | - | - | - | - | | | | |
| August..... | | | | - | - | - | - | - | | | | |
| September..... | | | | - | - | - | - | - | | | | |
| The period..... | | | | - | - | - | - | 1,558,000 | | | | |

Van Duzen River at Bridgeville, Calif.

Location.- Wire-weight gage, lat. 40°28'05", long. 123°47'55", in NW¼ sec. 13, T. 1 N., R. 3 E., at highway bridge at Bridgeville, 1 mile downstream from Little Larrabee Creek. Datum of gage is 590.66 feet above mean sea level (general adjustment of 1929).

Drainage area.- 200 square miles (revised).

Records available.- September 1911 to August 1913, December 1939 to September 1940.

Extremes.- Maximum discharge during period December 1939 to September 1940, 19,000 second-feet Feb. 28 (gage height, 23.9 feet); minimum, 7.5 second-feet Aug. 29 to Sept. 2, Sept. 10.

The flood of December 1937 reached a stage of about 24.1 feet, from floodmarks.

Remarks.- Records good. Gage read twice daily, with extra readings during periods of high water. No large diversions.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|-------|-------|--------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | | | 10 | 8,000 | 782 | 4,670 | 3,050 | 187 | 132 | 26 | 11 | 7.5 |
| 2 | | | 10 | 6,950 | 695 | 3,820 | 2,040 | 196 | 132 | 26 | 11 | 7.5 |
| 3 | | | 10 | 4,020 | 1,660 | 2,510 | 1,740 | 199 | 114 | 24 | 10 | 9.5 |
| 4 | | | 10 | 4,520 | 3,700 | 1,850 | 1,550 | 1,300 | 101 | 22 | 10 | 11 |
| 5 | | | 11 | 3,120 | 3,190 | 1,460 | 1,280 | 875 | 93 | 20 | 10 | 11 |
| 6 | | | 11 | 2,150 | 4,560 | 1,180 | 1,010 | 624 | 89 | 20 | 8.5 | 10 |
| 7 | | | 11 | 1,690 | 3,630 | 940 | 1,150 | 484 | 82 | 19 | 9.5 | 10 |
| 8 | | | 96 | 2,770 | 2,430 | 930 | 1,080 | 413 | 78 | 19 | 9 | 8.5 |
| 9 | | | 4,560 | 7,420 | 2,030 | 825 | 885 | 360 | 72 | 19 | 9 | 8 |
| 10 | | | 6,920 | 6,150 | 1,600 | 718 | 816 | 317 | 68 | 19 | 9 | 7.5 |
| 11 | | | 2,920 | 3,340 | 1,260 | 664 | 741 | 263 | 64 | 18 | 9 | 8 |
| 12 | | | 965 | 2,230 | 1,000 | 584 | 672 | 249 | 61 | 17 | 9 | 8 |
| 13 | | | 593 | 1,550 | 2,950 | 512 | 584 | 222 | 58 | 16 | 9.5 | 9 |
| 14 | | | 477 | 1,180 | 3,560 | 476 | 562 | 211 | 55 | 16 | 9.5 | 11 |
| 15 | | | 352 | 870 | 2,350 | 436 | 480 | 201 | 54 | 15 | 9 | 10 |
| 16 | | | 608 | 718 | 1,920 | 668 | 436 | 187 | 50 | 15 | 8.5 | 10 |
| 17 | | | 1,700 | 655 | 7,220 | 541 | 406 | 177 | 50 | 15 | 8.5 | 16 |
| 18 | | | 777 | 602 | 3,660 | 444 | 371 | 163 | 45 | 15 | 8.5 | 25 |
| 19 | | | 635 | 512 | 2,160 | 333 | 331 | 151 | 44 | 14 | 8 | 17 |
| 20 | | | 697 | 417 | 1,670 | 353 | 304 | 143 | 44 | 14 | 8 | 14 |
| 21 | | | 571 | 375 | 1,320 | 310 | 284 | 136 | 42 | 14 | 8 | 12 |
| 22 | | | 442 | 346 | 1,230 | 264 | 266 | 127 | 42 | 14 | 8 | 11 |
| 23 | | | 390 | 375 | 1,000 | 266 | 260 | 121 | 39 | 14 | 8 | 10 |
| 24 | | | 320 | 379 | 1,040 | 297 | 238 | 118 | 37 | 14 | 8 | 10 |
| 25 | | | 246 | 1,450 | 1,970 | 290 | 238 | 114 | 34 | 14 | 8 | 10 |
| 26 | | | 227 | 5,380 | 5,740 | 5,840 | 254 | 110 | 32 | 13 | 8 | 10 |
| 27 | | | 227 | 2,370 | 13,300 | 5,320 | 216 | 106 | 31 | 14 | 8 | 14 |
| 28 | | | 1,060 | 1,820 | 14,800 | 3,270 | 206 | 104 | 30 | 13 | 8 | 18 |
| 29 | | | 2,310 | 1,290 | 8,850 | 9,080 | 182 | 97 | 29 | 12 | 7.5 | 17 |
| 30 | | | 5,870 | 970 | - | 10,900 | 187 | 110 | 28 | 12 | 7.5 | 14 |
| 31 | | | 7,770 | 945 | - | 5,720 | - | 127 | - | 12 | 7.5 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | - | - | - | - | - | | |
| November..... | | | | | | - | - | - | - | - | | |
| December..... | | | | | | 40,604 | 7,770 | 10 | 1,810 | 80,540 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 74,264 | 8,000 | 346 | 2,396 | 147,300 | | |
| February..... | | | | | | 101,477 | 14,800 | 695 | 3,499 | 201,300 | | |
| March..... | | | | | | 65,541 | 10,900 | 266 | 2,114 | 130,000 | | |
| April..... | | | | | | 21,619 | 3,050 | 182 | 727 | 43,280 | | |
| May..... | | | | | | 5,192 | 1,300 | 97 | 264 | 16,250 | | |
| June..... | | | | | | 1,850 | 132 | 28 | 61.0 | 3,650 | | |
| July..... | | | | | | 515 | 26 | 12 | 16.6 | 1,020 | | |
| August..... | | | | | | 271.0 | 11 | 7.5 | 8.74 | 538 | | |
| September..... | | | | | | 344.5 | 25 | 7.5 | 11.5 | 683 | | |
| The period..... | | | | | | - | - | - | - | 624,500 | | |

KLAMATH RIVER BASIN

Smaller reservoirs in Klamath River Basin, Oreg.

Fourmile Lake Reservoir.— Staff gage, lat. 42°27', long. 122°14', in NW¼ sec. 9, T. 36 S., R. 5 E., at dam on Fourmile Creek, at outlet of Fourmile Lake, 15 miles northwest of Odessa. Gage readings are elevations above mean sea level (datum of Rogue River Valley Canal Co.). Records available, June 1923 to September 1930, June 1932 to September 1940. Maximum contents observed during year, 11,680 acre-feet May 16 (elevation, 5,998.1 feet); minimum contents, 648 acre-feet (estimated) Sept. 30. Maximum contents observed during periods 1923-30, 1932-40, 16,220 acre-feet May 18, 1938 (elevation, 6,003.1 feet); no usable contents at times.

Reservoir is formed on natural lake by rock-faced earth dam, completed by Rogue Valley Canal Co. about 1922. Capacity, 18,100 acre-feet between elevations 5,980 feet (sill of outlet gate) and 6,005 feet (crest of spillway). Figures given herein represent usable contents. Water is used for irrigation of lands near Medford. Gage read once daily, May 16 to July 29, occasionally at other times.

Hyatt Prairie Reservoir.— Staff gage, lat. 42°10', long. 122°28', in sec. 16, T. 39 S., R. 3 E., at dam of Talent Irrigation District on Keene Creek, 3 miles north of Ashland-Klamath Falls highway and 20 miles east of Ashland. Gage readings are elevations above mean sea level (datum of Talent Irrigation District). Records available, December 1922 to September 1940. Maximum contents observed during year, 9,371 acre-feet May 11, 13, 14 (elevation, 5,007.4 feet); minimum observed, 210 acre-feet Aug. 31 (elevation, 4,986.0 feet). Maximum contents observed during period 1922-40, 17,410 acre-feet May 29, 1938 (elevation, 5,017.37 feet); no usable contents at times.

Reservoir is formed by rock-faced earth dam, completed by Talent Irrigation District in 1923; storage began in December 1922. Capacity, 16,180 acre-feet between elevations 4,981.7 feet (sill of gate, approximate) and 5,016.0 feet (spillway crest). Dead storage negligible. Figures given herein represent usable contents. Water used for irrigation of lands near Ashland and Talent. Gage read one to three times from April to August, occasionally at other times.

Other small reservoirs.— There are six other small reservoirs in Williamson River Basin and eight in Lost River Basin, having a total capacity of 12,300 acre-feet.

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Fourmile Lake Reservoir | | | Hyatt Prairie Reservoir | | | |
|--------------------|-------------------------|----------------------|---|-------------------------|----------------------|---|--|
| | Elevation (feet)* | Contents (acre-feet) | Change in contents during month (acre-feet) | Elevation (feet)* | Contents (acre-feet) | Change in contents during month (acre-feet) | |
| Sept. 30..... | - | 5,956 | - | - | 1,294 | - | |
| Oct. 31..... | - | 6,074 | +118 | - | 1,492 | +198 | |
| Nov. 30..... | - | 6,085 | +11 | - | 1,514 | +22 | |
| Dec. 31..... | - | 6,265 | +180 | - | 2,243 | +729 | |
| Calendar year 1939 | - | - | -3,669 | - | - | -7,857 | |
| Jan. 31..... | - | 7,567 | +1,102 | - | 2,929 | +686 | |
| Feb. 29..... | 5,993.0 | 7,826 | +459 | - | 4,431 | +1,502 | |
| Mar. 31..... | - | 8,198 | +372 | - | 7,407 | +2,976 | |
| Apr. 30..... | - | 10,710 | +2,512 | - | 9,125 | +1,718 | |
| May 31..... | 5,998.1 | 10,080 | -630 | 5,006.4 | 8,873 | -452 | |
| June 30..... | 5,990.4 | 6,085 | -3,995 | - | 6,193 | -2,480 | |
| July 31..... | - | 1,744 | -4,341 | 4,996.2 | 2,884 | -3,309 | |
| Aug. 31..... | - | 967 | -777 | 4,986.0 | 210 | -2,674 | |
| Sept. 30..... | - | 648 | -319 | - | 606 | +396 | |
| Water year 1939-40 | - | - | -5,308 | - | - | -688 | |

*Hour of reading not known.

Note.— Contents interpolated for days on which gage was not read.

Williamson River below Sprague River, near Chiloquin, Oreg.

Location.— Water-stage recorder, lat. 42°34', long. 121°52', in sec. 3, T. 35 S., R. 7 E., a quarter of a mile downstream from Sprague River and three-quarters of a mile southwest of Chiloquin. Datum of gage is 4,155.66 feet above mean sea level (general adjustment of 1929).

Drainage area.— 3,000 square miles.

Records available.— June 1917 to September 1940.

Average discharge.— 23 years, 837 second-feet.

Extremes.— Maximum discharge during year, 5,550 second-feet Apr. 3 (gage height, 6.14 feet); minimum, 448 second-feet Aug. 14 (gage height, 2.16 feet).
1917-40: Maximum discharge, 7,660 second-feet Apr. 22, 1938 (gage height, 7.27 feet); minimum, 320 second-feet Oct. 14, 1920.

Remarks.— Records good. Diversions above station for irrigation. Manipulation of gates at dam above station causes fluctuation at times.

Cooperation.— Water-stage recorder inspected by employee of The California Oregon Power Co.

Rating tables, water year 1939-40 (gage height, in feet, and discharge, in second-feet).

| Oct. 1 to Apr. 3 | | | | Apr. 4 to Sept. 30 | | | |
|------------------|-------|-----|-------|--------------------|-------|-----|-------|
| 2.4 | 545 | 4.2 | 2,400 | 2.1 | 425 | 4.0 | 2,170 |
| 2.7 | 750 | 4.6 | 2,980 | 2.4 | 560 | 4.5 | 2,850 |
| 3.0 | 1,010 | 5.0 | 3,600 | 2.8 | 860 | 5.0 | 3,610 |
| 3.4 | 1,410 | 5.5 | 4,420 | 3.2 | 1,250 | 5.8 | 4,940 |
| 3.8 | 1,870 | 6.1 | 5,480 | 3.6 | 1,695 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 599 | 599 | 599 | 598 | 848 | 3,230 | 3,500 | 1,700 | 683 | 489 | 512 | 572 |
| 2 | 562 | 593 | 593 | 506 | 911 | 4,500 | 4,780 | 1,640 | 676 | 485 | 512 | 539 |
| 3 | 561 | 587 | 587 | 911 | 983 | 4,450 | 5,480 | 1,570 | 689 | 503 | 512 | 498 |
| 4 | 557 | 581 | 587 | 1,060 | 956 | 3,700 | 4,920 | 1,540 | 584 | 494 | 512 | 463 |
| 5 | 569 | 575 | 587 | 1,220 | 929 | 2,940 | 3,990 | 1,490 | 549 | 498 | 507 | 452 |
| 6 | 563 | 575 | 587 | 1,390 | 992 | 2,460 | 3,300 | 1,450 | 602 | 503 | 507 | 455 |
| 7 | 557 | 599 | 593 | 1,500 | 1,070 | 2,160 | 3,020 | 1,420 | 614 | 507 | 507 | 463 |
| 8 | 557 | 593 | 675 | 1,500 | 1,150 | 1,990 | 2,850 | 1,420 | 608 | 507 | 507 | 476 |
| 9 | 551 | 569 | 675 | 1,280 | 1,290 | 1,810 | 2,630 | 1,420 | 602 | 507 | 498 | 498 |
| 10 | 551 | 581 | 675 | 1,030 | 1,480 | 1,670 | 2,400 | 1,410 | 596 | 507 | 498 | 512 |
| 11 | 557 | 581 | 705 | 955 | 1,540 | 1,590 | 2,220 | 1,360 | 614 | 555 | 498 | 507 |
| 12 | 557 | 587 | 705 | 1,000 | 1,400 | 1,550 | 2,120 | 1,330 | 614 | 572 | 489 | 507 |
| 13 | 581 | 587 | 705 | 1,060 | 1,220 | 1,520 | 2,060 | 1,250 | 590 | 555 | 459 | 512 |
| 14 | 569 | 587 | 705 | 1,100 | 1,130 | 1,440 | 2,000 | 1,200 | 566 | 534 | 452 | 518 |
| 15 | 557 | 587 | 698 | 992 | 1,060 | 1,360 | 1,950 | 1,140 | 549 | 518 | 467 | 556 |
| 16 | 593 | 587 | 690 | 766 | 983 | 1,290 | 1,890 | 1,100 | 534 | 512 | 463 | 627 |
| 17 | 605 | 587 | 705 | 1,749 | 902 | 1,240 | 1,880 | 1,080 | 523 | 503 | 476 | 682 |
| 18 | 605 | 587 | 675 | 1,735 | 857 | 1,200 | 1,870 | 1,080 | 523 | 507 | 481 | 596 |
| 19 | 581 | 587 | 661 | 720 | 822 | 1,190 | 1,920 | 1,060 | 518 | 518 | 495 | 566 |
| 20 | 569 | 587 | 661 | 668 | 806 | 1,130 | 1,930 | 1,020 | 512 | 518 | 481 | 560 |
| 21 | 563 | 593 | 661 | 633 | 782 | 1,090 | 1,910 | 995 | 512 | 518 | 476 | 560 |
| 22 | 569 | 605 | 661 | 625 | 766 | 1,070 | 1,850 | 955 | 518 | 512 | 476 | 560 |
| 23 | 545 | 593 | 661 | 619 | 758 | 1,060 | 1,800 | 926 | 512 | 518 | 485 | 555 |
| 24 | 545 | 599 | 661 | 581 | 758 | 1,050 | 1,790 | 842 | 498 | 534 | 485 | 555 |
| 25 | 612 | 605 | 668 | 593 | 814 | 1,060 | 1,790 | 797 | 476 | 539 | 485 | 528 |
| 26 | 612 | 605 | 661 | 640 | 983 | 1,140 | 1,800 | 788 | 485 | 523 | 489 | 481 |
| 27 | 589 | 599 | 647 | 658 | 1,280 | 1,290 | 1,790 | 770 | 439 | 518 | 499 | 507 |
| 28 | 593 | 599 | 605 | 705 | 1,770 | 1,410 | 1,790 | 754 | 489 | 523 | 489 | 534 |
| 29 | 587 | 589 | 605 | 742 | 2,130 | 1,600 | 1,780 | 698 | 489 | 518 | 489 | 544 |
| 30 | 626 | 563 | 661 | 790 | - | 2,000 | 1,760 | 683 | 489 | 518 | 494 | 549 |
| 31 | 605 | - | 668 | 814 | - | 2,770 | - | 683 | - | 518 | 596 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 17,854 | 626 | 545 | 576 | 35,410 | | |
| November..... | | | | | | 17,646 | 605 | 563 | 568 | 35,000 | | |
| December..... | | | | | | 20,227 | 705 | 587 | 682 | 40,120 | | |
| Calendar year 1939..... | | | | | | 233,170 | 1,760 | 415 | 639 | 462,500 | | |
| January..... | | | | | | 27,561 | 1,500 | 581 | 889 | 54,670 | | |
| February..... | | | | | | 31,370 | 2,130 | 768 | 1,082 | 62,220 | | |
| March..... | | | | | | 57,960 | 4,500 | 1,050 | 1,870 | 115,000 | | |
| April..... | | | | | | 74,750 | 5,480 | 1,760 | 2,492 | 148,300 | | |
| May..... | | | | | | 35,571 | 1,700 | 683 | 1,147 | 70,560 | | |
| June..... | | | | | | 16,633 | 883 | 476 | 558 | 33,090 | | |
| July..... | | | | | | 18,031 | 572 | 485 | 517 | 31,800 | | |
| August..... | | | | | | 15,276 | 596 | 452 | 493 | 30,300 | | |
| September..... | | | | | | 16,922 | 682 | 452 | 531 | 31,580 | | |
| Water year 1939-40..... | | | | | | 346,851 | 5,480 | 452 | 948 | 688,000 | | |

a No gage-height record; discharge interpolated on basis of records for Sprague River near Chiloquin.

KLAMATH RIVER BASIN

Upper Klamath Lake near Klamath Falls, Oreg.

Location.- Water-stage recorder, lat. $42^{\circ}15'$, long. $121^{\circ}48'$, in SW $\frac{1}{4}$ sec. 19, T. 38 S., R. 9 E., 1 mile upstream from outlet of Upper Klamath Lake and 2 miles northwest of Klamath Falls. Datum of gage is 4,098.22 feet above mean sea level (general adjustment of 1929) or 4,100.00 feet (Bureau of Reclamation datum). All lake elevations given are referred to datum of Bureau of Reclamation.

Records available.- May 1904 to September 1940

Extremes.- Maximum elevation during year, 4,143.31 feet Apr. 28; minimum, 4,135.97 feet Dec. 10. Maximum mean daily elevation, 4,143.16 feet May 12, 15; minimum mean daily, 4,137.51 feet Oct. 4.

1904-40: Maximum elevation recorded, 4,144.98 feet about Apr. 20, 1904, determined from high-water marks; minimum recorded, 4,135.8 feet Oct. 9, 1926, at Buena Vista Landing; maximum and minimum mean daily elevations not determined, occurred during periods when recorder was not in operation.

Remarks.- Reservoir is formed by concrete dam at natural lake; completed in 1921, replacing a temporary dam built in 1919; storage began Apr. 15, 1919. Capacity, 584,000 acre-feet between elevations 4,135.0 feet and 4,143.3 feet. Dead storage below elevation 4,135 feet not known; lake level ordinarily maintained between elevations 4,137 feet (contents, 118,600 acre-feet) and 4,143.3 feet. Water stored may be diverted through "A" canal for irrigation of land under Klamath Falls project of Bureau of Reclamation, or released to Link River through dam or power plants at Klamath Falls. Area of lake at high stages is partly controlled by diking. Lake elevations, particularly extremes, are very much affected by wind. Contents given herein represent those above elevation 4,135 feet.

Cooperation.- Capacity table and water-stage recorder inspections furnished by The California Oregon Power Co.

Elevation, in feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 37.83 | 37.84 | 38.00 | 39.01 | 40.45 | 41.60 | 42.94 | 42.74 | 42.50 | 41.37 | 39.99 | 38.49 |
| 2 | 37.84 | 37.90 | 38.01 | 39.22 | 40.32 | 41.92 | 42.80 | 42.95 | 42.55 | 41.35 | 39.97 | 38.51 |
| 3 | 37.73 | 38.05 | 38.04 | 39.20 | 40.10 | 42.01 | 42.73 | 42.74 | 42.62 | 41.36 | 39.97 | 38.52 |
| 4 | 37.51 | 38.00 | 38.04 | 39.35 | 40.32 | 42.13 | 42.85 | 42.89 | 42.65 | 41.27 | 39.94 | 38.48 |
| 5 | 37.60 | 37.90 | 37.83 | 39.45 | 40.38 | 42.22 | 42.87 | 43.11 | 42.55 | 41.24 | 39.85 | 38.56 |
| 6 | 37.82 | 37.89 | 38.00 | 39.54 | 40.47 | 42.24 | 42.81 | 43.15 | 42.53 | 41.24 | 39.76 | 38.50 |
| 7 | 37.82 | 37.88 | 37.77 | 39.44 | 40.64 | 42.25 | 42.74 | 43.06 | 42.49 | 41.13 | 39.67 | 38.20 |
| 8 | 37.72 | 38.00 | 37.54 | 39.58 | 40.63 | 42.46 | 42.79 | 43.08 | 42.37 | 41.07 | 39.63 | 38.28 |
| 9 | 37.71 | 37.96 | 37.83 | 39.58 | 40.64 | 42.49 | 42.89 | 43.00 | 42.33 | 40.99 | 39.60 | 38.30 |
| 10 | 37.72 | 37.89 | 37.70 | 39.72 | 40.83 | 42.42 | 42.80 | 43.08 | 42.28 | 40.91 | 39.55 | 38.30 |
| 11 | 37.74 | 37.90 | 38.35 | 39.85 | 40.83 | 42.44 | 42.79 | 43.12 | 42.21 | 40.81 | 39.51 | 38.26 |
| 12 | 37.73 | 37.91 | 38.45 | 40.00 | 40.74 | 42.40 | 42.77 | 43.16 | 42.20 | 40.86 | 39.51 | 38.15 |
| 13 | 37.71 | 37.84 | 38.42 | 39.84 | 40.60 | 42.40 | 42.82 | 43.10 | 42.19 | 40.84 | 39.57 | 38.17 |
| 14 | 37.73 | 37.92 | 38.40 | 39.88 | 40.97 | 42.41 | 42.98 | 43.14 | 42.21 | 40.77 | 39.49 | 38.25 |
| 15 | 37.70 | 37.95 | 38.41 | 39.91 | 40.99 | 42.21 | 43.08 | 43.16 | 42.15 | 40.71 | 39.42 | 38.19 |
| 16 | 37.69 | 37.93 | 38.36 | 39.93 | 40.30 | 42.60 | 42.76 | 43.10 | 42.06 | 40.66 | 39.33 | 38.19 |
| 17 | 37.75 | 37.93 | 38.65 | 39.94 | 40.85 | 42.68 | 42.69 | 43.04 | 42.00 | 40.59 | 39.30 | 38.13 |
| 18 | 37.74 | 37.95 | 38.66 | 39.96 | 41.12 | 42.65 | 42.72 | 43.01 | 42.00 | 40.52 | 39.12 | 38.35 |
| 19 | 37.75 | 37.95 | 38.69 | 39.97 | 41.18 | 42.64 | 42.83 | 42.96 | 42.06 | 40.53 | 38.95 | 38.28 |
| 20 | 37.76 | 37.95 | 38.69 | 39.99 | 41.19 | 42.65 | 42.77 | 42.94 | 41.90 | 40.40 | 39.01 | 38.25 |
| 21 | 37.78 | 37.95 | 38.73 | 40.00 | 41.19 | 42.67 | 42.88 | 42.92 | 41.91 | 40.47 | 39.00 | 38.20 |
| 22 | 37.77 | 37.94 | 38.72 | 40.00 | 41.12 | 42.70 | 42.93 | 42.85 | 41.80 | 40.37 | 39.03 | 38.20 |
| 23 | 37.79 | 37.96 | 38.75 | 40.01 | 41.14 | 42.68 | 42.84 | 42.85 | 41.71 | 40.37 | 39.01 | 38.16 |
| 24 | 38.04 | 37.96 | 38.80 | 40.03 | 41.18 | 42.65 | 42.78 | 42.85 | 41.66 | 40.39 | 38.94 | 38.16 |
| 25 | 37.77 | 37.69 | 38.80 | 40.03 | 41.21 | 42.60 | 42.83 | 42.89 | 41.69 | 40.29 | 38.84 | 38.08 |
| 26 | 37.53 | 37.98 | 38.50 | 40.00 | 41.21 | 42.57 | 43.06 | 42.87 | 41.64 | 40.25 | 38.75 | 37.97 |
| 27 | 37.68 | 38.09 | 38.81 | 40.10 | 41.24 | 42.69 | 42.98 | 42.77 | 41.64 | 40.21 | 38.75 | 38.07 |
| 28 | 37.80 | 38.01 | 38.87 | 40.19 | 41.14 | 42.66 | 42.99 | 42.63 | 41.48 | 40.17 | 38.72 | 38.25 |
| 29 | 37.82 | 37.98 | 38.93 | 40.22 | 41.66 | 42.62 | 42.96 | 42.45 | 41.31 | 40.06 | 38.67 | 38.14 |
| 30 | 37.82 | 37.92 | 39.01 | 40.23 | - | 42.83 | 42.88 | 42.12 | 41.37 | 40.03 | 38.67 | 38.15 |
| 31 | 37.83 | - | 39.05 | 40.29 | - | 42.88 | - | 42.32 | - | 40.00 | 38.65 | - |

Note.- Add 4,100 feet to obtain elevation above mean sea level, U. S. Bureau of Reclamation datum.

Monthly elevation and contents, water year October 1939 to September 1940

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 4,137.73 | 162,400 | - |
| Oct. 31..... | 4,137.68 | 171,500 | +9,100 |
| Nov. 30..... | 4,137.99 | 178,100 | +6,600 |
| Dec. 31..... | 4,139.07 | 243,800 | +65,700 |
| Calendar year 1939..... | - | - | -128,000 |
| Jan. 31..... | 4,140.27 | 324,100 | +80,300 |
| Feb. 29..... | 4,141.60 | 433,400 | +109,300 |
| Mar. 31..... | 4,142.80 | 558,500 | +105,100 |
| Apr. 30..... | 4,142.88 | 545,700 | -7,200 |
| May 31..... | 4,142.43 | 605,600 | -40,100 |
| June 30..... | 4,141.37 | 413,800 | -91,800 |
| July 31..... | 4,140.01 | 304,800 | -109,000 |
| Aug. 31..... | 4,138.56 | 212,700 | -92,100 |
| Sept. 30..... | 4,138.16 | 188,400 | -24,300 |
| Water year 1939-40..... | - | - | +26,000 |

Note.- To compensate for wind effect, elevation given for end of month is mean of elevation for last 3 days of that month and first 3 days of following month.

Link River at Klamath Falls, Oreg.

Location.- Water-stage recorder, lat. 42°13', long. 121°49', in sec. 32, T. 38 S., R. 9 E., 200 yards upstream from outlet of Keno canal and three-eighths of a mile upstream from Main Street Bridge at Klamath Falls. Datum of gage is 4,063.71 feet above mean sea level (general adjustment of 1929) or 4,065.50 feet (Bureau of Reclamation datum).

Drainage area.- 3,812 square miles, including Crater Lake Basin.

Records available.- May 1904 to September 1940.

Average discharge.- 36 years, 1,581 second-feet (including Keno canal).

Extremes.- Maximum combined discharge of Link River and Keno canal during year, 6,260 feet Mar. 31, Apr. 1; minimum, 17 second-feet Dec. 10; minimum daily, 27 second-feet Dec. 10.
1904-40: Maximum discharge, 9,400 second-feet May 12, 1904 (gage height at bridge, 7.30 feet); minimum, 16 second-feet Dec. 13, 1937; minimum daily, 17 second-feet Dec. 13, 1937.

Remarks.- Records good. Regulation since April 1919 in Upper Klamath Lake. Water diverted above station by the main or "A" canal and Keno canal. Other small diversions above lake. Records of discharge include flow of Keno canal.

Cooperation.- Water-stage recorder inspected by employee of The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 643 | 990 | 931 | 31 | 538 | 40 | 5,900 | 617 | 840 | 1,430 | 1,330 | 1,150 |
| 2 | 1,320 | 1,000 | 843 | 182 | 292 | 38 | 4,500 | 1,120 | 662 | 1,500 | 1,220 | 1,200 |
| 3 | 1,200 | 989 | 843 | 133 | 449 | 39 | 5,320 | 942 | 1,200 | 1,630 | 1,370 | 1,310 |
| 4 | 1,160 | 727 | 1,190 | 52 | 176 | 41 | 5,580 | 991 | 1,450 | 1,570 | 1,400 | 1,150 |
| 5 | 896 | 509 | 1,280 | 46 | 720 | 42 | 5,350 | 2,250 | 1,450 | 1,410 | 1,410 | 1,150 |
| 6 | 733 | 964 | 1,320 | 30 | 123 | 389 | 4,820 | 2,380 | 1,450 | 556 | 1,390 | 1,210 |
| 7 | 731 | 976 | 1,310 | 339 | 194 | 882 | 4,690 | 2,160 | 1,450 | 1,160 | 1,380 | 1,310 |
| 8 | 876 | 1,040 | 1,130 | 539 | 168 | 1,400 | 4,960 | 1,820 | 1,440 | 1,740 | 1,340 | 1,520 |
| 9 | 1,130 | 1,330 | 480 | 370 | 172 | 1,390 | 5,040 | 1,110 | 1,300 | 1,760 | 1,370 | 1,630 |
| 10 | 1,020 | 1,340 | 27 | 426 | 518 | 1,390 | 4,990 | 816 | 1,620 | 1,760 | 1,370 | 1,540 |
| 11 | 1,020 | 1,020 | 486 | 455 | 208 | 1,400 | 4,510 | 821 | 1,790 | 1,810 | 1,370 | 1,540 |
| 12 | 1,020 | 707 | 554 | 613 | 464 | 1,220 | 3,820 | 1,030 | 1,790 | 1,970 | 1,370 | 1,520 |
| 13 | 582 | 1,080 | 713 | 645 | 464 | 446 | 3,860 | 1,190 | 1,800 | 1,980 | 1,380 | 1,420 |
| 14 | 897 | 1,120 | 899 | 178 | 91 | 698 | 3,850 | 1,350 | 1,760 | 1,840 | 1,440 | 1,140 |
| 15 | 765 | 1,160 | 1,020 | 732 | 254 | 546 | 2,830 | 1,500 | 1,630 | 1,740 | 1,620 | 1,160 |
| 16 | 1,080 | 1,140 | 440 | 692 | 30 | 535 | 2,100 | 1,500 | 1,660 | 1,700 | 1,610 | 1,440 |
| 17 | 1,060 | 1,070 | 246 | 699 | 341 | 171 | 2,120 | 1,250 | 1,660 | 1,470 | 1,460 | 1,540 |
| 18 | 1,260 | 895 | 751 | 699 | 99 | 807 | 1,730 | 859 | 1,670 | 1,400 | 1,130 | 1,420 |
| 19 | 1,330 | 1,090 | 864 | 734 | 553 | 895 | 1,400 | 1,120 | 1,680 | 1,190 | 1,340 | 1,330 |
| 20 | 1,160 | 1,160 | 864 | 778 | 553 | 715 | 1,130 | 1,560 | 1,670 | 991 | 1,550 | 1,320 |
| 21 | 829 | 1,250 | 771 | 1,080 | 565 | 1,080 | 1,900 | 1,550 | 1,670 | 1,400 | 1,360 | 1,330 |
| 22 | 831 | 1,250 | 282 | 1,080 | 557 | 868 | 1,420 | 1,530 | 1,540 | 1,400 | 1,360 | 1,320 |
| 23 | 1,150 | 991 | 335 | 1,080 | 474 | 651 | 918 | 1,540 | 1,230 | 1,400 | 1,480 | 1,320 |
| 24 | 1,360 | 907 | 697 | 787 | 32 | 579 | 641 | 1,520 | 1,630 | 1,400 | 1,550 | 1,340 |
| 25 | 1,360 | 675 | 954 | 788 | 616 | 824 | 776 | 1,530 | 1,630 | 1,390 | 1,500 | 1,410 |
| 26 | 1,260 | 1,080 | 1,130 | 288 | 520 | 1,590 | 1,130 | 1,500 | 1,560 | 1,380 | 1,530 | 1,530 |
| 27 | 724 | 1,300 | 957 | 425 | 84 | 2,340 | 653 | 1,540 | 1,430 | 1,380 | 1,530 | 1,320 |
| 28 | 479 | 1,110 | 708 | 594 | 40 | 2,780 | 53 | 1,360 | 1,420 | 1,380 | 1,510 | 768 |
| 29 | 558 | 983 | 532 | 698 | 42 | 3,350 | 691 | 802 | 1,420 | 1,380 | 1,490 | 1,220 |
| 30 | 809 | 1,100 | 432 | 422 | - | 4,370 | 827 | 968 | 1,110 | 1,380 | 1,340 | 1,260 |
| 31 | 496 | - | 72 | 581 | - | 5,530 | - | 1,180 | - | 1,380 | 1,150 | - |

| Month | River including Keno canal | | | | River including Keno and "A" canals | | | |
|--------------------|----------------------------|---------|-------|----------------------------|-------------------------------------|---------|-------|----------------------------|
| | Maximum | Minimum | Mean | Rup-off in acre-feet | Maximum | Minimum | Mean | Rup-off in acre-feet |
| October..... | 1,360 | 479 | 959 | 58,970 | 1,490 | 479 | 976 | 60,000 |
| November..... | 1,340 | 509 | 1,032 | 61,390 | 1,340 | 509 | 1,030 | 61,390 |
| December..... | 1,320 | 27 | 744 | 45,740 | 1,320 | 27 | 744 | 45,740 |
| Calendar year 1939 | 2,000 | 27 | 1,063 | 769,790 | 2,630 | 27 | 1,374 | 995,200 |
| January..... | 1,080 | 30 | 523 | 32,180 | 1,080 | 30 | 523 | 32,180 |
| February..... | 720 | 30 | 322 | 15,520 | 720 | 30 | 322 | 15,520 |
| March..... | 5,530 | 39 | 1,194 | 73,440 | 5,530 | 39 | 1,194 | 73,440 |
| April..... | 5,900 | 53 | 2,917 | 173,600 | 5,900 | 68 | 2,920 | 173,800 |
| May..... | 2,380 | 617 | 1,356 | 82,130 | 2,590 | 671 | 1,928 | 118,500 |
| June..... | 1,800 | 662 | 1,487 | 88,490 | 2,780 | 1,220 | 2,331 | 138,700 |
| July..... | 1,980 | 556 | 1,480 | 91,000 | 2,930 | 1,280 | 2,319 | 142,600 |
| August..... | 1,620 | 1,070 | 1,392 | 85,590 | 2,340 | 1,710 | 2,040 | 125,400 |
| September..... | 1,620 | 768 | 1,327 | 78,980 | 1,930 | 862 | 1,567 | 93,280 |
| Water year 1939-40 | 5,900 | 27 | 1,226 | 890,000 | 5,900 | 27 | 1,493 | 1,084,000 |

KLAMATH RIVER BASIN

Klamath River at Keno, Oreg.

Location.- Water-stage recorder, lat. 42°06', long. 121°58', in SE¼ sec. 35, T. 39 S., R. 7 E., 2 miles west of Keno and 5 miles upstream from Spencer Creek.

Drainage area.- 3,920 square miles, not including Lost River or Lower Klamath Lake Basins.

Records available.- June 1904 to December 1913, January 1930 to September 1940.

Average discharge.- 19 years, 1,555 second-feet.

Extremes.- Maximum discharge during year, 6,540 second-feet Apr. 5 (gage height, 9.91 feet); minimum, 115 second-feet Mar. 16 (gage height, 2.10 feet); minimum daily, 186 second-feet June 2.
1904-13, 1930-40: Maximum discharge, 6,830 second-feet May 1-6, 1938 (gage height, 10.10 feet); minimum, 35 second-feet Aug. 4, 1934; minimum daily, 60 second-feet May 19, 1934.

Remarks.- Records excellent. Diversions above station for irrigation. Lost River diversion canal enters or diverts from Klamath River above station. (See records for Lost River diversion canal near Olene and Diversion from Klamath River to Lost River near Olene, Oreg.) The following diversions, in acre-feet, through Klamath Strait into Lower Klamath Lake in the year ending Sept. 30, 1940, were computed by Bureau of Reclamation from gate openings at Ady: October, 633; November, 381; December, 984; January, 56; February, 0; March, 452; April, 653; May, 1,930; June, 3,970; July, 260; August, 1,050; September, 906; the year, 11,275. Flow regulated by storage in Upper Klamath Lake since 1919 and in Lake Ewauna and Klamath River above Keno since September 1931.

Cooperation.- Water-stage recorder inspected by employee of The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|-------|-------|------------------|-------|---------|---------|-------|----------------------|-------|
| 1 | 601 | 1,120 | 1,120 | 366 | 695 | 1,580 | 5,660 | 827 | 443 | 1,240 | 1,190 | 1,300 |
| 2 | 1,400 | 1,110 | 945 | 700 | 494 | 1,400 | 5,920 | 815 | 186 | 1,350 | 939 | 1,350 |
| 3 | 1,390 | 1,110 | 860 | 745 | 604 | 1,450 | 6,070 | 976 | 670 | 1,530 | 888 | 1,480 |
| 4 | 1,370 | 845 | 1,310 | 596 | 403 | 1,350 | 6,340 | 1,990 | 1,060 | 1,420 | 1,240 | 1,420 |
| 5 | 1,120 | 579 | 1,540 | 641 | 922 | 1,010 | 6,490 | 2,520 | 1,120 | 1,150 | 1,270 | 1,310 |
| 6 | 875 | 605 | 1,580 | 641 | 690 | 1,100 | 6,300 | 1,030 | 1,110 | 437 | 1,310 | 1,310 |
| 7 | 825 | 605 | 1,540 | 804 | 478 | 1,750 | 5,900 | 2,130 | 1,100 | 984 | 1,350 | 1,420 |
| 8 | 950 | 1,190 | 1,420 | 1,070 | 660 | 2,040 | 5,780 | 1,780 | 1,110 | 1,580 | 1,340 | 1,650 |
| 9 | 1,280 | 1,450 | 867 | 880 | 473 | 1,520 | 5,770 | 1,090 | 1,050 | 1,620 | 1,340 | 1,920 |
| 10 | 1,140 | 1,530 | 434 | 880 | 968 | 1,820 | 5,800 | 713 | 1,250 | 1,540 | 1,340 | 1,840 |
| 11 | 1,150 | 1,210 | 700 | 962 | 756 | 1,750 | 5,690 | 569 | 1,470 | 1,510 | 1,310 | 1,730 |
| 12 | 1,150 | 785 | 844 | 1,100 | 948 | 1,350 | 5,180 | 794 | 1,410 | 1,680 | 1,290 | 1,720 |
| 13 | 756 | 1,180 | 1,010 | 1,440 | 1,070 | 877 | 4,660 | 1,020 | 1,330 | 1,670 | 1,290 | 1,580 |
| 14 | 889 | 1,400 | 1,120 | 746 | 836 | 999 | 4,190 | 1,060 | 1,190 | 1,590 | 1,300 | 1,250 |
| 15 | 999 | 1,290 | 1,230 | 1,060 | 584 | 1,160 | 3,620 | 1,150 | 1,120 | 1,470 | 1,390 | 1,280 |
| 16 | 1,200 | 1,300 | 705 | 1,170 | 448 | 1,180 | 2,790 | 1,200 | 1,130 | 1,420 | 1,430 | 1,600 |
| 17 | 1,190 | 1,180 | 442 | 962 | 445 | 1,190 | 2,940 | 855 | 1,130 | 1,150 | 1,370 | 1,680 |
| 18 | 1,500 | 956 | 940 | 834 | 309 | 809 | 2,750 | 378 | 1,130 | 1,080 | 1,110 | 1,650 |
| 19 | 1,590 | 1,190 | 950 | 923 | 865 | 1,170 | 2,340 | 772 | 1,110 | 950 | 1,270 | 1,450 |
| 20 | 1,310 | 1,300 | 1,000 | 1,100 | 851 | 1,120 | 2,890 | 1,390 | 1,130 | 681 | 1,260 | 1,420 |
| 21 | 962 | 1,440 | 1,030 | 1,320 | 559 | 1,390 | 2,610 | 1,340 | 1,130 | 1,150 | 1,240 | 1,530 |
| 22 | 962 | 1,420 | 528 | 1,370 | 784 | 1,170 | 616 | 1,260 | 1,030 | 1,140 | 1,220 | 1,560 |
| 23 | 1,220 | 1,150 | 406 | 1,220 | 552 | 612 | 1,050 | 1,210 | 858 | 1,160 | 1,340 | 1,540 |
| 24 | 1,450 | 1,030 | 865 | 1,110 | 280 | 740 | 1,020 | 1,150 | 1,330 | 1,170 | 1,460 | 1,510 |
| 25 | 1,490 | 731 | 1,100 | 1,070 | 666 | 1,070 | 951 | 1,110 | 1,330 | 1,170 | 1,470 | 1,530 |
| 26 | 1,440 | 1,150 | 1,260 | 606 | 870 | 1,920 | 1,400 | 1,080 | 1,270 | 1,210 | 1,480 | 1,640 |
| 27 | 936 | 1,530 | 1,070 | 551 | 650 | 2,660 | 825 | 1,160 | 1,060 | 1,270 | 1,470 | 1,560 |
| 28 | 705 | 1,280 | 555 | 551 | 1,150 | 2,910 | 210 | 887 | 1,140 | 1,260 | 1,480 | 852 |
| 29 | 627 | 1,060 | 695 | 1,100 | 1,820 | 3,470 | 607 | 486 | 1,280 | 1,260 | 1,440 | 1,160 |
| 30 | 964 | 1,170 | 650 | 765 | - | 4,190 | 796 | 326 | 966 | 1,250 | 1,280 | 1,530 |
| 31 | 592 | - | 344 | 964 | - | 5,060 | - | 617 | - | 1,250 | 1,290 | - |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | 34,033 | | 1,590 | 592 | 1,098 | 67,600 | |
| November..... | | | | | | 33,896 | | 1,530 | 579 | 1,130 | 67,230 | |
| December..... | | | | | | 29,360 | | 1,580 | 344 | 947 | 58,230 | |
| Calendar year 1939..... | | | | | | 376,540 | | 2,270 | 129 | 1,032 | 746,900 | |
| January..... | | | | | | 29,567 | | 1,440 | 356 | 922 | 66,660 | |
| February..... | | | | | | 21,233 | | 1,820 | 280 | 732 | 42,120 | |
| March..... | | | | | | 52,157 | | 5,060 | 612 | 1,682 | 103,500 | |
| April..... | | | | | | 107,165 | | 6,490 | 210 | 3,572 | 212,600 | |
| May..... | | | | | | 33,691 | | 2,520 | 322 | 1,087 | 66,830 | |
| June..... | | | | | | 32,693 | | 1,470 | 156 | 1,090 | 64,850 | |
| July..... | | | | | | 39,352 | | 1,670 | 437 | 1,269 | 78,050 | |
| August..... | | | | | | 40,397 | | 1,480 | 888 | 1,303 | 80,130 | |
| September..... | | | | | | 44,822 | | 1,920 | 852 | 1,494 | 88,900 | |
| Water year 1939-40..... | | | | | | 497,366 | | 6,490 | 186 | 1,359 | 986,600 | |

Klamath River below Fall Creek, near Copco, Calif.

Location.- Water-stage recorder, lat. 41°58', long. 122°22', in NE¼ sec. 36, T. 48 N., R. 5 W., 500 feet downstream from Fall Creek, half a mile downstream from Copco No. 2 plant of The California Oregon Power Co., and 1 mile south of Copco post office. Altitude of gage, about 2,310 feet (from river profile map).

Drainage area.- 4,370 square miles.

Records available.- October 1928 to September 1940. October 1923 to September 1928, at site above Fall Creek.

Average discharge.- 17 years, 1,401 second-feet (including Fall Creek).

Extremes.- Maximum discharge during year, 8,140 second-feet Apr. 4 (gage height, 6.75 feet); minimum, 76 second-feet Oct. 15 (gage height, 1.03 feet); minimum daily, 288 second-feet Oct. 8.

1923-40: Maximum discharge, 9,660 second-feet Apr. 27, May 3, 1938 (gage height, 7.39 feet), from rating curve extended above 6,400 second-feet; minimum, about 10 second-feet at former site several times in 1925 and 1926; minimum daily, 83 second-feet at present site Aug. 2, 1931.

Remarks.- Records good. Diversion and regulation above station.

Cooperation.- Water-stage recorder inspected by employee of The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|-------|-------|------------------|---------|---------|--------|----------------------|-------|-------|
| 1 | 1,000 | 1,630 | 1,650 | 406 | 1,340 | 2,900 | 6,560 | 1,470 | 454 | 2,050 | 1,490 | 706 |
| 2 | 1,630 | 1,630 | 524 | 1,470 | 1,420 | 2,530 | 5,490 | 1,480 | 302 | 1,900 | 1,800 | 921 |
| 3 | 1,810 | 1,500 | 448 | 1,450 | 552 | 1,450 | 7,090 | 1,490 | 1,480 | 1,920 | 1,430 | 1,710 |
| 4 | 1,710 | 446 | 1,870 | 1,380 | 430 | 1,500 | 6,660 | 593 | 1,530 | 331 | 341 | 1,800 |
| 5 | 1,630 | 289 | 2,020 | 1,490 | 1,240 | 1,480 | 6,940 | 1,720 | 1,530 | 1,390 | 1,640 | 2,090 |
| 6 | 1,480 | 1,690 | 2,390 | 1,450 | 1,550 | 1,520 | 6,580 | 2,510 | 1,630 | 1,710 | 1,660 | 2,190 |
| 7 | 451 | 1,920 | 2,290 | 710 | 1,530 | 2,200 | 6,440 | 1,850 | 1,700 | 825 | 1,660 | 1,680 |
| 8 | 288 | 1,820 | 2,120 | 1,410 | 1,290 | 3,120 | a6,040 | 1,900 | 974 | 1,820 | 1,730 | 598 |
| 9 | 1,560 | 1,810 | 530 | 1,420 | 1,400 | 3,020 | a6,160 | 1,680 | 470 | 1,880 | 1,830 | 1,850 |
| 10 | 1,610 | 1,670 | 390 | 1,510 | 590 | 1,960 | f5,970 | 1,480 | 1,700 | 1,970 | 1,560 | 2,030 |
| 11 | 1,980 | 534 | 1,290 | 1,350 | 493 | 2,110 | f5,730 | 1,410 | 1,770 | 1,900 | 293 | 2,090 |
| 12 | 1,510 | 366 | 1,640 | 1,360 | 1,290 | 2,090 | f5,030 | 495 | 1,750 | 1,990 | 1,590 | 2,160 |
| 13 | 1,670 | 1,700 | 1,600 | 666 | 1,280 | 1,700 | f4,700 | 1,670 | 1,710 | 1,640 | 1,650 | 1,880 |
| 14 | 581 | 1,770 | 1,700 | 594 | 1,390 | 2,020 | f4,400 | 1,570 | 1,730 | 316 | 1,670 | 1,360 |
| 15 | 308 | 1,830 | 1,350 | 1,540 | 1,320 | 1,700 | 4,140 | 1,490 | a1,230 | 1,860 | 1,690 | 848 |
| 16 | 1,670 | 1,910 | 446 | 1,470 | 1,530 | 486 | 2,570 | 1,420 | a399 | 1,600 | 1,560 | 1,740 |
| 17 | 2,060 | 2,180 | 333 | 1,690 | 481 | 384 | 3,170 | 1,460 | a1,580 | 1,520 | 916 | 2,010 |
| 18 | 1,950 | 664 | 1,470 | 1,750 | 296 | 1,620 | f3,460 | 853 | a1,620 | 1,550 | 388 | 1,580 |
| 19 | 1,520 | 604 | 1,590 | 1,770 | 1,300 | 1,720 | a2,510 | 470 | a1,620 | 1,560 | 1,740 | 1,810 |
| 20 | 1,880 | 1,960 | 1,570 | 1,090 | 1,340 | 2,000 | a1,730 | 1,710 | a1,690 | 852 | 1,800 | 2,120 |
| 21 | 732 | 2,230 | 1,460 | 544 | 1,460 | 1,910 | a2,250 | 1,540 | 1,620 | 289 | 1,830 | 1,550 |
| 22 | 488 | 1,900 | 1,660 | 1,800 | 792 | 1,640 | 2,000 | 1,520 | 900 | 1,680 | 1,780 | 916 |
| 23 | 1,880 | 458 | 1,000 | 1,560 | 1,050 | 678 | 1,470 | 1,440 | 370 | 1,700 | 1,900 | 1,980 |
| 24 | 1,630 | 1,720 | 476 | 1,490 | 1,250 | 352 | 1,510 | 1,430 | 1,460 | 1,740 | 1,180 | 2,100 |
| 25 | 1,580 | 1,320 | 458 | 1,440 | 404 | 1,680 | 1,530 | 1,450 | 1,610 | 1,650 | 616 | 2,080 |
| 26 | 1,550 | 337 | 1,420 | 1,300 | 1,330 | 2,220 | 1,550 | 354 | 1,550 | 1,520 | 1,830 | 2,150 |
| 27 | 1,390 | 1,590 | 1,520 | 539 | 1,960 | 3,200 | 597 | 1,340 | 1,540 | 1,150 | 1,830 | 1,610 |
| 28 | 739 | 1,810 | 1,440 | 483 | 3,040 | 3,440 | 783 | 1,420 | 1,580 | 414 | 1,910 | 972 |
| 29 | 304 | 1,640 | 1,410 | 1,290 | 3,100 | 3,620 | 1,560 | 1,220 | 1,200 | 1,550 | 1,900 | 879 |
| 30 | 1,090 | 1,510 | 437 | 1,300 | - | 5,170 | 1,580 | 366 | 734 | 1,510 | 1,800 | 1,800 |
| 31 | 1,400 | - | 301 | 1,020 | - | 6,660 | - | 1,340 | - | 1,210 | 1,460 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 40,881 | 2,060 | 288 | 1,319 | 81,090 | | |
| November..... | | | | | | 42,438 | 2,230 | 289 | 1,415 | 84,170 | | |
| December..... | | | | | | 38,603 | 2,390 | 301 | 1,252 | 76,960 | | |
| Calendar year 1939..... | | | | | | 475,260 | 2,950 | 252 | 1,302 | 942,600 | | |
| January..... | | | | | | 38,442 | 1,770 | 406 | 1,240 | 76,250 | | |
| February..... | | | | | | 36,448 | 1,660 | 296 | 1,257 | 72,290 | | |
| March..... | | | | | | 68,080 | 6,660 | 352 | 2,196 | 135,000 | | |
| April..... | | | | | | 116,180 | 7,090 | 597 | 3,873 | 230,400 | | |
| May..... | | | | | | 42,141 | 2,510 | 354 | 1,359 | 83,590 | | |
| June..... | | | | | | 39,433 | 1,770 | 302 | 1,314 | 78,210 | | |
| July..... | | | | | | 44,897 | 2,050 | 289 | 1,448 | 89,050 | | |
| August..... | | | | | | 46,274 | 1,910 | 293 | 1,493 | 91,790 | | |
| September..... | | | | | | 49,210 | 2,190 | 598 | 1,640 | 97,610 | | |
| Water year 1939-40..... | | | | | | 603,227 | 7,090 | 288 | 1,648 | 1,196,000 | | |

a No gage-height record; discharge computed on basis of records for power plant 2 miles upstream.
f Discharge computed from partly estimated gage height.

Klamath River at Somesbar, Calif.

Location.— Water-stage recorder, lat. 41°23', long. 123°29', in NE¼ sec. 4, T. 11 N., R. 6 E., 300 feet downstream from Salmon River and 1 mile west of Somesbar post office. Altitude of gage, 450 feet (from topographic map).

Drainage area.— 8,480 square miles.

Records available.— October 1927 to September 1940.

Average discharge.— 12 years (1927-29, 1930-40), 6,183 second-feet.

Extremes.— Maximum discharge during year, 70,300 second-feet Feb. 28 (gage height, 31.1 feet); minimum, 911 second-feet (regulated) Oct. 17.

1927-40: Maximum discharge, 73,700 second-feet Dec. 11, 1937 (gage height, 32.3 feet); minimum, 218 second-feet (regulated), Aug. 26, 1931.

Flood of Feb. 21, 1927, reached a stage of 50.8 feet (discharge not computed).

Remarks.— Records good. Storage, large diversions for irrigation, and considerable regulation by power plants above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|--------|--------|------------------|---------|---------|--------|----------------------|-------|-------|-------|
| 1 | 1,710 | 2,090 | 2,190 | 17,400 | 7,260 | 40,600 | 33,100 | 9,400 | 6,290 | 2,340 | 2,340 | 2,130 |
| 2 | 2,090 | 2,130 | 2,260 | 18,500 | 7,280 | 35,400 | 27,800 | 9,950 | 5,800 | 3,190 | 2,180 | 1,750 |
| 3 | 1,900 | 2,340 | 1,680 | 18,000 | 8,560 | 28,900 | 24,000 | 9,530 | 4,880 | 3,240 | 2,400 | 1,510 |
| 4 | 2,390 | 2,140 | 1,240 | 22,500 | 11,100 | 23,200 | 22,900 | 10,400 | 5,510 | 3,360 | 2,320 | 2,170 |
| 5 | 2,390 | 1,640 | 1,860 | 17,300 | 13,900 | 19,800 | 21,200 | 8,930 | 5,530 | 2,910 | 1,850 | 2,410 |
| 6 | 2,510 | 1,150 | 2,500 | 12,500 | 26,700 | 17,400 | 19,800 | 9,300 | 5,350 | 1,960 | 1,650 | 2,770 |
| 7 | 2,280 | 1,570 | 3,000 | 10,100 | 25,100 | 16,200 | 20,800 | 10,000 | 5,200 | 2,660 | 2,460 | 3,120 |
| 8 | 1,590 | 2,470 | 3,450 | 9,290 | 18,700 | 18,300 | 20,400 | 9,190 | 5,200 | 2,400 | 2,460 | 2,530 |
| 9 | 1,180 | 2,390 | 9,340 | 15,500 | 14,600 | 17,400 | 19,700 | 9,430 | 4,400 | 2,500 | 2,540 | 1,960 |
| 10 | 1,510 | 2,420 | 14,300 | 15,500 | 14,900 | 15,500 | 19,000 | 10,100 | 3,800 | 3,060 | 2,720 | 1,900 |
| 11 | 2,190 | 2,300 | 8,720 | 12,600 | 13,200 | 13,500 | 18,300 | 9,870 | 4,620 | 3,140 | 2,560 | 2,660 |
| 12 | 2,570 | 1,830 | 6,390 | 10,500 | 11,700 | 12,800 | 18,200 | 9,530 | 4,990 | 3,090 | 1,680 | 2,960 |
| 13 | 2,260 | 1,150 | 4,860 | 8,920 | 13,700 | 12,000 | 18,000 | 8,520 | 4,820 | 3,010 | 1,640 | 2,990 |
| 14 | 2,170 | 1,660 | 4,480 | 7,300 | 14,300 | 11,300 | 17,800 | 9,220 | 4,580 | 3,150 | 2,420 | 2,740 |
| 15 | 1,780 | 2,500 | 4,640 | 6,410 | 13,300 | 11,100 | 16,500 | 8,860 | 4,640 | 1,920 | 2,400 | 2,410 |
| 16 | 1,130 | 2,310 | 6,390 | 6,620 | 12,500 | 11,700 | 14,800 | 8,830 | 4,060 | 2,260 | 2,420 | 1,850 |
| 17 | 1,440 | 2,600 | 10,900 | 6,210 | 16,700 | 10,300 | 12,700 | 8,500 | 3,360 | 2,720 | 2,420 | 2,460 |
| 18 | 2,540 | 2,800 | 6,800 | 6,060 | 14,600 | 9,430 | 13,200 | 8,240 | 3,690 | 2,590 | 2,040 | 2,980 |
| 19 | 2,570 | 1,860 | 5,710 | 5,830 | 12,100 | 10,200 | 13,500 | 7,620 | 4,080 | 2,560 | 1,450 | 2,880 |
| 20 | 2,110 | 1,310 | 5,400 | 5,690 | 11,400 | 10,200 | 12,000 | 7,220 | 3,950 | 2,700 | 1,550 | 2,700 |
| 21 | 2,440 | 2,130 | 4,900 | 4,920 | 10,400 | 10,600 | 11,600 | 8,140 | 3,820 | 2,290 | 2,460 | 2,960 |
| 22 | 1,850 | 2,880 | 4,280 | 4,110 | 10,000 | 10,900 | 11,400 | 7,920 | 3,750 | 1,770 | 2,620 | 2,540 |
| 23 | 1,400 | 2,570 | 4,240 | 4,720 | 9,240 | 10,600 | 11,100 | 7,870 | 3,120 | 1,820 | 2,580 | 2,080 |
| 24 | 1,750 | 1,740 | 3,340 | 4,980 | 9,970 | 10,400 | 10,300 | 7,570 | 2,640 | 2,680 | 2,540 | 2,500 |
| 25 | 2,400 | 1,710 | 2,880 | 5,860 | 15,500 | 10,600 | 9,870 | 7,100 | 2,830 | 2,660 | 2,210 | 2,930 |
| 26 | 2,340 | 2,390 | 2,500 | 10,600 | 22,400 | 27,000 | 9,510 | 6,270 | 3,380 | 2,620 | 1,520 | 2,990 |
| 27 | 2,390 | 1,440 | 3,000 | 11,700 | 43,900 | 35,800 | 9,090 | 5,240 | 3,240 | 2,480 | 1,810 | 3,460 |
| 28 | 2,260 | 1,680 | 5,950 | 8,860 | 63,100 | 29,700 | 8,070 | 5,780 | 3,190 | 2,350 | 2,480 | 3,240 |
| 29 | 1,770 | 2,310 | 11,800 | 8,020 | 57,600 | 33,200 | 8,020 | 6,080 | 3,190 | 1,750 | 2,480 | 2,270 |
| 30 | 1,460 | 2,440 | 17,000 | 8,240 | - | 39,300 | 9,250 | 5,640 | 2,860 | 1,800 | 2,530 | 2,020 |
| 31 | 1,150 | - | 19,200 | 7,810 | - | 37,800 | - | 4,950 | - | 2,420 | 2,500 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 61,420 | 2,570 | 1,130 | 1,981 | 121,800 | | | |
| November..... | | | | | 61,950 | 2,880 | 1,150 | 2,065 | 122,900 | | | |
| December..... | | | | | 185,200 | 19,200 | 1,240 | 5,974 | 367,300 | | | |
| Calendar year 1939..... | | | | | 1,662,304 | 20,900 | 959 | 4,554 | 3,297,000 | | | |
| January..... | | | | | 312,550 | 22,800 | 4,110 | 10,080 | 619,900 | | | |
| February..... | | | | | 523,500 | 63,100 | 7,260 | 18,050 | 1,038,000 | | | |
| March..... | | | | | 601,130 | 40,500 | 9,430 | 19,390 | 1,192,000 | | | |
| April..... | | | | | 481,710 | 33,100 | 8,020 | 16,060 | 955,500 | | | |
| May..... | | | | | 255,200 | 10,400 | 4,950 | 8,232 | 506,200 | | | |
| June..... | | | | | 126,770 | 6,290 | 2,640 | 4,226 | 251,400 | | | |
| July..... | | | | | 79,000 | 3,360 | 1,750 | 2,548 | 156,700 | | | |
| August..... | | | | | 69,230 | 2,720 | 1,450 | 2,233 | 137,300 | | | |
| September..... | | | | | 75,850 | 3,460 | 1,510 | 2,528 | 150,400 | | | |
| Water year 1939-40..... | | | | | 2,833,510 | 63,100 | 1,130 | 7,742 | 5,619,000 | | | |

Peak discharge.— Dec. 10 (6 p.m.) 17,000 sec.-ft.; Dec. 31 (8 p.m.) 23,200 sec.-ft.; Feb. 6 (2 p.m.) 32,500 sec.-ft.; Feb. 28 (12:30 p.m.) 70,300 sec.-ft.; Mar. 26 (6:30 p.m.) 41,900 sec.-ft.; Mar. 29 (8 p.m.) 40,000 sec.-ft.

Sprague River near Chiloquin, Oreg.

Location.- Water-stage recorder, lat. 42°35', long. 121°51', in NE¼ sec. 35, T. 34 S., R. 7 E., 1¼ miles east of Chiloquin and 4 miles upstream from Modoc Point canal intake.

Drainage area.- 1,580 square miles.

Records available.- August 1931 to September 1940. July 1920 to September 1931, at site at McCready ranch, 12 miles upstream; records equivalent except those for extremely low stages.

Average discharge.- 19 years (1921-40), 426 second-feet.

Extremes.- Maximum discharge during year, 4,870 second-feet Apr. 3 (gage height, 6.30 feet); minimum, 124 second-feet Aug. 14 (gage height, 1.28 feet).
1920-40: Maximum discharge, 6,330 second-feet Apr. 22, 1938 (gage height, 7.34 feet); minimum daily discharge, 50 second-feet (estimated) May 26, 27, 1926.

Remarks.- Records good except those for Jan. 17, 18, which are fair. Diversions above station for irrigation; regulation by ponding at irrigation dams.

Cooperation.- Water-stage recorder inspected by employee of The California Oregon Power Co.

Rating table, water year 1939-40 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 1.2 | 103 | 2.4 | 690 | 4.0 | 2,020 |
| 1.4 | 159 | 2.8 | 975 | 4.5 | 2,550 |
| 1.7 | 273 | 3.2 | 1,290 | 5.0 | 3,110 |
| 2.0 | 435 | 3.6 | 1,640 | 5.5 | 5,170 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|-------|-------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 268 | 241 | 241 | 334 | 528 | 2,850 | 2,990 | 1,280 | 419 | 179 | 201 | 259 |
| 2 | 228 | 232 | 228 | 437 | 565 | 4,000 | 4,250 | 1,220 | 408 | 179 | 197 | 228 |
| 3 | 212 | 228 | 228 | 528 | 610 | 3,820 | 4,790 | 1,160 | 396 | 179 | 197 | 166 |
| 4 | 209 | 228 | 232 | 656 | 578 | 3,020 | 4,230 | 1,140 | 277 | 183 | 193 | 126 |
| 5 | 216 | 220 | 232 | 809 | 565 | 2,310 | 3,360 | 1,100 | 268 | 186 | 190 | 126 |
| 6 | 212 | 224 | 232 | 950 | 604 | 1,870 | 2,710 | 1,060 | 318 | 186 | 190 | 132 |
| 7 | 212 | 246 | 236 | 1,040 | 682 | 1,600 | 2,430 | 1,050 | 334 | 186 | 186 | 147 |
| 8 | 209 | 228 | 302 | 1,010 | 747 | 1,440 | 2,270 | 1,060 | 328 | 186 | 186 | 159 |
| 9 | 209 | 220 | 287 | 823 | 875 | 1,270 | 2,060 | 1,040 | 323 | 183 | 179 | 173 |
| 10 | 212 | 228 | 292 | 688 | 1,030 | 1,150 | 1,840 | 1,040 | 318 | 193 | 183 | 176 |
| 11 | 212 | 228 | 328 | 598 | 1,080 | 1,070 | 1,690 | 1,000 | 339 | 250 | 183 | 176 |
| 12 | 212 | 228 | 345 | 643 | 950 | 1,040 | 1,590 | 958 | 339 | 264 | 166 | 176 |
| 13 | 236 | 232 | 356 | 708 | 909 | 996 | 1,530 | 898 | 297 | 236 | 129 | 179 |
| 14 | 220 | 232 | 345 | 747 | 734 | 935 | 1,490 | 838 | 269 | 212 | 124 | 190 |
| 15 | 209 | 232 | 334 | 650 | 669 | 852 | 1,420 | 802 | 254 | 193 | 132 | 236 |
| 16 | 246 | 228 | 328 | b420 | 584 | 795 | 1,380 | 781 | 232 | 183 | 150 | 297 |
| 17 | 254 | 228 | 339 | b400 | 522 | 754 | 1,360 | 760 | 224 | 186 | 162 | 313 |
| 18 | 250 | 228 | 313 | b385 | 485 | 728 | 1,380 | 747 | 224 | 190 | 166 | 241 |
| 19 | 220 | 228 | 308 | 373 | 461 | 714 | 1,420 | 734 | 224 | 193 | 169 | 228 |
| 20 | 209 | 228 | 323 | 339 | 437 | 662 | 1,440 | 721 | 220 | 193 | 162 | 228 |
| 21 | 209 | 228 | 313 | 308 | 419 | 636 | 1,400 | 688 | 224 | 190 | 156 | 228 |
| 22 | 209 | 228 | 308 | 313 | 408 | 624 | 1,360 | 656 | 228 | 190 | 159 | 228 |
| 23 | 176 | 224 | 313 | 302 | 402 | 617 | 1,330 | 617 | 224 | 193 | 166 | 228 |
| 24 | 186 | 232 | b300 | 250 | 402 | 617 | 1,330 | 553 | 193 | 224 | 169 | 224 |
| 25 | 254 | 232 | b310 | 282 | 455 | 643 | 1,330 | 528 | 179 | 216 | 173 | 176 |
| 26 | 236 | 236 | b300 | 318 | 578 | 714 | 1,350 | 515 | 193 | 201 | 173 | 141 |
| 27 | 228 | 228 | 282 | 350 | 809 | 852 | 1,340 | 491 | 193 | 201 | 173 | 179 |
| 28 | 224 | 224 | 246 | 396 | 1,210 | 965 | 1,350 | 467 | 190 | 197 | 173 | 209 |
| 29 | 228 | 201 | 259 | 431 | 1,640 | 1,150 | 1,350 | 431 | 190 | 197 | 169 | 220 |
| 30 | 264 | 205 | 292 | 449 | - | 1,520 | 1,320 | 419 | 186 | 197 | 190 | 232 |
| 31 | 236 | - | 302 | 479 | - | 2,240 | - | 419 | - | 201 | 302 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 6,905 | 268 | 176 | 223 | 13,700 | | |
| November..... | | | | | | 6,825 | 246 | 201 | 228 | 13,540 | | |
| December..... | | | | | | 9,054 | 356 | 228 | 292 | 17,960 | | |
| Calendar year 1939..... | | | | | | 107,607 | 1,310 | 111 | 295 | 213,400 | | |
| January..... | | | | | | 16,416 | 1,040 | 250 | 530 | 32,560 | | |
| February..... | | | | | | 19,838 | 1,640 | 402 | 684 | 39,350 | | |
| March..... | | | | | | 42,454 | 4,000 | 617 | 1,369 | 84,210 | | |
| April..... | | | | | | 59,080 | 4,790 | 1,320 | 1,969 | 117,200 | | |
| May..... | | | | | | 25,173 | 1,280 | 419 | 812 | 49,930 | | |
| June..... | | | | | | 8,010 | 419 | 179 | 267 | 15,890 | | |
| July..... | | | | | | 6,147 | 264 | 179 | 198 | 12,190 | | |
| August..... | | | | | | 5,448 | 302 | 124 | 176 | 10,810 | | |
| September..... | | | | | | 6,021 | 313 | 126 | 201 | 11,940 | | |
| Water year 1939-40..... | | | | | | 211,371 | 4,790 | 124 | 578 | 419,300 | | |

b Stage-discharge relation affected by ice.

KLAMATH RIVER BASIN

Cascade canal near Fish Lake, Oreg.

Location.- Water-stage recorder, lat. $42^{\circ}24'$, long. $122^{\circ}16'$, in SE $\frac{1}{4}$ sec. 30, T. 36 S., R. 5 E., at divide between Rogue River and Klamath River Basins, 3 miles upstream from Fish Lake and 10 miles downstream from point of diversion.

Records available.- June 1924 to September 1940 (irrigation seasons only prior to October 1939).

Extremes.- Maximum discharge recorded during year, 48 second-feet July 5-7 (gage height, 2.01 feet); practically no flow during periods October to March and Aug. 18 to Sept. 30.

1924-40: Maximum discharge recorded, 60 second-feet June 5, 1934; no flow at times.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Water stored in Fourmile Lake Reservoir was released to canal during period May 16 to Aug. 16. Canal diverts water from Fourmile Creek, in Klamath River Basin, and discharges into lava bed $1\frac{1}{2}$ miles above Fish Lake, in Rogue River Basin. Entire flow sinks into lava bed, reappearing in springs at head of Fish Lake.

Discharge, in second-feet, water year October 1939 to September 1940.

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|-------|
| 1 | | | | | | | | h6.2 | 46 | 45 | f20 | |
| 2 | | | | | | | | a5.8 | a46 | 45 | h17 | |
| 3 | | | | | | | | a5.4 | a46 | 46 | f16 | |
| 4 | | | | | | | | a4.9 | a46 | 42 | 15 | |
| 5 | | | | | | | | a4.5 | a46 | 42 | 13 | |
| 6 | | | | | | | | a4.1 | f46 | 48 | 8.1 | |
| 7 | | | | | | | | a3.7 | 46 | 47 | 6.7 | |
| 8 | | | | | | | | h3.3 | 45 | 46 | 6.2 | |
| 9 | | | | | | | | a3.4 | 45 | 46 | 5.6 | |
| 10 | | | | | | | | a3.4 | 44 | 46 | 6.9 | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | a4 | h3.5 | 44 | 45 | 7.1 | |
| 13 | | | | | | | | a2.8 | f46 | 44 | 5.6 | |
| 14 | | | | | | | | h2.2 | f45 | 46 | a4.9 | |
| 15 | | | | | | | | a2.2 | 44 | 44 | a4.2 | |
| 16 | | | | | | | | a2.2 | 44 | 44 | a3.5 | |
| 17 | | | | | | | | f30 | 44 | 45 | h2.8 | |
| 18 | | | | | | | | a44 | 44 | 45 | a1.4 | |
| 19 | | | | | | | | f44 | 44 | 45 | 0 | |
| 20 | | | | | | | | 44 | 45 | 45 | 0 | |
| 21 | | | | | | | | 44 | 45 | 45 | 0 | |
| 22 | | | | | | | | 44 | 44 | 45 | 0 | |
| 23 | | | | | | | | 44 | 44 | 44 | 0 | |
| 24 | | | | | | | h6 | 44 | 44 | 44 | 0 | |
| 25 | | | | | | | | 44 | 44 | 44 | 0 | |
| 26 | | | | | | | | 44 | 44 | 42 | 0 | |
| 27 | | | | | | | | 44 | 46 | 38 | 0 | |
| 28 | | | | | | | | 45 | 46 | a34 | 0 | |
| 29 | | | | | | | | 45 | 46 | a30 | 0 | |
| 30 | | | | | | | | 45 | 46 | a26 | 0 | |
| 31 | | | | | | | - | 46 | - | f22 | 0 | |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| November..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| December..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| Calendar year | | | | | | | - | - | - | - | - | |
| January..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| February..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| March..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| April..... | | | | | | | 136.0 | - | - | 4.53 | 270 | |
| May..... | | | | | | | 752.6 | 46 | 2.2 | 24.3 | 1,490 | |
| June..... | | | | | | | 1,349 | 46 | 44 | 45.0 | 2,680 | |
| July..... | | | | | | | 1,317 | 48 | 22 | 42.5 | 2,610 | |
| August..... | | | | | | | 144.0 | 20 | 0 | 4.65 | 286 | |
| September..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| Water year 1939-40..... | | | | | | | 3,698.6 | 48 | 0 | 10.1 | 7,340 | |

a No gage-height record; discharge interpolated or computed on basis of information furnished by State engineer's office.

f Discharge computed from partly estimated gage height.

h Discharge computed from staff-gage reading.

"A" canal at Klamath Falls, Oreg.

Location.- Water-stage recorder, lat. 42°14', long. 121°48', in NE¼ sec. 30, T. 38 S., R. 9 E., 300 feet downstream from head gates of canal and 1 mile northwest of Klamath Falls.

Records available.- October 1910 to September 1940.

Average discharge.- 30 years (1910-40), 176 second-feet.

Extremes.- Maximum daily discharge during year, 1,060 second-feet June 19 (gage height, 10.31 feet); no flow Oct. 4 to Apr. 24.
1910-40: Maximum discharge, 1,100 second-feet July 20, 1937; maximum stage, 10.72 feet June 27, 1925.

Remarks.- Records good. Canal diverts water from Upper Klamath Lake in NE¼ sec. 30, T. 38 S., R. 9 E., for irrigation of lands east of Klamath River on both sides of Lost River. Most of return water reaches Lost River.

Cooperation.- Records furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|-------|
| 1 | 297 | | | | | | 0 | 54 | 642 | 737 | 698 | 540 |
| 2 | 172 | | | | | | 0 | 90 | 557 | 799 | 695 | 539 |
| 3 | 50 | | | | | | 0 | 97 | 532 | 795 | 709 | 507 |
| 4 | 0 | | | | | | 0 | 112 | 586 | 669 | 673 | 436 |
| 5 | 0 | | | | | | 0 | 153 | 690 | 768 | 695 | 392 |
| 6 | 0 | | | | | | 0 | 212 | 753 | 722 | 767 | 401 |
| 7 | 0 | | | | | | 0 | 252 | 781 | 843 | 762 | 377 |
| 8 | 0 | | | | | | 0 | 300 | 769 | 870 | 712 | 333 |
| 9 | 0 | | | | | | 0 | 406 | 746 | 942 | 713 | 301 |
| 10 | 0 | | | | | | 0 | 470 | 827 | 994 | 641 | 233 |
| 11 | 0 | | | | | | 0 | 611 | 951 | 971 | 617 | 235 |
| 12 | 0 | | | | | | 0 | 543 | 994 | 958 | 695 | 256 |
| 13 | 0 | | | | | | 0 | 607 | 979 | 947 | 726 | 260 |
| 14 | 0 | | | | | | 0 | 662 | 973 | 863 | 727 | 268 |
| 15 | 0 | | | | | | 0 | 683 | 953 | 871 | 720 | 254 |
| 16 | 0 | | | | | | 0 | 744 | 876 | 917 | 684 | 247 |
| 17 | 0 | | | | | | 0 | 794 | 900 | 930 | 646 | 219 |
| 18 | 0 | | | | | | 0 | 807 | 970 | 953 | 584 | 193 |
| 19 | 0 | | | | | | 0 | 834 | 1,060 | 942 | 634 | 126 |
| 20 | 0 | | | | | | 0 | 840 | 1,040 | 830 | 657 | 74 |
| 21 | 0 | | | | | | 0 | 868 | 980 | 768 | 621 | 71 |
| 22 | 0 | | | | | | 0 | 865 | 906 | 801 | 628 | 73 |
| 23 | 0 | | | | | | 0 | 912 | 834 | 864 | 606 | 95 |
| 24 | 0 | | | | | | 0 | 942 | 821 | 847 | 550 | 119 |
| 25 | 0 | | | | | | 15 | 913 | 880 | 830 | 491 | 145 |
| 26 | 0 | | | | | | 15 | 850 | 916 | 837 | 544 | 172 |
| 27 | 0 | | | | | | 15 | 812 | 905 | 782 | 581 | 165 |
| 28 | 0 | | | | | | 15 | 810 | 865 | 691 | 598 | 94 |
| 29 | 0 | | | | | | 20 | 806 | 840 | 735 | 585 | 59 |
| 30 | 0 | | | | | | 25 | 716 | 789 | 766 | 571 | 28 |
| 31 | 0 | | | | | | - | 655 | - | 767 | 574 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | 519 | 297 | 0 | 16.7 | 1,030 | |
| November..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| December..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| Calendar year 1939..... | | | | | | | 113,659 | 1,030 | 0 | 311 | 226,400 | |
| January..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| February..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| March..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| April..... | | | | | | | 106 | 25 | 0 | 3.5 | 208 | |
| May..... | | | | | | | 18,338 | 942 | 54 | 592 | 36,370 | |
| June..... | | | | | | | 25,314 | 1,060 | 532 | 844 | 50,210 | |
| July..... | | | | | | | 26,020 | 994 | 669 | 839 | 51,610 | |
| August..... | | | | | | | 20,092 | 787 | 491 | 648 | 39,850 | |
| September..... | | | | | | | 7,201 | 540 | 28 | 240 | 14,280 | |
| Water year 1939-40..... | | | | | | | 97,589 | 1,060 | 0 | 267 | 193,600 | |

KLAMATH RIVER BASIN

Keno Canal at Klamath Falls, Oreg.

Location.- Watt-hour meter, lat. 42°13', long. 121°48', in SW $\frac{1}{4}$ sec. 32, T. 38 S., R. 9 E., in west-side plant of The California Oregon Power Co., a quarter of a mile upstream from bridge over Link River at Klamath Falls, with staff gage in canal 200 feet above penstock.

Records available.- October 1923 to September 1940.

Average discharge.- 17 years, 205 second-feet.

Extremes.- Maximum daily discharge during year, 339 second-feet Feb. 1; no flow at times. 1923-40: Maximum daily discharge, that of Feb. 1, 1940; no flow at times.

Remarks.- Records good except those above 300 second-feet, which include a larger proportion of discharge as measured at spillway and are poor. Discharge determined from record of electrical output of power plant combined with spill from canal at wasteway above penstock. Canal diverts water from Upper Klamath Lake at Link River storage dam in SE $\frac{1}{4}$ sec. 30. Water is used for developing power and returned to Link River in SW $\frac{1}{4}$ sec. 32. Flow controlled by gates at head of canal.

Cooperation.- Gage readings and record of electrical output furnished by The California Oregon Power Co.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|------|------|---------|------|---------|------|------|------|----------------------|
| 1 | 301 | 269 | 231 | 6 | 339 | 5 | 267 | 97 | 281 | 287 | 229 | 279 |
| 2 | 290 | 260 | 289 | 7 | 281 | 5 | 272 | 287 | 286 | 288 | 284 | 277 |
| 3 | 292 | 268 | 292 | 7 | 47 | 6 | 265 | 287 | 284 | 290 | 294 | 263 |
| 4 | 261 | 270 | 271 | 8 | 42 | 6 | 270 | 287 | 288 | 286 | 295 | 275 |
| 5 | 286 | 269 | 262 | 9 | 36 | 7 | 270 | 292 | 286 | 287 | 297 | 289 |
| 6 | 288 | 261 | 265 | 9 | 31 | 7 | 268 | 295 | 286 | 290 | 284 | 279 |
| 7 | 286 | 264 | 258 | 9 | 129 | 126 | 273 | 288 | 284 | 288 | 282 | 263 |
| 8 | 286 | 269 | 243 | 9 | 139 | 282 | 273 | 292 | 283 | 287 | 240 | 269 |
| 9 | 272 | 264 | 200 | 10 | 16 | 281 | 269 | 290 | 279 | 285 | 274 | 262 |
| 10 | 280 | 265 | 0 | 10 | 10 | 280 | 269 | 293 | 283 | 285 | 274 | 285 |
| 11 | 281 | 281 | 0 | 10 | 5 | 287 | 276 | 290 | 279 | 281 | 274 | 275 |
| 12 | 283 | 285 | 1 | 10 | 5 | 201 | 274 | 290 | 279 | 288 | 274 | 264 |
| 13 | 281 | 261 | 1 | 10 | 5 | 3 | 277 | 290 | 285 | 300 | 277 | 276 |
| 14 | 275 | 280 | 1 | 10 | 5 | 3 | 271 | 290 | 283 | 295 | 275 | 292 |
| 15 | 279 | 274 | 1 | 10 | 5 | 4 | 280 | 292 | 283 | 289 | 268 | 297 |
| 16 | 263 | 270 | 1 | 10 | 5 | 6 | 275 | 290 | 283 | 291 | 267 | 278 |
| 17 | 271 | 273 | 1 | 10 | 5 | 7 | 276 | 292 | 281 | 290 | 270 | 280 |
| 18 | 258 | 272 | 1 | 10 | 5 | 80 | 277 | 287 | 284 | 288 | 263 | 276 |
| 19 | 269 | 274 | 1 | 10 | 5 | 190 | 280 | 288 | 290 | 289 | 281 | 292 |
| 20 | 262 | 272 | 1 | 11 | 5 | 8 | 284 | 287 | 284 | 288 | 267 | 284 |
| 21 | 274 | 263 | 1 | 11 | 5 | 7 | 283 | 289 | 284 | 290 | 276 | 287 |
| 22 | 284 | 268 | 1 | 11 | 5 | 7 | 285 | 289 | 282 | 287 | 278 | 280 |
| 23 | 268 | 270 | 1 | 11 | 5 | 7 | 116 | 295 | 283 | 285 | 273 | 278 |
| 24 | 289 | 271 | 2 | 11 | 5 | 6 | 4 | 282 | 277 | 285 | 273 | 279 |
| 25 | 274 | 263 | 2 | 11 | 5 | 6 | 5 | 290 | 284 | 281 | 271 | 270 |
| 26 | 250 | 256 | 74 | 11 | 5 | 179 | 4 | 291 | 282 | 283 | 268 | 249 |
| 27 | 270 | 254 | 115 | 10 | 5 | 289 | 4 | 284 | 286 | 282 | 267 | 264 |
| 28 | 274 | 260 | 107 | 10 | 5 | 282 | 4 | 285 | 284 | 283 | 269 | 299 |
| 29 | 280 | 240 | 110 | 10 | 5 | 278 | 5 | 284 | 284 | 282 | 276 | 285 |
| 30 | 267 | 289 | 110 | 10 | - | 279 | 5 | 280 | 281 | 284 | 279 | 274 |
| 31 | 271 | - | 47 | 239 | - | 273 | - | 281 | - | 283 | 281 | - |
| Month | Second-foot-days | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October..... | 8,565 | | | | | 301 | | 250 | | 276 | | 16,990 |
| November..... | 8,025 | | | | | 289 | | 240 | | 268 | | 15,920 |
| December..... | 2,890 | | | | | 292 | | 0 | | 93.2 | | 5,750 |
| Calendar year 1939..... | 92,242 | | | | | 304 | | 0 | | 253 | | 183,000 |
| January..... | 530 | | | | | 239 | | 6 | | 17.1 | | 1,080 |
| February..... | 1,145 | | | | | 339 | | 5 | | 39.5 | | 2,270 |
| March..... | 3,407 | | | | | 289 | | 3 | | 110 | | 6,760 |
| April..... | 6,181 | | | | | 285 | | 4 | | 206 | | 12,260 |
| May..... | 8,754 | | | | | 295 | | 97 | | 282 | | 17,360 |
| June..... | 8,498 | | | | | 290 | | 277 | | 283 | | 16,860 |
| July..... | 8,897 | | | | | 300 | | 281 | | 287 | | 17,650 |
| August..... | 8,460 | | | | | 297 | | 229 | | 273 | | 16,780 |
| September..... | 5,320 | | | | | 299 | | 249 | | 277 | | 16,500 |
| Water year 1939-40..... | 73,672 | | | | | 339 | | 0 | | 201 | | 146,100 |

Lost River diversion canal near Olene, Oreg.

Location.- Staff gages above and below headgates at intake of canal at Lost River Dam; water-stage recorder, lat. $42^{\circ}09'$, long. $121^{\circ}42'$, in SW $\frac{1}{4}$ sec. 30, T. 39 S., R. 10 E., $1\frac{1}{2}$ miles downstream from intake and 5 miles southwest of Olene.

Records available.- May 1912 to September 1940.

Average discharge.- 24 years (1912-15, 1919-40), 115 second-feet.

Extremes.- Maximum daily discharge during year, 1,190 second-feet Mar. 1-3; no flow at times.

1912-40: Maximum discharge, 1,320 second-feet Apr. 11, 1935; no flow at times.

Remarks.- Records fair. Discharge computed from record of openings and head on gates; water-stage recorder used to indicate changes between readings. Canal diverts water from Lost River in SW $\frac{1}{4}$ sec. 29, T. 39 S., R. 10 E., and discharges it into Klamath River to aid in reclamation of bed of Tule Lake. At times direction of flow is reversed and water is diverted from Klamath River into Lost River. (See record for Diversion from Klamath River to Lost River near Olene.)

Cooperation.- Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 85 | 133 | 107 | 283 | 322 | 1,190 | 1,030 | 59 | | | 0 | 185 |
| 2 | 101 | 128 | 108 | 490 | 315 | 1,190 | 1,100 | 0 | | | 0 | 161 |
| 3 | 102 | 124 | 107 | 515 | 302 | 1,190 | 1,140 | 0 | | | 0 | 162 |
| 4 | 103 | 122 | 107 | 520 | 282 | 1,120 | 1,080 | 46 | | | 0 | 152 |
| 5 | 161 | 117 | 107 | 532 | 274 | 954 | 925 | 78 | | | 0 | 152 |
| 6 | 210 | 117 | 110 | 535 | 259 | 770 | 759 | 66 | | | 0 | 173 |
| 7 | 204 | 115 | 110 | 492 | 375 | 630 | 648 | 49 | | | 0 | 152 |
| 8 | 196 | 115 | 110 | 455 | 434 | 537 | 602 | 57 | | | 0 | 149 |
| 9 | 196 | 112 | 115 | 396 | 472 | 436 | 620 | 93 | | | 0 | 147 |
| 10 | 189 | 111 | 193 | 392 | 478 | 385 | 708 | 63 | | | 0 | 163 |
| 11 | 182 | 111 | 222 | 422 | 482 | 304 | 699 | 0 | | | 0 | 163 |
| 12 | 174 | 111 | 222 | 456 | 465 | 241 | 667 | 0 | | | 0 | 160 |
| 13 | 169 | 110 | 227 | 460 | 425 | 355 | 635 | 0 | | | 0 | 152 |
| 14 | 162 | 110 | 230 | 426 | 378 | 322 | 625 | 0 | | | 0 | 148 |
| 15 | 153 | 110 | 214 | 378 | 335 | 283 | 607 | 0 | | | 0 | 115 |
| 16 | 143 | 109 | 193 | 326 | 275 | 282 | 578 | 0 | | | 0 | 101 |
| 17 | 132 | 109 | 175 | 231 | 199 | 311 | 560 | 0 | | | 0 | 92 |
| 18 | 121 | 107 | 115 | 199 | 221 | 318 | 504 | 0 | | | 0 | 86 |
| 19 | 118 | 108 | 117 | 200 | 235 | 293 | 449 | 0 | | | 0 | 91 |
| 20 | 112 | 108 | 170 | 200 | 241 | 294 | 400 | 0 | | | 0 | 109 |
| 21 | 109 | 109 | 181 | 178 | 235 | 259 | 335 | 0 | | | 0 | 120 |
| 22 | 107 | 109 | 174 | 172 | 222 | 258 | 335 | 0 | | | 0 | 128 |
| 23 | 106 | 108 | 164 | 168 | 206 | 252 | 244 | 0 | | | 0 | 120 |
| 24 | 104 | 108 | 154 | 166 | 196 | 208 | 261 | 0 | | | 0 | 98 |
| 25 | 119 | 108 | 142 | 168 | 215 | 204 | 282 | 0 | | | 0 | 86 |
| 26 | 128 | 109 | 109 | 176 | 245 | 181 | 239 | 0 | | | 0 | 87 |
| 27 | 139 | 109 | 110 | 195 | 466 | 199 | 183 | 0 | | | 0 | 87 |
| 28 | 149 | 110 | 115 | 220 | 858 | 223 | 128 | 0 | | | 0 | 93 |
| 29 | 149 | 110 | 121 | 270 | 1,180 | 248 | 107 | 0 | | | 36 | 91 |
| 30 | 143 | 108 | 129 | 304 | - | 412 | 72 | 0 | | | 196 | 107 |
| 31 | 140 | - | 192 | 321 | - | 930 | - | 0 | | | 225 | 137 |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 4,405 | 210 | 85 | 142 | 8,740 | | |
| November..... | | | | | | 3,375 | 133 | 107 | 112 | 6,690 | | |
| December..... | | | | | | 4,650 | 230 | 107 | 150 | 9,220 | | |
| Calendar year 1939..... | | | | | | 29,909 | 299 | 0 | 81.9 | 59,320 | | |
| January..... | | | | | | 10,245 | 535 | 166 | 330 | 20,320 | | |
| February..... | | | | | | 10,592 | 1,180 | 196 | 565 | 21,010 | | |
| March..... | | | | | | 14,779 | 1,190 | 181 | 477 | 29,310 | | |
| April..... | | | | | | 16,545 | 1,140 | 72 | 562 | 32,820 | | |
| May..... | | | | | | 511 | 93 | 0 | 16.5 | 1,010 | | |
| June..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| July..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| August..... | | | | | | 457 | 225 | 0 | 14.7 | 906 | | |
| September..... | | | | | | 3,822 | 185 | 86 | 127 | 7,580 | | |
| Water year 1939-40..... | | | | | | 69,381 | 1,190 | 0 | 190 | 137,600 | | |

KLAMATH RIVER BASIN

Diversion from Klamath River to Lost River near Olene, Oreg.

Location.- Water-stage recorder, lat. 42°09', long. 121°42', in SW¼ sec. 30, T. 39 S., R. 10 E., 5 miles southwest of Olene; staff gage above rectangular gate at wasteway, 0.4 mile east of recorder.

Records available.- April 1931, when diversion began, to September 1940.

Extremes.- Maximum daily discharge during year, 304 second-feet May 25, 26; no flow at times.

1931-40: Maximum daily discharge, 564 second-feet Apr. 13, 1933; no flow at times.

Remarks.- Records fair. Discharge computed from record of gate openings and gage readings at wasteway; recorder used as index of changes between readings. Canal was built to divert water from Lost River to Klamath River and thereby aid in reclamation of bed of Tule Lake. (See record for Lost River diversion canal near Olene, Oreg.) Beginning in April 1931, water has been diverted at times from Klamath River and released into drain that empties into Lost River, from which it is rediverted for irrigation of lands near Tule Lake.

Cooperation.- Records furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | | 0 | 245 | 86 | 106 | |
| 2 | | | | | | | | 31 | 190 | 71 | 85 | |
| 3 | | | | | | | | 18 | 175 | 18 | 45 | |
| 4 | | | | | | | | 0 | 175 | 0 | 15 | |
| 5 | | | | | | | | 0 | 189 | 0 | 14 | |
| 6 | | | | | | | | 0 | 198 | 0 | 42 | |
| 7 | | | | | | | | 0 | 197 | 0 | 60 | |
| 8 | | | | | | | | 0 | 183 | 55 | 32 | |
| 9 | | | | | | | | 0 | 144 | 114 | 12 | |
| 10 | | | | | | | | 33 | 141 | 160 | 11 | |
| 11 | | | | | | | | 97 | 230 | 160 | 11 | |
| 12 | | | | | | | | 101 | 281 | 161 | 33 | |
| 13 | | | | | | | | 110 | 281 | 161 | 47 | |
| 14 | | | | | | | | 148 | 283 | 162 | 54 | |
| 15 | | | | | | | | 190 | 239 | 162 | 70 | |
| 16 | | | | | | | | 217 | 240 | 194 | 34 | |
| 17 | | | | | | | | 278 | 246 | 212 | 19 | |
| 18 | | | | | | | | 257 | 262 | 210 | 10 | |
| 19 | | | | | | | | 194 | 263 | 210 | 27 | |
| 20 | | | | | | | | 140 | 263 | 177 | 40 | |
| 21 | | | | | | | | 121 | 235 | 132 | 29 | |
| 22 | | | | | | | | 150 | 193 | 114 | 10 | |
| 23 | | | | | | | | 236 | 182 | 149 | 10 | |
| 24 | | | | | | | | 298 | 161 | 165 | 10 | |
| 25 | | | | | | | | 304 | 181 | 164 | 10 | |
| 26 | | | | | | | | 304 | 181 | 117 | 10 | |
| 27 | | | | | | | | 303 | 151 | 84 | 10 | |
| 28 | | | | | | | | 303 | 93 | 84 | 10 | |
| 29 | | | | | | | | 303 | 67 | 88 | 3 | |
| 30 | | | | | | | | 303 | 68 | 120 | 0 | |
| 31 | | | | | | | | 288 | - | 138 | 0 | |
| Month | Second-foot-days | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| November..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| December..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| Calendar year 1939..... | 25,030 | | | | | | 552 | 0 | 68.6 | 49,640 | | |
| January..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| February..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| March..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| April..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| May..... | 4,727 | | | | | | 304 | 0 | 152 | 9,380 | | |
| June..... | 5,937 | | | | | | 281 | 67 | 198 | 11,780 | | |
| July..... | 3,668 | | | | | | 212 | 0 | 118 | 7,280 | | |
| August..... | 869 | | | | | | 106 | 0 | 28.0 | 1,720 | | |
| September..... | 0 | | | | | | 0 | 0 | 0 | 0 | | |
| Water year 1939-40..... | 15,201 | | | | | | 304 | 0 | 41.5 | 30,160 | | |

Fall Creek at Copco, Calif.

Location.- Staff gage, lat. 41°58', long. 122°22', in NE¼ sec. 36, T. 48 N., R. 5 W., 1,500 feet upstream from mouth and 0.8 mile south of Fall Creek power plant and Copco post office.

Records available.- July 1928 to September 1940.

Average discharge.- 12 years, 33.1 second-feet.

Extremes.- Maximum discharge during year, 241 second-feet Feb. 28 (gage height, 2.64 feet, observed at peak), from rating curve extended above 80 second-feet; minimum observed, 28 second-feet on some days in June and August.
1928-40: Maximum discharge, that of Feb. 28, 1940; minimum, 24 second-feet on many days in period June to September 1937.

Remarks.- Records good. No diversion above station. Slight diurnal fluctuation caused by fish ponds half a mile upstream. Gage read once daily.

Cooperation.- Gage-height record furnished by The California Oregon Power Co. and California State Division of Fish and Game.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|----|-----|-----|-----|-----|
| 1.0 | 23 | 1.6 | 74 | 2.3 | 176 |
| 1.2 | 34 | 1.8 | 99 | 2.5 | 233 |
| 1.4 | 51 | 2.0 | 128 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | a28 | 29 | 30 | 34 | 32 | 56 | 64 | 32 | 29 | 28 | 29 | 27 |
| 2 | a28 | 28 | 30 | 46 | 30 | a53 | 54 | 32 | 28 | 27 | 28 | a28 |
| 3 | 28 | 29 | 30 | 40 | a50 | 49 | 49 | 32 | 28 | 27 | 28 | 28 |
| 4 | 28 | 29 | 29 | 56 | a40 | 43 | 49 | 32 | 28 | 27 | 28 | 28 |
| 5 | 29 | a28 | 29 | 36 | a45 | 41 | 44 | 32 | 28 | 28 | 28 | 28 |
| 6 | 28 | 28 | 31 | 34 | 53 | 39 | 42 | 31 | 28 | 27 | 27 | 28 |
| 7 | 28 | 28 | 30 | 34 | 38 | 38 | 42 | 31 | 26 | a26 | 27 | 28 |
| 8 | a28 | 29 | 30 | 34 | 36 | 39 | 40 | 31 | 27 | 26 | 28 | a28 |
| 9 | 28 | 29 | 55 | 35 | 33 | 37 | 39 | 31 | 26 | 29 | 27 | a28 |
| 10 | 28 | a29 | 36 | 33 | 36 | 36 | 38 | 30 | 27 | 28 | 26 | 28 |
| 11 | 27 | a28 | 38 | 32 | 35 | 34 | 36 | 29 | 27 | 28 | a26 | 27 |
| 12 | 27 | a28 | 32 | 32 | 32 | 34 | 35 | 30 | 28 | 28 | 27 | 28 |
| 13 | 27 | 28 | 31 | 32 | 36 | 33 | 35 | 30 | 27 | 28 | 27 | 28 |
| 14 | a28 | 29 | 32 | 32 | 40 | 33 | 33 | 30 | 27 | 29 | a27 | 29 |
| 15 | 28 | 29 | 31 | 30 | 39 | 33 | 33 | 28 | 27 | 28 | 27 | a29 |
| 16 | 27 | 29 | 32 | a30 | 31 | 33 | 33 | 27 | a28 | 29 | 27 | a29 |
| 17 | 27 | 29 | 39 | 30 | 36 | a32 | 32 | 28 | 28 | 28 | 28 | a29 |
| 18 | 28 | 28 | 32 | 31 | 38 | 32 | 34 | 28 | 28 | 28 | 26 | a29 |
| 19 | 27 | 30 | 31 | a30 | 36 | 31 | 33 | 27 | 27 | 29 | 28 | 29 |
| 20 | 28 | 29 | 31 | 30 | 33 | 30 | 33 | 27 | 26 | 28 | 28 | 29 |
| 21 | 28 | 29 | 30 | 30 | 33 | 30 | 32 | 28 | 26 | a28 | 28 | 29 |
| 22 | 27 | 29 | 30 | 29 | 34 | 30 | 31 | 27 | 26 | 28 | 28 | 29 |
| 23 | 28 | 29 | 30 | 29 | 34 | 30 | 32 | 28 | 27 | 28 | 27 | 29 |
| 24 | a28 | 30 | a30 | 30 | 35 | 31 | 31 | 28 | 26 | 28 | 27 | 28 |
| 25 | a29 | 30 | 29 | 30 | 32 | 32 | 30 | 28 | 26 | 28 | 26 | 29 |
| 26 | 29 | 30 | 30 | 56 | 34 | 91 | 32 | 28 | 27 | 28 | 27 | 29 |
| 27 | 29 | 30 | 30 | 36 | 99 | 55 | 32 | 28 | 28 | 27 | 27 | 29 |
| 28 | 29 | 29 | 30 | 33 | a150 | 44 | 32 | 28 | 27 | 28 | 28 | a30 |
| 29 | 29 | 30 | 29 | 32 | a70 | 60 | 32 | 28 | 27 | 28 | 28 | 30 |
| 30 | 29 | a30 | 49 | 32 | - | 124 | 32 | 28 | 28 | 28 | 28 | 31 |
| 31 | 29 | - | 37 | 31 | - | 89 | - | 27 | - | 28 | 27 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 869 | 29 | 27 | 28.0 | 1,720 | | |
| November..... | | | | | | 869 | 30 | 28 | 29.0 | 1,720 | | |
| December..... | | | | | | 1,013 | 49 | 29 | 32.7 | 2,010 | | |
| Calendar year 1939..... | | | | | | 10,875 | 80 | 26 | 29.8 | 21,560 | | |
| January..... | | | | | | 1,059 | 56 | 29 | 34.2 | 2,100 | | |
| February..... | | | | | | 1,270 | 150 | 30 | 43.8 | 2,520 | | |
| March..... | | | | | | 1,372 | 124 | 30 | 44.3 | 2,720 | | |
| April..... | | | | | | 1,114 | 64 | 30 | 37.1 | 2,210 | | |
| May..... | | | | | | 904 | 32 | 27 | 29.2 | 1,790 | | |
| June..... | | | | | | 816 | 29 | 26 | 27.2 | 1,680 | | |
| July..... | | | | | | 862 | 29 | 26 | 27.8 | 1,710 | | |
| August..... | | | | | | 848 | 29 | 26 | 27.4 | 1,680 | | |
| September..... | | | | | | 858 | 31 | 27 | 28.6 | 1,700 | | |
| Water year 1939-40..... | | | | | | 11,854 | 150 | 26 | 32.4 | 23,500 | | |

a No gage-height record; discharge interpolated except Feb. 28 when peak discharge occurred and daily discharge is based on staff-gage reading and weather records.

KLAMATH RIVER BASIN

Keene Creek canal near Ashland, Oreg.

Location.— Water-stage recorder, lat. $42^{\circ}09'$, long. $122^{\circ}30'$, in NW $\frac{1}{4}$ sec. 29, T. 39 S., R. 3 E., 400 feet upstream from 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 1940 (some years incomplete).

Extremes.— Maximum discharge during year, 57 second-feet Aug. 12 (gage height, 2.36 feet); no flow at times.

1923-40: Maximum discharge, 91 second-feet Aug. 2, 3, 1938, July 23, 1939; no flow at times.

Remarks.— Records fair. Water released from Hyatt Prairie Reservoir is diverted by this canal from Keene Creek, in SE $\frac{1}{4}$ sec. 20, T. 39 S., R. 3 E., and discharged into Emigrant Creek Basin for irrigation of lands near Ashland and Talent.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|-------|
| 1 | | | | | | | 0 | 1.1 | 36 | 48 | 50 | 0.9 |
| 2 | | | | | | | 0 | 1.1 | 35 | 48 | 52 | .5 |
| 3 | | | | | | | 0 | 1.2 | 33 | 48 | 52 | .4 |
| 4 | | | | | | | 0 | 1.8 | 29 | 48 | 52 | .4 |
| 5 | | | | | | | 0 | 1.8 | 32 | 48 | 50 | .4 |
| 6 | | | | | | | 0 | 1.2 | 33 | 48 | 50 | .4 |
| 7 | | | | | | | 0 | .7 | 33 | 48 | 49 | .4 |
| 8 | | | | | | | 0 | .6 | 33 | 48 | 45 | .4 |
| 9 | | | | | | | 0 | .6 | 34 | 48 | 49 | .3 |
| 10 | | | | | | | 0 | .6 | 34 | 48 | 50 | .3 |
| 11 | | | | | | | 0 | .5 | 34 | 46 | 51 | .2 |
| 12 | | | | | | | 0 | .5 | 32 | 46 | 56 | |
| 13 | | | | | | | 0 | .4 | 29 | 46 | 56 | |
| 14 | | | | | | | 0 | 3.7 | 40 | 46 | 53 | |
| 15 | | | | | | | 0 | 14 | 50 | 46 | 50 | |
| 16 | | | | | | | 0 | 20 | 49 | 46 | 47 | |
| 17 | | | | | | | 0 | 20 | 49 | 45 | 21 | |
| 18 | | | | | | | 0 | 20 | 49 | 45 | 8.0 | |
| 19 | | | | | | | 0 | 20 | 49 | 45 | 5.3 | |
| 20 | | | | | | | .5 | 20 | 49 | 45 | 4.8 | |
| 21 | | | | | | | | 21 | 49 | 45 | 5.7 | a.2 |
| 22 | | | | | | | | 25 | 48 | 45 | 5.7 | |
| 23 | | | | | | | | 27 | 48 | 45 | 5.1 | |
| 24 | | | | | | | | 27 | 48 | 45 | 4.8 | |
| 25 | | | | | | | | 26 | 48 | 46 | 4.5 | |
| 26 | | | | | | | a1.5 | 26 | 48 | 51 | 4.2 | |
| 27 | | | | | | | | 26 | 48 | 50 | 4.0 | |
| 28 | | | | | | | | 26 | 48 | 50 | 3.8 | |
| 29 | | | | | | | | 25 | 48 | 50 | 3.2 | |
| 30 | | | | | | | 1.3 | 42 | 46 | 50 | 3.1 | |
| 31 | | | | | | | - | 40 | - | 50 | 1.9 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| November..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| December..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| Calendar year | | | | | | | - | - | - | - | - | |
| January..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| February..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| March..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| April..... | | | | | | | 15.3 | - | 0 | .51 | 30 | |
| May..... | | | | | | | 440.8 | 42 | .4 | 14.2 | 874 | |
| June..... | | | | | | | 1,243 | 50 | 29 | 41.4 | 2,470 | |
| July..... | | | | | | | 1,485 | 51 | 45 | 47.3 | 2,910 | |
| August..... | | | | | | | 900.1 | 56 | 1.9 | 29.0 | 1,790 | |
| September..... | | | | | | | 6.4 | .9 | .2 | .28 | 17 | |
| Water year 1939-40..... | | | | | | | 4,072.6 | 56 | 0 | 11.1 | 8,090 | |

a No gage-height record; discharge computed on basis of information furnished by State engineer's office.

Shasta River near Yreka, Calif.

Location.- Water-stage recorder, lat. 41°49', long. 122°35', in NE¼ sec. 24, T. 46 N., R. 7 W., 0.6 mile upstream from mouth and 6 miles north of Yreka. Altitude of gage, about 7,000 feet (from topographic map).

Drainage area.- 804 square miles.

Records available.- October 1933 to September 1940.

Extremes.- Maximum discharge during year, 2,440 second-feet Feb. 29 (gage height, 6.72 feet), from rating curve extended above 900 second-feet by logarithmic plotting on basis of velocity-area studies; minimum, 24 second-feet June 19.
1933-40: Maximum discharge, that of Feb. 29, 1940; minimum, 3.4 second-feet Aug. 13, 1939, when about 2 second-feet were being diverted around gage.

Remarks.- Records good except those for period of no gage-height record, which are fair. Storage and many diversions above station for irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 123 | 118 | 123 | 317 | 177 | 1,170 | 1,190 | 174 | 92 | 56 | 79 | a65 |
| 2 | 125 | 118 | 125 | 375 | 182 | 1,130 | 894 | 203 | 130 | 54 | 69 | a65 |
| 3 | 123 | 118 | 125 | 396 | 194 | 882 | 762 | 228 | 154 | 47 | 52 | a75 |
| 4 | 116 | 118 | 125 | 465 | 266 | 724 | 729 | 206 | 164 | 44 | 44 | a100 |
| 5 | 116 | 118 | 127 | 368 | 321 | 628 | 729 | 215 | 149 | 39 | 48 | a110 |
| 6 | 118 | 118 | 127 | 298 | 324 | 548 | 662 | 209 | 146 | 39 | 59 | a105 |
| 7 | 118 | 120 | 123 | 256 | 432 | 491 | 632 | 182 | 120 | 41 | 74 | a100 |
| 8 | 116 | 120 | 127 | 240 | 341 | 487 | 628 | 154 | 87 | 44 | 74 | a90 |
| 9 | 114 | 120 | 295 | 254 | 301 | 479 | 608 | 143 | 87 | 50 | 69 | a85 |
| 10 | 114 | 120 | 475 | 234 | 279 | 434 | 567 | 123 | 85 | 58 | 62 | a80 |
| 11 | 107 | 123 | 500 | 215 | 276 | 414 | 539 | 106 | 79 | 67 | 61 | a75 |
| 12 | 107 | 125 | 393 | 212 | 253 | 380 | 522 | 106 | 76 | 62 | 54 | 72 |
| 13 | 107 | 123 | 266 | 197 | 288 | 352 | 496 | 107 | 64 | 66 | 54 | 90 |
| 14 | 111 | 123 | 209 | 185 | 345 | 334 | 426 | 86 | 74 | 71 | 51 | 98 |
| 15 | 111 | 120 | 191 | 185 | 324 | 308 | 384 | 74 | 64 | 85 | 45 | 118 |
| 16 | 109 | 120 | 194 | 185 | 292 | 295 | 366 | 69 | 44 | 75 | 42 | 114 |
| 17 | 107 | 120 | 334 | 177 | 292 | 295 | 317 | 65 | 34 | 70 | 43 | 123 |
| 18 | 107 | 123 | 253 | 180 | 314 | 279 | 292 | 67 | 34 | 67 | 56 | 143 |
| 19 | 106 | 123 | 209 | 185 | 328 | 256 | 276 | 66 | 32 | 62 | 59 | 146 |
| 20 | 106 | 123 | 191 | 188 | 282 | 266 | 266 | 67 | 34 | 59 | 59 | 143 |
| 21 | 106 | 123 | 185 | 180 | 256 | 263 | 250 | 62 | 34 | 54 | 67 | 135 |
| 22 | 109 | 123 | 174 | 174 | 250 | 260 | 231 | 50 | 42 | 56 | 80 | 132 |
| 23 | 109 | 123 | 168 | 174 | 263 | 247 | 215 | 42 | 50 | 52 | 69 | 135 |
| 24 | 120 | 123 | 166 | 174 | 256 | 240 | 200 | 46 | 51 | 49 | 60 | 132 |
| 25 | 138 | 123 | 160 | 200 | 263 | 269 | 247 | 52 | 49 | 48 | 56 | 132 |
| 26 | 140 | 123 | 157 | 224 | 301 | 359 | 260 | 45 | 46 | 47 | 64 | 132 |
| 27 | 130 | 123 | 160 | 237 | 524 | 571 | 209 | 49 | 51 | 50 | 58 | 132 |
| 28 | 125 | 123 | 163 | 221 | 1,220 | 475 | 188 | 53 | 55 | 55 | a60 | 135 |
| 29 | 123 | 123 | 160 | 206 | 1,900 | 462 | 185 | 49 | 49 | 75 | a65 | 138 |
| 30 | 120 | 123 | 224 | 191 | - | 804 | 182 | 64 | 44 | 78 | a65 | 143 |
| 31 | 120 | - | 338 | 182 | - | 1,490 | - | 76 | - | 78 | a65 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 3,601 | 140 | 106 | 116 | 7,140 | | |
| November..... | | | | | | 3,641 | 125 | 113 | 121 | 7,220 | | |
| December..... | | | | | | 6,565 | 500 | 123 | 212 | 13,020 | | |
| Calendar year 1939..... | | | | | | 37,081.8 | 500 | 4.1 | 102 | 73,540 | | |
| January..... | | | | | | 7,255 | 465 | 174 | 234 | 14,390 | | |
| February..... | | | | | | 11,044 | 1,900 | 177 | 381 | 21,910 | | |
| March..... | | | | | | 16,592 | 1,490 | 240 | 503 | 30,930 | | |
| April..... | | | | | | 13,442 | 1,190 | 182 | 448 | 26,660 | | |
| May..... | | | | | | 8,238 | 223 | 42 | 104 | 6,420 | | |
| June..... | | | | | | 2,208 | 154 | 32 | 73.6 | 4,350 | | |
| July..... | | | | | | 1,798 | 85 | 39 | 58.0 | 3,570 | | |
| August..... | | | | | | 1,853 | 80 | 42 | 59.8 | 3,680 | | |
| September..... | | | | | | 3,343 | 146 | 65 | 111 | 6,630 | | |
| Water year 1939-40..... | | | | | | 75,580 | 1,900 | 32 | 201 | 146,000 | | |

Peak discharge.- Feb. 29 (4 a.m.) 2,440 sec.-ft.; Mar. 27 (6 a.m.) 623 sec.-ft.
a No gage-height record; discharge computed on basis of recorded range of stage, rainfall records, and records for Salmon River at Somes Bar.

Salmon River at Somesbar, Calif.

Location.- Water-stage recorder, lat. 41°23', long. 123°28', in NW¼ sec. 2, T. 11 N., R. 6 E., half a mile east of Somesbar post office and 1½ miles upstream from mouth. Altitude of gage, 500 feet (from topographic map).

Drainage area.- 737 square miles.

Records available.- September 1911 to September 1915, October 1927 to September 1940.

Average discharge.- 14 years (1911-13, 1927-29, 1930-40), 1,471 second-feet.

Extremes.- Maximum discharge during year, 21,200 second-feet Feb. 28 (gage height, 12.75 feet); minimum, 117 second-feet Oct. 1 (gage height, 2.81 feet).

1927-40: Maximum discharge, 27,000 second-feet Dec. 11, 1937 (gage height, 14.80 feet), from rating curve extended above 7,000 second-feet; minimum, 70 second-feet Aug. 25, Sept. 4, 5, 1931.

Remarks.- Records good below 5,000 second-feet; fair above. No large diversions above station.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|-------|--------|--------|-------|-------|-------|------|------|-------|
| 1 | 120 | 154 | 140 | 5,480 | 1,720 | 8,620 | 7,220 | 2,660 | 1,900 | 499 | 231 | 133 |
| 2 | 130 | 146 | 140 | 5,590 | 1,680 | 7,640 | 5,860 | 3,100 | 1,840 | 499 | 231 | 137 |
| 3 | 130 | 146 | 140 | 4,800 | 1,930 | 6,450 | 5,130 | 2,700 | 1,540 | 472 | 219 | 165 |
| 4 | 130 | 143 | 140 | 5,680 | 2,430 | 5,660 | 4,660 | 2,790 | 1,410 | 463 | 213 | 165 |
| 5 | 146 | 143 | 136 | 3,990 | 3,400 | 5,020 | 4,120 | 2,450 | 1,320 | 446 | 207 | 165 |
| 6 | 161 | 143 | 140 | 2,890 | 6,530 | 4,480 | 3,790 | 2,340 | 1,250 | 420 | 201 | 165 |
| 7 | 157 | 143 | 140 | 2,560 | 5,950 | 4,200 | 3,320 | 2,320 | 1,180 | 404 | 190 | 165 |
| 8 | 150 | 143 | 230 | 2,160 | 4,490 | 4,560 | 4,260 | 2,290 | 1,140 | 380 | 185 | 170 |
| 9 | 146 | 140 | 2,910 | 3,210 | 3,690 | 4,200 | 4,200 | 2,610 | 1,090 | 372 | 180 | 165 |
| 10 | 140 | 140 | 4,300 | 3,530 | 3,870 | 3,780 | 4,100 | 3,170 | 1,100 | 365 | 175 | 165 |
| 11 | 136 | 140 | 2,090 | 3,000 | 3,590 | 3,440 | 4,020 | 3,080 | 1,200 | 365 | 175 | 150 |
| 12 | 133 | 140 | 1,060 | 2,480 | 3,170 | 3,100 | 4,140 | 2,920 | 1,220 | 358 | 170 | 160 |
| 13 | 130 | 140 | 770 | 2,070 | 3,710 | 2,880 | 4,360 | 2,880 | 1,120 | 342 | 160 | 185 |
| 14 | 130 | 136 | 690 | 1,790 | 3,950 | 2,680 | 4,540 | 2,770 | 1,040 | 342 | 155 | 190 |
| 15 | 127 | 136 | 671 | 1,590 | 3,440 | 2,570 | 3,960 | 2,700 | 1,060 | 328 | 155 | 190 |
| 16 | 124 | 136 | 1,140 | 1,430 | 3,130 | 2,880 | 3,400 | 2,750 | 1,040 | 314 | 150 | 190 |
| 17 | 124 | 133 | 3,260 | 1,300 | 3,950 | 2,700 | 3,560 | 2,700 | 998 | 307 | 145 | 195 |
| 18 | 124 | 133 | 1,540 | 1,230 | 3,710 | 2,560 | 3,190 | 2,570 | 952 | 300 | 145 | 243 |
| 19 | 124 | 133 | 1,130 | 1,150 | 3,160 | 2,520 | 3,290 | 2,540 | 916 | 300 | 141 | 274 |
| 20 | 124 | 133 | 1,020 | 1,080 | 2,720 | 2,570 | 3,140 | 2,650 | 825 | 320 | 137 | 237 |
| 21 | 124 | 133 | 860 | 1,010 | 2,450 | 2,630 | 3,020 | 2,540 | 740 | 314 | 137 | 213 |
| 22 | 120 | 133 | 740 | 978 | 2,340 | 2,810 | 3,120 | 2,500 | 700 | 307 | 137 | 195 |
| 23 | 120 | 130 | 680 | 945 | 2,290 | 2,840 | 3,060 | 2,480 | 690 | 281 | 141 | 185 |
| 24 | 154 | 130 | 604 | 956 | 2,350 | 3,160 | 2,840 | 2,360 | 670 | 274 | 155 | 175 |
| 25 | 161 | 130 | 550 | 1,110 | 3,280 | 3,440 | 2,630 | 2,120 | 660 | 268 | 160 | 175 |
| 26 | 150 | 150 | 514 | 2,240 | 5,380 | 8,430 | 2,430 | 1,750 | 622 | 262 | 141 | 175 |
| 27 | 180 | 150 | 497 | 2,260 | 12,000 | 9,470 | 2,310 | 1,630 | 594 | 262 | 137 | 320 |
| 28 | 189 | 143 | 1,080 | 1,870 | 17,900 | 7,060 | 2,320 | 1,620 | 556 | 255 | 137 | 360 |
| 29 | 180 | 140 | 3,170 | 1,830 | 12,400 | 8,560 | 2,310 | 1,690 | 556 | 243 | 137 | 281 |
| 30 | 169 | 140 | 5,260 | 1,830 | - | 11,000 | 2,620 | 1,560 | 518 | 237 | 137 | 243 |
| 31 | 161 | - | 5,560 | 1,770 | - | 9,120 | - | 1,560 | - | 237 | 133 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 4,394 | 189 | 120 | 142 | 8,720 |
| November..... | 4,180 | 154 | 130 | 139 | 8,290 |
| December..... | 41,282 | 5,550 | 136 | 1,332 | 81,880 |
| Calendar year 1939..... | 363,866 | 6,340 | 100 | 997 | 721,700 |
| January..... | 73,599 | 5,680 | 945 | 2,374 | 146,000 |
| February..... | 130,610 | 17,900 | 1,680 | 4,504 | 259,100 |
| March..... | 161,020 | 11,000 | 2,520 | 4,872 | 299,500 |
| April..... | 111,190 | 7,220 | 2,310 | 3,706 | 220,500 |
| May..... | 75,800 | 3,170 | 1,560 | 2,445 | 150,300 |
| June..... | 30,427 | 1,900 | 518 | 1,014 | 60,350 |
| July..... | 10,536 | 499 | 237 | 340 | 20,900 |
| August..... | 5,107 | 231 | 133 | 165 | 10,130 |
| September..... | 5,911 | 350 | 133 | 197 | 11,720 |
| Water year 1939-40..... | 644,056 | 17,900 | 120 | 1,760 | 1,277,000 |

Peak discharge.- Dec. 31 (6 p.m.) 6,760 sec.-ft.; Feb. 6 (2 p.m.) 7,730 sec.-ft.; Feb. 28 (10 a.m.) 21,200 sec.-ft.; Mar. 26 (6:30 p.m.) 13,900 sec.-ft.

Trinity River at Lewiston, Calif.

Location.- Water-stage recorder, lat. 40°42', long. 122°48', in NE¼ sec. 19, T. 33 N., R. 8 W., at highway bridge at Lewiston, 0.8 mile downstream from Deadwood Creek. Datum of gage is 1,794.72 feet above mean sea level (general adjustment of 1929).

Drainage area.- 724 square miles.

Records available.- August 1911 to September 1940.

Average discharge.- 29 years, 1,454 second-feet.

Extremes.- Maximum discharge during year, 40,300 second-feet Feb. 28 (gage height, 20.8 feet), from rating curve extended above 12,500 second-feet; minimum, 114 second-feet Oct. 17-21.

1911-40: Maximum discharge, that of Feb. 28, 1940; minimum, 23 second-feet July 30, 1924.

Remarks.- Records good Oct. 1 to Feb. 28, fair Feb. 29 to Sept. 30. Diversions above station for irrigation, power, and placer mining.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|--------|--------|--------|-------|-------|-------|------|------|-------|
| 1 | 117 | 129 | 141 | 10,100 | 2,620 | 11,000 | 8,460 | 3,900 | 3,180 | 660 | 215 | 137 |
| 2 | 117 | 126 | 141 | 11,600 | 2,510 | 8,150 | 6,310 | 5,340 | 2,690 | 600 | 211 | 136 |
| 3 | 120 | 123 | 141 | 7,510 | 4,710 | 6,200 | 5,600 | 4,540 | 2,220 | 560 | 206 | 137 |
| 4 | 123 | 123 | 144 | 7,730 | 5,130 | 5,230 | 5,020 | 4,210 | 2,040 | 530 | 195 | 145 |
| 5 | 126 | 123 | 144 | 4,180 | 4,620 | 4,660 | 4,480 | 3,350 | 1,850 | 470 | 188 | 162 |
| 6 | 129 | 120 | 141 | 2,920 | 8,410 | 4,130 | 4,120 | 2,900 | 1,770 | 450 | 182 | 169 |
| 7 | 141 | 120 | 138 | 2,410 | 6,750 | 3,940 | 4,820 | 2,890 | 1,770 | 430 | 178 | 165 |
| 8 | 147 | 123 | 150 | 2,480 | 4,580 | 4,050 | 5,080 | 3,100 | 1,770 | 410 | 176 | 160 |
| 9 | 141 | 126 | 4,480 | 3,650 | 3,610 | 3,840 | 4,850 | 4,100 | 1,620 | 400 | 171 | 160 |
| 10 | 138 | 126 | 9,690 | 3,820 | 3,130 | 3,420 | 4,760 | 5,500 | 1,670 | 390 | 167 | 155 |
| 11 | 135 | 129 | 4,380 | 3,310 | 2,830 | 3,040 | 4,760 | 5,390 | 1,800 | 380 | 163 | 150 |
| 12 | 129 | 129 | 1,840 | 2,620 | 2,510 | 2,720 | 4,960 | 5,080 | 1,800 | 370 | 166 | 160 |
| 13 | 126 | 129 | 1,240 | 2,120 | 2,440 | 2,530 | 5,360 | 4,940 | 1,640 | 360 | 163 | 150 |
| 14 | 120 | 129 | 960 | 1,800 | 2,270 | 2,350 | 5,700 | 4,590 | 1,640 | 350 | 158 | 200 |
| 15 | 117 | 132 | 810 | 1,600 | 2,080 | 2,230 | 4,960 | 4,280 | 1,640 | 345 | 156 | 235 |
| 16 | 117 | 132 | 780 | 1,450 | 1,960 | 2,220 | 4,310 | 4,260 | 1,600 | 338 | 153 | 218 |
| 17 | 114 | 132 | 684 | 1,340 | 2,720 | 2,120 | 3,990 | 4,130 | 1,540 | 325 | 149 | 195 |
| 18 | 114 | 132 | 1,240 | 1,240 | 2,650 | 2,100 | 4,140 | 3,880 | 1,440 | 318 | 146 | 205 |
| 19 | 114 | 135 | 980 | 1,170 | 2,290 | 2,180 | 4,480 | 3,830 | 1,330 | 313 | 143 | 233 |
| 20 | 114 | 135 | 880 | 1,110 | 2,080 | 2,300 | 4,310 | 4,100 | 1,220 | 308 | 142 | 242 |
| 21 | 114 | 135 | 750 | 1,040 | 1,960 | 2,580 | 4,190 | 4,010 | 1,080 | 302 | 142 | 238 |
| 22 | 117 | 135 | 657 | 1,000 | 1,950 | 3,020 | 4,390 | 3,930 | 1,000 | 293 | 142 | 235 |
| 23 | 117 | 135 | 603 | 1,000 | 1,910 | 3,330 | 4,480 | 4,020 | 970 | 279 | 141 | 210 |
| 24 | 117 | 135 | 858 | 1,100 | 2,270 | 3,640 | 4,160 | 3,770 | 920 | 268 | 145 | 200 |
| 25 | 117 | 138 | 495 | 2,470 | 6,740 | 4,410 | 3,940 | 3,340 | 910 | 261 | 149 | 172 |
| 26 | 123 | 150 | 459 | 5,700 | 10,500 | 9,290 | 3,470 | 2,670 | 860 | 254 | 146 | 185 |
| 27 | 129 | 170 | 434 | 4,000 | 24,300 | 9,520 | 3,280 | 2,470 | 820 | 246 | 145 | 230 |
| 28 | 135 | 162 | 522 | 2,900 | 34,500 | 6,230 | 3,230 | 2,330 | 790 | 245 | 142 | 335 |
| 29 | 141 | 150 | 1,460 | 2,410 | 19,500 | 10,400 | 3,180 | 2,380 | 750 | 242 | 142 | 312 |
| 30 | 141 | 147 | 2,590 | 2,330 | - | 18,500 | 3,320 | 2,370 | 680 | 229 | 142 | 275 |
| 31 | 135 | - | 6,550 | 2,440 | - | 15,500 | - | 2,900 | - | 217 | 140 | - |

| # | Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|-------|------------------|---------|---------|-------|----------------------|
| October..... | | 3,585 | 147 | 114 | 125 | 7,710 |
| November..... | | 4,010 | 170 | 120 | 134 | 7,950 |
| December..... | | 44,182 | 9,890 | 138 | 1,425 | 87,630 |
| Calendar year 1939..... | | 287,990 | 9,890 | 65 | 789 | 571,200 |
| January..... | | 100,750 | 11,600 | 1,000 | 3,250 | 199,800 |
| February..... | | 173,510 | 34,500 | 1,910 | 5,983 | 344,200 |
| March..... | | 163,030 | 18,500 | 2,100 | 5,259 | 323,400 |
| April..... | | 139,100 | 9,450 | 5,180 | 4,603 | 273,900 |
| May..... | | 118,500 | 5,600 | 2,330 | 3,823 | 235,000 |
| June..... | | 45,010 | 3,180 | 660 | 1,500 | 89,280 |
| July..... | | 11,143 | 660 | 217 | 359 | 22,100 |
| August..... | | 5,002 | 215 | 140 | 161 | 9,920 |
| September..... | | 5,954 | 335 | 136 | 198 | 11,810 |
| Water year 1939-40..... | | 813,075 | 34,500 | 114 | 2,222 | 1,613,000 |

Peak discharge.- Dec. 10 (6:30 p.m.) 15,200 sec.-ft.; Jan. 1 (9 p.m.) 16,800 sec.-ft.; Feb. 27 (12 m.) 27,900 sec.-ft.; Feb. 28 (11:30 a.m.) 40,300 sec.-ft.; Mar. 26 (8 p.m.) 15,800 sec.-ft.; Mar. 30 (4 p.m.) 21,300 sec.-ft.

KLAMATH RIVER BASIN

Trinity River near Burnt Ranch, Calif.

Location.- Water-stage recorder, lat. 40°47', long. 123°25', in sec. 29, T. 5 N., R. 7 E., 2 miles upstream from highway bridge at Cedar Flat and 7 miles upstream from Burnt Ranch post office. Datum of gage is 1,007.98 feet above mean sea level (general adjustment of 1929).

Drainage area.- 1,429 square miles.

Records available.- October 1931 to January 1940 (destroyed by flood of Feb. 28, 1940).

Extremes.- Maximum discharge during year, 80,700 second-feet Feb. 28 (gage height, 33.8 feet, from floodmarks), from rating curve extended above 24,000 second-feet on basis of logarithmic extension and velocity-area studies; minimum, October to January, 136 second-feet Oct. 8 (gage height, 2.30 feet).

1931-40: Maximum discharge, that of Feb. 28, 1940; minimum, 82 second-feet Aug. 31, 1939.

Remarks.- Records excellent. Slight regulation and several small diversions above station for mining and irrigation.

Rating table, October to January (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|------|--------|
| 2.4 | 150 | 5.0 | 1,215 | 10.0 | 8,000 |
| 2.8 | 226 | 5.5 | 1,610 | 12.0 | 12,100 |
| 3.2 | 337 | 6.0 | 2,070 | 14.0 | 16,800 |
| 3.6 | 470 | 6.5 | 2,600 | 15.3 | 20,200 |
| 4.0 | 630 | 7.0 | 3,210 | | |
| 4.5 | 890 | 8.5 | 5,400 | | |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|--------|--------|------|------|------|-----|------|------|------|-------|
| 1 | 170 | 222 | 248 | 14,300 | | | | | | | | |
| 2 | 175 | 217 | 243 | 20,000 | | | | | | | | |
| 3 | 175 | 206 | 245 | 14,400 | | | | | | | | |
| 4 | 173 | 206 | 245 | 16,800 | | | | | | | | |
| 5 | 184 | 204 | 258 | 9,270 | | | | | | | | |
| 6 | 253 | 198 | 253 | 6,110 | | | | | | | | |
| 7 | 222 | 202 | 248 | 4,790 | | | | | | | | |
| 8 | 182 | 206 | 300 | 4,310 | | | | | | | | |
| 9 | 228 | 206 | 2,620 | 6,600 | | | | | | | | |
| 10 | 226 | 204 | 10,700 | 7,680 | | | | | | | | |
| 11 | 222 | 198 | 11,200 | 6,880 | | | | | | | | |
| 12 | 194 | 200 | 3,710 | 5,620 | | | | | | | | |
| 13 | 198 | 202 | 2,210 | 4,480 | | | | | | | | |
| 14 | 196 | 204 | 1,620 | 3,750 | | | | | | | | |
| 15 | 186 | 206 | 1,320 | 3,240 | | | | | | | | |
| 16 | 180 | 200 | 1,240 | 2,850 | | | | | | | | |
| 17 | 180 | 202 | 2,540 | 2,540 | | | | | | | | |
| 18 | 179 | 200 | 2,450 | 2,340 | | | | | | | | |
| 19 | 179 | 202 | 1,790 | 2,170 | | | | | | | | |
| 20 | 177 | 208 | 1,520 | - | | | | | | | | |
| 21 | 186 | 208 | 1,320 | - | | | | | | | | |
| 22 | 180 | 206 | 1,160 | - | | | | | | | | |
| 23 | 175 | 204 | 1,050 | - | | | | | | | | |
| 24 | 179 | 213 | 980 | - | | | | | | | | |
| 25 | 188 | 211 | 890 | - | | | | | | | | |
| 26 | 180 | 226 | 824 | - | | | | | | | | |
| 27 | 198 | 250 | 791 | - | | | | | | | | |
| 28 | 215 | 283 | 966 | - | | | | | | | | |
| 29 | 239 | 272 | 3,100 | - | | | | | | | | |
| 30 | 231 | 253 | 6,650 | - | | | | | | | | |
| 31 | 228 | - | 9,720 | - | | | | | | | | |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 6,077 | 253 | 170 | 196 | 12,060 |
| November..... | 6,421 | 283 | 198 | 214 | 12,740 |
| December..... | 72,711 | 11,200 | 243 | 2,346 | 144,200 |
| Calendar year 1939..... | 495,342 | 11,200 | 93 | 1,357 | 982,400 |
| January 1-19..... | 138,130 | 20,000 | 2,170 | 7,270 | 274,000 |
| February..... | - | - | - | - | - |
| March..... | - | - | - | - | - |
| April..... | - | - | - | - | - |
| May..... | - | - | - | - | - |
| June..... | - | - | - | - | - |
| July..... | - | - | - | - | - |
| August..... | - | - | - | - | - |
| September..... | - | - | - | - | - |
| The period..... | - | - | - | - | 443,000 |

Trinity River near Hoopa, Calif.

Location.- Water-stage recorder, lat. 41°02', long. 123°39', in SE¼ sec. 31, T. 8 N., R. 5 E., on Hoopa Indian Reservation, half a mile downstream from Campbell Creek and 2 miles southeast of Hoopa. Altitude of gage, 315 feet (from river-profile map).

Drainage area.- 2,840 square miles.

Records available.- October 1931 to September 1940. October 1911 to January 1914 and November 1916 to August 1918 at site at Hoopa, 2 miles downstream.

Extremes.- Maximum discharge during year, 124,000 second-feet Feb. 28 (gage height, 31.2 feet) from rating curve extended above 60,000 second-feet; minimum, 281 second-feet Oct. 1 (gage height, 2.82 feet).
1911-14, 1916-18, 1931-40: Maximum discharge, that of Feb. 28, 1940; minimum, 162 second-feet Oct. 4, 1931.

Remarks.- Records good. Small diversions above station for mining and irrigation.

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|--------|--------|---------|------------------|---------|---------|--------|-------|----------------------|-------|
| 1 | 285 | 390 | 413 | 25,360 | 8,180 | 55,200 | 35,200 | 6,700 | 5,460 | 1,550 | 614 | 357 |
| 2 | 295 | 354 | 406 | 31,000 | 7,560 | 44,800 | 26,100 | 7,650 | 5,970 | 1,540 | 606 | 354 |
| 3 | 303 | 375 | 403 | 26,100 | 8,920 | 36,600 | 21,500 | 8,380 | 4,990 | 1,480 | 590 | 350 |
| 4 | 303 | 369 | 403 | 32,300 | 17,100 | 31,800 | 19,000 | 8,400 | 4,440 | 1,400 | 574 | 350 |
| 5 | 326 | 369 | 406 | 22,400 | 20,100 | 28,300 | 16,600 | 8,050 | 4,160 | 1,310 | 563 | 395 |
| 6 | 366 | 366 | 410 | 14,200 | 24,100 | 25,200 | 15,400 | 7,080 | 3,940 | 1,280 | 532 | 401 |
| 7 | 406 | 363 | 406 | 10,700 | 29,000 | 22,300 | 14,500 | 6,580 | 3,750 | 1,200 | 514 | 440 |
| 8 | 378 | 363 | 351 | 9,550 | 21,400 | 20,500 | 15,100 | 6,390 | 3,660 | 1,130 | 504 | 490 |
| 9 | 345 | 372 | 2,980 | 16,800 | 16,500 | 15,700 | 13,900 | 6,550 | 3,510 | 1,070 | 493 | 466 |
| 10 | 381 | 366 | 15,800 | 22,200 | 14,000 | 16,700 | 13,200 | 7,800 | 3,350 | 1,040 | 480 | 456 |
| 11 | 378 | 369 | 15,500 | 17,800 | 12,500 | 14,700 | 12,600 | 8,480 | 3,450 | 1,010 | 466 | 434 |
| 12 | 363 | 357 | 6,100 | 13,900 | 11,100 | 12,900 | 12,300 | 8,180 | 3,600 | 956 | 460 | 444 |
| 13 | 329 | 366 | 3,700 | 11,000 | 11,800 | 11,600 | 12,300 | 8,050 | 3,510 | 951 | 444 | 473 |
| 14 | 337 | 363 | 2,720 | 9,080 | 14,500 | 10,700 | 12,500 | 7,680 | 3,320 | 940 | 437 | 480 |
| 15 | 326 | 366 | 2,250 | 7,800 | 13,200 | 10,100 | 11,900 | 7,350 | 3,220 | 925 | 437 | 574 |
| 16 | 321 | 360 | 2,230 | 6,820 | 11,600 | 10,100 | 10,800 | 7,200 | 3,240 | 850 | 431 | 665 |
| 17 | 313 | 360 | 4,560 | 6,100 | 18,300 | 9,550 | 9,930 | 7,100 | 3,150 | 850 | 425 | 652 |
| 18 | 313 | 360 | 4,490 | 5,550 | 19,000 | 8,920 | 9,500 | 6,730 | 3,070 | 855 | 413 | 665 |
| 19 | 310 | 354 | 3,260 | 5,100 | 14,900 | 8,520 | 9,520 | 6,440 | 2,870 | 820 | 404 | 648 |
| 20 | 316 | 351 | 2,900 | 4,680 | 12,600 | 8,500 | 9,500 | 6,510 | 2,680 | 860 | 398 | 610 |
| 21 | 316 | 357 | 2,520 | 4,300 | 11,200 | 8,280 | 9,050 | 6,690 | 2,470 | 890 | 392 | 602 |
| 22 | 323 | 354 | 2,200 | 4,100 | 10,600 | 8,450 | 8,950 | 6,440 | 2,260 | 850 | 389 | 575 |
| 23 | 321 | 354 | 1,990 | 3,940 | 10,400 | 8,680 | 8,980 | 6,490 | 2,150 | 805 | 389 | 544 |
| 24 | 354 | 357 | 1,830 | 3,900 | 10,300 | 8,920 | 8,600 | 6,320 | 2,110 | 767 | 395 | 525 |
| 25 | 357 | 366 | 1,690 | 4,560 | 15,400 | 9,750 | 8,220 | 5,950 | 2,060 | 751 | 398 | 504 |
| 26 | 375 | 384 | 1,540 | 18,000 | 26,600 | 16,800 | 7,750 | 5,220 | 1,990 | 704 | 398 | 500 |
| 27 | 413 | 410 | 1,470 | 17,800 | 64,600 | 32,100 | 7,050 | 4,680 | 1,860 | 691 | 395 | 566 |
| 28 | 410 | 433 | 2,620 | 12,300 | 110,000 | 24,600 | 6,700 | 4,440 | 1,750 | 678 | 386 | 616 |
| 29 | 416 | 443 | 6,800 | 10,200 | 86,700 | 29,700 | 6,580 | 4,350 | 1,680 | 652 | 350 | 614 |
| 30 | 406 | 419 | 14,400 | 9,000 | - | 51,100 | 6,550 | 4,350 | 1,630 | 652 | 377 | 594 |
| 31 | 400 | - | 20,700 | 8,400 | - | 46,800 | - | 4,970 | - | 631 | 368 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 10,786 | 416 | 285 | 348 | | 21,390 | |
| November..... | | | | | | 11,200 | 443 | 351 | 373 | | 22,210 | |
| December..... | | | | | | 125,698 | 20,700 | 403 | 4,055 | | 249,300 | |
| Calendar year 1939..... | | | | | | 1,003,697 | 26,300 | 214 | 2,750 | | 1,991,000 | |
| January..... | | | | | | 394,680 | 32,300 | 3,900 | 12,740 | | 785,200 | |
| February..... | | | | | | 652,450 | 110,000 | 7,860 | 22,500 | | 1,294,000 | |
| March..... | | | | | | 650,670 | 55,200 | 8,280 | 20,990 | | 1,291,000 | |
| April..... | | | | | | 382,110 | 35,200 | 6,580 | 12,740 | | 757,900 | |
| May..... | | | | | | 207,250 | 8,450 | 4,350 | 6,655 | | 411,100 | |
| June..... | | | | | | 95,360 | 5,970 | 1,630 | 3,179 | | 169,100 | |
| July..... | | | | | | 30,078 | 1,550 | 631 | 970 | | 59,660 | |
| August..... | | | | | | 14,052 | 614 | 365 | 455 | | 27,870 | |
| September..... | | | | | | 15,409 | 665 | 354 | 514 | | 30,560 | |
| Water year 1939-40..... | | | | | | 2,589,973 | 110,000 | 288 | 7,076 | | 5,137,000 | |

Peak discharge.- Jan. 2 (10 a.m.) 33,400 sec.-ft.; Jan. 4 (11 a.m.) 36,200 sec.-ft.; Feb. 7 (5 a.m.) 32,200 sec.-ft.; Feb. 28 (4 p.m.) 124,000 sec.-ft.; Mar. 27 (6 a.m.) 35,400 sec.-ft.; Mar. 30 (12 m.) 65,100 sec.-ft.

a No gage-height record; discharge interpolated.

SMITH RIVER BASIN

Smith River near Crescent City, Calif.

Location.- Water-stage recorder, lat. 41°47', long. 124°04', in SW¼ sec. 10, T. 16 N., R. 1 E., half a mile downstream from South Fork and 9 miles east of Crescent City.

Drainage area.- 613 square miles.

Records available.- October 1931 to September 1940.

Extremes.- Maximum discharge during year, 37,200 second-feet Feb. 28 (gage height, 21.22 feet), from rating curve extended above 23,500 second-feet; minimum, 183 second-feet Oct. 1 (gage height, 3.48 feet).

1931-40: Maximum discharge, 78,900 second-feet either Nov. 20 or Dec. 11, 1937 (gage height, 29.4 feet, from floodmarks in well), from rating curve extended above 23,500 second-feet; minimum, 168 second-feet Oct. 21, 1931.

Remarks.- Records excellent except those for period of fragmentary gage-height record, which are fair. No diversion or regulation.

Rating table, water year 1939-40 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-------|------|--------|------|--------|
| 3.4 | 164 | 5.5 | 865 | 9.0 | 3,940 | 14.0 | 13,400 |
| 3.7 | 236 | 6.0 | 1,110 | 10.0 | 5,280 | 15.0 | 16,040 |
| 4.0 | 314 | 6.5 | 1,430 | 11.0 | 6,900 | 16.0 | 18,900 |
| 4.5 | 465 | 7.0 | 1,830 | 12.0 | 8,850 | 18.0 | 25,000 |
| 5.0 | 650 | 8.0 | 2,780 | 13.0 | 11,060 | 20.0 | 32,300 |

Discharge, in second-feet, water year October 1939 to September 1940

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|--------|--------|--------|--------|-------|-------|-------|------|------|-------|
| 1 | 186 | 217 | 214 | 14,900 | 2,740 | 17,500 | 8,590 | 2,130 | 1,210 | 458 | 306 | 219 |
| 2 | 193 | 214 | 231 | 14,000 | 2,490 | 18,600 | 6,640 | 2,420 | 1,060 | 448 | 304 | 226 |
| 3 | 193 | 214 | 234 | 10,900 | 4,360 | 12,300 | 5,950 | 2,500 | 950 | 437 | 293 | 254 |
| 4 | 190 | 214 | 217 | 15,800 | 11,700 | 9,160 | 5,520 | 8,120 | 888 | 430 | 283 | 266 |
| 5 | 288 | 210 | 212 | 12,600 | 11,400 | 7,280 | 4,910 | 6,530 | 847 | 418 | 278 | 262 |
| 6 | 334 | 205 | 231 | 8,510 | 21,500 | 6,000 | 4,370 | 4,410 | 820 | 409 | 272 | 239 |
| 7 | 265 | 202 | 246 | 6,330 | 18,100 | 5,460 | 4,710 | 3,530 | 798 | 403 | 270 | 234 |
| 8 | 231 | 205 | 1,580 | 7,840 | 11,600 | 6,570 | 4,930 | 2,980 | 770 | 400 | 265 | 264 |
| 9 | 214 | 205 | 8,480 | 21,000 | 8,150 | 5,550 | 5,580 | 2,630 | 752 | 397 | 262 | 249 |
| 10 | 207 | 202 | 19,500 | 18,000 | 9,530 | 4,840 | 4,980 | 2,560 | 730 | 394 | 262 | 239 |
| 11 | 202 | 200 | 6,620 | 10,000 | 8,590 | 4,270 | 4,260 | 2,140 | 710 | 391 | 259 | 234 |
| 12 | 195 | 198 | 3,230 | 17,500 | 6,700 | 3,800 | 3,810 | 1,960 | 690 | 391 | 267 | 256 |
| 13 | 193 | 202 | 2,260 | 15,800 | 15,200 | 3,440 | 3,440 | 1,820 | 670 | 368 | 254 | 314 |
| 14 | 190 | 231 | 2,470 | 14,800 | 15,000 | 3,140 | 3,120 | 1,690 | 654 | 375 | 246 | 309 |
| 15 | 188 | 234 | 2,860 | 14,000 | 11,500 | 3,020 | 2,820 | 1,600 | 642 | 367 | 241 | 283 |
| 16 | 190 | 214 | 8,580 | 13,400 | 9,360 | 3,820 | 2,610 | 1,500 | 614 | 364 | 239 | 293 |
| 17 | 193 | 210 | 13,400 | 13,000 | 20,800 | 3,420 | 2,410 | 1,420 | 606 | 370 | 239 | 267 |
| 18 | 205 | 205 | 5,490 | 12,700 | 13,400 | 3,090 | 2,240 | 1,540 | 598 | 364 | 239 | 314 |
| 19 | 205 | 198 | 3,960 | 12,400 | 9,360 | 2,840 | 2,130 | 1,280 | 586 | 356 | 236 | 353 |
| 20 | 198 | 193 | 6,000 | 12,200 | 7,180 | 2,640 | 2,010 | 1,230 | 578 | 348 | 239 | 280 |
| 21 | 193 | 190 | 4,990 | 2,010 | 5,940 | 2,510 | 1,880 | 1,170 | 563 | 356 | 239 | 257 |
| 22 | 190 | 190 | 3,620 | 1,860 | 5,160 | 2,400 | 1,780 | 1,130 | 546 | 348 | 234 | 244 |
| 23 | 193 | 190 | 3,800 | 1,880 | 4,680 | 2,260 | 1,710 | 1,100 | 535 | 356 | 229 | 256 |
| 24 | 262 | 188 | 2,240 | 1,760 | 6,960 | 2,420 | 1,640 | 1,070 | 528 | 328 | 224 | 254 |
| 25 | 288 | 190 | 1,870 | 2,060 | 9,890 | 2,270 | 1,610 | 1,040 | 514 | 322 | 222 | 234 |
| 26 | 275 | 212 | 1,640 | 8,470 | 18,600 | 18,500 | 1,530 | 1,000 | 504 | 320 | 222 | 254 |
| 27 | 465 | 214 | 1,460 | 9,580 | 25,600 | 22,200 | 1,450 | 980 | 490 | 334 | 222 | 770 |
| 28 | 362 | 205 | 5,460 | 5,440 | 31,800 | 14,700 | 1,500 | 955 | 479 | 331 | 222 | 762 |
| 29 | 272 | 195 | 11,200 | 4,230 | 24,900 | 18,900 | 1,540 | 935 | 472 | 320 | 224 | 424 |
| 30 | 241 | 198 | 12,800 | 3,560 | - | 16,200 | 2,090 | 945 | 465 | 311 | 224 | 334 |
| 31 | 226 | - | 15,600 | 3,100 | - | 11,800 | - | 1,040 | - | 306 | 222 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 7,227 | 465 | 186 | 233 | 14,330 |
| November..... | 6,145 | 234 | 188 | 205 | 12,190 |
| December..... | 149,695 | 19,500 | 212 | 4,829 | 296,900 |
| Calendar year 1939..... | 775,149 | 29,500 | 169 | 2,124 | 1,538,000 |
| January..... | 219,630 | 21,000 | 1,760 | 7,085 | 435,800 |
| February..... | 352,190 | 31,800 | 2,490 | 12,140 | 698,600 |
| March..... | 240,900 | 22,200 | 2,260 | 7,771 | 477,800 |
| April..... | 101,760 | 8,590 | 1,450 | 3,392 | 201,800 |
| May..... | 64,955 | 8,120 | 935 | 2,095 | 128,800 |
| June..... | 20,269 | 1,210 | 465 | 676 | 40,200 |
| July..... | 11,521 | 458 | 306 | 372 | 22,850 |
| August..... | 7,728 | 306 | 222 | 249 | 16,330 |
| September..... | 9,063 | 770 | 219 | 302 | 17,980 |
| Water year 1939-40..... | 1,191,083 | 31,800 | 186 | 3,254 | 2,562,000 |

Peak discharge.- Feb. 28 (10 a.m.) 37,200 sec.-ft.; Mar. 26 (5 p.m.) 33,200 sec.-ft.

f Fragmentary gage-height record; discharge computed from partly estimated gage heights and record for Bel River at Scotia.

Measurements of stream flow in the Pacific slope basins in California at points other than regular gaging stations for the year ending September 30, 1940, are listed in the following table.

STREAMS SOUTH OF SAN FRANCISCO BAY

Cottonwood Creek at Morena Dam spillway, Calif.

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|---------|-------------------------|----------|-------------------------|
| June 14 | 3.6 | July 19 | 2.2 | Aug. 14 | 3.4 | Sept. 11 | 2.8 |

Cottonwood Creek at weir, half a mile below Morena Dam, Calif.

| | | | | | | | |
|---------|-----|---------|-----|---------|-----|----------|-----|
| June 14 | 5.1 | July 19 | 4.2 | Aug. 14 | 4.5 | Sept. 11 | 4.5 |
|---------|-----|---------|-----|---------|-----|----------|-----|

Tecate Creek at confluence with Cottonwood Creek, near Dulzura, Calif.
Apr. 17, 2.3 second-feet

San Luis Rey River just above Pala Indian Reservation diversion, Calif.

| | | | | | | | |
|--------|------|--------|-----|---------|-----|--------|-----|
| Dec. 4 | 11.0 | May 29 | 8.4 | June 26 | 6.1 | Aug. 7 | 4.2 |
| May 3 | 13.2 | June 5 | 6.9 | July 10 | 4.4 | | |
| 15 | 9.3 | 12 | 6.5 | 26 | 4.0 | | |
| 22 | 9.8 | 20 | 6.3 | 31 | 4.2 | | |

Moreno ditch 100 feet below intake at Pala, Calif.

| | | | | | | | |
|--------|-----|--------|-----|---------|-----|---------|------|
| May 15 | 2.2 | May 29 | 2.0 | June 12 | 2.1 | July 10 | 0.75 |
| 22 | 2.4 | June 5 | 1.9 | | | | |

San Luis Rey River at crossing at Bonsall, Calif.

| | | | | | | | |
|---------|------|---------|------|---------|------|---------|-----|
| Oct. 27 | 4.9 | Jan. 4 | 24.6 | Mar. 11 | 29.3 | June 3 | 1.9 |
| Nov. 13 | 7.4 | 12 | 71 | 25 | 20.8 | 17 | 1.2 |
| 22 | 6.0 | 31 | 28.2 | Apr. 8 | 44.7 | 26 | .50 |
| Dec. 4 | 17.9 | Feb. 12 | 47.2 | 23 | 16.9 | July 10 | .37 |
| 12 | 15.1 | 19 | 34.7 | May 6 | 12.1 | | |
| 27 | 18.9 | Mar. 4 | 35.3 | 20 | 5.1 | | |

San Luis Rey River at Rancho Guajomita, Calif.

| | | | | | | | |
|---------|------|---------|------|---------|------|---------|------|
| Oct. 27 | 3.7 | Dec. 27 | 17.7 | Feb. 19 | 37.7 | Apr. 23 | 16.9 |
| Nov. 13 | 7.9 | Jan. 4 | 20.2 | Mar. 4 | 43.7 | May 6 | 11.6 |
| 22 | 7.7 | 12 | 69 | 11 | 34.6 | 20 | 2.6 |
| Dec. 4 | 11.3 | 31 | 31.0 | 25 | 21.8 | June 3 | 1.1 |
| 12 | 12.5 | Feb. 12 | 54 | Apr. 8 | 48.2 | 17 | a.2 |

a Estimated.

San Luis Rey River at highway bridge at San Luis Rey, Calif.
May 13, 0.91 second-feet

Arroyo Seco at Nigger Canyon, near Temecula, Calif.

| | | | | | | | |
|---------|------|---------|-----|---------|------|--|--|
| Jan. 23 | 0.91 | Apr. 15 | 1.5 | June 12 | 0.17 | | |
|---------|------|---------|-----|---------|------|--|--|

Arroyo San Mateo near San Clemente, Calif.

| | | | | | | | |
|---------|------|---------|------|---------|-----|---------|------|
| Oct. 2 | 0.68 | Feb. 12 | 26.1 | Apr. 25 | 3.1 | July 25 | 0.78 |
| 6 | .62 | 15 | 22.7 | 29 | 5.9 | 29 | .70 |
| 12 | .64 | 19 | 11.8 | May 2 | 3.8 | Aug. 1 | .69 |
| 16 | .63 | 21 | 11.3 | 8 | 2.3 | 5 | .71 |
| 18 | .61 | 23 | 11.4 | 10 | 2.1 | 8 | .73 |
| 20 | .66 | 26 | 61 | 13 | 1.7 | 12 | .62 |
| 24 | .68 | 28 | 27.1 | 16 | 1.6 | 15 | .59 |
| 26 | .25 | Mar. 1 | 25.7 | 20 | 1.6 | 19 | .50 |
| 30 | .35 | 4 | 15.6 | 23 | 1.3 | 22 | .61 |
| Nov. 21 | .35 | 6 | 14.0 | 27 | 1.2 | 26 | .58 |
| 27 | .48 | 8 | 11.6 | 30 | 1.1 | 29 | .68 |
| 29 | .50 | 11 | 9.4 | June 3 | 1.0 | Sept. 3 | .63 |
| Dec. 6 | .47 | 14 | 7.4 | 6 | 1.0 | 6 | .54 |
| 11 | .61 | 18 | 6.4 | 10 | .94 | 11 | .63 |
| 27 | .59 | 21 | 5.6 | 13 | .90 | 13 | .64 |
| Jan. 3 | .61 | 25 | 3.9 | 19 | .79 | 16 | .58 |
| 6 | .79 | 27 | 4.4 | 21 | .78 | 18 | .57 |
| 11 | 1.4 | Apr. 1 | 158 | 24 | .99 | 20 | .60 |
| 17 | 3.0 | 3 | 34.5 | 27 | .82 | 23 | .59 |
| 24 | 6.0 | 5 | 20.6 | July 1 | .85 | 26 | .73 |
| 26 | 3.3 | 10 | 10.2 | 5 | .79 | 30 | .68 |
| 30 | 1.9 | 15 | 5.8 | 8 | .70 | | |
| Feb. 5 | 132 | 18 | 4.5 | 11 | .72 | | |
| 8 | 43.0 | 22 | 4.3 | 15 | .73 | | |

MISCELLANEOUS DISCHARGE MEASUREMENTS

STREAMS SOUTH OF SAN FRANCISCO BAY--CONTINUED

San Juan Creek above Capistrano diversion near San Juan Capistrano, Calif.

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|---------|-------------------------|---------|-------------------------|
| June 27 | 5.3 | July 15 | 4.0 | July 25 | 3.1 | July 29 | 3.8 |

Santa Ana River at Hammer Avenue, near Corona, Calif.

| | | | | | | | |
|--------|------|---------|------|---------|------|--------|------|
| Dec. 1 | 38.1 | Dec. 29 | 41.1 | Feb. 16 | 46.4 | Apr. 5 | 49.9 |
| 4 | 36.2 | Jan. 2 | 44.8 | 23 | 44.9 | 9 | 46.3 |
| 8 | 40.8 | 5 | 50 | Mar. 1 | 50 | 12 | 44.4 |
| 11 | 38.1 | 12 | 67 | 8 | 45.6 | 15 | 38.7 |
| 15 | 37.7 | 19 | 55 | 15 | 44.4 | 19 | 32.4 |
| 18 | 41.6 | 26 | 55 | 22 | 40.7 | 22 | 33.5 |
| 22 | 37.9 | 31 | 48.9 | 25 | 37.3 | 26 | 47.1 |
| 26 | 38.6 | Feb. 9 | 52 | 29 | 40.8 | 29 | 44.5 |

Santa Ana River at Auburndale Bridge, near Corona, Calif.

| | | | | | | | |
|--------|----|---------|----|---------|----|--------|----|
| Dec. 1 | 61 | Dec. 29 | 64 | Feb. 16 | 70 | Apr. 5 | 73 |
| 4 | 61 | Jan. 2 | 68 | 23 | 68 | 8 | 66 |
| 8 | 58 | 5 | 77 | Mar. 1 | 75 | 12 | 64 |
| 11 | 64 | 12 | 87 | 8 | 71 | 15 | 65 |
| 15 | 58 | 19 | 81 | 15 | 69 | 19 | 53 |
| 18 | 65 | 26 | 76 | 22 | 68 | 22 | 60 |
| 22 | 60 | 31 | 74 | 25 | 61 | 26 | 69 |
| 26 | 66 | Feb. 9 | 80 | 29 | 63 | 29 | 69 |

Santa Ana River at Atchison, Topeka & Santa Fe Railway Bridge, near Prado, Calif.

| | | | | | | | |
|--------|-----|---------|----|--------|-----|---------|----|
| Dec. 1 | 73 | Dec. 18 | 89 | Jan. 3 | 123 | Feb. 16 | 99 |
| 4 | 87 | 20 | 98 | 5 | 98 | 23 | 94 |
| 6 | 103 | 22 | 74 | 12 | 135 | Mar. 1 | 99 |
| 8 | 76 | 26 | 94 | 19 | 110 | 8 | 96 |
| 11 | 95 | 26 | 99 | 26 | 103 | 15 | 81 |
| 13 | 93 | 29 | 85 | 31 | 94 | | |
| 16 | 80 | Jan. 2 | 97 | Feb. 9 | 104 | | |

Note.- On March 19, 1940, a gaging station was installed at this location and named "Santa Ana River below Prado Dam, near Prado, Calif." (see page 43).

Santa Ana River at Yorba Bridge, near Yorba, Calif.

| | | | | | | | |
|--------|-------|--------|-----|---------|------|---------|------|
| Jan. 3 | 1.9 | Feb. 2 | 305 | Feb. 23 | 39.6 | Mar. 29 | 10.8 |
| 8 | 3,430 | 4 | 452 | 26 | 378 | Apr. 5 | 68 |
| 9 | 302 | 5 | 177 | Mar. 1 | 41.3 | 12 | 36.3 |
| 10 | 171 | 8 | 111 | 4 | 39.6 | 19 | 13.2 |
| 19 | 104 | 13 | 90 | 8 | 42.0 | 26 | 10.0 |
| 26 | 103 | 16 | 77 | 15 | 20.4 | May 3 | 3.0 |
| Feb. 1 | 125 | 19 | 61 | 22 | 19.3 | | |

Santa Ana River at Jefferson Street Bridge, near Atwood, Calif.

| | | | | | | | |
|--------|------|---------|------|--------|-----|--------|-----|
| Jan. 9 | 175 | Feb. 13 | 15.4 | Mar. 4 | 1.3 | Apr. 2 | 82 |
| 10 | 56 | 16 | 17.8 | 8 | 1.4 | 5 | 3.8 |
| Feb. 2 | 182 | 23 | 0 | 15 | 1.9 | 19 | 0 |
| 8 | 31.2 | Mar. 1 | 9.1 | 29 | a.2 | 26 | 0 |

a Estimated.

Santa Ana River at Anaheim-Olive Bridge, near Olive, Calif.

| | | | | | | | |
|--------|------|--------|------|---------|------|--------|------|
| Jan. 9 | 113 | Feb. 5 | 39.1 | Feb. 23 | 0 | Apr. 2 | 33.7 |
| 10 | 27.0 | 8 | 8.8 | Mar. 1 | a.10 | 5 | 0 |
| 26 | 20.0 | 13 | 0 | 8 | 0 | 19 | 0 |
| Feb. 1 | 20.1 | 16 | 3.2 | 15 | a.10 | 26 | 0 |
| 2 | 156 | 19 | .40 | 29 | 0 | May 3 | 0 |

a Estimated.

Santa Ana River at Chapman Avenue Bridge, near Orange, Calif.

| | | | | | | | |
|--------|------|--------|-----|---------|------|--------|-----|
| Jan. 9 | 69 | Feb. 2 | 77 | Feb. 16 | 0.45 | Apr. 2 | 5.5 |
| 10 | 5.2 | 5 | 5.6 | 19 | 0 | 5 | a.1 |
| 26 | 4.8 | 8 | 2.7 | 23 | 0 | 19 | a.5 |
| Feb. 1 | 15.0 | 13 | 0 | Mar. 29 | 0 | 26 | 0 |

a Estimated.

Santa Ana River at Seventeenth Street Bridge, at Santa Ana, Calif.

| | | | | | | | |
|--------|-----|--------|------|---------|-----|--------|---|
| Jan. 9 | 58 | Feb. 8 | 0.90 | Feb. 16 | 3.0 | Apr. 5 | 0 |
| 10 | 6.9 | 13 | .17 | 19 | 0 | 19 | 0 |

Santa Ana River at Talbert Avenue, near Talbert, Calif.

| | | | | | | | |
|---------|------|--------|----|--------|------|---------|---|
| Jan. 26 | 0.96 | Feb. 2 | 80 | Feb. 8 | a0.2 | Feb. 13 | 0 |
|---------|------|--------|----|--------|------|---------|---|

a Estimated.

Mill Creek near Craftonville, Calif.

| | | | | | | | |
|---------|-----|--------|-----|--|--|--|--|
| Jan. 19 | 6.2 | May 31 | 7.2 | | | | |
|---------|-----|--------|-----|--|--|--|--|

STREAMS SOUTH OF SAN FRANCISCO BAY--CONTINUED

Lone Pine Creek near Keenbrook, Calif.

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|--------|-------------------------|---------|-------------------------|
| Oct. 3 | 1.6 | May 17 | 1.5 | July 1 | 1.3 | Aug. 15 | 1.2 |
| 16 | 1.5 | 23 | 1.4 | 5 | 1.2 | 19 | 1.1 |
| 31 | 1.6 | 29 | 1.5 | 8 | 1.2 | 22 | 1.2 |
| Nov. 14 | 2.0 | 31 | 1.4 | 15 | 1.3 | 26 | 1.1 |
| Dec. 27 | 1.5 | June 5 | 1.1 | 22 | 1.2 | 30 | 1.1 |
| Jan. 30 | 1.8 | 10 | 1.2 | 23 | 1.2 | Sept. 3 | 1.1 |
| Feb. 23 | 1.8 | 13 | 1.5 | 29 | 1.2 | 5 | 1.0 |
| Mar. 13 | 2.1 | 17 | 1.3 | Aug. 1 | 1.2 | 9 | .99 |
| 27 | 2.1 | 20 | 1.2 | 5 | 1.1 | 26 | .96 |
| Apr. 17 | 2.0 | 24 | 1.4 | 6 | 1.2 | 30 | 1.0 |
| 30 | 1.2 | 27 | 1.3 | 12 | 1.1 | | |

Day Creek diversion near Etiwanda, Calif.

| | | | | | | | |
|---------|-----|---------|-----|---------|-----|---------|-----|
| Feb. 28 | 4.0 | Apr. 17 | 4.4 | May 22 | 3.8 | Sept. 9 | 2.5 |
| Apr. 2 | 3.1 | May 6 | 4.1 | June 25 | 2.9 | 20 | 2.4 |

Santa Ynez River below Mono Creek, near Santa Barbara, Calif.

| | | | | | | | |
|---------|------|---------|------|--------|-----|---------|------|
| Jan. 15 | 5.6 | Feb. 16 | 13.7 | May 23 | 3.1 | June 20 | 0.13 |
| 25 | 13.1 | 23 | 43.8 | 29 | 2.2 | | |
| Feb. 2 | 38.1 | May 9 | 4.8 | June 6 | 1.6 | | |
| 9 | 19.6 | 16 | 3.2 | 13 | .34 | | |

Santa Ynez River at Solvang, Calif.

| | | | | | | | |
|---------|-----|--------|-----|--------|-----|--------|-----|
| Dec. 11 | 7.9 | May 15 | 8.4 | May 21 | 6.6 | May 28 | 6.2 |
| 20 | 8.5 | | | | | | |

Santa Ynez River at A Street Bridge, near Lompoc, Calif.

| | | | | | | | |
|-------|------|--------|------|--|--|--|--|
| May 3 | 22.2 | June 3 | 0.47 | | | | |
|-------|------|--------|------|--|--|--|--|

Santa Ynez River at H Street Bridge, near Lompoc, Calif.

| | | | | | | | |
|-------|------|--------|------|--|--|--|--|
| May 3 | 22.2 | June 3 | 0.32 | | | | |
|-------|------|--------|------|--|--|--|--|

Santa Ynez River at Pine Canyon Bridge, near Lompoc, Calif.

| | | | | | | | |
|-------|------|--------|------|--|--|--|--|
| May 3 | 21.5 | June 3 | 0.58 | | | | |
|-------|------|--------|------|--|--|--|--|

Santa Ynez River at Southern Pacific Railway pumping plant, near Surf, Calif.

| | | | | | | | |
|-------|------|--------|------|--|--|--|--|
| May 3 | 18.3 | June 3 | 0.54 | | | | |
|-------|------|--------|------|--|--|--|--|

Gidney Creek at confluence with Santa Ynez River, near Santa Barbara, Calif.

| | | | | | | | |
|---------|------|--------|------|-------|------|--------|------|
| Jan. 15 | 0.37 | Feb. 9 | 0.67 | May 9 | 0.08 | May 23 | 0.06 |
| 26 | .73 | 16 | .40 | 16 | .07 | | |
| Feb. 2 | 1.8 | 23 | 1.0 | | | | |

Hot Springs at confluence with Santa Ynez River, near Santa Barbara, Calif.

| | | | | | | | |
|---------|------|---------|------|---------|------|----------|------|
| Oct. 12 | 0.27 | Jan. 25 | 0.65 | Mar. 21 | 0.44 | May 23 | 0.28 |
| Dec. 28 | .37 | Feb. 23 | 1.1 | Apr. 18 | .37 | Sept. 26 | .17 |

Santa Agueda Creek at confluence with Santa Ynez River, near Santa Ynez, Calif.

| | | | | | | | |
|---------|------|---------|------|---------|------|---------|---|
| Oct. 24 | 0.10 | Feb. 15 | 0.28 | Apr. 17 | 0.30 | Aug. 27 | 0 |
| Dec. 11 | 0.08 | Feb. 20 | .36 | May 21 | .16 | | |
| Jan. 12 | 2.1 | Mar. 19 | .27 | June 25 | .12 | | |
| 29 | .34 | Apr. 1 | 12.2 | July 24 | .09 | | |

Santa Cota Creek at confluence with Santa Ynez River, near Santa Ynez, Calif.

| | | | | | | | |
|---------|-----|---------|-----|---------|-----|----------|-----|
| Oct. 24 | 3.0 | Feb. 20 | 3.5 | May 21 | 1.7 | Aug. 27 | 1.7 |
| Dec. 20 | 2.3 | Mar. 19 | 2.5 | June 25 | 1.4 | Sept. 24 | 2.7 |
| Jan. 29 | 3.4 | Apr. 17 | 2.2 | July 24 | 2.9 | | |

Alamo Pintado Creek 1.1 miles above confluence with Santa Ynez River, near Solvang, Calif.

| | | | | | | | |
|---------|------|---------|------|---------|------|----------|------|
| Oct. 24 | 0.42 | Feb. 20 | 0.39 | May 21 | 0.27 | Aug. 27 | 0.18 |
| Dec. 20 | .31 | Mar. 19 | .45 | June 25 | .18 | Sept. 24 | .22 |
| Jan. 29 | .35 | Apr. 17 | .29 | July 24 | .20 | | |

Allsal Creek at confluence with Santa Ynez River, near Solvang, Calif.

| | | | | | | | |
|---------|-----|---------|------|---------|------|----------|------|
| Oct. 24 | 0 | Feb. 20 | 0.91 | May 21 | 0.11 | Aug. 27 | 0.04 |
| Dec. 20 | 0 | Mar. 19 | 3.4 | June 25 | .07 | Sept. 24 | 0 |
| Jan. 29 | .63 | Apr. 17 | 1.8 | July 24 | .06 | | |

Nojoqui Creek at confluence with Santa Ynez River, near Buellton, Calif.

| | | | | | | | |
|---------|------|---------|-----|---------|------|----------|---|
| Jan. 29 | 0.81 | Mar. 19 | 1.5 | May 21 | 0.06 | Sept. 24 | 0 |
| Feb. 20 | .98 | Apr. 16 | 1.0 | Aug. 27 | 0 | | |

MISCELLANEOUS DISCHARGE MEASUREMENTS

STREAMS SOUTH OF SAN FRANCISCO BAY--CONTINUED

Salsipuedes Creek 0.9 mile above confluence with Santa Ynez River, near Lompoc, Calif.

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|---------|-------------------------|----------|-------------------------|
| Oct. 16 | 0.28 | Jan. 26 | 2.5 | Apr. 16 | 1.6 | July 19 | 0.19 |
| Nov. 29 | .94 | Feb. 28 | 3.5 | May 24 | 1.0 | Sept. 24 | .05 |
| Dec. 18 | 1.2 | Mar. 15 | 1.6 | June 21 | .31 | | |

Alamo Creek at confluence with Cuyama River, near Santa Maria, Calif.

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|---------|-------------------------|----------|-------------------------|
| Oct. 24 | 1.4 | Feb. 15 | 1.9 | June 6 | | Sept. 13 | 1.4 |
| Dec. 18 | 2.0 | Mar. 29 | 2.2 | July 11 | 1.3 | | |

Pajaro River at gaging station about three-quarters of a mile upstream from bridge on U. S. Highway 101 at Sargent, Calif.^b

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|--------|-------------------------|---------|-------------------------|
| Jan. 13 | 243 | Feb. 17 | 747 | Mar. 4 | 914 | Mar. 16 | 165 |
| 16 | 190 | 23 | 393 | 4 | 902 | Apr. 1 | 1,790 |
| 19 | 98 | 26 | 813 | 5 | 724 | 16 | 152 |
| 22 | 57 | 26 | 973 | 6 | 654 | May 8 | 49.2 |
| Feb. 8 | 387 | Mar. 2 | 1,940 | 8 | 454 | June 10 | 16.6 |

^b Results of discharge measurements furnished by Corps of Engineers, U. S. Army.Branciforte Creek at gaging station at Market Street Bridge in Santa Cruz, Calif.^b

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|--------|-------------------------|---------|-------------------------|--------|-------------------------|--------|-------------------------|
| Jan. 8 | 231 | Jan. 31 | 42.2 | Feb. 2 | 791 | Mar. 6 | 30.1 |
| 12 | 64 | Feb. 1 | 295 | 3 | 572 | 30 | 2,060 |
| 18 | 11.4 | 1 | 165 | 3 | 493 | 30 | 1,520 |
| 26 | 463 | 1 | 134 | 25 | 582 | July 3 | 2.0 |
| 27 | 101 | Feb. 3 | 1,100 | 28 | 455 | | |

^b Results of discharge measurements furnished by Corps of Engineers, U. S. Army.

Laguna Creek at gaging station at highway bridge in Coast, Calif.

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|--------|-------------------------|---------|-------------------------|
| Oct. 2 | 0.1 | Apr. 2 | 53 | June 5 | 5.4 | July 31 | 0.6 |
| Jan. 28 | 23.0 | 30 | 11.2 | July 2 | 1.9 | Aug. 14 | .2 |
| Mar. 27 | 29.8 | May 17 | 7.1 | 17 | 1.4 | | |

SAN JOAQUIN RIVER BASIN

Chinquapin Creek near camp 62, near Florence Lake, Calif.^c

May 26, 15.6 second-feet

^c Results of discharge measurements furnished by Southern California Edison Co.San Joaquin River at Turner ranch bridge, about 10 miles northeast of Los Banos, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|------|-------------------------|------|-------------------------|
| Apr. 18 | 601 | June 19 | 806 | | | | |

^d Results of discharge measurements furnished by State Engineer.San Joaquin River at Fremont Ford Bridge, 5 miles west of Stevenson, Calif.^{de}

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 18 | 2,460 | May 31 | 3,600 | June 19 | 3,300 | | |

^d Results of discharge measurements furnished by State Engineer.^e For total flow add flow in Mud Slough.San Joaquin River at Laird Slough Bridge, 1 mile east of Grayson, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 16 | 6,010 | May 28 | 8,820 | June 18 | 5,400 | | |

^d Results of discharge measurements furnished by State Engineer.San Joaquin River at Hetch Hetchy aqueduct crossing, about 5 miles southeast of Vernalis, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 20 | 8,850 | May 28 | 14,400 | June 18 | 8,880 | | |

^d Results of discharge measurements furnished by State Engineer.Mud Slough at Gustine-Stevenson-highway crossing, near Gustine, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 18 | 289 | May 31 | 919 | June 19 | 416 | | |

^d Results of discharge measurements furnished by State Engineer.Middle Fork of Mud Slough at Gustine-Stevenson highway crossing, near Gustine, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 18 | 0 | May 31 | 413 | June 19 | 0 | | |

^d Results of discharge measurements furnished by State Engineer.North Fork of Mud Slough at Gustine-Stevenson highway crossing, near Gustine, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 18 | 392 | May 31 | 1,380 | June 19 | 641 | | |

^d Results of discharge measurements furnished by State Engineer.

MERCED RIVER BASIN

Merced River at Yosemite Valley Railroad crossing, about 4 miles southwest of Snelling, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 17 | 3,180 | May 30 | 2,160 | June 20 | 424 | | |

^d Results of discharge measurements furnished by State Engineer.Merced River at mouth, 300 feet upstream from Hills Ferry bridge and $3\frac{1}{2}$ miles northeast of Newman, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 18 | 3,270 | May 31 | 2,320 | June 19 | 1,020 | | |

TUOLUMNE RIVER BASIN

Tuolumne River at Roberts Ferry, about 6 miles east of Waterford, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|--------|-------------------------|---------|-------------------------|------|-------------------------|
| Apr. 17 | 2,110 | May 29 | 6,220 | June 20 | 1,550 | | |

d Results of discharge measurements furnished by State Engineer.

Tuolumne River at Hickman Bridge, at Hickman, Calif.^d

| | | | | | | | |
|---------|-------|--------|-------|---------|-------|--|--|
| Apr. 19 | 2,280 | May 29 | 6,550 | June 20 | 1,910 | | |
|---------|-------|--------|-------|---------|-------|--|--|

d Results of discharge measurements furnished by State Engineer.

Tuolumne River at bridge on U. S. Highway 99 at Modesto, Calif.^d

| | | | | | | | |
|---------|-------|--------|-------|---------|-------|--|--|
| Apr. 15 | 3,520 | May 30 | 6,400 | June 19 | 2,950 | | |
|---------|-------|--------|-------|---------|-------|--|--|

d Results of discharge measurements furnished by State Engineer.

Tuolumne River 3 miles upstream from mouth, at Tuolumne City, Calif.^d

| | | | | | | | |
|---------|-------|--------|-------|---------|-------|--|--|
| Apr. 16 | 3,780 | May 29 | 6,420 | June 18 | 3,500 | | |
|---------|-------|--------|-------|---------|-------|--|--|

d Results of discharge measurements furnished by State Engineer.

Dry Creek near Modesto, Calif.^d

| | | | | | | | |
|---------|----|--------|----|---------|----|--|--|
| Apr. 16 | 66 | May 30 | 65 | June 21 | 83 | | |
|---------|----|--------|----|---------|----|--|--|

d Results of discharge measurements furnished by State Engineer.

STANISLAUS RIVER BASIN

Stanislaus River at Orange Blossom Bridge, 5 miles east of Oakdale, Calif.^d

| | | | | | | | |
|---------|-------|--------|-------|---------|-----|--|--|
| Apr. 16 | 3,250 | May 30 | 2,470 | June 21 | 380 | | |
|---------|-------|--------|-------|---------|-----|--|--|

d Results of discharge measurements furnished by State Engineer.

Stanislaus River at bridge on U. S. Highway 99 at Ripon, Calif.^d

| | | | | | | | |
|---------|-------|--------|-------|---------|-----|--|--|
| Apr. 15 | 3,830 | May 31 | 3,010 | June 21 | 908 | | |
|---------|-------|--------|-------|---------|-----|--|--|

d Results of discharge measurements furnished by State Engineer.

Stanislaus River at Hatmark ranch, about 4 miles southwest of Ripon, Calif.^d

| | | | | | | | |
|---------|-------|--------|-------|---------|-------|--|--|
| Apr. 19 | 3,300 | May 28 | 4,760 | June 18 | 1,610 | | |
|---------|-------|--------|-------|---------|-------|--|--|

d Results of discharge measurements furnished by State Engineer.

GOOSE LAKE BASIN

Cottonwood Creek above Cottonwood Reservoir, in SW $\frac{1}{4}$ sec. 18, T. 38 S., R. 19 E., Ore.

June 10, 13.6 second-feet

Cottonwood Creek at Klamath Falls highway crossing, in NE $\frac{1}{4}$ sec. 21, T. 39 S., R. 19 E., Ore.

June 10, 15.8 second-feet

SACRAMENTO RIVER BASIN

Sacramento River at Sacramento, Calif.^d

| | | | | | | | |
|---------|--------|---------|--------|---------|--------|--|--|
| Jan. 11 | 65,300 | Jan. 29 | 60,100 | Feb. 28 | 77,300 | | |
|---------|--------|---------|--------|---------|--------|--|--|

d Results of discharge measurements furnished by State Engineer.

Stillwater Creek at Anderson-Viola highway crossing, near Anderson, Calif.

| | | | | | | | |
|--------|-----|--------|-----|---------|-----|--|--|
| Jan. 5 | 538 | Jan. 6 | 278 | Jan. 15 | 131 | | |
|--------|-----|--------|-----|---------|-----|--|--|

Grindstone Creek at gaging station near Elk Creek, Calif.

| | | | | | | | |
|---------|-----|--|--|--|--|--|--|
| June 25 | 7.1 | | | | | | |
|---------|-----|--|--|--|--|--|--|

Yuba River at Simpsons Lane Bridge, near Marysville, Calif.^d

| | | | | | | | |
|-------|-------|--------|-------|---------|-----|--|--|
| May 7 | 4,530 | May 27 | 3,650 | June 17 | 577 | | |
|-------|-------|--------|-------|---------|-----|--|--|

d Results of discharge measurements furnished by State Engineer.

Plum Creek at former gaging station near Riverton, Calif.

| | | | | | | | |
|---------|-----|--|--|--|--|--|--|
| Oct. 25 | 0.8 | | | | | | |
|---------|-----|--|--|--|--|--|--|

Leakage through Sacramento bypass gates near Sacramento, Calif.^d

| | | | | | | | |
|--------|-----|--|--|--|--|--|--|
| Feb. 1 | 168 | | | | | | |
|--------|-----|--|--|--|--|--|--|

d Results of discharge measurements furnished by State Engineer.

MISCELLANEOUS DISCHARGE MEASUREMENTS

SACRAMENTO RIVER BASIN--CONTINUED

Yolo bypass at Sacramento-Woodland highway crossing, near Woodland, Calif.^d

| Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) | Date | Discharge (sec.-ft.) |
|---------|-------------------------|---------|-------------------------|---------|-------------------------|------|-------------------------|
| Jan. 13 | 42,200 | Jan. 16 | 8,210 | Jan. 29 | 16,900 | | |

d Results of discharge measurements furnished by State Engineer.

Knights Landing Ridge cut at Knights Landing, Calif.^d

| | | | | | | | |
|---------|-------|---------|-------|--------|-------|--|--|
| Jan. 16 | 2,060 | Jan. 29 | 1,930 | Feb. 1 | 2,190 | | |
|---------|-------|---------|-------|--------|-------|--|--|

d Results of discharge measurements furnished by State Engineer.

NAPA RIVER BASIN

Dry Creek at gaging station a quarter of a mile upstream from bridge on State Highway 28
3 miles south of Yountville, Calif.^b

| | | | | | | | |
|---------|------|---------|-------|---------|-------|---------|------|
| Jan. 18 | 14.1 | Feb. 14 | 127 | Mar. 26 | 16.6 | Apr. 22 | 14.2 |
| 25 | 42.4 | 17 | 164 | 27 | 68 | May 10 | 5.3 |
| 26 | 249 | 27 | 1,870 | 30 | 1,270 | 21 | 3.6 |
| 31 | 34.9 | Mar. 4 | 90 | 30 | 1,510 | 29 | 2.8 |
| Feb. 3 | 95 | 23 | 13.1 | Apr. 1 | 253 | June 13 | .3 |
| 5 | 42.9 | | | | | | |

b Results of discharge measurements furnished by Corps of Engineers, U. S. Army.

RUSSIAN RIVER BASIN

Mark West Creek at gaging station at bridge on U. S. Highway 101, 4 miles southeast
of Windsor, Calif.^b

| | | | | | | | |
|---------|-------|---------|-------|---------|------|---------|-----|
| Feb. 24 | 50 | Mar. 29 | 3,270 | May 9 | 10.6 | July 19 | 1.1 |
| 26 | 2,600 | 30 | 5,190 | 20 | 5.4 | 31 | 1.7 |
| Mar. 16 | 27.3 | 31 | 823 | 28 | 4.9 | Aug. 15 | .5 |
| 26 | 439 | Apr. 1 | 397 | June 12 | .4 | Sept. 6 | .7 |
| 27 | 221 | 18 | 21.2 | July 5 | 1.5 | 21 | .6 |
| 29 | 838 | 26 | 50 | | | | |

b Results of discharge measurements furnished by Corps of Engineers, U. S. Army.

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