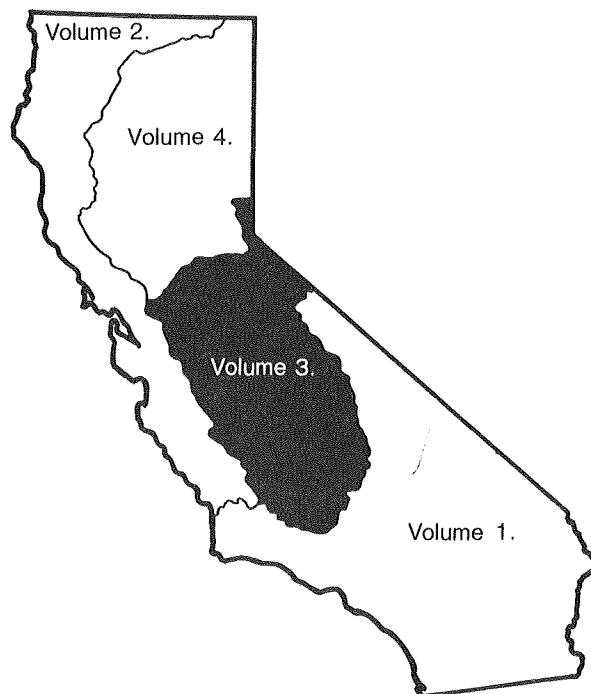


Water Resources Data California

Water Year 1981

Volume 3. Southern Central Valley Basins and
The Great Basin from Walker River
to Truckee River



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-81-3
Prepared in cooperation with the California Department of
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1981

1980

OCTOBER

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1981

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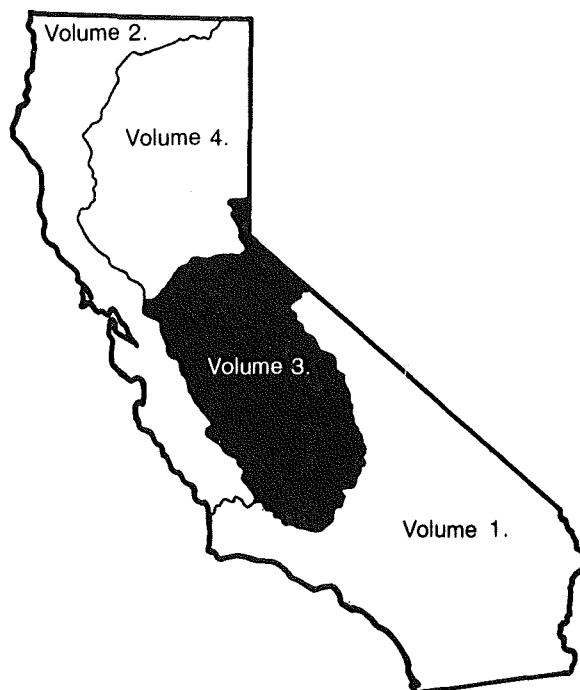
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Water Resources and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

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PREFACE

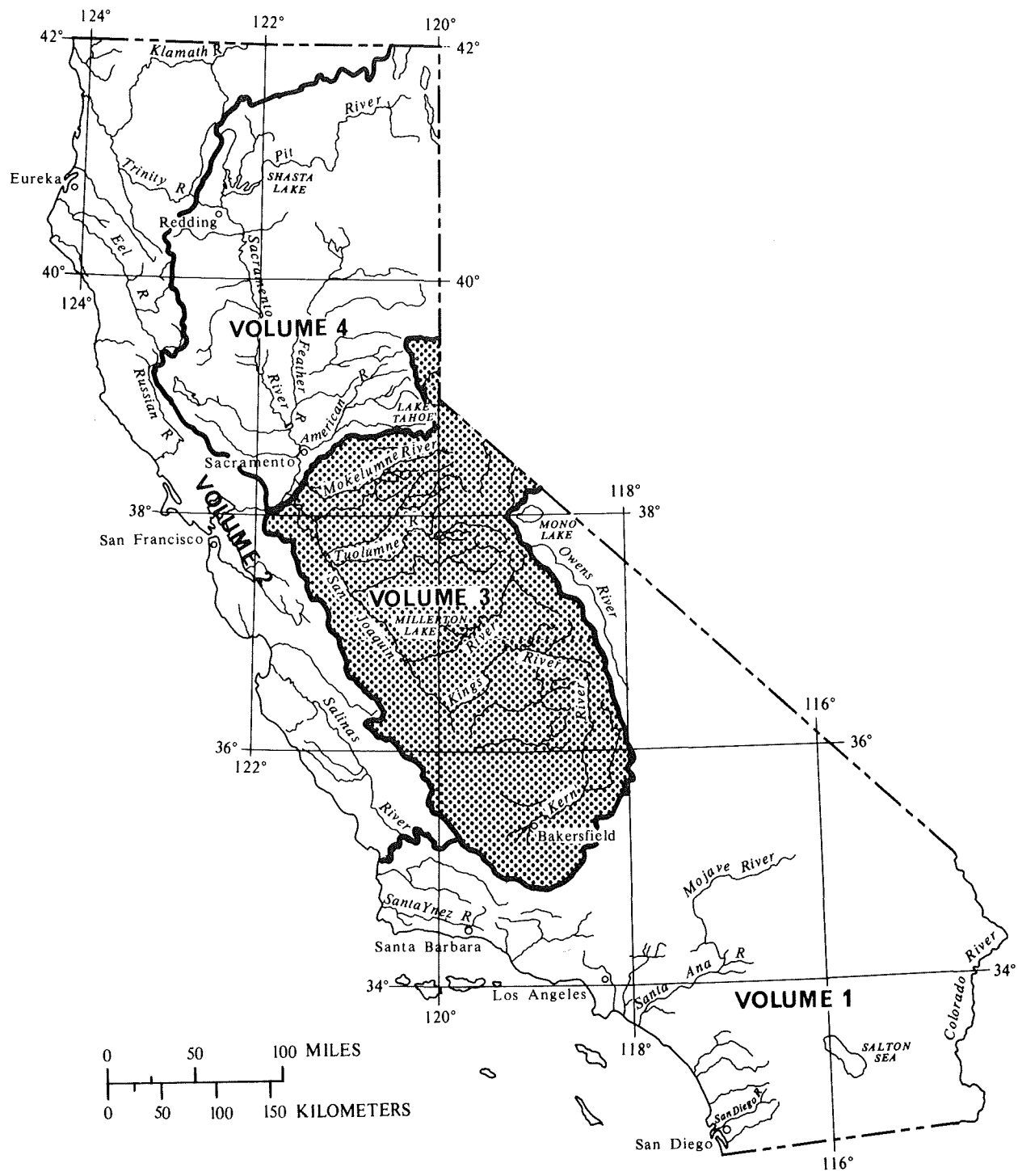
This report was prepared by personnel of the California District, Water Resources Division, U.S. Geological Survey, under the supervision of Richard M. Bloyd and Timothy J. Durbin, successive District Chiefs, and J. D. Bredehoeft, Regional Hydrologist, Western Region. It was done in cooperation with the California Department of Water Resources and other agencies.

This report is one of a series issued by State. General direction for the series is by Philip Cohen, Chief Hydrologist.

Data for California are in four volumes as follows:

- Volume 1. Colorado River Basin, Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from Tijuana River to Santa Maria River
- Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley
- Volume 3. Southern Central Valley Basins and The Great Basin from Walker River to Truckee River
- Volume 4. Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line

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Area covered by volumes in the annual series on water-resources data for California. Area covered by this volume is shaded.

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[Letters after station name designate type of data:
(d), discharge; (l), lake contents; (c), chemical; (b), biological;
(t), water temperature; and (s), sediment]

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WATER RESOURCES DATA FOR CALIFORNIA, 1981

Volume 3

INTRODUCTION

Water-resources data for the 1981 water year for California consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and records of water levels in selected observation wells. Records for a few pertinent streamflow and water-quality stations in bordering States are also included. These data, a contribution to the National Water Data System, were collected by the Geological Survey and cooperating local, State, and Federal agencies in California.

Records of discharge or stage of streams and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface-Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Eastern Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Virginia, 22304.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released, either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-81-3." These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (916) 484-4606.

COOPERATION

The U.S. Geological Survey and organizations of the State of California have had cooperative agreements for the systematic collection of records since 1903. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

California Department of Water Resources, R. B. Robie, Director.
East Bay Municipal Utility District, Al B. Bonner, Manager of Water Operations
Kern County Water Agency, S. T. Pyle, Engineer-Manager.
Kings River Conservation District, Jeff L. Taylor, General Manager-Chief Engineer.
Madera Irrigation District, Bob Standfield, General Manager-Chief Engineer.
Merced Irrigation District, Tom Reta, Chief Engineer and Manager.
San Francisco, City and County, Hetch-Hetchy Water and Power, Dean Coffee, General Manager.
Terra Bella Irrigation District, J. E. Boudreau, Engineer-Manager.
Tulare County Flood Control District, J. L. Carlsen, Flood-Control Engineer.
Turlock Irrigation District, Leroy J. Louchart, Secretary-General Manager.
University of California (Berkeley), College of Natural Resources, Department of Forestry and Conservation, Don Erman.
University of California (Davis), Division of Environmental Studies, Dr. Robert Leonard.
Woodbridge Irrigation District, Mabel Hall, Secretary.

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

The following organizations aided in collecting records: Pacific Gas and Electric Co.; Southern California Edison Co.; Merced, Modesto, Nevada, and Oakdale-South San Joaquin Irrigation Districts.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Runoff during the 1981 water year in the area covered by this volume was below normal for the entire year. Total runoff at selected sites in California is shown in figure 1. Runoff in the Kern River basin in the southern part of the area, averaged 79 percent of the 1951-80 median, while to the north in the Mokelumne River basin it dropped to 57 percent.

Precipitation this year was below normal. No major storms occurred during the winter, and the only storm front that did occur produced median runoff. Runoff from the snowpack in the central Sierra Nevada was only 60 percent of normal. During the entire water year there were no peaks of record or local flooding in central California.

Ground Water

The geography and geology of California are sufficiently complex that a summary of ground-water conditions in the State is difficult. Descriptions of conditions in specific basins and valleys apply only to those areas and cannot be transferred to other areas.

Ground-water levels fluctuate in response to a variety of stresses and changes in stress. Short- and long-term climatic conditions can lead to changes in natural recharge and discharge. Ground-water pumping can also cause changes in ground-water levels.

For the fourth straight year water levels rose at an observation well east of Mendota in the San Joaquin Valley. The water level at the beginning of the water year was 325.3 feet below land surface datum (lsd), the low for the year. The highest water level was 310.7 feet September 30.

The water levels and seasonal patterns in an observation well west of Mendota remained about the same as in 1980. The highest water level was 35.8 feet below lsd in January, and the lowest was 90.8 feet below lsd in July.

At an observation well near Wasco in the southern San Joaquin Valley water levels were 10-40 feet lower than in 1980 for much of the year. Seasonal patterns remained the same as in the past 2 years. The high water level was about 210 feet below lsd in January-February, and the low was about 310 feet below lsd in July.

Water Quality

Water samples taken at one Hydrologic Benchmark and three NASQAN stations in the area covered by this volume were analyzed for water-quality constituents. Water quality was consistent with the findings from previous samplings. All the stations are on streams that drain the west slope of the Sierra Nevada and contain water that is typically low in dissolved minerals and trace elements. Values for water-quality constituents were below maximum recommended EPA or other public health standards or guidelines.

The highest concentrations of indicator bacteria were found in water sampled at San Joaquin River near Vernalis. At this station the fecal coliform ranged from 120 to 8,700 col/100 mL and fecal streptococci ranged from 74 to 750 col/100 mL.

Water samples from San Joaquin River at Vernalis also had the highest concentrations of suspended sediment and dissolved constituents of all the NASQAN and Benchmark stations in the area.

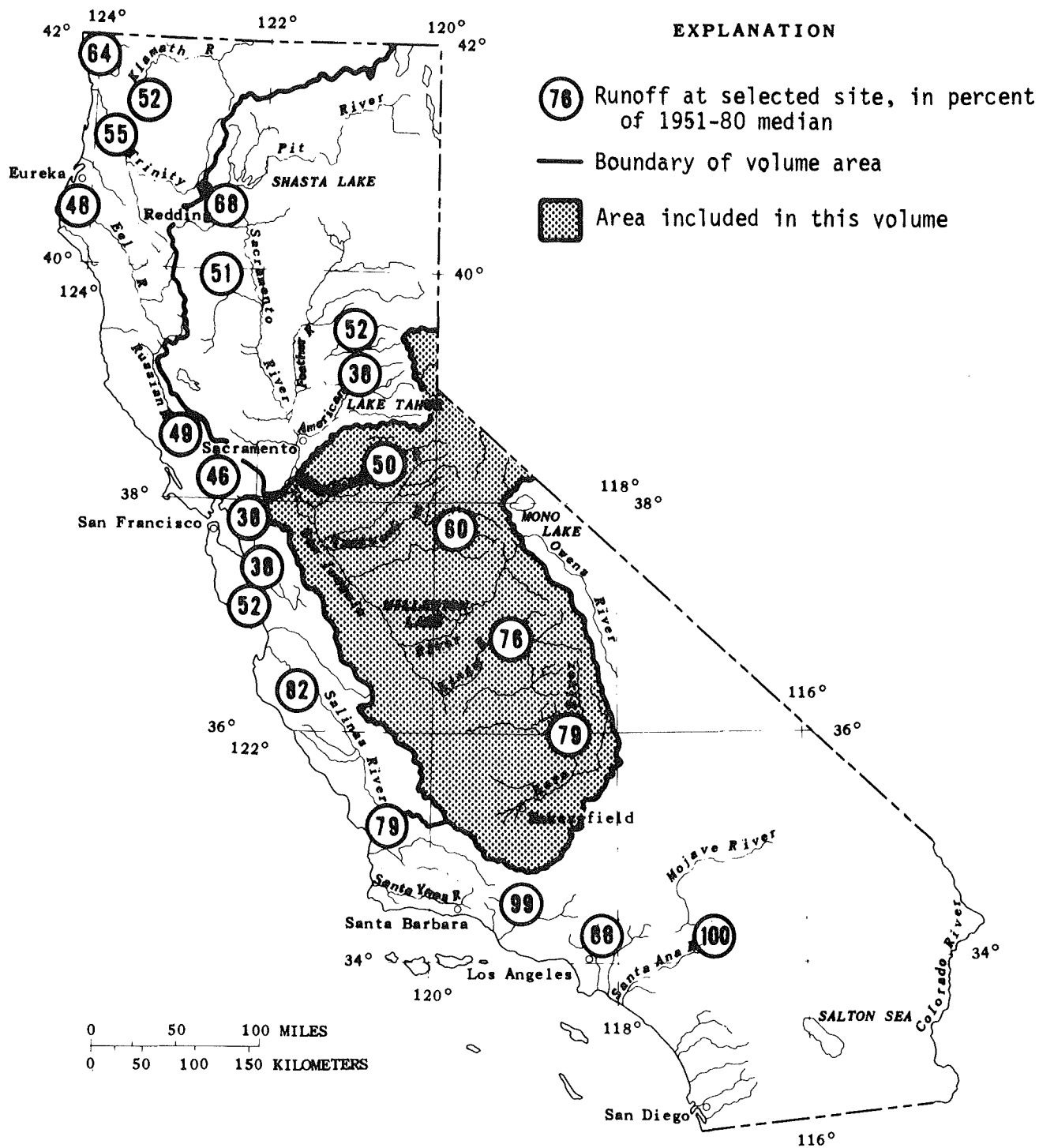


FIGURE 1 — Runoff for the current water year.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, ground-water, and other hydrologic data, as used in this report, are defined below. See also the table for converting inch-pound units to International System units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by a well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials, for example, decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. For the membrane filter method these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 0.5°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. For the membrane filter method they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. For the membrane filter method they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 0.5°C on KF Streptococcus agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic organisms (invertebrates) are the group of animals living in or on the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Cells/volume refers to the number of cells of any organism that are counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually in milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile or 0.3468 millimeter from 1 square kilometer.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (FT³/S, ft³/s), is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, total fluids plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved is that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = \frac{s}{i \sum_{i=1}^s \frac{n_i}{n}} \log_2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the samples are the same, to some positive number, when some or all the organisms in the sample are different.

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

Drainage basin is a part of the surface of the Earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_0 e^{-\lambda L},$$

where I_0 is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This development process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-pupa-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, $\mu\text{g/g}$) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area of the habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

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

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in chemically dispersed distilled water.

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024-0.004	Sedimentation
Silt.....	0.004-0.062	Sedimentation
Sand.....	0.062-2.0	Sedimentation or sieve
Gravel.....	2.0-64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water.

Percent composition or percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton are microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, the periphyton also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton are suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton compose the plant part of the plankton. They are usually microscopic and their movement is subject to water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are phytoplankton organisms having a blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton compose the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms, chiefly green plants. The rate of primary production is estimated by measuring the amount of carbon assimilated by plants (carbon method) or the amount of oxygen released (oxygen method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$ for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Sediment is solid material that is derived mostly from disintegrated rocks and is transformed by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bedload is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bedload is considered to consist of particles in transit within 0.25 ft (0.076 m) of the streambed.

Bedload discharge (tons per day) is the quantity of sediment, as measured by dry weight, that moves past a section as bedload in a given time.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft or 0.09 m above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons per day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or volume, that passes a section in a given time. It is computed by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load (tons per day) is the quantity of suspended sediment passing a section in a specified period.

Total-sediment discharge or total-sediment load (tons per day) is the sum of suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight, that passes a section in a given time.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids concentration in water. Commonly, dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

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

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic-organism collection and plexiglass strips for periphyton collection.

Surface area of a lake is the area, in square miles or acres, outlined on the latest Geological Survey topographic map as the boundary of the lake and measured by a planimeter. In localities not covered by topographic maps, the areas are computed from the best maps available. Areas shown are for the lake stage at the time the map was made.

Surficial bed material is the part (upper 0.1 to 0.2 ft or 0.03 to 0.06 m) of the bed material that is sampled by using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in a digital format on punched paper tape.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total load (tons) is the total amount of any individual constituent, as measured by dry mass or volume, that is dissolved or suspended in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90 degrees from the path of an incident light source (see also p. 23).

WDR is used as an abbreviation for "Water-Data Reports" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first-rank, second-rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indentation in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each surface-water station, water-quality station, and partial-record station has been assigned a station number. These are in the same downstream order as used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left between the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 11264500, which appears just to the left of the station name, includes the 2-digit number "11" plus the 6-digit downstream order number "264500". In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records for California are in Part 9 (Colorado River basin), Part 10 (The Great Basin), and Part 11 (Pacific slope basins in California). All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream-order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well- and miscellaneous-site number system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 2.

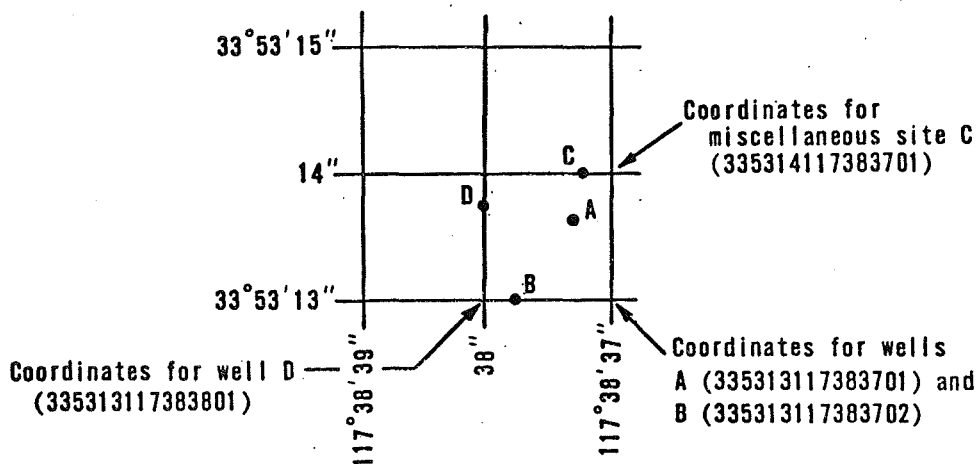


FIGURE 2.--System for numbering wells and miscellaneous sites (latitude and longitude).

Local well numbers

Wells and springs in California are assigned numbers according to their location on the rectangular system for the subdivision of public land. For example, in the number 005S/010E-22G01 M, the part of the number preceding the slash indicates the township (T.5 S.) and the number between the slash and hyphen indicates the range (R.10 E.); the digits following the hyphen indicate the section (sec.22); the letter following the section number indicates the 40-acre subdivision of the section. Within each 40-acre tract, the wells are numbered serially, as indicated by the final digit. The final letter, separated from the rest of the number by a space, indicates the base line and meridian. Base-line and meridian designations are as follows: H, Humboldt; M, Mount Diablo; S, San Bernardino. See figure 3.

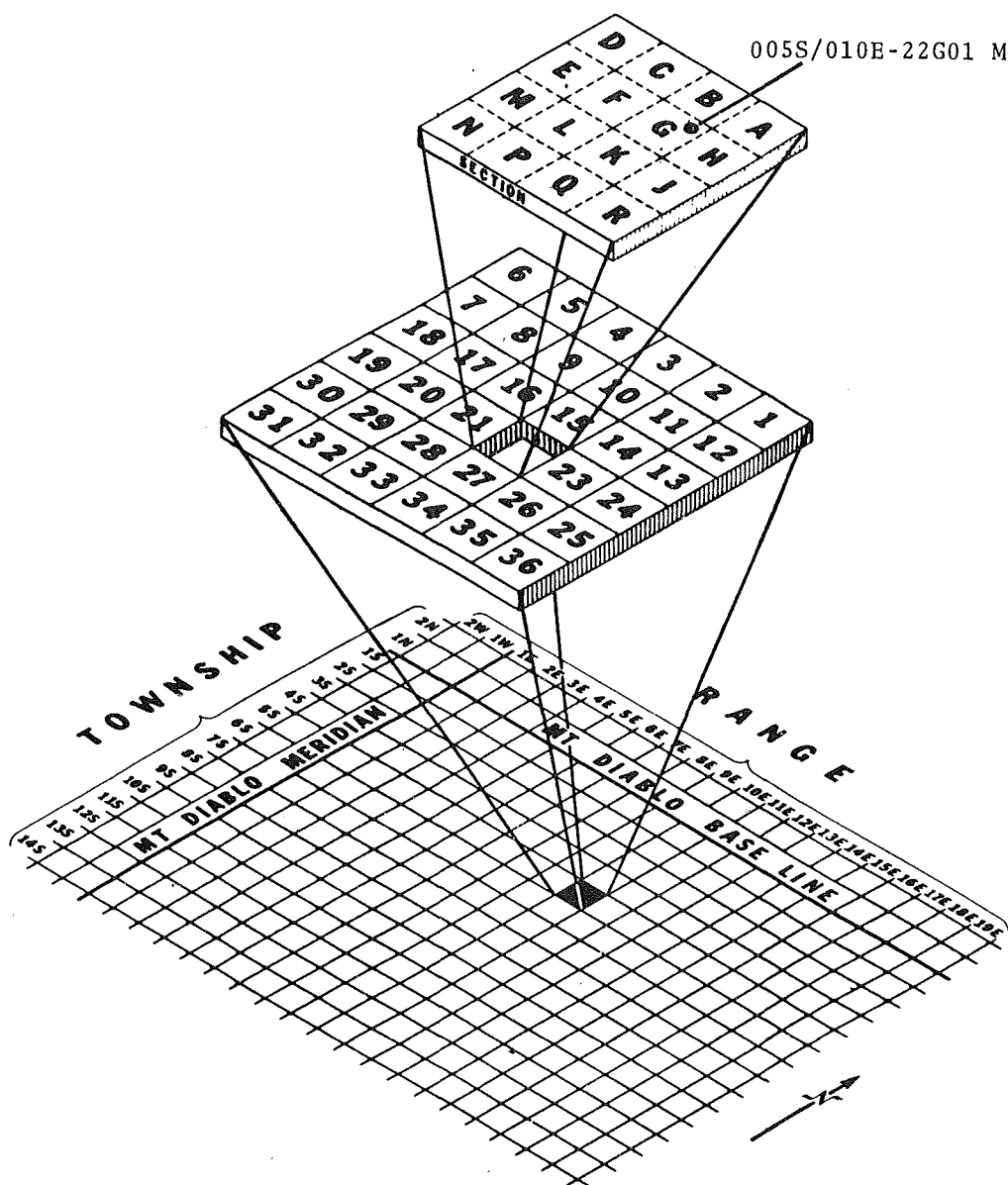


FIGURE 3.--California well-numbering system.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

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

Volume 2:

11475560 Elder Creek near Branscomb, CA

Volume 3:

11264500 Merced River at Happy Isles Bridge, near Yosemite, CA

National stream-quality accounting network is an accounting network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on the river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality. Stations in this network are listed below:

Volume 1:

09424190 Colorado River Aqueduct near San Jacinto, CA
10254670 Alamo River at Drop No. 3, near Calipatria, CA
10254970 New River at International Boundary, at Calexico, CA
10261500 Mojave River at lower narrows, near Victorville, CA
10277400 Owens River below Tinemaha Reservoir, near Big Pine, CA
11042000 San Luis Rey River at Oceanside, CA
11074000 Santa Ana River below Prado Dam, CA
11103000 Los Angeles River at Long Beach, CA
11108500 Santa Clara River at Los Angeles-Ventura County line, CA

Volume 2:

11152300 Salinas River near Chualar, CA
11159000 Pajaro River at Chittenden, CA
11458000 Napa River near Napa, CA
11467000 Russian River near Guerneville, CA
11477000 Eel River at Scotia, CA
11530500 Klamath River near Klamath, CA
11532500 Smith River near Crescent City, CA

Volume 3:

11187000 Kern River at Kernville, CA
11218500 Kings River below North Fork, near Trimmer, CA
11250000 Friant-Kern Canal at Friant, CA
11303500 San Joaquin River near Vernalis, CA
11325500 Mokelumne River at Woodbridge, CA

Volume 4:

10356500 Susan River at Susanville, CA
11370500 Sacramento River at Keswick, CA
11447650 Sacramento River at Freeport, CA

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal inter-agency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radiosotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams and canals, and stage and contents of lakes and reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in the U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For a stream-gaging station, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the current year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATIONS" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published, along with the current records, in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are affected by the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only the peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum of 1929, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 8.

Information pertaining to the accuracy of the discharge records, and to conditions that affect the natural flow at the gaging station, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is also given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance.

Under "EXTREMES" are given: First, the extremes for the period of record; second, information available outside the period of record; and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks (including the maximum for the year) above the selected base, with the time of occurrence and corresponding gage heights, are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in acre-feet (line headed "AC-FT"). In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

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

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

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

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

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation by storage, increase or decrease due to artificial causes, or to other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations, such as observations of water temperatures, discharge measurements, gage-height records, and rating tables, is on file in the District Office. Also, most gaging-station records are available in computer-usable form and many statistical analyses have been made. Information on the availability of unpublished data or statistical analyses may be obtained from the District Office.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the District Office.

Records of discharge collected by agencies other than the Geological Survey

Records of discharge not published by the Geological Survey have been collected at numerous sites by many other Federal, State, County, City, and local agencies and by private organizations. A listing of stream-gaging stations and the agencies operating them is published in California Department of Water Resources Bulletin 230-78, "Index to Sources of Hydrologic Data." The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22092, maintains an index of such sites. Information on records at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface-water samples for analyses usually are collected at or near gaging stations. The water-quality records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); instrumentation; general remarks; extremes for the period of daily record; and extremes for the current year.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations, listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between the reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between time of measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District Office.

Ground-water quality normally does not change significantly during short periods of time; infrequent sampling and analysis of ground water adequately defines ground-water quality at a given site.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and month. Water temperatures taken at the time of discharge measurements are on file in the district office. They will be used, with all other temperature data, for reports such as the open-file reports by subregion, "Water Temperature of California Streams, 1970."

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration at the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, estimates of bedload and total-sediment discharge are included for some stations. Also included are particle-size distribution analyses of suspended sediment, surface bed material, and bedload material (sediment in transit within 0.25 ft (0.076 m) of the bed).

Computations of monthly bedload discharges are based on the relation between instantaneous water discharge and corresponding bedload discharge for the station. Values of bedload discharge used in defining this relation are based on samples obtained by use of the Helley-Smith bedload sampler or by modified-Einstein or Meyer-Peter Muller computation procedures. Application of the bedload-transport relation at a station was made on a daily basis or subdivided-day basis.

The Helley-Smith sampler is designed to collect a time-weighted sample of the sediment moving within 0.25 ft (0.076 m) of the streambed. Sediment moving in this portion of the flow cannot be sampled with standard suspended-sediment samplers. It is assumed that samples obtained by this sampler represent the bedload discharge when used in coarse-material bedded streams (median diameter coarser than about 4 mm) and that these data can be used in conjunction with theoretical computations to define the bedload-transport relation for a station.

Calibration of the Helley-Smith sampler has not been completed, and a trap efficiency of 1.0 has been assumed applicable to this device. Error sources in the theoretical methods, based on analysis of bed-material characteristics, channel geometry, and associated hydraulic factors, are also undefined. In consequence, figures of bedload discharge must be used with caution. They are estimates, at best, and are subject to revision.

Turbidity

At some stations samples for the determination of turbidity were collected at the same frequency as samples collected for determination of suspended sediment. Turbidity, measured in Nephelometric turbidity units (NTU), is shown in relation to the concentration of sediment in the simultaneously collected sample.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water-level data from a basic national network of observation wells are published herein. These water-level measurements are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on the grid system of latitude and longitude as shown in figure 2, and (2) a local number that is provided for continuity with older reports and for other use as dictated by local needs (fig. 3).

Measurements are made in many types of wells under various conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well insure that measurements at a well are of consistent accuracy and reliability.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum referred to National Geodetic Vertical Datum is given in the well description. The height of the measuring point (MP above or below land-surface datum), if known, is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (EOM).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

In this report basin names and numbers, for example San Joaquin Valley (5-22), are from "California's Ground Water," California Department of Water Resources Bulletin No. 118, 1975, 135 p.

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Eastern Distribution Branch, Text Products Section, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please specify the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3, 1968. 60 pages.
- 3-A4. Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5, 1967. 29 pages.
- 3-A6. General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968. 13 pages.
- 3-A7. Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
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- 4-B1. Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
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- 7-C2. Computer model of two-dimensional solute transport and dispersion in ground water, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 8-A1. Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-B2. Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

10290300 UPPER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°09'15", long 119°20'58", in NW¼NE¼ sec.5, T.3 N., R.24 E., Mono County, Hydrologic Unit 16050301, Toiyabe National Forest, at outlet of upper lake dam on Robinson Creek, and 10 mi (16 km) southwest of Bridgeport.

DRAINAGE AREA.--29.5 mi² (76.4 km²).

PERIOD OF RECORD.--December 1961 to February 1964, September 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet. Figures given herein represent usable contents. Usable contents, 2,070 acre-ft (2.55 hm³) between elevations 7,200 ft (2,194.6 m) natural rim, and 7,207 ft (2,196.7 m) spillway crest.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 2,920 acre-ft (3.60 hm³) July 2, 1980, elevation, 7,209.65 ft (2,197.501 m); minimum observed, 62 acre-ft (76,400 m³) Oct. 31, Nov. 1, 1964, elevation, 7,200.22 ft (2,194.627 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--No usable contents Oct. 17, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,650 acre-ft (3.27 hm³) June 10, elevation, 7,203.80 ft (2,195.718 m); minimum 521 acre-ft (642,000 m³) Sept. 12, elevation, 7,201.86 ft (2,195.127 m).

ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	7,207.52	2,240	--
Oct. 31.....	7,206.59	1,940	-300
Nov. 30.....	7,207.13	2,110	+170
Dec. 31.....	7,207.30	2,170	+60
CAL YR 1980.....	--	--	-70
Jan. 31.....	--	g2,130	-40
Feb. 28.....	7,207.22	2,140	+10
Mar. 31.....	7,207.28	2,160	+20
Apr. 30.....	7,208.12	2,430	+270
May 31.....	7,208.61	2,590	+160
June 30.....	7,208.22	2,460	-130
July 31.....	7,207.13	2,110	-350
Aug. 31.....	7,202.74	767	-1,343
Sept. 30.....	7,202.06	577	-190
WTR YR 1981.....	--	--	-1,663

g Interpolated.

10290400 LOWER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°10'05", long 119°19'33", in NE¼NE¼ sec.33, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, Toiyabe National Forest, at outlet of lower lake dam on Robinson Creek, 8 mi (13 km) southwest of Bridgeport.

DRAINAGE AREA.--38.9 mi² (100.8 km²).

PERIOD OF RECORD.--December 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet and by Upper Twin Lake (station 10290300). Figures given herein represent usable contents. Usable contents, 4,010 acre-ft (4.94 hm³) between elevations 7,190 ft (2,192 m) natural rim, and 7,200 ft (2,195 m) spillway crest. One diversion out of Tamarack Creek into Summers Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,490 acre-ft (6.77 hm³) June 6, 1969, elevation, 7,203.51 ft (2,195.630 m); no usable contents Nov. 17, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,730 acre-ft (5.83 hm³) June 13, elevation, 7,201.69 ft (2,195.075 m); minimum, 724 acre-ft (893,000 m³) Sept. 30, elevation, unknown, contents interpolated.

ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	7,196.99	2,800	--
Oct. 31.....	7,197.39	2,960	+160
Nov. 30.....	7,197.34	2,940	-20
Dec. 31.....	7,199.66	3,870	+930
CAL YR 1980.....	--	--	+1,020
Jan. 31.....	7,200.60	4,260	+390
Feb. 28.....	7,200.44	4,200	-60
Mar. 31.....	7,200.48	4,210	+10
Apr. 30.....	7,200.00	4,010	-200
May 31.....	7,199.60	3,850	-160
June 30.....	7,201.09	4,470	+620
July 31.....	7,197.79	3,120	-1,350
Aug. 31.....	--	g1,460	-1,660
Sept. 30.....	--	g 724	-736
WTR YR 1981.....	--	--	-2,076

g Interpolated.

10292500 BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'30", long 119°12'40", in SE4NE4 sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, Toiyabe National Forest, at Bridgeport Dam on East Walker River, 4.5 mi (7.2 km) north of Bridgeport.

DRAINAGE AREA.--358 mi² (927 km²).

PERIOD OF RECORD.--March 1926 to current year. Monthend contents only for some periods, published in WSP 1314.

REVISED RECORDS.--WSP 1180: 1949. WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (project datum).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft (52.4 hm³) between elevations 6,415 ft (1,955.3 m), approximate elevation of outlet tunnel, and 6,460.75 ft (1,969.237 m) crest of spillway. There are four siphons that become operative prior to the water level reaching the crest of the spillway. Elevation of sill of outlet gate, 6,412 ft (1,954.4 m). No dead storage. Figures given herein represent total contents. Water is used for irrigation by Walker River Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,880 acre-ft (55.3 hm³) June 16, 1974, elevation, 6,460.78 ft (1,969.246 m); no usable contents during fall of 1929-30, 1960, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,670 acre-ft (52.6 hm³) Mar. 28, elevation, 6,460.07 ft (1,969.029 m); minimum, 3,420 acre-ft (4.22 hm³), elevation, 6,435.94 ft (1,961.675 m) Sept. 30.

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

6,415	0	6,441	7,120
6,418	20	6,443	9,100
6,421	115	6,445	11,380
6,424	269	6,447	13,990
6,427	539	6,449	17,060
6,430	1,130	6,451	20,620
6,433	2,050	6,453	24,660
6,435	2,920	6,456	31,570
6,437	4,050	6,461	45,490
6,439	5,440		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23180	21440	26350	31450	36100	40770	42340	37180	33650	29330	18680	6990
2	23040	21540	26530	31600	36180	41120	42320	36960	33780	29020	18310	6770
3	22870	21640	26790	31750	36260	41290	42200	36710	33810	28720	17950	6540
4	22660	21820	27110	31870	36390	41410	42170	36500	33940	28420	17560	6320
5	22420	22150	27250	32000	36550	41490	42080	36120	34060	28100	17160	6120
6	22190	22150	27410	32160	36730	41670	41940	35830	34250	27710	16770	5930
7	21990	22340	27500	32280	36870	41910	41790	35520	34560	27320	16390	5710
8	21820	22500	27640	32410	37100	42140	41670	35250	34820	26980	15950	5540
9	21620	22710	27780	32510	37370	42340	41520	34980	35140	26570	15460	5390
10	21440	22690	27900	32640	37560	42430	41290	34690	35440	26130	14990	5250
11	21320	22870	28060	32770	37790	42460	41090	34510	35310	25690	14460	5130
12	21130	23120	28190	32940	37930	42430	40860	34300	35440	25320	13920	4990
13	20970	23310	28330	33090	38120	42430	40650	34190	35220	24920	13460	4890
14	20840	23450	28470	33250	38510	42460	40390	34040	35140	24530	12970	4760
15	20740	23600	28630	33400	38790	42460	40090	33830	35040	24200	12480	4650
16	20620	23770	28840	33550	39150	42320	39860	33650	34800	23810	12010	4630
17	20620	23940	29000	33700	39460	42230	39600	33500	34540	23410	11550	4540
18	20620	24140	29180	33860	39660	42370	39370	33270	34300	23060	11190	4440
19	20620	24300	29350	34040	39740	42400	39230	33040	33990	22690	10810	4310
20	20640	24470	29520	34220	39630	42400	39040	32990	33730	22320	10440	4220
21	20620	24680	29740	34380	39660	42460	38820	32820	33450	22070	10100	4010
22	20660	24840	29830	34610	39860	42460	38570	32670	33170	21800	9780	3930
23	20720	24990	30000	34670	39950	42460	38430	32590	32740	21480	9470	3830
24	20780	25170	30190	34740	40150	42520	38350	32510	32280	21190	9130	3730
25	20840	25390	30340	34850	40210	42490	38350	32430	31800	20880	8830	3670
26	20900	25560	30540	35040	40390	42490	37900	32410	31330	20570	8540	3620
27	20920	25690	30710	35490	40540	42580	37810	32670	30900	20270	8210	3580
28	20900	25960	30900	35670	40650	42670	37650	32870	30440	19990	7980	3530
29	20970	26130	31040	35830	---	42520	37510	33020	29980	19650	7720	3470
30	21030	26180	31210	35960	---	42550	37370	33250	29640	19350	7470	3420
31	21210	---	31350	35960	---	42580	---	33480	---	19040	7250	---
MAX	23180	26180	31350	35960	40650	42670	42340	37180	35440	29330	18680	6990
MIN	20620	21440	26350	31450	36100	40770	37370	32410	29640	19040	7250	3420
†	6451.30	6453.69	6455.91	6457.70	6459.38	6460.04	6458.22	6456.75	6455.20	6450.14	6441.13	6435.94
‡	-2120	+4970	+5170	+4610	+4600	+1930	-5210	-3800	-3840	-16600	-11790	-3830

CAL YR 1980 † +12160
WTR YR 1981 ‡ -19019

† Elevation, in feet NGVD, at end of month.
‡ Change in contents, in acre-feet.

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'40", long 119°12'50", in SW¼NE¼ sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, Toiyabe National Forest, on right bank 1,500 ft (460 m) downstream from Bridgeport Reservoir, 5 mi (8 km) north of Bridgeport, and 10 mi (16 km) upstream from Sweetwater Creek.

DRAINAGE AREA.--359 mi² (930 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1911 to September 1914 (gage heights only), October 1921 to current year. No winter record water years 1922, 1925.

REVISED RECORDS.--WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,400 ft (1,951 m) from topographic map. See WSP 2127 for history of changes prior to May 25, 1939.

REMARKS.--Records good except those for the winter period, which are poor. Diversions for irrigation of pasture lands near Bridgeport. Flow regulated by Bridgeport Reservoir (station 10292500).

AVERAGE DISCHARGE (unadjusted).--58 years (water years 1923-24, 1926-81), 139 ft³/s (3.936 m³/s), 100,700 acre-ft/yr (124 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1922-81).--Maximum discharge, 1,390 ft³/s (39.4 m³/s) June 19, 1963, gage height, 4.64 (1.414 m); maximum gage height, 4.95 ft (1.509 m) Jan. 22, 1943, top of surge; minimum daily discharge, 0.2 ft³/s (0.006 m³/s) on many days in 1955 and 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 332 ft³/s (9.40 m³/s) June 26, gage height, 2.05 ft (0.625 m); minimum daily, 8.9 ft³/s (0.25 m³/s) Nov. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	23	11	16	69	13	108	256	184	280	184	148
2	199	23	12	16	69	13	117	275	193	267	204	145
3	213	20	12	16	57	34	117	286	214	254	207	137
4	242	14	9.4	16	29	48	130	275	214	254	221	131
5	235	14	14	16	23	48	141	267	202	254	221	120
6	230	14	14	16	12	39	147	254	191	254	216	120
7	217	16	14	16	11	13	163	238	182	254	209	120
8	217	14	14	16	11	13	161	231	186	251	241	117
9	208	14	14	16	11	13	161	231	198	256	259	105
10	187	14	15	16	11	47	167	228	195	264	264	102
11	187	15	15	16	11	90	189	228	207	262	278	100
12	187	14	15	16	11	100	200	219	236	251	278	100
13	187	15	15	17	11	100	202	216	256	241	267	100
14	181	14	15	16	11	100	204	219	241	248	264	98
15	176	15	15	13	11	100	226	233	236	236	262	89
16	162	16	15	13	11	100	224	226	248	231	259	88
17	132	14	14	12	58	100	224	207	256	216	256	80
18	120	14	14	12	157	100	224	207	251	204	241	80
19	120	13	14	13	231	100	224	200	243	204	221	80
20	120	12	14	15	214	100	224	169	246	188	214	80
21	111	12	14	13	118	100	236	159	256	159	202	80
22	86	12	14	12	65	100	251	149	269	167	189	80
23	86	12	14	12	43	100	251	149	317	167	175	80
24	72	11	14	12	28	100	251	149	326	169	175	80
25	64	8.9	21	12	28	100	231	149	326	175	175	80
26	63	9.4	18	12	23	100	214	149	317	175	173	77
27	63	11	19	12	13	102	214	149	302	175	169	72
28	63	12	19	12	13	102	214	150	297	175	159	72
29	63	12	19	12	---	103	214	154	294	175	147	72
30	44	11	17	30	---	100	226	173	286	175	141	72
31	22	---	17	69	---	100	---	182	---	173	143	---
TOTAL	4455	419.3	461.4	511	1360	2378	5855	6377	7369	6754	6614	2905
MEAN	144	14.0	14.9	16.5	48.6	76.7	195	206	246	218	213	96.8
MAX	242	23	21	69	231	103	251	286	326	280	278	148
MIN	22	8.9	9.4	12	11	13	108	149	182	159	141	72
AC-FT	8840	832	915	1010	2700	4720	11610	12650	14620	13400	13120	5760
CAL YR 1980 TOTAL	91010.7			MEAN 249	MAX 1280	MIN 8.9	AC-FT 180500					
WTR YR 1981 TOTAL	45458.7			MEAN 125	MAX 326	MIN 8.9	AC-FT 90170					

WALKER LAKE BASIN

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1949 to November 1952, March 1960 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (FT ³ /S)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH, FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO ₃)	CALCIUM DIS- SOLVED (MG/L AS Ca)
NOV									
25...	1130	11	130	--	4.0	--	--	--	--
DEC									
30...	1350	18	204	--	5.0	--	--	--	--
JAN									
26...	1415	12	149	--	3.0	--	--	--	--
FEB									
24...	1430	28	170	--	4.5	--	--	--	--
APR									
*28...	1215	214	194	8.2	13.0	1.0	8.7	62	18
29...	1100	216	182	--	12.0	--	--	--	--
MAY									
14...	1135	214	189	--	15.5	--	--	--	--
26...	1300	149	187	--	12.5	--	--	--	--
JUN									
29...	1540	298	173	--	17.5	--	--	--	--
JUL									
15...	1445	235	173	--	28.5	--	--	--	--
28...	1435	176	178	--	20.5	--	--	--	--
AUG									
28...	1520	161	192	--	19.0	--	--	--	--
SEP									
*16...	1300	88	198	8.9	17.0	12	5.3	64	19

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CaCO ₃)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV								
25...	--	--	--	--	--	--	--	--
DEC								
30...	--	--	--	--	--	--	--	--
JAN								
26...	--	--	--	--	--	--	--	--
FEB								
24...	--	--	--	--	--	--	--	--
APR								
28...	3.9	16	.9	2.8	79	4.0	110	63.6
29...	--	--	--	--	--	--	--	--
MAY								
14...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
JUN								
29...	--	--	--	--	--	--	--	--
JUL								
15...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
AUG								
28...	--	--	--	--	--	--	--	--
SEP								
16...	3.5	16	.9	3.3	84	4.0	132	31.4

* Data from Calif. Dept. of Water Resources.

10293050 EAST WALKER RIVER BELOW SWEETWATER CREEK, NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°26'27", long 119°06'18", in NW¼NW¼ sec.29, T.7 N., R.26 E., Lyon County, Nevada, Hydrologic Unit 16050301, Toiyabe National Forest, on left bank 10 ft (3 m) downstream from bridge, 1.8 mi (2.9 km) downstream from Sweetwater Creek, and 14.3 mi (23.0 km) northeast of Bridgeport.

DRAINAGE AREA.--467 mi² (1,210 km²).

PERIOD OF RECORD.--March 1974 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,760 ft (1,760 m), from topographic map.

REMARKS.--Records fair Oct. 1 to Mar. 12, good thereafter. Diversions for irrigation above station. Flow regulated by Bridgeport Reservoir (station 10292500).

AVERAGE DISCHARGE.--7 years (water years 1975-81), 152 ft³/s (4.305 m³/s), 110,100 acre-ft/yr (136 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,420 ft³/s (40.2 m³/s) July 3, 1980, gage height, 7.90 ft (2.408 m); minimum daily, 5.2 ft³/s (0.15 m³/s) Mar. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 310 ft³/s (8.78 m³/s) June 24, gage height, 5.29 ft (1.612 m); minimum daily, 18 ft³/s (0.51 m³/s) Jan. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	41	23	26	73	25	106	252	169	268	160	137
2	216	41	24	28	78	24	118	263	180	255	183	132
3	226	41	26	24	74	30	118	278	208	247	184	125
4	265	36	25	24	42	56	125	275	209	247	195	124
5	252	35	26	23	41	56	140	263	201	247	191	114
6	252	34	26	24	26	56	142	258	186	241	191	118
7	235	30	25	26	25	28	172	249	176	238	185	118
8	235	28	25	28	20	24	173	244	178	238	205	118
9	229	28	26	28	20	24	171	247	186	238	235	103
10	204	30	28	26	20	36	172	248	184	250	244	97
11	204	33	28	28	20	90	189	248	190	252	257	94
12	204	33	28	26	20	111	204	235	218	244	244	94
13	204	30	28	26	21	112	204	225	242	247	253	97
14	202	30	28	25	33	113	204	224	236	241	254	97
15	196	30	28	21	26	112	225	237	227	232	251	90
16	184	26	28	19	25	113	225	236	236	229	249	90
17	158	27	27	19	37	111	224	214	246	213	237	85
18	140	27	25	19	175	109	224	212	247	202	234	82
19	140	25	25	19	256	115	225	204	235	202	220	82
20	140	24	25	19	271	113	221	174	235	190	210	79
21	134	24	25	20	172	113	231	164	245	145	200	79
22	111	23	25	19	80	113	251	153	250	147	190	81
23	109	20	25	19	71	113	253	150	292	150	180	80
24	100	20	25	18	38	115	251	154	304	150	175	80
25	88	19	26	18	37	113	236	160	301	158	170	81
26	86	22	28	19	37	106	214	159	297	155	170	79
27	86	24	29	23	25	104	210	153	284	155	170	73
28	82	24	29	22	25	106	209	143	278	153	160	73
29	84	24	29	20	---	109	209	142	276	157	144	73
30	80	23	24	26	---	106	214	159	271	158	138	72
31	44	---	26	71	---	106	---	171	---	156	134	---
TOTAL	5109	852	815	753	1788	2662	5860	6494	6987	6405	6233	2847
MEAN	165	28.4	26.3	24.3	63.9	85.9	195	209	233	207	201	94.9
MAX	265	41	29	71	271	115	253	278	304	268	264	137
MIN	44	19	23	18	20	24	106	142	169	145	134	72
AC-FT	10130	1690	1620	1490	3550	5280	11620	12880	13860	12700	12360	5650
CAL YR 1980	TOTAL	96906	MEAN 265	MAX 1340	MIN 19	AC-FT 192200						
WTR YR 1981	TOTAL	46805	MEAN 128	MAX 304	MIN 18	AC-FT 92840						

WALKER LAKE BASIN

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°21'30", long 119°26'38", in NW¼NW¼ sec.22, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, Toiyabe National Forest, on right bank 0.8 mi (1.3 km) north of Sonora Junction, 1.5 mi (2.4 km) upstream from mouth, and 14 mi (23 km) northwest of Bridgeport.

DRAINAGE AREA.--63.1 mi² (163.4 km²).

PERIOD OF RECORD.--April to August 1910, October 1944 to current year. Prior to October 1958, published as East Fork West Walker River near Bridgeport.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,790 ft (2,070 m), from topographic map. April to August 1910, nonrecording gage at site 1 mi (2 km) upstream at different datum.

REMARKS.--Records good except those for winter periods and period of no gage-height record Mar. 1 to Apr. 27, which are fair. Small diversions above station.

AVERAGE DISCHARGE.--37 years (water years 1945-81), 50.4 ft³/s (1.427 m³/s), 36,510 acre-ft/yr (45.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) Jan. 31, 1963, gage height, 3.22 ft (0.981 m), from rating curve extended above 350 ft³/s (9.91 m³/s) on basis of slope-area measurement at gage height 2.80 ft (0.853 m); maximum gage height recorded, 3.63 ft (1.106 m) Jan. 3, 1945, backwater from ice; minimum discharge, 1.4 ft³/s (0.040 m³/s) Nov. 20, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 193 ft³/s (5.47 m³/s) June 5, gage height, 1.74 ft (0.530 m), no peak above base of 200 ft³/s (5.66 m³/s); minimum daily, 6.7 ft³/s (0.19 m³/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	24	21	21	13	21	28	102	126	53	9.9	7.1
2	26	24	21	23	13	22	28	106	130	46	9.1	6.9
3	26	25	24	19	14	21	27	92	122	42	9.8	6.7
4	26	26	23	18	14	21	27	83	129	38	11	6.9
5	25	25	21	17	15	20	27	75	142	36	9.9	7.0
6	25	25	20	17	15	20	27	66	148	36	9.1	8.2
7	26	24	19	17	16	20	28	61	136	36	8.4	8.3
8	26	23	18	17	16	20	28	61	142	32	8.2	12
9	26	22	18	17	17	21	29	68	141	30	8.9	13
10	25	23	19	17	17	22	29	79	123	27	8.7	15
11	25	31	20	17	17	22	30	86	110	26	10	13
12	33	26	20	17	18	21	30	93	95	23	9.5	13
13	29	23	20	17	19	22	30	100	80	22	9.2	16
14	29	24	20	18	42	21	31	105	73	20	10	15
15	29	23	21	17	34	21	31	90	68	21	8.1	13
16	28	29	21	16	30	21	38	77	66	17	8.7	12
17	28	27	21	16	30	20	39	69	65	16	14	12
18	28	26	21	16	29	22	39	72	63	18	14	13
19	27	25	20	16	33	23	36	67	62	18	10	11
20	27	26	20	17	26	21	31	58	62	15	8.8	10
21	28	28	21	16	24	25	34	53	59	15	8.0	10
22	27	22	22	17	24	27	48	53	57	14	8.0	10
23	27	22	22	16	23	26	60	56	56	14	7.4	11
24	26	20	19	15	19	24	72	64	52	13	7.8	11
25	26	19	22	15	22	26	73	83	51	13	9.7	15
26	26	19	22	15	19	26	60	88	50	13	7.9	13
27	26	19	22	15	20	27	49	105	46	13	7.6	12
28	25	20	20	15	20	27	53	100	47	11	8.1	11
29	25	20	20	14	---	27	70	107	44	13	7.6	12
30	26	19	21	14	---	27	87	118	58	12	7.1	12
31	25	---	22	14	---	27	---	121	---	11	7.1	---
TOTAL	828	709	641	516	599	715	1216	2558	2603	714	282.0	336.1
MEAN	26.7	23.6	20.7	16.6	21.4	23.1	40.5	82.5	86.8	23.0	9.10	11.2
MAX	33	31	24	23	42	28	87	121	148	53	14	16
MIN	25	19	18	14	13	20	27	53	44	11	7.1	6.7
AC-FT	1640	1410	1270	1020	1190	1420	2410	5070	5160	1420	559	667

CAL YR 1980 TOTAL 29927.0 MEAN 91.8 MAX 454 MIN 13 AC-FT 59360
 WTH YR 1981 TOTAL 11717.1 MEAN 32.1 MAX 148 MIN 6.7 AC-FT 23240

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA

LOCATION.--Lat 38°22'47", long 119°26'57", in NE¼SE¼ sec.9, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, Toiyabe National Forest, on right bank 150 (50 m) downstream from Little Walker River, 60 ft (20 m) upstream from bridge on U.S. Highway 395, and 13 mi (21 km) southeast of Coleville.

DRAINAGE AREA.--181 mi² (469 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year. Prior to October 1958, published as "below East Fork."

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,591.39 ft (2,009.056 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1939, to Sept. 30, 1969, at site 100 ft (30 m) upstream at same datum. Prior to Oct. 1, 1939, at site 25 ft (8 m) downstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for the winter period, which are fair. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poor Lake Reservoir (capacity unknown) 7 mi (11 km) upstream.

AVERAGE DISCHARGE.--43 years, 254 ft³/s (7.193 m³/s), 184,000 acre-ft/yr (227 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,220 ft³/s (176 m³/s) Nov. 20, 1950, gage height, 8.10 ft (2.469 m), from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurement of peak flow; minimum, 4.0 ft³/s (0.11 m³/s) Nov. 18, 1948, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed prior to 1938, 5,800 ft³/s (164 m³/s) Dec. 11, 1937, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) June 5 (2300 hrs), gage height, 3.83 ft (1.167 m), no other peak above base of 1,120 ft³/s (31.7 m³/s); minimum daily, 26 ft³/s (0.74 m³/s) Feb. 3, 4, Sept. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	60	47	47	27	63	83	916	771	228	55	37
2	72	60	53	49	27	65	84	903	820	187	53	36
3	72	60	60	50	26	64	80	713	729	173	52	33
4	71	59	63	48	26	63	78	572	747	160	53	31
5	71	59	51	44	27	61	85	508	866	149	52	29
6	68	57	40	43	28	61	104	450	902	155	49	28
7	68	56	39	46	28	60	118	416	798	155	48	28
8	67	55	40	47	28	61	125	426	779	139	47	30
9	66	52	42	53	30	62	145	514	804	123	46	32
10	64	53	42	49	30	65	169	616	673	112	48	33
11	63	73	44	47	35	66	165	652	558	103	49	31
12	81	67	45	44	38	64	161	675	469	95	48	31
13	83	57	48	43	52	66	174	712	367	89	49	35
14	79	54	49	41	109	64	202	767	304	85	56	37
15	79	61	51	42	95	64	252	581	270	43	48	34
16	77	56	53	42	85	64	314	432	280	91	48	30
17	76	67	54	39	93	62	325	368	301	89	52	30
18	75	57	55	41	88	64	328	405	297	90	54	34
19	75	55	55	41	98	71	300	380	303	87	47	30
20	73	52	52	38	88	63	249	323	321	40	45	28
21	73	54	52	40	74	77	273	290	310	75	45	27
22	72	56	50	41	75	83	407	308	293	73	44	26
23	71	54	50	40	75	78	549	357	278	70	43	26
24	69	46	50	36	71	73	699	478	248	68	42	26
25	67	45	53	35	66	64	680	630	235	65	43	31
26	67	46	55	49	63	85	540	622	217	65	41	29
27	67	47	57	48	61	83	406	663	207	64	40	29
28	64	47	54	32	61	85	427	722	199	60	42	27
29	61	47	50	31	---	91	613	732	190	61	40	27
30	63	47	49	30	---	82	800	845	251	59	39	27
31	62	---	48	29	---	81	---	816	---	58	38	---
TOTAL	2189	1659	1551	1305	1604	2175	8935	17792	13787	3201	1456	912
MEAN	70.6	55.3	50.0	42.1	57.3	70.2	298	574	460	103	47.0	30.4
MAX	83	73	63	53	109	91	800	916	902	228	56	37
MIN	61	45	39	29	26	60	78	290	190	58	38	26
AC-FT	4340	3290	3080	2590	3180	4310	17720	35290	27350	6350	2890	1810
CAL YR 1980	TOTAL	139770	MEAN 382	MAX 2380	MIN 39	AC-FT 277200						
WTR YR 1981	TOTAL	56566	MEAN 155	MAX 916	MIN 26	AC-FT 112200						

WALKER LAKE BASIN

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER NEAR COLEVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981*

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (FT ³ /S)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH, FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO ₃)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 28...	1130	388	49	7.6	6.5	2.0	10.0	19	5.7
SEP 16...	1215	41	307	8.3	15.5	1.0	8.4	59	17

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LILITY FIELD (MG/L AS CACO ₃)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
APR 28...	1.3	2.3	.2	.6	20	.5	28	29.3
SEP 16...	4.0	42	2.3	4.2	114	19	192	21.3

* Data from Calif. Dept. of Water Resources.

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LOCATION.--Lat 38°50'55", long 119°27'15", in NW¼NE¼ sec.28, T.8 N., R.23 E., Mono County, Hydrologic Unit 16050302, Toiyabe National Forest, on left bank 0.2 mi (0.3 km) downstream from Rock Creek, and 5 mi (8 km) southeast of Coleville.

PERIOD OF RECORD.--October 1902 to July 1908 (published as West Fork of Walker River near Coleville 1903, 1905-8 and as Walker River, West Fork, near Coleville 1904), March 1909 to September 1910, June 1915 to March 1938, May 1957 to current year. Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 5,520 ft (1,682 m) from topographic map. See WSP 2127 for history of changes prior to Sept. 10, 1963.

AVERAGE DISCHARGE.--52 years (water years 1903-7, 1910, 1916-37, 1958-81), 271 ft³/s (7.675 m³/s), 196,300 acre-ft/yr (242 hm³/yr).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft³/s (33.1 m³/s) June 6 (0200 hrs), gage height, 2.93 ft (0.893 m), no other peak above base of 1,120 ft³/s (31.7 m³/s); minimum daily, 33 ft³/s (0.93 m³/s) on several days during September.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	70	56	62	35	86	102	886	767	272	70	43
2	83	68	66	64	35	89	101	892	845	213	68	42
3	83	69	68	68	34	85	97	702	751	198	65	39
4	82	69	89	65	34	82	93	540	749	184	66	36
5	81	69	61	58	35	81	96	475	869	171	64	33
6	80	67	52	55	37	80	113	425	947	169	61	33
7	78	65	50	59	37	80	130	402	831	176	59	33
8	78	64	52	55	37	80	138	401	799	159	59	33
9	76	62	54	59	39	81	158	469	834	140	58	38
10	76	62	54	58	39	83	185	576	703	125	58	39
11	74	82	56	57	45	84	187	624	564	116	59	38
12	94	76	58	61	50	84	177	644	471	108	59	39
13	96	66	62	58	70	86	188	683	378	102	57	42
14	91	62	64	56	118	84	209	762	312	98	64	49
15	90	70	66	57	114	83	250	564	283	108	58	44
16	89	66	69	57	103	84	322	420	284	109	56	41
17	88	76	70	54	112	79	339	359	302	107	58	41
18	86	66	72	56	107	85	340	396	298	106	63	44
19	85	64	70	54	113	91	323	380	301	103	56	38
20	84	61	68	51	113	81	271	326	318	95	53	35
21	84	62	67	54	92	91	275	297	313	92	53	35
22	83	64	65	54	95	96	383	304	295	89	53	33
23	81	62	65	54	97	98	495	339	285	86	49	33
24	80	60	67	49	92	91	667	441	263	84	47	33
25	78	58	68	46	87	100	683	603	251	80	48	39
26	77	60	71	52	84	103	534	619	236	80	46	41
27	77	60	73	68	81	102	402	649	226	79	45	39
28	75	60	71	47	82	100	401	712	215	75	47	38
29	75	60	66	40	---	109	560	716	213	75	45	36
30	74	60	65	39	---	100	756	839	249	74	44	36
31	72	---	63	38	---	99	---	834	---	73	44	---
TOTAL	2534	1960	1998	1705	2017	2757	8975	17279	14152	3746	1732	1143
MEAN	81.7	65.3	64.5	55.0	72.0	88.9	299	557	472	121	55.9	38.1
MAX	96	82	89	68	118	109	756	892	947	272	70	49
MIN	72	58	50	38	34	79	93	297	213	73	44	33
AC-FT	5030	3890	3960	3380	4000	5470	17800	34270	28070	7430	3440	2270
CAL YR 1980	TOTAL	148079	MEAN 405	MAX 2310	MIN 50	AC-FT	293700					
WTH YR 1981	TOTAL	59998	MEAN 164	MAX 947	MIN 33	AC-FT	119000					

WALKER LAKE BASIN

10297000 TOPAZ LAKE NEAR TOPAZ, CA

LOCATION.--Lat 38°41'35", long 119°31'10", in NW¼NE¼ sec.33, T.10 N., R.22 E., Douglas County, Nevada, Hydrologic Unit 16050301, at outlet of Topaz Lake on West Walker River, 5.5 mi (8.8 km) north of Topaz.

PERIOD OF RECORD.--December 1921 to September 1931 (monthly contents only published in WSP 1734), October 1931 to current year.

GAGE.--Float and nonrecording gages read once daily. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at datum 4.62 ft (1.408 m) higher.

REMARKS.--Topaz Lake, formerly known as Alkali Lake and Topaz Reservoir, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in the rim of the lake. Storage began about December 1921. Usable capacity, 59,440 acre-ft (73.3 hm³) between elevations 4,967.68 ft (1,514.149 m), lowest practical elevation for diversion through tunnel, bottom of outlet tunnel at elevation, 4,965.4 ft (1,513.45 m), and 5,000.38 ft (1,524.116 m), 3 ft (0.9 m) below top of levee. Usable capacity of reservoir was increased from about 45,000 acre-ft (55.5 hm³) to 59,440 acre-ft (73.3 hm³) in October 1937 by an earthfill, rock-faced levee at south end. Figures given herein represent usable contents. There is 65,000 acre-ft (80.1 hm³) of lake volume below the point of controllable storage. Water is used for irrigation in Walker River Irrigation District.

COOPERATION.--Elevations furnished by Walker River Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,680 acre-ft (74.8 hm³) July 3, 1980, elevation, 5,000.92 ft (1,524.280 m), no usable contents at times in 1924, 1960, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 52,030 acre-ft (64.2 hm³) June 12, elevation, 4,997.08 ft (1,523.110 m); minimum contents observed, 6,860 acre-ft (8.46 hm³) Sept. 30, elevation, 4,972.09 ft (1,515.493 m).

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

4,972	6,720	4,985	28,310
4,973	8,310	4,990	37,360
4,975	11,520	4,995	47,540
4,977	14,770	5,000	58,570
4,979	18,080	5,001	60,870
4,981	21,440		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24500	19800	24420	29360	34420	41370	47660	44380	45800	43080	27120	12930
2	24220	19990	24540	29530	34580	41610	47600	44840	46410	42570	26550	12550
3	23940	20190	24730	29690	34760	41940	47580	45430	47200	42040	25970	12200
4	23670	20430	24980	29860	34970	42200	47490	45570	47790	41510	25420	11840
5	23360	20660	25190	30020	35170	42470	47390	45450	48390	40910	24920	11500
6	23100	20850	25310	30180	35410	42670	47280	45070	49080	40320	24400	11180
7	22860	21070	25470	30340	35620	42940	47150	44630	49980	39590	23960	10890
8	22610	21290	25590	30500	35860	43170	47010	44240	50630	39070	23410	10630
9	22360	21490	25690	30620	36120	43390	46810	43780	51130	38560	22900	10360
10	22100	21660	25790	30780	36370	43620	46670	43560	51700	37960	22390	10100
11	21760	21880	25930	30920	36580	43850	46520	43540	51960	37340	21850	9870
12	21420	22060	26050	31070	36840	44070	46330	43640	52030	36710	21290	9620
13	21080	22250	26190	31240	37110	44300	46100	43740	51740	36200	20760	9480
14	20800	22390	26350	31390	37380	44530	45720	43870	51480	35500	20280	9330
15	20630	22510	26480	31550	37730	44780	45430	44050	51200	34950	19790	9140
16	20520	22640	26570	31690	38060	44970	45070	43890	50850	34420	19250	9010
17	20410	22760	26780	31870	38370	45180	44930	43430	50460	33910	18870	8980
18	20310	22920	26950	32020	38660	45380	44680	42980	50220	33420	18420	8690
19	20220	23050	27120	32160	38980	45640	44570	42570	49720	32950	18000	8500
20	20140	23170	27300	32280	39250	45970	44430	42200	49310	32440	17570	8310
21	20060	23310	27450	32420	39530	46200	44160	41900	48900	32050	17170	8120
22	19990	23440	27610	32570	39790	46410	43870	41590	48560	31650	16800	8020
23	19920	23560	27820	32730	40030	46670	43800	41370	48030	31240	16450	7830
24	19860	23680	27960	32860	40280	46860	44090	41290	47340	30820	15940	7680
25	19820	23800	28130	32960	40490	46980	44590	41450	46690	30450	15650	7530
26	19770	23890	28310	33070	40730	47200	44930	41920	46140	30060	15250	7380
27	19740	24010	28500	33290	40950	47320	44780	42470	45510	29620	14740	7290
28	19690	24130	28680	33630	41150	47410	44340	42960	44800	29180	14410	7160
29	19650	24300	28870	33870	---	47540	43970	43680	44220	28690	14050	7040
30	19690	24330	29040	34110	---	47580	43950	44320	43560	28170	13680	6860
31	19690	---	29200	34230	---	47620	---	45160	---	27630	13290	---
MAX	24500	24330	29200	34230	41150	47620	47660	45570	52030	43080	27120	12930
MIN	19650	19800	24420	29360	34420	41370	43800	41290	43560	27630	13290	6860
†	4979.95	4982.70	4985.51	4988.33	4991.92	4995.04	4993.29	4993.87	4993.10	4984.61	4976.09	4972.09
‡	-5090	+4640	+4870	+5030	+6920	+6470	-3670	+1210	-1600	-15930	-14340	-6430

CAL YR 1980 ‡ +11670

WTR YR 1981 ‡ -17920

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°42'50", long 119°45'50", in SW¼SE¼ sec.15, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on right bank 0.5 mi (0.8 km) downstream from Markleeville Creek and 1.5 mi (2.4 km) northeast of Markleeville.

DRAINAGE AREA.--276 mi² (715 km²).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,400 ft (1,646 m), from topographic map. Prior to Oct. 1, 1967, at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter period, which are fair. A few small diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft (6.16 hm³).

AVERAGE DISCHARGE.--21 years, 343 ft³/s (9.714 m³/s), 248,500 acre-ft/yr (306 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s (428 m³/s) Jan. 31, 1963, gage height, 10.21 ft (3.112 m), present datum; minimum daily, 9.5 ft³/s (0.27 m³/s) Nov. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 24	2100	1,310 37.1	4.56 1.390
Apr. 30	2300	*1,460 41.3	4.70 1.433

Minimum daily, 30 ft³/s (0.85 m³/s) Sept. 20, 21, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	79	68	69	88	124	187	1190	659	136	52	49
2	84	78	78	70	90	124	192	1100	674	128	67	44
3	83	78	92	75	90	123	180	858	599	133	67	43
4	83	78	149	72	91	126	174	742	589	121	70	44
5	83	78	81	64	92	123	193	680	625	119	76	49
6	82	78	83	60	93	121	245	613	633	112	76	49
7	81	76	78	60	94	121	272	576	578	99	77	49
8	83	74	76	60	90	120	270	574	549	90	72	54
9	97	76	76	61	87	123	309	635	545	86	72	57
10	97	76	76	61	86	133	344	720	480	84	73	52
11	104	94	76	61	89	140	326	745	426	82	75	40
12	126	87	76	62	90	137	317	732	378	87	77	39
13	117	81	76	62	109	137	335	755	327	97	81	44
14	109	78	76	63	300	132	379	820	292	96	84	45
15	110	83	76	64	215	135	462	674	263	96	77	43
16	102	76	76	65	168	134	535	532	248	97	75	41
17	101	83	77	62	203	128	534	480	240	93	76	41
18	97	78	81	64	181	134	529	553	226	86	80	43
19	97	78	79	63	198	168	471	563	219	80	73	34
20	95	78	80	59	197	152	396	472	215	74	68	32
21	94	78	85	64	154	160	446	434	205	72	64	31
22	94	78	93	64	150	155	632	449	189	77	62	31
23	92	78	77	67	155	151	857	473	178	73	60	31
24	91	72	76	58	149	146	1070	555	170	70	58	31
25	90	68	79	54	135	212	951	662	170	69	47	46
26	91	83	80	63	134	233	771	653	156	70	46	46
27	91	87	79	138	121	199	594	682	137	67	46	41
28	86	81	79	99	123	187	637	668	130	60	46	37
29	88	74	73	76	---	207	870	644	127	48	46	45
30	89	68	73	88	---	181	1090	696	134	46	52	45
31	86	---	68	87	---	177	---	685	---	45	49	---
TOTAL	2909	2354	2492	2135	3772	4643	14568	20615	10361	2693	2044	1276
MEAN	93.8	78.5	80.4	68.9	135	150	486	665	345	86.9	65.9	42.5
MAX	126	94	149	138	300	233	1090	1190	674	136	84	57
MIN	81	68	68	54	86	120	174	434	127	45	46	31
AC-FT	5770	4670	4940	4230	7480	9210	28900	40890	20550	5340	4050	2530
CAL YR 1980 TOTAL	186284			MEAN 509	MAX 4180	MIN 68	AC-FT 369500					
WTH YR 1981 TOTAL	69862			MEAN 191	MAX 1190	MIN 31	AC-FT 138600					

LOCATION.--Lat 38°46'10", long 119°49'55", in NW¼SE¼ sec.34, T.11 N., R.19 E., Alpine County, Hydrologic Unit 16050201, Toiyabe National Forest, on left bank 0.3 mi (0.5 km) downstream from bridge on State Highway 88-89, 0.6 mi (1.0 km) southwest of Woodfords, and 3.8 mi (6.1 km) downstream from Willow Creek.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WDR CA-79-3: Drainage area.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 514 ft³/s (14.6 m³/s) Apr. 24 (2300 hrs), gage height, 2.89 ft (0.881 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 11 ft³/2 (0.312 m³/s) on several days during September.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	21	22	24	19	38	63	349	145	59	49	12
2	22	21	27	24	20	38	59	323	152	52	21	12
3	22	21	27	26	19	37	56	259	136	44	17	12
4	22	22	23	26	20	37	60	237	125	40	16	12
5	22	22	21	23	24	37	78	220	135	26	15	12
6	21	21	20	22	27	37	111	203	142	23	17	12
7	21	21	19	23	28	38	127	193	129	23	17	11
8	33	22	18	22	27	39	132	190	120	21	17	15
9	38	22	20	22	27	42	156	198	122	20	14	19
10	38	22	21	22	27	46	174	212	108	19	17	18
11	37	24	21	22	27	48	164	215	90	18	36	16
12	34	26	22	23	28	46	158	208	82	18	46	14
13	30	25	22	23	32	47	171	206	72	33	47	13
14	26	23	20	23	54	44	191	222	66	48	46	12
15	26	24	21	22	51	47	221	199	59	59	41	12
16	26	22	21	23	56	47	237	164	55	60	21	12
17	26	24	22	23	80	45	230	144	53	57	15	12
18	25	24	23	23	71	45	230	173	52	52	15	12
19	25	23	23	24	76	46	221	189	60	24	14	12
20	25	23	24	23	72	43	199	145	57	18	13	11
21	24	23	25	25	56	43	212	126	46	17	13	11
22	24	25	30	27	53	45	257	120	43	19	12	11
23	24	25	27	28	52	49	302	123	42	24	12	11
24	24	23	25	24	43	49	358	141	39	25	19	11
25	23	21	28	21	47	62	347	178	37	26	36	13
26	24	23	29	25	43	61	301	169	35	26	36	13
27	24	24	31	29	41	55	238	172	34	28	33	13
28	23	24	30	19	39	54	250	161	33	34	28	12
29	23	24	27	18	---	68	287	159	43	53	24	12
30	22	23	26	19	---	61	327	167	52	56	17	12
31	22	---	24	20	---	60	---	161	---	55	13	---
TOTAL	799	688	739	717	1159	1454	5917	5926	2364	1077	737	380
MEAN	25.8	22.9	23.8	23.1	41.4	46.9	197	191	78.8	34.7	23.8	12.7
MAX	38	26	31	29	80	68	358	349	152	60	49	19
MIN	21	21	18	18	14	37	56	120	33	17	12	11
AC-FT	1580	1360	1470	1420	2300	2880	11740	11750	4690	2140	1460	754
CAL YR 1980	TOTAL	50900	MEAN 139	MAX 746	MIN 14	AC-FT 101000						
WTR YR 1981	TOTAL	21957	MEAN 60.2	MAX 358	MIN 11	AC-FT 43550						

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July, September, and December 1949, March 1950 to March 1952, November 1952, March 1960 to July 1961, February 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (FT ³ /S)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH, FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO ₃)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 30...	1300	23	81	--	5.0	--	--	--	--
NOV 25...	0930	12	74	--	.5	--	--	--	--
JAN 05...	1015	16	71	--	1.0	--	--	--	--
26...	1315	28	75	--	1.0	--	--	--	--
FEB 25...	1330	52	78	--	1.0	--	--	--	--
MAR 30...	1035	42	71	--	2.5	--	--	--	--
APR 27...	1530	227	47	--	7.0	--	--	--	--
*28...	0950	230	47	7.7	4.5	2.0	10.5	16	5.1
MAY 26...	1500	163	46	--	9.0	--	--	--	--
JUL 02...	1300	57	59	--	17.0	--	--	--	--
30...	1100	57	61	--	14.0	--	--	--	--
AUG 24...	1533	27	84	--	17.0	--	--	--	--
SEP *16...	0900	89	83	7.7	11.5	<1.0	8.8	30	8.6

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CaCO ₃)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 30...	--	--	--	--	--	--	--	--
NOV 25...	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
FEB 25...	--	--	--	--	--	--	--	--
MAR 30...	--	--	--	--	--	--	--	--
APR 27...	--	--	--	--	--	--	--	--
28...	1.4	2.3	.2	.8	19	1.0	40	24.8
MAY 26...	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
AUG 24...	--	--	--	--	--	--	--	--
SEP 16...	2.3	4.2	.3	1.6	37	1.0	54	13.0

* Data from Calif. Dept. of Water Resources.

10336600 UPPER TRUCKEE RIVER NEAR MEYERS, CA

LOCATION.--Lat 38°50'35", long 120°01'25", in NE4SE4 sec.31, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 0.4 mi (0.6 km) upstream from mouth of Echo Lake outlet, 1.1 mi (1.8 km) southwest of Meyers, and 2.5 mi (4.0 km) upstream from Angora Creek.

DRAINAGE AREA, - - 33.1 mi² (85.7 km²).

PERIOD OF RECORD.--October 1960 to current year.

REVISÉD RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,321.89 ft (1,926.912 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter months, which are fair. No regulation. Some small diversions above station for domestic use.

AVERAGE DISCHARGE.--21 years, 61.7 ft³/s (1.747 m³/s), 44,700 acre-ft/yr (55.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft³/s (72.2 m³/s) Feb. 1, 1963, gage height, 12.41 ft (3.783 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Aug. 31 to Sept. 7, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 23	2100	268 7.59	6.43 1.960
Apr. 30	2030	*338 9.57	6.84 2.085

Minimum daily, 2.1 ft³/s (0.059 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	7.2	8.1	9.7	10	20	28	258	131	13	4.1	2.7
2	7.6	7.3	9.0	9.9	10	19	26	236	127	12	4.4	2.3
3	7.2	7.3	11	10	10	19	25	172	110	12	3.7	2.6
4	7.1	7.4	14	11	10	19	25	149	109	11	4.2	2.7
5	7.1	7.7	11	10	10	19	30	131	113	10	3.9	2.2
6	7.0	8.3	9.9	9.9	10	18	41	115	107	10	3.5	2.3
7	7.0	13	9.2	9.7	10	18	46	108	95	9.6	3.4	2.2
8	7.0	11	8.8	9.4	10	18	46	114	90	9.4	3.1	2.2
9	6.8	9.4	7.9	9.7	10	19	50	138	86	9.3	3.3	2.4
10	7.1	11	7.3	9.2	10	20	58	158	70	8.9	3.1	2.2
11	8.7	10	7.3	9.2	10	22	54	160	61	8.4	3.0	2.2
12	7.9	9.7	8.1	9.0	11	22	51	155	52	7.9	3.0	2.3
13	8.3	9.4	8.1	8.8	14	22	55	162	44	7.6	3.1	2.8
14	7.8	9.2	8.1	8.8	35	21	65	170	39	7.3	3.0	2.6
15	7.5	9.1	8.1	8.8	32	21	86	136	35	7.0	3.3	2.4
16	7.5	9.1	8.3	9.2	27	21	99	109	34	6.6	3.4	2.2
17	7.4	9.4	8.6	9.0	42	20	98	97	32	6.3	3.0	2.3
18	7.2	9.7	9.0	9.0	32	20	97	123	30	6.1	2.9	2.4
19	7.2	9.0	8.8	9.2	34	23	87	126	28	5.9	2.9	2.3
20	7.4	8.8	8.8	9.0	35	22	72	100	26	5.6	2.7	2.1
21	7.5	8.8	10	9.0	28	22	82	86	24	5.3	2.5	2.3
22	7.3	8.8	13	9.9	25	22	130	92	23	5.1	2.5	2.2
23	7.2	9.2	11	11	26	22	166	98	21	4.9	2.5	2.2
24	7.8	8.8	10	10	22	22	184	122	20	4.7	2.5	2.3
25	8.5	8.1	11	9.4	22	33	166	188	18	4.4	2.5	4.1
26	8.0	8.1	11	9.9	22	33	149	163	17	4.4	2.5	2.9
27	7.8	8.1	12	13	23	28	107	162	16	4.4	2.5	2.5
28	7.8	8.3	11	7.2	20	27	123	154	15	4.3	2.5	2.3
29	7.8	8.3	11	7.5	---	32	176	147	14	4.3	2.4	2.3
30	7.8	8.6	10	9.2	---	29	236	149	14	4.2	2.3	2.3
31	7.6	---	9.5	9.9	---	27	---	138	---	4.2	2.4	---
TOTAL	233.5	268.1	298.9	294.5	560	700	2658	4416	1601	224.1	94.1	72.8
MEAN	7.53	8.94	9.64	9.50	20.0	22.6	88.6	142	53.4	7.23	3.04	2.43
MAX	8.7	13	14	13	42	33	236	258	131	13	4.4	4.1
MIN	6.8	7.2	7.3	7.2	10	18	25	86	14	4.2	2.3	2.1
AC-F T	463	532	593	584	1110	1390	5270	8760	3180	445	187	144

CAL YR 1980	TOTAL	31507.2	MEAN	86.1	MAX	850	MIN	6.8	AC-FT	62490
WTR YR 1981	TOTAL	11421.0	MEAN	31.3	MAX	258	MIN	2.1	AC-FT	22650

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA

LOCATION.--Lat 38°55'22", long 119°59'23", in NW¼SE¼ sec.4, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on right bank on downstream side of U.S. Highway 50 bridge, 1.0 mi (1.6 km) northeast of South Lake Tahoe Post Office, and 1.4 mi (2.3 km) upstream from Lake Tahoe.

DRAINAGE AREA.--54.9 mi² (142.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to September 1974, October 1976 to June 1977, October 1977 to June 1978, March 1980 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,240 ft (1,902 m) from topographic map.

REMARKS.--Records good except those for the winter periods and July 19 to Sept. 30, which are fair. Two small dams may cause slight regulation at times. Some small diversions above station for domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) Nov. 12, 1973, gage height, 5.94 ft (1.811 m); minimum daily, 1.7 ft³/s (0.048 m³/s) on many days during September 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 352 ft³/s (9.97 m³/s) May 1 (0130 hrs), gage height, 3.31 ft (1.009 m), no other peak above base of 300 ft³/s (8.50 m³/s); minimum daily, 1.7 ft³/s (0.048 m³/s) on many days during September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	12	19	27	41	60	304	168	23	2.5	1.7
2	10	12	11	18	27	40	60	258	166	23	2.5	1.7
3	9.8	12	15	20	27	39	54	206	149	21	2.4	1.7
4	10	12	24	21	27	39	50	187	138	20	2.4	1.7
5	9.7	12	22	21	27	37	51	176	144	18	2.3	1.7
6	9.0	13	20	20	26	36	63	160	135	17	2.3	1.7
7	9.3	12	19	19	26	35	73	148	111	15	2.2	1.7
8	13	16	18	18	26	34	74	146	105	14	2.2	1.7
9	8.9	13	17	18	26	36	78	161	103	13	2.1	1.7
10	9.5	12	16	17	25	39	91	185	91	12	2.1	1.7
11	8.3	17	15	17	25	40	88	183	82	11	2.1	1.7
12	15	16	17	17	25	39	83	160	74	9.3	2.0	1.7
13	16	14	17	16	35	40	84	164	62	8.0	2.0	1.7
14	15	14	17	16	123	40	94	176	55	8.4	2.0	1.7
15	15	13	17	16	95	41	118	148	52	8.0	1.9	1.7
16	16	13	17	16	75	41	141	115	49	7.2	1.9	1.7
17	16	13	17	16	93	39	146	100	41	6.4	1.9	1.7
18	15	13	16	16	81	39	146	117	38	5.2	1.9	1.7
19	15	13	17	16	85	51	157	157	38	5.2	1.9	1.7
20	15	12	16	16	89	52	134	126	37	4.8	1.9	1.7
21	14	12	18	16	69	58	125	105	34	4.4	1.9	1.7
22	14	12	27	17	58	58	172	101	33	4.1	1.9	1.7
23	14	12	23	20	57	52	215	102	31	3.8	1.8	1.8
24	14	13	22	19	52	48	247	126	30	3.6	1.8	2.0
25	13	12	21	19	67	92	256	193	28	3.4	1.8	20
26	15	12	22	24	57	96	250	202	28	3.2	1.8	11
27	15	12	22	47	51	71	190	188	26	3.1	1.8	8.0
28	14	12	23	30	45	64	175	200	26	3.0	1.8	7.0
29	13	12	22	29	---	70	230	192	26	2.8	1.8	6.2
30	13	12	21	28	---	65	270	190	24	2.7	1.8	5.8
31	13	---	19	27	---	57	---	185	---	2.6	1.8	---
TOTAL	398.5	385	580	629	1446	1529	3975	5161	2124	286.2	62.5	99.2
MEAN	12.9	12.8	18.7	20.3	51.6	49.3	133	166	70.8	9.23	2.02	3.31
MAX	16	17	27	47	123	96	270	304	168	23	2.5	20
MIN	8.3	12	11	16	25	34	50	100	24	2.6	1.8	1.7
AC-FT	790	764	1150	1250	2870	3030	7880	10240	4210	568	124	197

CAL YR 1980 TOTAL 24094.2 MEAN 126 MAX 611 MIN 8.3 AC-FT 17790
WTR YR 1981 TOTAL 16675.4 MEAN 15.8 MAX 304 MIN 1.7 AC-FT 53080

PYRAMID AND WINNEMUCCA LAKES BASIN

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-74, 1978, 1980 to current year.

SPECIFIC CONDUCTANCE: March to September 1981.

WATER TEMPERATURES: Water years 1972-74, 1978, March 1980 to current year.

SEDIMENT RECORDS: Water years 1972-74, 1978, March 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1981.

WATER TEMPERATURES: March to September 1981.

SEDIMENT RECORDS: October 1971 to June 1974, October 1977 to June 1978, March 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 312 mg/L Dec. 29, 1973; minimum daily mean, 0 mg/L on several days during October 1973 and January 1981.

SEDIMENT DISCHARGE: Maximum daily, 339 tons (308 metric tons) Dec. 29, 1973; minimum daily, 0 ton (0 metric ton) on several days during October 1973 and January 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 187 micromhos Sept. 24; minimum recorded, 8 micromhos Apr. 25.

WATER TEMPERATURES: Maximum recorded, 25.5°C July 27; minimum recorded, 0.0°C Dec. 9, Mar. 20, 26, 30.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 115 mg/L Apr. 24; minimum daily mean, 0 mg/L on several days during January.

SEDIMENT DISCHARGE: Maximum daily, 84 tons (76 metric tons) Apr. 25; minimum daily, 0 ton (0 metric ton) on several days during January.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	46	11	18	62	---	107
2						---	46	15	17	65	---	107
3						---	50	19	17	67	---	107
4						---	49	19	18	68	---	107
5						---	51	19	20	69	---	107
6						---	48	20	21	70	---	108
7						---	42	20	22	70	---	108
8						---	40	20	22	69	---	107
9						---	39	19	23	71	---	107
10						52	37	18	24	73	---	107
11						52	35	18	26	75	---	106
12						50	35	20	27	75	---	106
13						53	36	20	30	75	---	106
14						48	35	19	32	77	---	106
15						49	30	21	34	78	---	105
16						48	27	24	37	79	---	106
17						49	26	26	43	80	---	105
18						49	26	25	46	81	---	105
19						49	28	23	47	82	---	104
20						49	30	23	49	84	---	106
21						49	30	24	50	85	---	106
22						47	26	24	51	85	---	106
23						49	22	24	53	86	---	106
24						50	16	22	54	86	---	110
25						47	14	17	56	91	---	103
26						42	18	17	57	91	---	101
27						45	20	18	58	92	108	102
28						46	21	18	59	92	107	103
29						46	18	18	60	93	107	104
30						45	11	18	62	93	107	106
31						46	---	17	---	95	107	---
MONTH						---	32	20	38	79	---	106

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN
1	--	--	--	--	--	--	--	--	--	--	2.0	--	--	--	--	--	--	--
2	--	12.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	8.0	--	--	--	--	--	--	--	--	0.5	--	--	4.0	--
6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--	0.0	--	--	0.5	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.0	--	2.0
11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.5	--	1.5
12	--	--	--	--	--	--	--	0.5	--	--	--	--	--	--	--	7.5	--	1.5
13	--	--	--	--	--	--	--	--	--	--	--	--	--	2.0	--	4.0	--	1.5
14	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5	--	8.0	--	0.5
15	--	--	--	--	--	--	--	1.0	--	--	3.5	--	--	--	--	6.5	--	1.5
16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.5	--	1.0
17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.5	--	1.0
18	--	--	--	--	4.0	--	--	--	--	--	--	--	--	6.5	--	4.0	--	1.5
19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.0	--	1.0
20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.5	--	0.0
21	--	--	--	--	--	--	--	--	--	--	5.0	--	--	--	--	6.0	--	0.5
22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.0	--	2.0
23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.5	--	1.5
24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.5	--	1.5
25	--	--	--	--	1.0	--	--	--	--	--	--	--	--	0.5	--	5.0	--	1.0
26	--	--	--	--	--	--	--	3.5	--	--	--	--	--	--	--	4.0	--	0.0
27	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--	--	6.0	--	1.0
28	--	6.0	--	--	--	--	--	--	--	--	--	--	--	--	--	9.5	--	0.5
29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0	--	1.0
30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.5	--	0.0
31	--	--	--	--	--	--	--	2.0	--	--	--	--	--	--	--	8.0	--	1.0
MONTH	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

DAY	APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN	MAX	DAILY	MIN
1	5.5	--	1.5	10.0	--	4.5	14.0	--	9.0	20.5	--	14.5	--	--	--	19.0	--	14.5
2	9.0	--	1.0	10.0	--	4.5	15.5	--	9.5	22.0	--	16.5	--	--	--	18.5	--	14.5
3	9.5	--	1.5	9.5	--	2.5	16.0	--	8.5	23.0	--	16.5	--	--	--	19.5	--	14.0
4	11.0	--	2.0	9.5	--	3.0	17.5	--	10.0	23.0	--	18.0	--	--	--	18.0	--	14.0
5	11.5	--	3.0	10.0	--	3.5	18.0	--	11.0	22.5	--	18.5	--	--	--	20.0	--	13.5
6	11.5	--	3.5	10.0	--	3.0	18.0	--	11.0	21.5	--	18.0	--	--	--	21.5	--	12.5
7	10.0	--	3.0	10.5	--	3.0	17.5	--	10.5	20.5	--	14.0	--	--	--	21.5	--	12.5
8	10.0	--	2.5	11.5	--	4.0	17.0	--	11.0	21.0	--	15.5	--	20.5	--	18.0	--	13.5
9	11.0	--	3.5	11.5	--	5.0	18.0	--	10.0	21.0	--	15.5	--	--	--	21.0	--	13.5
10	9.5	--	3.0	11.5	--	5.0	17.0	--	10.0	20.5	--	15.5	--	--	--	21.5	--	14.5
11	9.5	--	2.0	11.5	--	4.5	17.5	--	9.5	20.5	--	15.0	--	--	--	20.5	--	14.0
12	9.5	--	1.5	12.5	--	5.0	16.0	--	8.5	21.0	--	15.0	--	--	--	19.0	--	15.5
13	10.5	--	2.5	12.5	--	5.5	15.5	--	7.0	21.5	--	13.0	--	--	--	18.5	--	15.0
14	11.0	--	3.0	10.5	--	6.0	15.0	--	7.0	23.0	--	15.0	--	--	--	20.5	--	14.5
15	9.0	--	3.0	7.5	--	4.5	17.0	--	7.5	24.0	--	16.0	--	--	--	19.5	--	15.0
16	9.0	--	2.5	11.0	--	3.0	18.0	--	9.5	24.5	--	16.5	--	--	--	17.5	--	14.5
17	8.5	--	3.0	10.5	--	4.0	19.5	--	11.0	24.5	--	16.0	--	19.5	--	16.0	--	14.0
18	6.5	--	3.5	8.5	--	6.0	20.0	--	12.5	24.5	--	15.0	--	--	--	17.5	--	12.0
19	7.0	--	2.5	9.5	--	4.0	21.0	--	13.5	24.5	--	14.5	--	--	--	18.0	--	13.5
20	9.5	--	2.0	9.5	--	4.0	21.5	--	14.5	24.0	--	15.0	--	--	--	16.5	--	13.0
21	9.5	--	3.0	12.0	--	5.0	22.0	--	14.5	24.5	--	14.5	--	--	--	16.5	--	12.5
22	11.0	--	3.5	14.0	--	6.0	21.5	--	15.5	24.5	--	14.5	--	--	--	15.5	--	11.0
23	11.0	--	3.0	13.0	--	7.0	21.0	--	14.5	25.0	--	14.5	--	--	--	14.0	--	10.5
24	9.5	--	3.0	11.5	--	8.0	21.0	--	14.5	25.0	--	15.0	--	--	--	12.5	--	9.5
25	7.5	--	3.0	9.5	--	7.5	22.0	--	17.5	25.0	--	14.5	--	--	--	14.5	--	9.5
26	5.5	--	2.5	9.5	--	6.5	22.0	--	16.5	25.0	--	15.0	--	16.5	--	15.5	--	12.0
27	9.5	--	1.5	12.5	--	6.5	22.0	--	16.5	25.5	--	16.0	--	20.5	--	15.0	--	11.5
28	11.0	--	3.0	14.0	--	6.5	22.0	--	16.5	25.0	--	15.5	--	23.5	--	14.0	--	11.5
29	11.5	--	3.5	15.0	--	8.5	22.0	--	17.0	23.5	--	14.5	--	20.5	--	15.5	--	11.0
30	10.5	--	4.0	15.0	--	8.5	21.0	--	17.0	23.5	--	13.5	--	19.0	--	12.5	--	9.5
31	--	--	--	15.0	--	8.0	--	--	--	23.5	--	14.0	--	19.0	--	14.5	--	--
MONTH	9.5	--	2.7	11.2	--	5.2	18.9	--	12.0	23.1	--	15.3	--	--	--	17.5	--	12.9

PYRAMID AND WINNEMUCCA LAKES BASIN

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	3	.09	12	4	.13	12	6	.19
2	10	3	.08	12	3	.10	11	6	.18
3	9.8	3	.08	12	3	.10	15	8	.32
4	10	3	.08	12	3	.10	24	10	.65
5	9.7	3	.08	12	2	.06	22	9	.53
6	9.0	3	.07	13	4	.14	20	9	.49
7	9.3	3	.08	12	2	.06	19	9	.46
8	13	6	.21	16	4	.17	18	9	.44
9	8.9	3	.07	13	2	.07	17	9	.41
10	9.5	3	.08	12	2	.06	16	10	.43
11	8.3	3	.07	17	5	.23	15	11	.45
12	15	5	.20	16	2	.09	17	14	.64
13	16	4	.17	14	2	.08	17	12	.55
14	15	4	.16	14	2	.08	17	11	.50
15	15	4	.16	13	2	.07	17	10	.46
16	16	4	.17	13	2	.07	17	9	.41
17	16	4	.17	13	2	.07	17	5	.23
18	15	4	.16	13	2	.07	16	4	.17
19	15	4	.16	13	2	.07	17	4	.18
20	15	4	.16	12	2	.06	16	4	.17
21	14	4	.15	12	2	.06	18	7	.34
22	14	4	.15	12	2	.06	27	10	.73
23	14	4	.15	12	2	.06	23	9	.56
24	14	4	.15	13	2	.07	22	7	.42
25	13	4	.14	12	5	.16	21	5	.28
26	15	4	.16	12	6	.19	22	4	.24
27	15	4	.16	12	6	.19	22	3	.18
28	14	4	.15	12	4	.13	23	3	.19
29	13	4	.14	12	4	.13	22	4	.24
30	13	4	.14	12	4	.13	21	4	.23
31	13	4	.14	---	---	---	19	4	.21
TOTAL	398.5	---	4.13	385	---	3.06	580	---	11.48

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	19	3	.15	27	6	.44	41	3	.33
2	18	2	.10	27	6	.44	40	2	.22
3	20	3	.16	27	6	.44	39	2	.21
4	21	5	.28	27	5	.36	39	2	.21
5	21	5	.28	27	5	.36	37	2	.20
6	20	5	.27	26	5	.35	36	2	.19
7	19	5	.26	26	5	.35	35	2	.19
8	18	5	.24	26	5	.35	34	2	.18
9	18	5	.24	26	5	.35	36	2	.19
10	17	5	.23	25	5	.34	39	2	.21
11	17	5	.23	25	5	.34	40	2	.22
12	17	5	.23	25	5	.34	39	2	.21
13	16	4	.17	35	24	3.4	40	2	.22
14	16	2	.09	123	95	32	40	2	.22
15	16	1	.04	95	22	6.1	41	2	.22
16	16	0	0	75	12	2.4	41	2	.22
17	16	0	0	93	18	4.5	39	2	.21
18	16	0	0	81	10	2.2	39	2	.21
19	16	0	0	85	12	2.8	51	14	1.9
20	16	0	0	89	9	2.2	52	10	1.4
21	16	0	0	69	7	1.3	58	42	7.9
22	17	0	0	58	6	.94	58	28	4.4
23	20	5	.27	57	6	.92	52	12	1.7
24	19	5	.26	52	6	.84	48	5	.65
25	19	5	.26	67	21	4.4	92	58	22
26	24	28	1.8	57	14	2.4	96	60	16
27	47	33	5.4	51	16	2.2	71	42	8.1
28	30	10	.81	45	10	1.2	64	25	4.3
29	29	8	.63	---	---	---	70	12	2.3
30	28	6	.45	---	---	---	65	12	2.1
31	27	6	.44	---	---	---	57	9	1.4
TOTAL	629	---	13.29	1446	---	74.26	1529	---	78.11

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	60	7	1.1	304	100	82	168	12	5.4
2	60	4	.65	258	45	31	166	17	7.6
3	54	3	.44	206	40	22	149	21	8.4
4	50	3	.41	187	19	9.6	138	14	5.2
5	51	4	.55	176	12	5.7	144	10	3.9
6	63	8	1.4	160	8	3.5	135	9	3.3
7	73	10	2.0	148	7	2.8	111	13	3.9
8	74	6	1.2	146	11	4.3	105	10	2.8
9	78	8	1.7	161	22	9.6	103	6	1.7
10	91	16	3.9	185	26	13	91	4	.98
11	88	7	1.7	183	34	17	82	4	.89
12	83	4	.90	160	22	9.5	74	4	.80
13	84	8	1.8	164	24	11	62	4	.67
14	94	18	4.6	176	25	12	55	4	.59
15	118	26	8.3	148	10	4.0	52	4	.56
16	141	34	13	115	6	1.9	49	4	.53
17	146	31	12	100	6	1.6	41	4	.44
18	146	27	11	117	15	5.2	38	4	.41
19	157	21	8.9	157	18	7.6	38	4	.41
20	134	11	4.0	126	6	2.0	37	5	.50
21	125	12	4.1	105	4	1.1	34	5	.46
22	172	60	30	101	5	1.4	33	5	.45
23	215	96	60	102	6	1.7	31	6	.50
24	247	115	81	126	15	5.1	30	6	.49
25	256	113	84	193	35	19	28	7	.53
26	250	70	47	202	25	14	28	8	.60
27	190	24	12	188	20	10	26	8	.56
28	175	28	13	200	24	13	26	8	.56
29	230	43	27	192	16	8.3	26	10	.70
30	270	90	66	190	11	5.6	24	10	.65
31	---	---	---	185	14	7.0	---	---	---
TOTAL	3975	---	503.65	5161	---	341.5	2124	---	54.48

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	23	10	.62	2.5	10	.07	1.7	10	.05
2	23	8	.50	2.5	9	.06	1.7	10	.05
3	21	8	.45	2.4	9	.06	1.7	10	.05
4	20	7	.38	2.4	9	.06	1.7	10	.05
5	18	6	.29	2.3	8	.05	1.7	10	.05
6	17	4	.18	2.3	8	.05	1.7	10	.05
7	15	2	.08	2.2	8	.05	1.7	10	.05
8	14	5	.19	2.2	7	.04	1.7	10	.05
9	13	8	.28	2.1	7	.04	1.7	10	.05
10	12	7	.23	2.1	7	.04	1.7	10	.05
11	11	6	.18	2.1	8	.05	1.7	10	.05
12	9.3	6	.15	2.0	8	.04	1.7	10	.05
13	8.0	6	.13	2.0	8	.04	1.7	10	.05
14	8.4	6	.14	2.0	9	.05	1.7	10	.05
15	8.0	6	.13	1.9	9	.05	1.7	10	.05
16	7.2	6	.12	1.9	10	.05	1.7	10	.05
17	6.4	6	.10	1.9	10	.05	1.7	10	.05
18	5.2	6	.08	1.9	10	.05	1.7	10	.05
19	5.2	6	.08	1.9	10	.05	1.7	10	.05
20	4.8	6	.08	1.9	10	.05	1.7	10	.05
21	4.4	6	.07	1.9	10	.05	1.7	10	.05
22	4.1	6	.07	1.9	10	.05	1.7	10	.05
23	3.8	6	.06	1.8	10	.05	1.8	10	.05
24	3.6	6	.06	1.8	10	.05	2.0	10	.05
25	3.4	6	.06	1.8	10	.05	20	10	.54
26	3.2	6	.05	1.8	10	.05	11	10	.30
27	3.1	6	.05	1.8	10	.05	8.0	10	.22
28	3.0	6	.05	1.8	10	.05	7.0	10	.19
29	2.8	6	.05	1.8	10	.05	6.2	10	.17
30	2.7	8	.06	1.8	10	.05	5.8	10	.16
31	2.6	10	.07	1.8	10	.05	---	---	---
TOTAL	286.2	---	5.04	62.5	---	1.55	99.2	---	2.78
YEAR	16675.4		1093.23						

PYRAMID AND WINNEMUCCA LAKES BASIN

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
DEC										
12...	1510	17	.5	23	1.1	46	--	--	--	--
JAN										
27...	1420	77	1.5	78	16	90	95	97	100	--
FEB										
14...	1610	143	3.5	119	46	72	--	--	--	--
25...	1625	70	.5	28	5.3	80	--	--	--	--
MAR										
21...	1710	72	6.5	140	27	100	--	--	--	--
25...	1700	154	4.5	164	68	71	--	--	--	--
APR										
09...	2130	83	8.0	10	2.2	66	--	--	--	--
16...	0525	157	3.5	51	22	53	--	--	--	--
19...	0545	163	3.0	50	8.8	51	--	--	--	--
23...	0615	216	3.0	82	48	39	--	--	--	--
23...	2245	293	8.0	231	183	46	--	--	--	--
26...	0335	274	4.0	35	20	48	--	--	--	--
27...	1020	180	3.0	18	8.7	46	58	79	94	100
30...	2110	288	10.0	40	62	33	--	--	--	--
MAY										
01...	0535	343	4.0	131	121	26	--	--	--	--
03...	0010	229	6.5	37	23	32	--	--	--	--
03...	2225	185	7.5	31	15	39	--	--	--	--
10...	0335	204	7.5	40	22	38	--	--	--	--
13...	2115	137	10.5	12	4.4	31	--	--	--	--
14...	0555	198	7.5	35	19	30	--	--	--	--
18...	2130	155	7.0	31	13	34	--	--	--	--
25...	1550	233	9.5	61	38	38	--	--	--	--
JUN										
05...	0010	152	14.0	9	3.7	54	--	--	--	--
06...	0730	150	11.0	8	3.2	61	--	--	--	--
AUG										
08...	1315	2.2	20.5	7	.04	70	--	--	--	--

10336625 FALLEN LEAF LAKE NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°54'00", long 120°04'14", in NE¼SW¼ sec.11, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, on left bank near center of lake, 200 ft (61 m) north of Cathedral Creek, 1.5 mi (2.4 km) south of Fallen Leaf Dam, 2.9 mi (4.7 km) southwest of Camp Richardson, and 3.7 mi (6.0 km) west of South Lake Tahoe Post Office.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1973, published as "near Tahoe Valley."

GAGE.--Water-stage recorder. Datum of gage is 6,372.30 ft (1,942.277 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Lake levels regulated by a concrete dam at the outlet constructed in 1934. Regulation is for maintenance of lake level and enhancement of fishery.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 5.85 ft (1.783 m) Jan. 13, 1980; minimum, 1.79 ft (0.546 m) Jan. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.95 ft (1.204 m) June 26-29; minimum, 2.00 ft (0.610 m) Dec. 2.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2440

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.52	2.42	2.02	2.19	2.53	2.52	2.60	3.71	3.73	3.92	3.32	2.60
2	3.52	2.38	2.00	2.19	2.51	2.51	2.58	3.74	3.71	3.91	3.30	2.58
3	3.52	2.36	2.17	2.22	2.47	2.48	2.57	3.69	3.67	3.91	3.27	2.56
4	3.51	2.33	2.23	2.23	2.46	2.46	2.56	3.63	3.64	3.90	3.25	2.53
5	3.51	2.31	2.23	2.23	2.43	2.44	2.56	3.56	3.63	3.88	3.24	2.51
6	3.49	2.28	2.22	2.23	2.42	2.43	2.56	3.48	3.66	3.85	3.22	2.48
7	3.49	2.30	2.19	2.23	2.40	2.42	2.57	3.41	3.68	3.82	3.21	2.47
8	3.47	2.27	2.18	2.23	2.40	2.41	2.58	3.37	3.72	3.81	3.20	2.45
9	3.43	2.24	2.18	2.23	2.40	2.48	2.60	3.34	3.77	3.78	3.18	2.44
10	3.38	2.23	2.18	2.22	2.37	2.39	2.61	3.34	3.81	3.73	3.17	2.43
11	3.33	2.26	2.17	2.22	2.36	2.39	2.61	3.34	3.83	3.69	3.16	2.42
12	3.34	2.26	2.16	2.21	2.36	2.39	2.61	3.33	3.83	3.65	3.15	2.40
13	3.28	2.24	2.16	2.21	2.47	2.41	2.62	3.37	3.85	3.64	3.13	2.39
14	3.25	2.23	2.15	2.20	2.65	2.40	2.64	3.45	3.85	3.64	3.10	2.38
15	3.22	2.20	2.13	2.20	2.67	2.40	2.69	3.48	3.85	3.63	3.08	2.37
16	3.19	2.19	2.13	2.20	2.68	2.39	2.74	3.47	3.86	3.61	3.06	2.36
17	3.15	2.19	2.13	2.19	2.70	2.39	2.78	3.42	3.87	3.60	3.04	2.35
18	3.10	2.17	2.13	2.19	2.69	2.38	2.86	3.58	3.88	3.58	3.03	2.34
19	3.07	2.17	2.14	2.18	2.71	2.44	2.87	3.68	3.90	3.57	2.99	2.30
20	3.02	2.16	2.13	2.17	2.70	2.44	2.87	3.58	3.91	3.55	2.96	2.26
21	2.98	2.12	2.15	2.17	2.68	2.48	2.86	3.53	3.92	3.54	2.93	2.24
22	2.93	2.12	2.16	2.17	2.66	2.47	2.92	3.51	3.93	3.52	2.91	2.22
23	2.89	2.10	2.16	2.20	2.62	2.46	3.05	3.51	3.93	3.50	2.86	2.18
24	2.83	2.09	2.16	2.22	2.67	2.44	3.28	3.53	3.93	3.49	2.81	2.20
25	2.78	2.09	2.17	2.21	2.64	2.60	3.43	3.65	3.94	3.48	2.76	2.20
26	2.74	2.08	2.17	2.22	2.61	2.63	3.48	3.72	3.95	3.46	2.75	2.17
27	2.67	2.07	2.17	2.44	2.58	2.61	3.44	3.73	3.95	3.44	2.74	2.14
28	2.64	2.05	2.17	2.55	2.55	2.60	3.42	3.75	3.95	3.42	2.72	2.11
29	2.61	2.01	2.18	2.57	---	2.61	3.47	3.75	3.95	3.39	2.68	2.10
30	2.54	2.02	2.18	2.57	---	2.60	3.59	3.77	3.94	3.36	2.65	2.08
31	2.47	---	2.19	2.55	---	2.58	---	3.76	---	3.35	2.63	---
MEAN	3.12	2.20	2.16	2.26	2.55	2.47	2.87	3.55	3.83	3.63	3.02	2.34
MAX	3.52	2.42	2.23	2.57	2.71	2.63	3.59	3.77	3.95	3.92	3.32	2.60
MIN	2.47	2.01	2.00	2.17	2.36	2.38	2.56	3.33	3.63	3.35	2.63	2.08

CAL YR 1980 MAX 5.85 MIN 2.00
WTR YR 1981 MAX 3.95 MIN 2.00

10336626 TAYLOR CREEK NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°55'18", long 120°03'37", in NE4NW4 sec.2, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, on left bank 0.1 mi (0.2 km) downstream from Fallen Leaf Lake outlet, and 1.4 mi (2.3 km) southwest of Camp Richardson.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1973, published as "near Tahoe Valley."

GAGE.--Water-stage recorder. Datum of gage is 6,361.08 ft (1,938.857 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Fallen Leaf Lake Dam (station 10336625).

AVERAGE DISCHARGE (unadjusted).--13 years, 42.6 ft³/s (1.206 m³/s), 30,860 acre-ft/yr (38.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft³/s (43.3 m³/s) Jan. 14, 1980, gage height, 6.33 ft (1.929 m); minimum daily, 0.20 ft³/s (0.006 m³/s) Oct. 4-7, 1970, Sept. 4-6, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 153 ft³/s (4.33 m³/s) May 2, gage height, 4.12 ft (1.256 m); minimum daily, 0.97 ft³/s (0.027 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	24	5.0	7.3	22	25	30	131	92	3.5	3.2	3.7
2	2.9	22	6.3	6.5	21	24	30	146	89	4.6	3.0	3.7
3	2.9	15	6.0	6.9	19	23	28	144	87	4.9	3.2	3.7
4	2.5	13	8.6	7.6	18	21	26	131	84	5.0	3.1	3.7
5	2.2	11	9.0	7.3	17	20	26	119	61	5.2	3.1	3.7
6	2.2	10	8.4	7.3	15	19	26	105	33	5.0	3.1	3.7
7	2.2	9.1	7.6	7.3	14	18	26	91	34	5.2	3.0	3.7
8	13	9.5	7.0	7.1	14	17	28	84	26	4.4	2.8	3.5
9	20	9.1	6.8	7.0	14	17	29	81	13	4.7	2.7	2.2
10	19	8.0	6.6	7.0	13	16	31	85	13	4.8	2.6	2.1
11	19	7.3	6.4	6.8	13	16	31	89	13	4.7	2.5	2.1
12	19	7.0	6.4	6.7	12	16	31	86	10	4.7	2.0	2.0
13	19	6.8	6.1	6.6	17	17	31	64	8.7	4.5	2.4	2.0
14	19	6.7	6.1	6.4	34	17	36	56	9.1	4.3	4.2	1.5
15	21	6.6	5.9	6.4	35	18	36	59	7.5	4.2	4.2	.97
16	24	6.1	5.8	6.5	35	17	42	60	4.2	3.8	4.2	.99
17	24	8.6	5.5	6.6	36	16	47	58	4.9	3.7	3.9	1.3
18	24	8.8	5.5	6.4	37	17	54	63	5.5	3.7	3.9	2.0
19	24	8.2	5.5	6.4	39	18	63	71	6.0	4.7	3.9	2.3
20	24	7.7	5.3	6.2	39	20	60	71	5.5	4.5	3.9	2.3
21	26	7.7	5.4	6.0	37	23	53	68	4.4	4.1	3.7	2.3
22	26	6.8	6.0	5.9	35	22	50	67	4.6	4.1	3.7	2.3
23	26	6.3	6.1	6.5	35	22	54	66	4.0	4.2	3.7	2.4
24	26	5.3	6.7	7.1	36	21	70	68	4.3	4.3	3.7	2.5
25	26	5.0	6.7	6.7	35	26	90	74	3.5	4.2	3.5	2.6
26	26	4.2	6.7	7.0	32	34	102	84	3.2	4.1	3.5	2.4
27	25	2.9	7.2	13	29	33	99	88	4.2	3.9	3.6	2.4
28	25	3.0	7.1	22	27	31	95	90	3.8	3.7	3.7	2.2
29	29	5.2	7.3	26	---	32	98	92	3.9	3.7	3.7	2.1
30	32	4.7	7.5	26	---	32	108	93	3.3	3.7	3.7	2.0
31	28	---	7.7	24	---	31	---	94	---	3.5	3.7	---
TOTAL	581.8	255.6	204.2	286.5	730	679	1530	2680	645.6	133.6	105.1	74.36
MEAN	18.8	8.52	6.59	9.24	26.1	21.9	51.0	86.5	21.5	4.31	3.39	2.48
MAX	32	24	9.0	26	39	34	108	148	92	5.2	4.2	3.7
MIN	2.2	2.9	5.0	5.9	12	16	26	56	3.2	3.5	2.0	.97
AC-FT	1150	507	405	568	1450	1350	3030	5320	1280	265	208	147
CAL YR 1980 TOTAL	23772.30			MEAN 65.0	MAX 1220	MIN 1.6	AC-FT 47150					
WTR YR 1981 TOTAL	7905.76			MEAN 21.7	MAX 148	MIN .97	AC-FT 15680					

10336645 GENERAL CREEK NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'07", long 120°07'03", in NE¼NE¼ sec.20, T.14 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, on right bank 200 ft (60 m) upstream from State Highway 89, 1.1 mi (1.8 km) north of Meeks Bay, and 0.4 mi (0.6 km) upstream from Lake Tahoe.

DRAINAGE AREA.--7.44 mi² (19.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,250.38 ft (1,905.116 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter months, which are poor. No known diversion or regulation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134 ft³/s (3.79 m³/s) Apr. 30, 1981, gage height, 2.11 ft (0.643 m); minimum daily, 0.53 ft³/s (0.015 m³/s) Sept. 10, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 134 ft³/s (3.79 m³/s) Apr. 30 (2230 hrs), gage height, 2.11 ft (0.643 m), no other peak above base of 100 ft³/s (2.83 m³/s); minimum daily, 0.53 ft³/s (0.015 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.1	1.1	1.7	2.2	4.6	8.2	89	13	.91	.64	.58
2	1.1	1.1	1.3	1.7	2.2	4.7	8.2	65	11	.90	.65	.59
3	1.0	1.1	2.2	1.7	2.3	4.7	7.4	44	9.9	.88	.66	.62
4	1.0	1.1	3.5	2.1	2.3	4.7	7.4	37	8.5	.89	.67	.56
5	1.0	1.1	1.9	1.9	2.3	4.6	8.7	33	7.4	.88	.66	.55
6	1.1	1.0	1.7	1.8	2.3	4.4	12	30	6.5	.86	.57	.54
7	1.1	1.0	1.6	1.8	2.3	4.4	14	28	5.8	.83	.57	.54
8	1.1	1.2	1.6	1.8	2.3	4.4	15	29	5.3	.82	.57	.56
9	.99	1.0	1.5	1.7	2.3	4.5	17	33	4.9	.80	.56	.57
10	1.0	1.0	1.5	1.7	2.3	5.0	20	36	4.4	.78	.61	.53
11	1.0	1.5	1.5	1.7	2.4	5.5	19	35	4.0	.82	.66	.54
12	1.4	1.3	1.5	1.6	2.4	5.6	19	33	3.8	.79	.67	.56
13	1.2	1.2	1.4	1.5	3.6	5.8	19	33	3.4	.76	.67	.60
14	1.3	1.1	1.4	1.5	11	5.5	22	35	3.2	.70	.68	.66
15	1.3	1.1	1.4	1.5	9.6	5.3	29	29	3.0	.68	.68	.66
16	1.3	1.1	1.5	1.6	7.5	5.3	33	24	2.8	.68	.66	.63
17	1.4	1.1	1.5	1.6	11	5.1	34	20	2.6	.68	.70	.68
18	1.3	1.0	1.6	1.6	8.8	5.1	35	44	2.5	.68	.68	.71
19	1.3	1.0	1.6	1.6	8.5	5.4	30	45	2.2	.67	.68	.69
20	1.2	1.0	1.6	1.6	10	5.3	24	30	2.0	.66	.63	.73
21	1.1	1.0	1.9	1.6	7.5	5.4	28	25	1.8	.63	.63	.77
22	1.1	1.0	2.2	1.8	6.9	5.8	48	23	1.7	.61	.61	.73
23	1.1	1.1	2.0	2.2	7.9	5.7	61	23	1.6	.62	.59	.74
24	1.1	1.1	1.8	2.1	7.3	5.7	81	25	1.4	.61	.59	.86
25	1.4	1.0	1.7	2.0	7.3	13	61	30	1.4	.61	.59	1.1
26	1.6	1.0	1.6	1.9	6.3	15	42	32	1.3	.62	.59	.81
27	1.3	1.0	1.7	3.0	5.4	18	30	26	1.2	.62	.59	.77
28	1.3	1.0	1.7	2.3	4.9	8.7	38	21	1.1	.64	.59	.77
29	1.3	1.0	1.7	2.0	---	9.6	66	19	1.1	.65	.59	.77
30	1.3	1.1	1.7	2.0	---	9.1	86	17	1.0	.66	.59	.77
31	1.3	---	1.7	2.1	---	8.2	---	15	---	.64	.56	---
TOTAL	37.09	32.4	52.6	56.7	151.1	196.3	922.9	1088	119.8	22.58	19.39	20.19
MEAN	1.20	1.08	1.70	1.83	5.40	6.33	30.8	32.5	3.99	.73	.63	.67
MAX	1.6	1.5	3.5	3.0	11	15	86	89	13	.91	.70	1.1
MIN	.99	1.0	1.1	1.5	2.2	4.4	7.4	15	1.0	.61	.56	.53
AC-FT	74	64	104	112	300	389	1830	2000	238	45	38	40

WTR YR 1981 TOTAL 2639.05 MEAN 7.23 MAX 89 MIN .53 AC-FT 5230

PYRAMID AND WINNEMUCCA LAKES BASIN

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1981.

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

WATER TEMPERATURES: October 1980 to September 1981.

SEDIMENT RECORDS: October 1980 to September 1981.

PERIOD OF DAILY RECORD.--

SEDIMENT RECORDS: October 1980 to September 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 65 micromhos Sept. 25; minimum recorded, 10 micromhos on several days during May.

WATER TEMPERATURES: Maximum recorded, 24.0°C July 2; minimum recorded, 0°C many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 19 mg/L Apr. 30; minimum daily mean, 0 mg/L on many days.

SEDIMENT DISCHARGE: Maximum daily, 4.8 tons (4.4 metric tons) Apr. 30; minimum daily, 0 ton (0 metric ton) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	56	55	53	46	33	30	11	17	35	42	---
2	---	56	55	52	46	34	30	12	17	35	42	---
3	---	56	53	53	47	34	31	13	18	36	42	---
4	---	56	51	51	47	34	31	14	19	37	42	---
5	---	56	54	51	46	34	31	13	20	38	42	---
6	---	56	56	52	46	35	28	13	20	38	42	---
7	---	56	57	53	46	35	26	14	22	38	43	---
8	---	57	58	52	46	35	25	14	22	39	43	---
9	---	57	58	52	46	35	24	13	23	39	43	---
10	---	57	58	53	46	34	23	12	23	38	43	---
11	---	56	58	53	46	33	22	12	23	39	43	---
12	---	56	58	53	48	33	22	11	24	39	44	---
13	---	56	58	53	46	32	21	11	24	39	44	---
14	---	56	58	53	38	33	20	11	24	39	44	---
15	---	56	57	53	33	33	18	12	25	39	44	---
16	---	56	57	52	33	33	17	13	26	40	44	---
17	---	56	56	52	31	33	17	14	27	40	46	---
18	---	56	56	52	33	33	16	13	27	40	47	---
19	---	56	56	52	32	33	17	12	29	40	47	---
20	---	58	55	52	30	33	19	13	31	40	46	---
21	---	56	54	52	31	33	18	14	32	41	46	---
22	56	55	54	52	32	33	15	14	32	41	47	---
23	56	55	55	50	31	33	14	14	33	41	47	---
24	56	55	55	49	30	33	14	13	34	41	47	---
25	56	56	54	50	31	31	14	13	35	42	47	64
26	55	56	53	50	29	28	15	13	35	42	47	63
27	56	56	53	44	31	30	16	13	35	42	47	63
28	56	56	53	44	33	31	15	14	34	42	48	63
29	56	56	53	44	---	30	13	15	35	42	---	63
30	56	55	53	45	---	29	12	15	35	42	---	62
31	56	---	52	46	---	30	---	16	---	42	---	---
MONTH	---	56	55	51	39	33	20	13	27	40	45	---

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	5.0	2.5	2.5	0.5	2.0	1.0	0.5	0.0	1.5	0.5
2	---	---	5.0	2.5	2.5	2.0	2.0	1.0	0.5	0.0	2.5	1.0
3	---	---	5.0	2.5	2.5	1.0	3.0	1.5	0.5	0.0	2.5	0.5
4	---	---	5.0	2.5	1.5	1.0	2.5	1.0	0.5	0.0	2.5	1.0
5	---	---	5.0	2.5	1.0	0.0	1.5	0.5	0.5	0.0	2.0	1.0
6	---	---	5.5	2.5	0.5	0.0	1.0	0.0	0.5	0.0	3.0	1.5
7	---	---	6.0	3.0	0.5	0.0	1.0	0.0	0.5	0.0	3.5	1.5
8	---	---	6.5	4.5	0.5	0.0	1.5	0.0	0.5	0.5	3.5	1.0
9	---	---	5.5	3.5	0.5	0.0	1.0	0.0	0.5	0.5	3.5	1.0
10	---	---	5.5	3.5	0.5	0.0	1.0	0.0	1.0	0.5	3.5	1.5
11	---	---	5.0	3.5	0.5	0.0	1.0	0.0	1.5	0.5	3.5	1.0
12	---	---	4.5	2.5	0.5	0.0	1.5	0.0	1.5	0.5	3.5	1.0
13	---	---	3.5	1.5	0.5	0.0	1.5	0.5	1.0	0.5	2.0	1.5
14	---	---	3.0	1.0	0.5	0.0	1.5	0.0	1.0	0.5	3.0	0.5
15	---	---	2.5	1.0	0.5	0.0	2.0	0.5	1.5	0.5	3.0	1.0
16	---	---	3.0	1.0	0.5	0.5	2.0	1.0	2.0	0.5	3.5	1.0
17	---	---	3.0	1.5	0.5	0.0	2.0	1.0	1.5	0.5	3.0	0.5
18	---	---	2.5	1.0	1.0	0.5	2.5	1.0	2.0	0.5	2.0	1.0
19	---	---	2.5	0.5	1.0	0.5	2.5	1.5	2.5	1.0	2.5	0.5
20	---	---	2.0	0.5	1.5	0.5	2.0	1.0	1.5	0.5	2.0	0.5
21	---	---	2.5	0.5	1.5	0.5	3.5	1.5	1.5	0.0	3.0	0.5
22	6.5	3.5	3.5	1.5	2.0	0.5	4.0	2.0	1.5	0.0	4.0	1.5
23	6.0	3.0	3.0	1.5	1.0	0.0	2.5	1.0	2.0	0.5	4.0	1.0
24	6.5	3.5	2.0	0.5	1.5	0.0	1.5	0.0	1.0	0.0	4.5	1.0
25	5.0	3.5	2.0	0.0	2.5	1.5	0.5	0.0	1.0	0.0	2.5	0.0
26	5.5	3.0	2.0	0.5	2.5	1.0	1.0	0.0	1.0	0.0	1.0	0.0
27	5.0	3.0	1.5	0.0	2.0	1.0	0.5	0.0	1.0	0.0	2.0	0.5
28	5.0	2.5	2.0	0.5	2.0	1.0	0.0	0.0	1.5	0.0	4.0	1.0
29	4.5	2.0	2.5	0.5	1.5	0.5	0.5	0.0	---	---	3.0	1.0
30	4.5	2.0	2.0	1.0	1.5	0.0	0.5	0.0	---	---	3.0	0.0
31	5.5	2.0	---	---	2.0	0.5	0.0	0.0	---	---	3.5	0.5
MONTH	---	---	6.5	0.0	2.5	0.0	4.0	0.0	2.5	0.0	4.5	0.0

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.0	0.5	7.5	2.0	13.5	9.0	23.5	11.0	18.0	10.0	---	---
2	3.5	0.5	6.5	2.5	14.0	10.0	24.0	12.0	17.5	10.0	---	---
3	4.0	1.0	6.5	2.0	14.5	9.0	22.5	12.5	17.5	9.5	---	---
4	5.0	1.5	6.5	2.5	15.5	10.0	20.0	13.0	18.0	10.0	---	---
5	5.5	1.5	6.5	3.0	16.5	11.0	21.5	14.0	18.5	10.0	---	---
6	5.0	2.0	6.5	2.5	16.0	11.0	20.0	13.5	19.5	11.0	---	---
7	4.5	1.5	7.0	3.0	15.5	10.5	20.5	12.0	20.0	12.0	---	---
8	5.0	1.5	7.5	3.5	14.5	11.0	20.0	11.5	20.0	12.0	---	---
9	5.0	1.5	8.0	4.0	15.5	10.5	20.0	11.0	20.0	12.5	---	---
10	4.5	1.5	8.5	4.0	14.5	9.5	19.5	12.0	18.0	13.5	---	---
11	4.5	1.0	8.5	4.0	14.0	9.5	19.0	11.0	19.5	12.5	---	---
12	4.5	1.0	9.0	4.5	13.5	9.0	19.0	11.0	19.5	12.5	---	---
13	5.0	1.5	9.5	5.5	12.5	7.0	19.0	9.5	20.0	13.5	---	---
14	5.5	1.5	9.5	6.5	12.5	7.0	20.0	10.0	19.5	13.0	---	---
15	5.5	1.5	7.0	4.5	13.5	7.5	20.5	11.0	19.0	12.0	---	---
16	4.5	1.0	7.5	3.5	15.0	9.0	20.5	11.5	18.0	12.0	---	---
17	4.5	1.0	8.5	4.0	15.5	9.5	20.0	10.5	16.0	12.5	---	---
18	3.5	1.5	6.5	3.5	16.5	10.5	20.0	10.0	17.5	11.5	---	---
19	3.5	1.0	6.5	3.0	19.0	11.0	20.0	10.0	17.0	12.0	---	---
20	4.5	1.5	6.0	3.0	20.0	11.5	20.0	11.0	17.0	10.5	---	---
21	5.5	2.0	7.5	4.0	21.0	11.5	20.0	10.5	17.0	10.0	---	---
22	5.5	1.5	8.5	5.0	21.0	12.0	19.5	10.5	17.5	10.5	---	---
23	6.0	1.0	8.5	5.5	21.0	11.5	20.0	11.0	17.0	10.5	---	---
24	5.5	1.5	9.5	7.0	21.5	11.0	20.0	11.0	17.0	10.5	---	---
25	3.5	1.5	8.5	7.0	22.5	13.5	20.0	11.0	17.0	10.5	11.5	8.0
26	3.5	1.5	8.5	6.5	22.5	12.5	20.0	11.5	17.5	11.5	11.5	7.5
27	6.0	1.0	11.0	6.5	23.0	12.0	20.5	12.0	18.0	11.0	11.5	8.0
28	7.0	2.0	12.0	7.5	23.0	12.5	20.5	11.5	18.0	12.0	11.0	9.0
29	7.0	2.0	13.0	8.5	22.5	12.0	20.0	11.0	17.5	11.0	11.0	8.0
30	7.0	2.0	13.5	9.0	20.0	12.5	18.5	10.5	---	---	10.5	7.5
31	---	---	13.5	8.5	---	---	18.5	10.5	---	---	---	---
MONTH	7.0	0.5	13.5	2.0	23.0	7.0	24.0	9.5	20.0	9.5	---	---

PYRAMID AND WINNEMUCCA LAKES BASIN

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.1	2		1.1	1		1.1	1	0
2	1.1	2		1.1	1		1.3	1	0
3	1.0	2		1.1	1		2.2	3	.02
4	1.0	2		1.1	1		3.5	2	.02
5	1.0	2		1.1	1		1.9	1	0
6	1.1	2		1.0	1		1.7	1	0
7	1.1	2		1.0	1		1.6	1	0
8	1.1	2		1.2	1		1.6	1	0
9	.99	2		1.0	1		1.5	1	0
10	1.0	2		1.0	1		1.5	1	0
11	1.0	2		1.5	1		1.5	1	0
12	1.4	2		1.3	1		1.5	1	0
13	1.2	2		1.2	1		1.4	1	0
14	1.3	2		1.1	1		1.4	1	0
15	1.3	2		1.1	1		1.4	1	0
16	1.3	1		1.1	1		1.5	1	0
17	1.4	1		1.1	1		1.5	1	0
18	1.3	1		1.0	1		1.6	1	0
19	1.3	1		1.0	1		1.6	1	0
20	1.2	1		1.0	1		1.6	1	0
21	1.1	1		1.0	1		1.9	1	0
22	1.1	1		1.0	1		2.2	1	0
23	1.1	1		1.1	1		2.0	1	0
24	1.1	1		1.1	1		1.8	1	0
25	1.4	2		1.0	1		1.7	1	0
26	1.6	1		1.0	1		1.6	1	0
27	1.3	1		1.0	1		1.7	1	0
28	1.3	1		1.0	1		1.7	1	0
29	1.3	1		1.0	1		1.7	1	0
30	1.3	1		1.1	1		1.7	1	0
31	1.3	1		---	---		1.7	1	0
TOTAL	37.09	---	0	32.4	---	0	52.6	---	.04

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.7	1	0	2.2	0	0	4.8	1	.01
2	1.7	1	0	2.2	0	0	4.7	1	.01
3	1.7	1	0	2.3	0	0	4.7	1	.01
4	2.1	1	0	2.3	0	0	4.7	1	.01
5	1.9	1	0	2.3	0	0	4.6	1	.01
6	1.8	1	0	2.3	0	0	4.4	1	.01
7	1.8	1	0	2.3	0	0	4.4	1	.01
8	1.8	1	0	2.3	0	0	4.4	1	.01
9	1.7	1	0	2.3	0	0	4.5	1	.01
10	1.7	1	0	2.3	0	0	5.0	1	.01
11	1.7	1	0	2.4	0	0	5.5	1	.01
12	1.6	1	0	2.4	0	0	5.6	1	.02
13	1.5	1	0	3.6	1	0	5.8	0	0
14	1.5	0	0	11	1	.03	5.5	0	0
15	1.5	0	0	9.6	1	.03	5.3	0	0
16	1.6	0	0	7.5	1	.02	5.3	0	0
17	1.6	0	0	11	1	.03	5.1	0	0
18	1.6	0	0	8.8	0	0	5.1	0	0
19	1.6	0	0	8.5	0	0	5.4	0	0
20	1.6	0	0	16	0	0	5.3	0	0
21	1.6	0	0	7.5	0	0	5.4	1	.01
22	1.8	0	0	6.9	0	0	5.8	1	.02
23	2.2	0	0	7.9	1	.02	5.7	1	.02
24	2.1	0	0	7.3	1	.02	5.7	1	.02
25	2.0	0	0	7.3	1	.02	13	4	.14
26	1.9	0	0	6.3	1	.02	15	1	.04
27	3.0	4	.03	5.4	1	.01	10	0	0
28	2.3	1	0	4.9	1	.01	8.7	0	0
29	2.0	1	0	---	---	---	9.6	0	0
30	2.0	1	0	---	---	---	9.1	0	0
31	2.1	1	0	---	---	---	8.2	0	0
TOTAL	56.7	---	.03	151.1	---	.21	196.3	---	.38

10336645 GENERAL CREEK NEAR WEEKS BAY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8.2	0	0	89	14	3.7	13	1	.04
2	8.2	0	0	65	7	1.3	11	1	.03
3	7.4	0	0	44	3	.36	9.9	1	.03
4	7.4	0	0	37	2	.20	8.5	1	.02
5	8.7	0	0	33	1	.09	7.4	1	.02
6	12	0	0	30	1	.08	6.5	1	.02
7	14	1	.04	28	1	.08	5.8	1	.02
8	15	1	.04	29	1	.08	5.3	1	.01
9	17	2	.09	33	1	.09	4.9	1	.01
10	20	2	.11	36	1	.10	4.4	1	.01
11	19	2	.10	35	1	.09	4.0	1	.01
12	19	1	.05	33	1	.09	3.8	1	.01
13	19	2	.10	33	1	.09	3.4	1	0
14	22	3	.18	35	1	.09	3.2	1	0
15	29	5	.39	29	1	.08	3.0	1	0
16	33	5	.45	24	1	.06	2.8	1	0
17	34	3	.28	20	1	.05	2.6	1	0
18	35	2	.19	44	8	1.5	2.5	1	0
19	30	1	.08	45	2	.24	2.2	1	0
20	24	1	.06	30	1	.08	2.0	1	0
21	28	3	.31	25	1	.07	1.8	1	0
22	48	11	1.5	23	1	.06	1.7	1	0
23	61	14	2.6	23	1	.06	1.6	1	0
24	81	14	3.5	25	2	.14	1.4	1	0
25	61	7	1.4	30	3	.24	1.4	1	0
26	42	5	.57	32	2	.17	1.3	1	0
27	30	5	.41	26	2	.14	1.2	1	0
28	38	6	.73	21	2	.11	1.1	1	0
29	66	10	2.3	19	2	.10	1.1	1	0
30	86	19	4.8	17	2	.09	1.0	1	0
31	---	---	---	15	1	.04	---	---	---
TOTAL	922.9	---	20.28	1008	---	9.67	119.8	---	.23

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.91	1	.64	1		.58	0		0
2	.90	1	.65	1		.59	0		0
3	.88	1	.66	1		.62	0		0
4	.89	1	.67	0		.56	0		0
5	.88	1	.66	0		.55	0		0
6	.86	1	.57	0		.54	0		0
7	.83	1	.57	0		.54	0		0
8	.82	1	.57	0		.56	0		0
9	.80	1	.56	0		.57	0		0
10	.78	1	.61	0		.53	0		0
11	.82	1	.66	0		.54	0		0
12	.79	1	.67	0		.56	0		0
13	.76	1	.67	0		.60	0		0
14	.70	1	.68	0		.66	0		0
15	.68	1	.68	0		.66	0		0
16	.68	1	.66	0		.63	0		0
17	.68	1	.70	0		.68	0		0
18	.68	1	.68	0		.71	0		0
19	.67	1	.68	0		.69	0		0
20	.66	1	.63	0		.73	0		0
21	.63	1	.63	0		.77	0		0
22	.61	1	.61	0		.73	0		0
23	.62	1	.59	0		.74	0		0
24	.61	1	.59	0		.86	1		0
25	.61	1	.59	0		1.1	3		0
26	.62	1	.54	0		.81	1		0
27	.62	1	.59	0		.77	1		0
28	.64	1	.59	0		.77	0		0
29	.65	1	.59	0		.77	0		0
30	.66	1	.59	0		.77	0		0
31	.64	1	.56	0		---	---		0
TOTAL	22.58	---	0	19.34	---	0	20.19	---	0
YEAR	2639.05								

31
30.84

PYRAMID AND WINNEMUCCA LAKES BASIN

10336645 GENERAL CRÉEK NEAR MEEKS BAY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TENPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR 30...	1945	120	6.0	33	11	26
MAY 18...	2110	78	--	14	2.9	10

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA

LOCATION.--Lat 39°06'27", long 120°09'40", in NW¼NE¼ sec.36, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, on right bank 300 ft (91 m) upstream from bridge on State Highway 89, 1,000 ft (305 m) upstream from Lake Tahoe, and 4.6 mi (7.4 km) south of Tahoe City.

DRAINAGE AREA.--11.2 mi² (29.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,240 ft (1,902 m), from topographic map. Oct. 1, 1960, to Sept. 30, 1964, at site 400 ft (122 m) downstream at datum 10.25 ft (3.124 m) lower, and Oct. 1, 1964, to Aug. 27, 1970, at datum 12 ft (3.7 m) lower.

REMARKS.--Records good except those for the winter months, which are fair. No known diversion or regulation.

AVERAGE DISCHARGE.--21 years, 35.3 ft³/s (1,000 m³/s), 25,570 acre-ft/yr (31.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Dec. 22 or 24, 1964, from indirect measurement of peak flow; maximum gage height, 9.90 ft (3.018 m) Dec. 22, 1964; minimum discharge, 0.30 ft³/s (0.008 m³/s) Sept. 19, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 208 ft³/s (5.89 m³/s) May 1 (1845 hrs), gage height, 2.46 ft (0.750 m), no other peak above base of 200 ft³/s (5.66 m³/s); minimum daily, 1.2 ft³/s (0.034 m³/s) on many days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.7	3.1	5.1	5.4	14	19	156	62	6.6	1.9	1.2
2	2.7	2.6	3.4	4.9	5.6	13	18	126	60	6.3	1.8	1.3
3	2.7	2.6	5.1	5.2	5.8	13	17	95	54	6.0	1.8	1.3
4	2.8	2.6	8.1	5.7	5.8	13	18	79	52	5.6	1.7	1.3
5	2.8	2.7	5.1	5.2	5.8	13	21	70	52	5.2	1.9	1.3
6	2.6	2.7	4.7	5.0	5.8	12	28	62	48	5.0	1.7	1.3
7	2.6	3.2	4.3	4.9	5.7	12	32	58	43	4.9	1.7	1.3
8	2.6	4.6	4.0	4.8	5.8	12	32	57	41	4.7	1.6	1.3
9	2.6	3.4	3.9	4.7	5.9	13	38	62	37	4.6	1.5	1.2
10	2.6	3.3	3.9	4.6	5.6	14	42	70	32	4.4	1.6	1.2
11	2.6	3.9	3.8	4.5	5.9	15	39	72	28	4.3	1.6	1.2
12	3.2	3.6	3.8	4.3	5.9	15	37	71	27	4.3	1.6	1.2
13	2.7	3.4	3.8	4.3	8.2	15	41	77	23	4.0	1.6	1.2
14	3.0	3.3	3.8	4.3	32	15	48	80	21	3.8	1.5	1.2
15	2.7	3.3	3.7	4.3	24	15	59	67	20	3.7	1.5	1.2
16	2.7	3.2	3.6	4.6	20	15	62	55	18	3.5	1.6	1.2
17	2.7	3.3	3.7	4.5	32	14	62	50	18	3.4	1.6	1.2
18	2.6	3.2	3.9	4.4	24	15	61	100	16	3.1	1.6	1.2
19	2.6	3.1	3.9	4.4	25	16	55	84	15	3.0	1.4	1.3
20	2.6	3.1	3.9	4.3	26	15	46	62	14	3.0	1.4	1.2
21	2.7	3.1	4.3	4.4	21	15	53	56	13	2.8	1.4	1.2
22	2.7	3.0	7.0	4.5	19	15	76	54	12	2.8	1.4	1.2
23	2.6	3.2	5.7	5.1	19	15	100	57	11	2.5	1.4	1.2
24	2.6	3.1	5.3	4.8	18	15	151	68	10	2.4	1.4	1.2
25	2.9	3.0	5.3	4.7	17	22	112	86	9.6	2.4	1.3	1.7
26	3.1	3.0	5.4	4.7	16	24	88	88	9.1	2.4	1.4	1.3
27	2.8	3.0	5.6	7.5	15	20	68	81	8.3	2.4	1.4	1.3
28	2.8	3.0	5.8	5.4	14	19	77	76	7.8	2.1	1.3	1.3
29	2.8	3.0	5.6	5.0	---	21	104	75	7.4	2.1	1.3	1.3
30	2.8	3.0	5.5	5.0	---	19	141	74	7.0	2.1	1.2	1.3
31	2.8	---	5.2	5.3	---	18	---	66	---	2.0	1.3	---
TOTAL	84.7	94.2	144.2	150.4	399.2	482	1745	2334	776.2	115.4	47.4	37.8
MEAN	2.73	3.14	4.65	4.85	14.3	15.5	58.2	75.3	25.9	3.72	1.53	1.26
MAX	3.2	4.6	8.1	7.5	32	24	151	156	62	6.6	1.9	1.7
MIN	2.6	2.6	3.1	4.3	5.4	12	17	50	7.0	2.0	1.2	1.2
AC-FT	168	187	286	298	792	956	3460	4630	1540	229	94	75
CAL YR 1980 TOTAL	17784.0			MEAN 48.6	MAX 800	MIN 2.6	AC-FT 35270					
WTR YR 1981 TOTAL	6410.5			MEAN 17.6	MAX 156	MIN 1.2	AC-FT 12720					

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-78, October 1979 to current year.

SPECIFIC CONDUCTANCE: December 1980 to September 1981.

WATER TEMPERATURES: Water years 1975-78, October 1979 to current year.

SEDIMENT RECORDS: Water years 1975-78, October 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1980 to September 1981.

WATER TEMPERATURES: October 1974 to June 1978 (1977-78 storm season only), October 1979 to current year.

SEDIMENT RECORDS: October 1974 to June 1978 (1977-78 storm season only), October 1979 to current year.

COOPERATION.--Selected sediment samples and water temperature readings furnished by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 121 micromhos Sept. 7, 1981; minimum recorded, 34 micromhos May 30 to June 1, 1981.

WATER TEMPERATURES: Maximum recorded, 22.5°C July 27, 28, 1981; minimum recorded, 0°C on several days during January and February 1981.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,200 mg/L Jan. 13, 1980; minimum daily mean, 0 mg/L on many days each year.

SEDIMENT DISCHARGE: Maximum daily, 2,590 tons (2,350 metric tons) Jan. 13, 1980; minimum daily, 0 ton (0 metric ton) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 121 micromhos Sept. 7; minimum recorded, 34 micromhos May 30 to June 1.

WATER TEMPERATURES: Maximum recorded, 22.5°C July 27, 28; minimum recorded, 0°C on several days during January and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 103 mg/L Apr. 24; minimum daily mean, 0 mg/L on many days.

SEDIMENT DISCHARGE: Maximum daily, 48 tons (43 metric tons) Apr. 24; minimum daily, 0 ton (0 metric ton) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	58	56	59	58	37	36	57	---	82
2			---	58	57	59	58	38	36	57	---	82
3			---	58	58	59	57	38	37	58	---	82
4			---	58	57	60	56	39	37	59	---	85
5			---	58	60	60	55	39	37	59	---	79
6			62	58	59	59	50	40	37	60	---	82
7			62	58	59	60	49	40	38	60	---	84
8			62	59	59	60	49	40	39	60	---	82
9			62	59	58	61	49	40	40	60	---	83
10			62	60	58	62	49	39	41	60	---	83
11			62	61	59	61	49	39	41	61	---	83
12			64	61	59	61	49	39	41	61	---	83
13			63	61	60	61	49	39	41	61	---	84
14			64	61	53	61	48	39	42	60	---	84
15			64	61	52	61	47	38	43	61	---	84
16			65	61	54	61	47	39	44	62	---	85
17			66	61	53	60	46	40	46	62	---	87
18			66	62	52	60	47	39	47	62	79	84
19			66	62	54	60	46	39	47	62	79	85
20			66	62	54	59	46	42	47	63	79	85
21			65	62	54	58	47	42	49	64	79	85
22			59	63	53	58	45	42	52	64	80	85
23			55	60	53	58	42	40	53	64	80	83
24			56	59	53	57	37	39	55	65	80	81
25			57	61	54	55	37	37	56	65	80	79
26			57	62	56	51	38	37	55	65	80	83
27			57	59	55	56	41	38	57	66	81	83
28			56	57	58	56	41	36	56	67	82	83
29			57	56	---	54	39	36	57	67	82	84
30			57	56	---	56	37	35	58	67	83	85
31			58	56	---	58	---	35	---	67	82	---
MONTH			61	60	56	59	47	39	46	62	---	83

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1					---	---	3.5	2.0	0.0	0.0	4.0	1.5
2					---	---	3.5	2.0	0.0	0.0	5.0	2.5
3					---	---	5.0	1.5	0.0	0.0	5.5	1.0
4					---	---	3.5	2.0	0.0	0.0	6.0	2.0
5					---	---	2.5	1.5	0.5	0.0	4.0	2.5
6					1.0	0.5	2.5	0.5	1.0	0.0	6.5	2.5
7					1.0	0.5	2.5	0.5	1.0	0.0	6.5	2.5
8					1.0	0.5	3.0	1.0	1.5	1.0	6.5	1.5
9					1.0	0.5	2.5	0.5	3.0	1.5	6.5	2.0
10					1.0	0.5	2.5	0.5	2.5	1.0	7.0	2.5
11					1.0	0.5	2.5	0.5	3.5	2.0	6.5	2.0
12					1.5	0.5	4.0	1.0	3.5	1.5	6.0	2.0
13					1.5	0.5	3.0	2.0	2.5	2.0	4.0	2.5
14					1.5	0.5	3.0	1.0	2.5	1.0	6.5	1.5
15					2.5	1.5	3.5	1.5	4.0	1.0	5.5	2.0
16					2.5	1.5	4.5	2.0	4.5	1.0	6.0	1.5
17					2.5	1.0	4.0	2.5	4.5	1.0	6.0	1.0
18					3.5	2.5	5.0	2.5	5.0	1.5	4.0	2.0
19					3.0	2.0	4.5	3.0	4.5	2.0	3.5	0.5
20					3.5	2.0	4.0	2.0	4.0	1.0	4.0	0.5
21					3.5	2.0	5.5	3.5	4.5	1.0	5.0	0.5
22					4.0	2.5	5.5	4.5	5.0	1.0	6.0	2.5
23					2.5	1.0	4.0	1.0	5.0	1.5	7.0	1.5
24					3.5	1.0	2.5	1.0	2.5	0.5	8.0	2.0
25					5.0	3.5	1.5	0.5	1.5	0.5	4.0	0.5
26					4.0	2.5	3.0	1.0	2.5	0.5	4.0	0.5
27					4.0	2.5	1.5	0.0	3.0	0.5	6.5	1.5
28					4.0	2.5	0.0	0.0	4.0	0.5	8.0	2.0
29					3.0	1.5	0.0	0.0	---	---	4.5	1.5
30					3.0	1.0	0.0	0.0	---	---	6.5	0.5
31					3.5	1.0	0.0	0.0	---	---	7.0	1.5
MONTH					5.0	0.5	5.5	0.0	5.0	0.0	8.0	0.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.0	1.0	9.5	3.0	13.5	5.5	20.0	11.0	---	---	20.0	11.5
2	7.0	1.5	8.5	3.0	13.0	6.5	21.0	12.5	---	---	19.5	11.0
3	8.0	1.5	9.0	2.0	13.5	5.5	21.5	12.5	---	---	19.0	10.5
4	8.5	2.0	9.0	2.5	14.5	6.5	20.0	13.5	---	---	18.5	10.0
5	9.0	2.5	9.0	3.0	15.0	7.5	21.5	14.5	---	---	18.5	9.5
6	8.5	2.5	9.0	2.5	15.0	7.5	21.0	13.5	---	---	18.5	10.5
7	8.0	2.0	9.5	2.5	14.5	7.5	20.5	11.5	---	---	18.0	9.5
8	8.0	2.0	9.5	3.0	13.5	8.5	20.5	11.0	---	---	16.0	10.5
9	8.5	2.5	11.0	3.5	15.0	8.5	20.0	11.0	---	---	18.0	11.5
10	8.0	2.0	11.0	3.0	14.0	7.5	20.5	12.0	---	---	18.5	11.0
11	8.0	2.0	10.5	3.5	13.5	7.5	20.5	11.0	---	---	19.0	11.0
12	8.0	1.5	11.0	3.5	13.5	7.5	20.0	12.0	---	---	18.5	11.5
13	8.5	2.0	11.0	3.5	13.0	5.5	19.5	9.5	---	---	18.0	12.0
14	9.0	2.0	9.5	4.5	13.5	6.0	21.0	10.5	---	---	18.5	11.0
15	9.0	2.5	7.0	3.0	15.0	6.5	21.5	11.5	---	---	18.5	11.0
16	8.5	2.5	9.5	2.5	16.5	8.0	22.0	12.0	---	---	18.5	11.5
17	7.5	2.5	10.0	3.0	17.0	8.5	21.5	11.0	---	---	17.0	11.0
18	6.0	3.0	5.5	3.5	17.5	9.5	21.5	11.0	21.0	12.5	17.5	10.5
19	5.5	2.0	7.5	3.5	18.5	10.0	21.5	10.5	21.0	11.0	17.5	11.0
20	7.5	2.5	7.0	3.0	19.0	10.5	22.0	11.5	20.0	11.0	17.0	11.0
21	8.0	3.0	10.0	3.5	19.5	10.5	22.0	11.0	20.0	10.5	15.5	8.5
22	9.0	3.0	9.5	4.0	19.5	11.0	21.5	11.0	20.5	10.0	14.5	8.0
23	8.5	2.5	10.0	4.5	19.0	10.5	21.5	11.0	20.5	10.5	13.5	7.5
24	7.0	3.0	10.0	5.5	19.5	10.5	22.0	11.5	20.0	11.0	13.0	7.0
25	6.5	2.5	7.5	5.5	20.5	13.0	21.5	11.0	20.0	11.0	14.0	8.5
26	5.5	2.0	9.0	4.5	20.5	11.5	22.0	12.0	21.0	12.0	14.5	8.5
27	8.5	2.0	12.0	4.5	20.5	11.5	22.5	12.5	21.0	11.5	15.0	9.0
28	9.5	2.5	12.5	4.5	20.5	12.0	22.5	12.0	21.0	13.0	14.0	10.5
29	9.5	3.0	13.0	5.0	21.0	12.0	22.0	11.0	20.5	11.5	13.5	8.0
30	8.5	3.0	13.0	5.5	19.5	12.5	21.5	10.5	20.5	12.0	13.0	8.0
31	---	---	13.0	5.0	---	---	21.5	10.5	19.5	11.0	---	---
MONTH	9.5	1.0	13.0	2.0	21.0	5.5	22.5	9.5	---	---	20.0	7.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.7	1	0	2.7	1	0	3.1	1	0
2	2.7	1	0	2.6	1	0	3.4	1	0
3	2.7	1	0	2.6	1	0	5.1	4	.06
4	2.8	1	0	2.6	1	0	8.1	5	.11
5	2.8	1	0	2.7	1	0	5.1	1	.01
6	2.6	1	0	2.7	1	0	4.7	1	.01
7	2.6	1	0	3.2	1	0	4.3	0	0
8	2.6	1	0	4.6	2	.02	4.0	2	.02
9	2.6	1	0	3.4	4	.04	3.9	1	.01
10	2.6	1	0	3.3	2	.02	3.9	1	.01
11	2.6	1	0	3.9	2	.02	3.8	1	.01
12	3.2	1	0	3.6	2	.02	3.8	0	0
13	2.7	0	0	3.4	2	.02	3.8	0	0
14	3.0	0	0	3.3	1	0	3.8	0	0
15	2.7	0	0	3.3	1	0	3.7	0	0
16	2.7	1	0	3.2	1	0	3.6	0	0
17	2.7	1	0	3.3	1	0	3.7	0	0
18	2.6	1	0	3.2	1	0	3.9	0	0
19	2.6	2	.01	3.1	1	0	3.9	0	0
20	2.6	2	.01	3.1	1	0	3.9	0	0
21	2.7	2	.01	3.1	1	0	4.3	2	.02
22	2.7	2	.01	3.0	1	0	7.0	4	.08
23	2.6	2	.01	3.2	1	0	5.7	2	.03
24	2.6	2	.01	3.1	1	0	5.3	2	.03
25	2.9	2	.02	3.0	1	0	5.3	2	.03
26	3.1	2	.02	3.0	1	0	5.4	2	.03
27	2.8	1	0	3.0	1	0	5.6	2	.03
28	2.8	1	0	3.0	1	0	5.8	2	.03
29	2.8	1	0	3.0	1	0	5.6	1	.02
30	2.8	1	0	3.0	1	0	5.5	1	.01
31	2.8	1	0	---	---	---	5.2	1	.01
TOTAL	84.7	---	.10	94.2	---	.14	144.2	---	.56

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	5.1	1	.01	5.4	9	.13	14	0	0
2	4.9	1	.01	5.6	8	.12	13	0	0
3	5.2	2	.03	5.8	3	.05	13	0	0
4	5.7	2	.03	5.8	3	.05	13	0	0
5	5.2	2	.03	5.8	3	.05	13	0	0
6	5.0	3	.04	5.8	3	.05	12	0	0
7	4.9	3	.04	5.7	3	.05	12	0	0
8	4.8	3	.04	5.8	3	.05	12	0	0
9	4.7	3	.04	5.9	3	.05	13	0	0
10	4.6	3	.04	5.6	3	.05	14	0	0
11	4.5	3	.04	5.9	3	.05	15	0	0
12	4.3	3	.03	5.9	3	.05	15	0	0
13	4.3	3	.03	8.2	9	.24	15	1	.04
14	4.3	3	.03	32	21	1.9	15	1	.04
15	4.3	3	.03	24	6	.39	15	1	.04
16	4.6	3	.04	20	9	.52	15	1	.04
17	4.5	3	.04	32	11	1.1	14	1	.04
18	4.4	3	.04	24	4	.26	15	1	.04
19	4.4	3	.04	25	4	.27	16	1	.04
20	4.3	3	.03	26	2	.14	15	1	.04
21	4.4	3	.04	21	1	.06	15	1	.04
22	4.5	3	.04	19	1	.05	15	1	.04
23	5.1	3	.04	19	1	.05	15	1	.04
24	4.8	3	.04	18	1	.05	15	1	.04
25	4.7	3	.04	17	1	.05	22	4	.24
26	4.7	3	.04	16	1	.04	24	1	.06
27	7.5	9	.18	15	1	.04	20	1	.05
28	5.4	9	.13	14	0	0	19	1	.05
29	5.0	9	.12	---	---	---	21	1	.06
30	5.0	9	.12	---	---	---	19	1	.05
31	5.3	9	.13	---	---	---	18	1	.05
TOTAL	150.4	---	1.58	399.2	---	5.91	482	---	1.04

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	19	1	.05	156	48	24	62	5	.84
2	18	1	.05	126	30	10	60	5	.81
3	17	1	.05	95	16	4.1	54	5	.73
4	18	1	.05	79	10	2.1	52	5	.70
5	21	2	.11	70	7	1.3	52	4	.56
6	28	3	.23	62	5	.84	48	4	.52
7	32	3	.26	58	4	.63	43	4	.46
8	32	4	.35	57	4	.62	41	3	.33
9	38	5	.51	62	4	.67	37	3	.30
10	42	5	.57	70	5	.95	32	3	.26
11	39	4	.42	72	4	.78	28	3	.23
12	37	3	.30	71	4	.77	27	3	.22
13	41	4	.44	77	4	.83	23	3	.19
14	48	5	.65	80	4	.86	21	3	.17
15	59	7	1.3	67	2	.36	20	3	.16
16	62	9	1.5	55	2	.30	18	3	.15
17	62	8	1.3	50	3	.41	18	3	.15
18	61	7	1.2	100	53	18	16	3	.13
19	55	4	.59	84	10	2.7	15	3	.12
20	46	3	.37	62	2	.33	14	3	.11
21	53	8	1.4	56	4	.60	13	3	.11
22	76	24	6.2	54	3	.44	12	3	.10
23	100	62	22	57	4	.62	11	3	.09
24	151	103	48	68	6	1.1	10	3	.08
25	112	37	12	86	14	3.3	9.6	3	.08
26	88	10	2.4	88	17	4.0	9.1	3	.07
27	68	10	1.8	81	13	2.8	8.3	2	.04
28	77	14	3.3	76	7	1.4	7.8	2	.04
29	104	21	7.7	75	6	1.2	7.4	2	.04
30	141	39	18	74	6	1.2	7.0	2	.04
31	---	---	---	66	5	.89	---	---	---
TOTAL	1745	---	133.10	2334	---	88.10	776.2	---	7.83
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.6	2	.04	1.9	1	0	1.2	4	.01
2	6.3	2	.03	1.8	1	0	1.3	4	.01
3	6.0	2	.03	1.8	1	0	1.3	4	.01
4	5.6	2	.03	1.7	1	0	1.3	4	.01
5	5.2	3	.04	1.9	2	.01	1.3	4	.01
6	5.0	3	.04	1.7	2	0	1.3	4	.01
7	4.9	3	.04	1.7	2	0	1.3	3	.01
8	4.7	3	.04	1.6	2	0	1.3	3	.01
9	4.6	3	.04	1.5	3	.01	1.2	3	0
10	4.4	3	.04	1.6	2	0	1.2	3	0
11	4.3	3	.03	1.6	2	0	1.2	3	0
12	4.3	4	.05	1.6	2	0	1.2	3	0
13	4.0	4	.04	1.6	2	0	1.2	3	0
14	3.8	4	.04	1.5	2	0	1.2	3	0
15	3.7	5	.05	1.5	2	0	1.2	3	0
16	3.5	4	.04	1.6	2	0	1.2	4	.01
17	3.4	3	.03	1.6	2	0	1.2	3	0
18	3.1	2	.02	1.6	2	0	1.2	3	0
19	3.0	2	.02	1.4	2	0	1.3	3	.01
20	3.0	2	.02	1.4	2	0	1.2	3	0
21	2.8	2	.02	1.4	3	.01	1.2	3	0
22	2.8	2	.02	1.4	3	.01	1.2	3	0
23	2.5	2	.01	1.4	3	.01	1.2	3	0
24	2.4	1	0	1.4	3	.01	1.2	3	0
25	2.4	1	0	1.3	3	.01	1.7	3	.01
26	2.4	1	0	1.4	3	.01	1.3	3	.01
27	2.4	1	0	1.4	3	.01	1.3	3	.01
28	2.1	1	0	1.3	3	.01	1.3	3	.01
29	2.1	2	.01	1.3	3	.01	1.3	2	0
30	2.1	3	.02	1.2	3	0	1.3	2	0
31	2.0	2	.01	1.3	4	.01	---	---	---
TOTAL	115.4	---	.80	47.4	---	.12	37.8	---	.14
YEAR	6410.5		239.42						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
FEB											
14...	1515	40	2.5	25	2.7	48	--	--	--	--	--
MAR											
25...	1625	27	2.0	8	.58	52	--	--	--	--	--
APR											
16...	1750	68	7.5	20	3.7	34	--	--	--	--	--
23...	1930	154	5.0	208	86	41	54	71	87	98	100
24...	1455	179	7.5	249	120	29	--	--	--	--	--
30...	1845	198	6.5	118	63	34	--	--	--	--	--
MAY											
01...	1415	129	9.5	38	13	25	--	--	--	--	--
18...	1340	114	4.5	98	30	16	--	--	--	--	--
18...	1910	146	3.5	58	23	27	--	--	--	--	--

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA

LOCATION.--Lat 39°07'56", long 120°09'24", in NW¼SE¼ sec.24, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on right bank 165 ft (50 m) downstream from State Highway 89 bridge, 2.1 mi (3.4 km) north of Tahoe Pines, and 2.6 mi (4.2 km) southwest of Tahoe City.

DRAINAGE AREA.--9.70 mi² (25.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,230 ft (1,899 m), from topographic map.

REMARKS.--Records good except those for the winter periods, which are fair. Minor diversion for local water supply.

AVERAGE DISCHARGE.--9 years, 22.5 ft³/s (0.637 m³/s), 16,300 acre-ft/yr (20.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft³/s (41.1 m³/s) Jan. 13, 1980, gage height, 7.76 ft (2.365 m), from rating extended above 350 ft³/s (9.74 m³/s); no flow on many days during 1977-78, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 14	1200	--	--	a*7.93	2.417
Apr. 24	1615	146	4.13	5.56	1.695
May 1	1645	*148	4.19	5.57	1.698

a Backwater from ice.

Minimum, no flow on many days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.6	1.8	3.0	4.5	8.3	12	107	42	3.7	.31	0
2	1.5	1.5	2.2	2.8	4.6	7.9	11	89	40	3.3	.31	0
3	1.4	1.6	3.2	3.0	4.5	7.8	10	67	37	3.1	.28	0
4	1.4	1.5	6.9	3.3	4.3	7.6	11	58	36	2.8	.28	0
5	1.4	1.6	3.6	2.9	4.0	7.2	14	49	36	2.7	.26	0
6	1.4	1.6	3.1	2.8	3.7	7.2	19	43	34	2.5	.19	0
7	1.4	2.3	2.8	2.7	3.5	7.4	21	41	31	2.2	.17	0
8	1.3	4.7	2.6	2.7	3.4	7.4	22	40	29	2.0	.13	0
9	1.3	2.5	2.4	2.6	3.3	8.0	26	46	27	1.8	.09	0
10	1.2	2.2	2.3	2.6	3.2	8.8	28	49	24	1.7	.08	0
11	1.2	2.6	2.2	2.6	3.1	9.6	26	48	21	1.6	.11	0
12	2.9	2.3	2.1	2.6	3.2	9.7	25	48	20	1.4	.09	0
13	2.1	2.2	2.1	2.6	10	9.4	28	50	18	1.3	.08	0
14	2.3	1.9	2.1	2.6	16	9.0	33	52	16	1.2	.08	0
15	2.2	1.9	2.2	2.5	15	8.8	40	45	14	1.3	.06	0
16	2.3	1.8	2.5	2.4	14	8.4	42	39	13	1.2	.06	0
17	2.0	1.8	2.5	2.4	21	8.8	42	35	12	.98	.06	0
18	1.9	1.7	2.6	2.4	17	8.4	40	80	12	.95	.07	0
19	1.9	1.7	2.4	2.5	20	8.9	34	63	11	.90	.06	0
20	1.8	1.8	2.4	2.4	19	8.6	29	44	11	.83	.04	0
21	1.8	1.8	2.9	2.6	14	8.3	33	40	9.8	.78	.03	0
22	1.9	1.7	4.8	3.2	13	8.6	52	37	9.1	.71	.04	0
23	1.7	1.9	4.3	4.1	13	8.6	72	39	8.0	.60	.03	0
24	1.6	1.8	3.9	3.5	12	9.2	102	45	7.5	.56	.01	.06
25	2.2	1.8	3.8	4.1	11	16	79	58	6.9	.55	0	.86
26	2.5	1.8	4.1	3.9	11	17	60	61	6.1	.50	0	.46
27	2.5	1.8	4.4	4.8	10	13	49	52	5.5	.43	0	.35
28	2.1	1.7	3.9	4.0	9.4	12	58	49	5.0	.41	0	.32
29	2.0	1.7	3.6	3.6	---	14	76	50	4.4	.36	0	.34
30	1.8	1.7	3.4	3.8	---	13	99	49	4.0	.35	0	.33
31	1.8	---	3.2	4.1	---	11	---	44	---	.34	0	---
TOTAL	56.3	58.5	96.3	95.1	270.7	297.9	1193	1617	550.3	43.05	2.92	2.72
MEAN	1.82	1.95	3.11	3.07	9.67	9.61	39.8	52.2	18.3	1.39	.094	.091
MAX	2.9	4.7	6.9	4.8	21	17	102	107	42	3.7	.31	.86
MIN	1.2	1.5	1.8	2.4	3.1	7.2	10	35	4.0	.34	0	0
AC-FT	112	116	191	189	537	591	2370	3210	1090	85	5.8	5.4
CAL YR 1980	TOTAL	12789.10	MEAN	34.9	MAX	784	MIN	1.2	AC-FT	25370		
WTR YR 1981	TOTAL	4283.79	MEAN	11.7	MAX	107	MIN	0	AC-FT	8500		

PYRAMID AND WINNEMUCCA LAKES BASIN

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-78, October 1979 to current year.

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

WATER TEMPERATURES: Water years 1973-78, October 1979 to current year.

SEDIMENT RECORDS: Water years 1973-78, October 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

WATER TEMPERATURES: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to current year.

SEDIMENT RECORDS: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to current year.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperatures since October 1980.

COOPERATION.--Selected sediment samples furnished by University of California at Davis.

REMARKS.--Intermittent or no flow Aug. 9, 10, Aug. 14 to Sept. 24.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 82 micromhos Sept. 25, 26, 1981; minimum recorded, 22 micromhos Apr. 24, 1981.

WATER TEMPERATURES: Maximum recorded, 23.5°C Aug. 8, 12, 13, 1981; minimum recorded, 0°C many days in winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 670 mg/L Jan. 13, 1980; minimum daily mean, 0 mg/L on many days each year.

SEDIMENT DISCHARGE: Maximum daily, 1,420 tons (1,290 metric tons) Jan. 13, 1980; minimum daily, 0 ton (0 metric ton) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 82 micromhos Sept. 25, 26; minimum recorded, 22 micromhos Apr. 24.

WATER TEMPERATURES: Maximum recorded, 23.5°C Aug. 8, 12, 13; minimum recorded, 0°C on many days during November to February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 59 mg/L Apr. 24; minimum daily mean, 0 mg/L on many days.

SEDIMENT DISCHARGE: Maximum daily, 20 tons (18 metric tons) Apr. 24; minimum daily, 0 ton (0 metric ton) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	67	65	57	---	51	53	26	26	45	61	---
2	---	68	63	57	---	51	53	28	26	46	61	---
3	---	68	61	57	60	52	53	29	27	47	61	---
4	---	68	54	56	60	51	53	30	27	47	62	---
5	---	68	59	57	60	52	51	30	27	48	62	---
6	---	68	62	57	60	58	48	30	27	49	63	---
7	---	68	61	58	61	57	47	31	28	49	64	---
8	---	60	60	58	61	53	47	30	28	50	64	---
9	---	64	64	59	61	52	45	29	28	50	---	---
10	---	66	66	60	61	51	44	28	30	51	---	---
11	---	65	65	61	62	50	44	28	30	51	64	---
12	---	66	65	60	61	50	---	28	31	52	64	---
13	---	65	65	60	58	50	---	27	32	52	---	---
14	---	66	66	60	39	51	---	27	33	52	---	---
15	---	66	65	---	44	51	---	28	34	53	---	---
16	---	67	63	---	50	50	---	30	34	54	---	---
17	---	66	63	---	46	50	---	30	35	55	---	---
18	---	67	62	---	48	51	---	28	36	56	---	---
19	---	67	62	---	47	49	---	30	36	56	---	---
20	---	67	62	---	47	50	---	31	37	57	---	---
21	---	67	61	---	45	51	---	32	37	57	---	---
22	67	66	52	---	45	51	31	31	38	58	---	---
23	67	66	56	---	49	52	30	30	38	59	---	---
24	68	62	57	---	48	52	26	28	39	59	---	---
25	67	65	57	---	49	48	28	26	40	59	---	80
26	66	67	56	---	45	49	30	27	41	60	---	81
27	66	67	55	---	51	52	32	27	42	60	---	79
28	66	66	55	---	47	53	31	27	42	60	---	79
29	67	66	56	---	---	51	29	25	43	60	---	79
30	67	65	47	---	---	53	27	24	44	61	---	79
31	67	---	57	---	---	55	---	25	---	61	---	---
MONTH	---	66	60	---	53	52	---	28	34	54	---	---

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	5.5	2.5	1.0	0.5	1.5	0.5	---	---	---	---
2	---	---	6.0	2.5	1.5	1.0	1.5	0.0	---	---	---	---
3	---	---	6.0	2.5	1.5	0.0	2.5	0.0	0.0	0.0	---	---
4	---	---	6.0	2.5	0.0	0.0	1.5	0.0	0.0	0.0	---	---
5	---	---	6.0	2.5	0.5	0.0	1.0	0.0	0.0	0.0	---	---
6	---	---	5.5	2.0	0.5	0.5	0.5	0.0	0.0	0.0	---	---
7	---	---	6.0	2.5	0.5	0.5	0.5	0.0	0.0	0.0	---	---
8	---	---	6.0	4.0	0.5	0.5	0.5	0.0	0.5	0.0	---	---
9	---	---	5.0	3.5	0.5	0.5	0.5	0.0	0.5	0.0	---	---
10	---	---	6.0	3.0	0.5	0.5	0.5	0.0	0.5	0.0	---	---
11	---	---	5.0	3.5	0.5	0.0	0.5	0.0	1.0	0.0	---	---
12	---	---	4.0	2.0	0.5	0.0	0.5	0.0	1.0	0.0	---	---
13	---	---	3.5	1.0	0.5	0.0	0.5	0.0	1.0	0.5	---	---
14	---	---	2.5	0.5	0.5	0.0	0.5	0.0	0.5	0.0	---	---
15	---	---	2.0	1.0	0.5	0.0	---	---	0.5	0.0	---	---
16	---	---	2.5	0.5	0.0	0.0	---	---	2.0	0.0	---	---
17	---	---	2.5	1.0	0.0	0.0	---	---	---	---	---	---
18	---	---	2.0	0.5	0.5	0.0	---	---	3.0	0.0	---	---
19	---	---	1.0	0.5	0.5	0.0	---	---	3.5	1.0	---	---
20	---	---	1.0	0.5	1.0	0.0	---	---	2.0	0.0	---	---
21	---	---	1.5	0.5	1.0	0.0	---	---	0.0	0.0	---	---
22	7.0	3.5	3.0	1.0	0.5	0.0	---	---	1.0	0.0	---	---
23	7.0	1.5	3.0	1.0	0.5	0.0	---	---	---	---	---	---
24	7.0	3.0	1.5	0.5	0.5	0.0	---	---	---	---	---	---
25	6.5	4.0	0.5	0.5	1.0	0.0	---	---	---	---	---	---
26	5.5	3.0	0.5	0.0	1.5	0.0	---	---	---	---	---	---
27	5.5	3.5	0.5	0.0	1.5	1.0	---	---	---	---	---	---
28	5.5	2.5	0.5	0.0	1.5	0.0	---	---	---	---	---	---
29	5.0	1.5	1.0	0.0	1.0	0.0	---	---	---	---	---	---
30	5.5	1.0	1.0	0.5	0.5	0.0	---	---	---	---	---	---
31	6.0	2.0	---	---	1.0	0.0	---	---	---	---	---	---
MONTH	---	---	6.0	0.0	1.5	0.0	---	---	---	---	---	---

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	10.0	3.0	14.5	5.0	20.5	12.0	21.5	11.0	---	---
2	---	---	9.5	3.0	14.0	6.5	21.5	13.0	21.0	11.0	---	---
3	---	---	9.5	2.0	15.0	5.0	22.0	13.5	21.0	10.5	---	---
4	---	---	10.0	2.0	16.0	6.0	21.5	14.0	21.5	11.0	---	---
5	---	---	10.0	2.5	16.5	7.0	21.0	15.0	21.5	11.0	---	---
6	---	---	10.0	2.0	16.5	7.0	21.0	14.0	22.5	12.0	---	---
7	---	---	10.5	2.0	16.0	7.0	21.0	12.5	23.0	13.5	---	---
8	---	---	11.5	2.5	14.0	8.5	21.0	12.0	23.5	13.5	---	---
9	---	---	12.0	3.0	16.5	8.0	20.5	12.0	---	---	---	---
10	---	---	11.5	3.0	15.0	6.5	21.0	13.0	---	---	---	---
11	---	---	12.0	3.0	15.0	6.5	21.0	12.0	23.0	14.0	---	---
12	---	---	12.5	3.0	14.5	7.0	20.5	12.0	23.5	14.0	---	---
13	---	---	11.5	3.5	14.0	4.5	20.0	10.5	23.5	14.5	---	---
14	---	---	11.0	4.5	14.5	5.0	21.5	11.5	---	---	---	---
15	---	---	6.5	2.5	16.0	5.5	22.5	12.5	---	---	---	---
16	---	---	11.0	2.5	17.0	7.5	22.5	13.0	---	---	---	---
17	---	---	11.0	2.5	17.5	8.0	22.0	12.0	---	---	---	---
18	---	---	5.0	3.5	18.0	9.0	22.0	11.5	---	---	---	---
19	---	---	10.0	3.5	19.5	10.0	22.0	11.0	---	---	---	---
20	---	---	8.0	2.5	20.0	10.5	22.5	12.5	---	---	---	---
21	---	---	11.5	3.5	20.0	10.5	22.0	12.0	---	---	---	---
22	9.5	2.0	11.5	3.5	20.5	11.0	22.0	11.5	---	---	---	---
23	9.5	2.0	10.0	4.5	19.5	10.5	22.0	12.0	---	---	---	---
24	8.0	2.5	12.0	5.5	20.0	11.0	22.5	12.5	---	---	---	---
25	6.5	2.5	8.5	5.5	21.0	13.5	22.5	12.5	---	---	13.5	8.0
26	6.5	2.0	9.5	4.5	21.0	12.5	22.5	13.0	---	---	14.0	7.5
27	9.5	1.5	13.0	4.0	21.0	12.0	23.0	13.5	---	---	14.0	9.0
28	10.5	2.0	13.5	4.0	21.0	12.5	23.0	13.0	---	---	12.5	10.0
29	10.0	2.5	14.5	5.0	21.5	12.5	22.5	12.5	---	---	13.0	7.5
30	10.0	3.0	14.0	5.0	20.0	13.5	22.0	12.0	---	---	12.5	7.0
31	---	---	14.5	4.5	---	---	22.0	11.5	---	---	---	---
MONTH	---	---	14.5	2.0	21.5	4.5	23.0	10.5	---	---	---	---

PYRAMID AND WINNEMUCCA LAKES BASIN

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.5	1	0	1.6	0	0	1.8	1	0
2	1.5	1	0	1.5	0	0	2.2	1	0
3	1.4	1	0	1.6	0	0	3.2	1	0
4	1.4	1	0	1.5	0	0	6.9	1	.02
5	1.4	0	0	1.6	0	0	3.6	1	0
6	1.4	0	0	1.6	0	0	3.1	2	.02
7	1.4	0	0	2.3	23	.25	2.8	1	0
8	1.3	0	0	4.7	47	.69	2.6	2	.01
9	1.3	0	0	2.5	5	.03	2.4	2	.01
10	1.2	0	0	2.2	4	.02	2.3	1	0
11	1.2	0	0	2.6	3	.02	2.2	1	0
12	2.9	0	0	2.3	2	.01	2.1	1	0
13	2.1	0	0	2.2	1	0	2.1	1	0
14	2.3	0	0	1.9	0	0	2.1	1	0
15	2.2	0	0	1.9	0	0	2.2	1	0
16	2.3	0	0	1.8	0	0	2.5	1	0
17	2.0	0	0	1.8	0	0	2.5	1	0
18	1.9	0	0	1.7	0	0	2.6	1	0
19	1.9	0	0	1.7	0	0	2.4	1	0
20	1.8	0	0	1.8	0	0	2.4	1	0
21	1.8	0	0	1.8	0	0	2.9	3	.02
22	1.9	0	0	1.7	0	0	4.8	2	.03
23	1.7	0	0	1.9	0	0	4.3	1	.01
24	1.6	0	0	1.8	0	0	3.9	1	.01
25	2.2	2	.01	1.8	0	0	3.8	1	.01
26	2.5	1	0	1.8	0	0	4.1	1	.01
27	2.5	1	0	1.8	0	0	4.4	1	.01
28	2.1	1	0	1.7	0	0	3.9	1	.01
29	2.0	1	0	1.7	1	0	3.6	1	0
30	1.8	1	0	1.7	1	0	3.4	1	0
31	1.8	0	0	---	---	---	3.2	1	0
TOTAL	56.3	---	.01	58.5	---	1.02	96.3	---	.17

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.0	2	.02	4.5	2	.02	8.3	2	.04
2	2.8	2	.02	4.6	3	.04	7.9	2	.04
3	3.0	2	.02	4.5	3	.04	7.8	2	.04
4	3.3	2	.02	4.3	3	.03	7.6	2	.04
5	2.9	3	.02	4.0	3	.03	7.2	2	.04
6	2.8	3	.02	3.7	3	.03	7.2	2	.04
7	2.7	3	.02	3.5	3	.03	7.4	2	.04
8	2.7	3	.02	3.4	3	.03	7.4	2	.04
9	2.6	3	.02	3.3	3	.03	8.0	2	.04
10	2.6	3	.02	3.2	3	.03	8.8	2	.05
11	2.6	3	.02	3.1	3	.03	9.6	2	.05
12	2.6	3	.02	3.2	3	.03	9.7	2	.05
13	2.6	3	.02	10	5	.14	9.4	3	.08
14	2.6	3	.02	16	27	1.2	9.0	3	.07
15	2.5	3	.02	15	13	.53	8.8	3	.07
16	2.4	3	.02	14	8	.30	8.4	3	.07
17	2.4	3	.02	21	7	.40	8.8	3	.07
18	2.4	3	.02	17	8	.37	8.4	2	.05
19	2.5	3	.02	20	8	.43	8.9	2	.05
20	2.4	3	.02	19	5	.26	8.6	2	.05
21	2.6	3	.02	14	3	.11	8.3	2	.04
22	3.2	3	.03	13	3	.11	8.6	1	.02
23	4.1	3	.03	13	3	.11	8.6	1	.02
24	3.5	3	.03	12	3	.10	9.2	1	.02
25	4.1	4	.04	11	3	.09	16	5	.22
26	3.9	6	.06	11	3	.09	17	3	.14
27	4.8	7	.09	10	3	.08	13	1	.04
28	4.0	5	.05	9.4	2	.05	12	1	.03
29	3.6	3	.03	---	---	---	14	1	.04
30	3.8	3	.03	---	---	---	13	1	.04
31	4.1	2	.02	---	---	---	11	1	.03
TOTAL	95.1	---	.83	270.7	---	4.74	297.9	---	1.66

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	12	1	.03	107	23	8.2	42	3	.34
2	11	1	.03	89	10	2.5	40	2	.22
3	10	1	.03	67	8	1.4	37	2	.20
4	11	2	.06	58	6	.94	36	2	.19
5	14	5	.19	49	4	.53	36	1	.10
6	19	7	.36	43	4	.46	34	1	.09
7	21	7	.40	41	3	.33	31	1	.08
8	22	8	.48	40	4	.43	29	1	.08
9	26	10	.70	46	5	.62	27	1	.07
10	28	7	.53	49	5	.66	24	1	.06
11	26	5	.35	48	4	.52	21	1	.06
12	25	4	.27	48	3	.39	20	1	.05
13	28	7	.53	50	5	.68	18	1	.05
14	33	11	1.1	52	3	.42	16	1	.04
15	40	13	1.6	45	3	.36	14	1	.04
16	42	9	1.1	39	2	.21	13	1	.04
17	42	5	.57	35	2	.19	12	1	.03
18	40	4	.43	80	20	5.3	12	1	.03
19	34	3	.28	63	5	.85	11	1	.03
20	29	2	.16	44	2	.24	11	1	.03
21	33	6	.62	40	3	.32	9.8	0	0
22	52	18	3.3	37	3	.30	9.1	0	0
23	72	29	7.5	39	3	.32	8.0	0	0
24	102	59	20	45	3	.36	7.5	0	0
25	79	13	2.8	58	6	.94	6.9	0	0
26	60	5	.81	61	6	.99	6.1	0	0
27	49	7	.93	52	3	.42	5.5	0	0
28	58	11	2.1	49	3	.40	5.0	0	0
29	76	13	3.4	50	3	.41	4.4	0	0
30	99	23	7.5	49	3	.40	4.0	0	0
31	---	---	---	44	3	.36	---	---	---
TOTAL	1193	---	58.16	1617	---	30.45	550.3	---	1.83

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.7			.31	0		0	0	0
2	3.3			.31	0		0	0	0
3	3.1			.28	0		0	0	0
4	2.8			.28	0		0	0	0
5	2.7			.26	0		0	0	0
6	2.5			.19	0		0	0	0
7	2.2			.17	0		0	0	0
8	2.0			.13	0		0	0	0
9	1.8			.09	0		0	0	0
10	1.7			.08	0		0	0	0
11	1.6			.11	0		0	0	0
12	1.4			.09	0		0	0	0
13	1.3			.08	0		0	0	0
14	1.2			.08	0		0	0	0
15	1.3			.06	0		0	0	0
16	1.2			.06	0		0	0	0
17	.98			.06	0		0	0	0
18	.95			.07	0		0	0	0
19	.90			.06	0		0	0	0
20	.83			.04	0		0	0	0
21	.78			.03	1		0	0	0
22	.71			.04	1		0	0	0
23	.60			.03	1		0	0	0
24	.56			.01	1		.06	2	0
25	.55			0	1		.86	10	.02
26	.50			0	0		.46	3	0
27	.43			0	0		.35	2	0
28	.41			0	0		.32	2	0
29	.36			0	0		.34	2	0
30	.35			0	0		.33	2	0
31	.34			0	0		---	---	---
TOTAL	43.05	0	0	2.92	---	0	2.72	---	.02
YEAR	4283.79		98.89						

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
NOV 08...	1015	4.2	5.0	50	.57	98	--	--	--
FEB 14...	1545	25	.5	34	2.3	47	--	--	--
MAR 25...	1645	22	1.5	6	.36	57	--	--	--
APR 09...	1800	35	5.5	26	2.5	57	--	--	--
15...	1640	55	7.0	34	5.0	79	90	98	100
16...	1825	55	5.0	17	2.5	57	--	--	--
23...	1540	101	3.0	108	29	62	--	--	--
24...	1430	129	7.5	165	57	50	--	--	--
30...	1650	133	7.5	75	27	83	92	98	100
30...	1750	135	6.5	83	30	62	--	--	--
MAY 18...	1610	107	4.5	38	11	53	--	--	--
18...	2100	102	3.5	18	5.0	52	--	--	--

10336689 SNOW CREEK AT TAHOE VISTA, CA

LOCATION.--Lat 39°14'18", long 120°02'19", in SE¼NW¼ sec.13, T.16 N., R.17 E., Placer County, Hydrologic Unit 16050101, on right bank 300 ft (90 m) downstream from State Highway 28, 0.6 mi (1.0 km) east of Tahoe Vista Post Office, and 20 ft (6 m) upstream from Lake Tahoe.

DRAINAGE AREA.--4.43 mi² (11.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,225.24 ft (1,897.453 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some small diversions above station for domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3.3 ft³/s (0.093 m³/s) Mar. 25, 1981, gage height, 2.20 ft (0.671 m), maximum gage height, 2.49 ft (0.759 m) Jan. 29, 1981 (backwater from ice); minimum discharge, no flow many days during July, August, and September, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3.3 ft³/s (0.093 m³/s) Mar. 25, gage height, 2.20 ft (0.671 m), no peak above base of 20 ft³/s (0.57 m³/s), maximum gage height, 2.49 ft (0.759 m) Jan. 29 (backwater from ice); minimum discharge, no flow many days during July, August, and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.10	.23	.22	.37	.35	1.0	.71	.18	.03	.03	0
2	.05	.09	.30	.22	.34	.35	.85	.65	.18	.03	.02	0
3	.05	.10	.94	.26	.31	.36	.63	.84	.16	.03	0	0
4	.04	.10	1.3	.35	.29	.32	.57	.99	.13	.03	.01	.01
5	.04	.10	.36	.30	.27	.31	.61	.94	.10	.02	0	.01
6	.05	.10	.25	.27	.26	.33	.71	.87	.10	0	0	.01
7	.04	.14	.21	.26	.24	.31	.72	.75	.09	0	0	.01
8	.04	.17	.18	.25	.23	.32	.71	.74	.09	.01	0	.01
9	.04	.14	.17	.25	.22	.37	.76	.69	.08	.03	0	.01
10	.05	.14	.17	.24	.21	.39	.80	.76	.07	.03	0	.01
11	.05	.26	.17	.24	.25	.39	.80	.94	.06	.03	0	.01
12	.14	.17	.17	.24	.32	.39	.80	1.1	.06	.03	0	.01
13	.11	.14	.16	.25	.49	.46	1.2	.96	.06	.03	0	.01
14	.13	.14	.16	.25	1.3	.45	1.2	.93	.06	.03	0	.01
15	.16	.19	.16	.25	.93	.40	1.4	.90	.06	.02	0	.01
16	.17	.15	.17	.27	.93	.37	1.8	.83	.05	.03	0	.01
17	.16	.11	.17	.22	1.4	.33	1.7	1.2	.05	.02	.01	.01
18	.12	.09	.18	.15	.97	.34	1.7	2.2	.05	.01	.01	.01
19	.11	.09	.18	.14	1.4	1.2	2.2	1.5	.05	0	.01	.01
20	.10	.07	.20	.13	.94	.71	1.4	.88	.05	.01	.01	.01
21	.10	.07	.26	.15	.60	.95	1.1	.74	.04	0	.01	0
22	.10	.11	.29	.15	.57	.73	1.0	.56	.04	.01	.01	.01
23	.09	.09	.25	.17	.62	.56	1.2	.44	.04	.02	.01	.01
24	.09	.09	.23	.17	.58	.51	1.2	.40	.04	.02	.01	.04
25	.13	.09	.24	.16	.46	1.9	1.3	.40	.04	0	.01	.15
26	.16	.09	.22	.16	.41	1.9	1.1	.71	.03	0	.01	.10
27	.13	.09	.22	.22	.37	1.6	.90	.46	.03	0	.01	.02
28	.11	.13	.21	.55	.37	1.2	.77	.40	.03	0	.01	.02
29	.10	.15	.19	.54	---	1.2	.76	.30	.03	0	.01	.03
30	.11	.20	.22	.47	---	1.3	.75	.24	.03	.01	.01	.03
31	.10	---	.22	.41	---	1.0	---	.21	---	.03	.01	---
TOTAL	2.93	3.70	8.38	7.91	15.65	21.30	31.64	24.24	2.08	.51	.21	.58
MEAN	.095	.12	.27	.26	.56	.69	1.05	.78	.069	.017	.007	.019
MAX	.17	.26	1.3	.55	1.4	1.9	2.2	2.2	.18	.03	.03	.15
MIN	.04	.07	.16	.13	.21	.31	.57	.21	.03	0	0	0
AC-FT	5.8	7.3	17	16	31	42	63	48	4.1	1.0	.4	1.2

WTR YR 1981 TOTAL 119.13 MEAN .33 MAX 2.2 MIN 0 AC-FT 236

PYRAMID AND WINNEMUCCA LAKES BASIN

10336689 SNOW CREEK AT TAHOE VISTA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1981.

SPECIFIC CONDUCTANCE: June to September 1981.

WATER TEMPERATURES: October 1980 to September 1981.

SEDIMENT RECORDS: October 1980 to September 1981.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June to September 1981.

WATER TEMPERATURES: October 1980 to September 1981.

SEDIMENT RECORDS: October 1980 to September 1981.

COOPERATION.--Selected sediment samples and temperature observations furnished by University of California at Davis.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 166 micromhos Aug. 2; minimum daily, 110 micromhos Aug. 16.

WATER TEMPERATURES: Maximum recorded, 20.0°C June 4; minimum observed, 0.0°C Feb. 1.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 59 mg/L May 18; minimum daily mean, 1 mg/L on several days during November, December and March.

SEDIMENT DISCHARGE: Maximum daily, 0.43 ton (0.39 metric ton) May 18; minimum daily, 0 ton (0 metric ton) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), JUNE TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	---	142	
2									---	---	166	
3									---	---	---	
4									142	---	---	
5									138	---	---	
6									137	---	---	
7									132	---	---	
8									130	---	---	
9									131	---	---	
10									128	---	---	
11									125	---	---	
12									123	---	---	
13									124	---	---	
14									122	---	---	
15									124	---	---	
16									124	---	110	
17									124	---	113	
18									---	---	116	
19									---	---	120	
20									---	---	---	
21									---	---	---	
22									---	---	---	
23									---	---	---	
24									---	---	---	
25									---	---	---	
26									---	---	---	
27									---	---	---	
28									---	---	---	
29									---	---	---	
30									---	118	---	
31									---	132	---	
MONTH									---	---	---	

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.06	4		.10	2		.23	2	0
2	.05	4		.09	2		.30	2	0
3	.05	4		.10	2		.94	31	.11
4	.04	4		.10	2		1.3	7	.02
5	.04	4		.10	2		.36	5	0
6	.05	4		.10	2		.25	5	0
7	.04	4		.14	2		.21	5	0
8	.04	4		.17	2		.18	5	0
9	.04	4		.14	2		.17	5	0
10	.05	4		.14	2		.17	4	0
11	.05	4		.26	2		.17	4	0
12	.14	4		.17	3		.17	4	0
13	.11	4		.14	3		.16	3	0
14	.13	4		.14	3		.16	4	0
15	.16	4		.19	3		.16	4	0
16	.17	4		.15	3		.17	5	0
17	.16	4		.11	3		.17	5	0
18	.12	3		.09	3		.18	6	0
19	.11	3		.09	3		.18	5	0
20	.10	3		.07	3		.20	5	0
21	.10	3		.07	2		.26	4	0
22	.10	3		.11	2		.29	4	0
23	.09	3		.09	1		.25	4	0
24	.09	3		.09	2		.23	3	0
25	.13	3		.09	2		.24	3	0
26	.16	3		.09	2		.22	2	0
27	.13	2		.09	2		.22	2	0
28	.11	2		.13	2		.21	2	0
29	.10	2		.15	2		.19	1	0
30	.11	2		.20	2		.22	2	0
31	.10	2		---	---		.22	2	0
TOTAL	2.93	---	0	3.70	---	0	8.38	---	.13

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.22	2	0	.37	6	0	.35	2	0
2	.22	2	0	.34	5	0	.35	2	0
3	.26	3	0	.31	4	0	.36	1	0
4	.35	3	0	.29	3	0	.32	1	0
5	.30	3	0	.27	8	0	.31	1	0
6	.27	3	0	.26	6	0	.33	1	0
7	.26	3	0	.24	5	0	.31	1	0
8	.25	3	0	.23	5	0	.32	1	0
9	.25	4	0	.22	5	0	.37	1	0
10	.24	5	0	.21	5	0	.39	1	0
11	.24	5	0	.25	5	0	.39	1	0
12	.24	5	0	.32	5	0	.39	1	0
13	.25	7	0	.49	4	0	.46	1	0
14	.25	9	0	1.3	7	.02	.45	2	0
15	.25	10	0	.93	3	0	.40	2	0
16	.27	8	0	.93	3	0	.37	2	0
17	.22	6	0	1.4	2	0	.33	2	0
18	.15	5	0	.97	3	0	.34	2	0
19	.14	4	0	1.4	8	.04	1.2	13	.05
20	.13	3	0	.94	5	.01	.71	5	0
21	.15	2	0	.60	2	0	.95	12	.03
22	.15	3	0	.57	2	0	.73	10	.02
23	.17	4	0	.62	2	0	.56	8	.01
24	.17	5	0	.58	2	0	.51	7	0
25	.16	8	0	.46	2	0	1.9	41	.27
26	.16	9	0	.41	2	0	1.9	7	.04
27	.22	20	.01	.37	2	0	1.6	7	.03
28	.55	12	.02	.37	2	0	1.2	10	.03
29	.54	9	.01	---	---	---	1.2	10	.03
30	.47	8	.01	---	---	---	1.3	10	.04
31	.41	7	0	---	---	---	1.0	11	.03
TOTAL	7.91	---	.05	15.65	---	.07	21.30	---	.58

10336689 SNOW CREEK AT TAHOE VISTA, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.0	10	.03	.71	17	.03	.18	12	
2	.85	7	.02	.65	18	.03	.18	14	
3	.63	5	0	.84	27	.06	.16	16	
4	.57	5	0	.99	25	.07	.13	17	
5	.61	5	0	.94	23	.06	.10	15	
6	.71	5	0	.87	19	.04	.10	13	
7	.72	5	0	.75	25	.05	.09	9	
8	.71	5	0	.74	11	.02	.09	7	
9	.76	6	.01	.69	10	.02	.08	5	
10	.80	8	.02	.76	12	.02	.07	3	
11	.80	9	.02	.94	17	.04	.06	3	
12	.80	9	.02	1.1	16	.05	.06	4	
13	1.2	8	.03	.96	14	.04	.06	4	
14	1.2	7	.02	.93	14	.04	.06	4	
15	1.4	15	.06	.90	14	.03	.06	5	
16	1.8	35	.17	.83	14	.03	.05	6	
17	1.7	38	.17	1.2	14	.05	.05	7	
18	1.7	14	.06	2.2	59	.43	.05	7	
19	2.2	20	.12	1.5	9	.04	.05	8	
20	1.4	10	.04	.88	5	.01	.05	8	
21	1.1	10	.03	.74	12	.02	.04	8	
22	1.0	10	.03	.56	14	.02	.04	9	
23	1.2	7	.02	.44	14	.02	.04	9	
24	1.2	7	.02	.40	9	0	.04	9	
25	1.3	7	.02	.40	7	0	.04	9	
26	1.1	6	.02	.71	10	.02	.03	9	
27	.90	13	.03	.46	5	0	.03	8	
28	.77	9	.02	.40	5	0	.03	8	
29	.76	12	.02	.30	7	0	.03	7	
30	.75	21	.04	.24	9	0	.03	7	
31	---	---	---	.21	11	0	---	---	
TOTAL	31.64	---	1.04	24.24	---	1.24	2.08	---	0
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.03	6		.03	10		0	0	
2	.03	7		.02	10		0	0	
3	.03	7		0	0		0	0	
4	.03	7		.01	10		.01	10	
5	.02	7		0	0		.01	10	
6	0	0		0	0		.01	10	
7	0	0		0	0		.01	10	
8	.01	8		0	0		.01	10	
9	.03	8		0	0		.01	10	
10	.03	9		0	0		.01	10	
11	.03	10		0	0		.01	10	
12	.03	10		0	0		.01	10	
13	.03	11		0	0		.01	10	
14	.03	12		0	0		.01	10	
15	.02	12		0	0		.01	10	
16	.03	13		0	0		.01	10	
17	.02	13		.01	10		.01	10	
18	.01	13		.01	10		.01	10	
19	0	0		.01	10		.01	10	
20	.01	5		.01	10		.01	10	
21	0	0		.01	10		0	0	
22	.01	10		.01	10		.01	10	
23	.02	10		.01	10		.01	10	
24	.02	10		.01	10		.04	15	
25	0	0		.01	10		.15	10	
26	0	0		.01	10		.10	8	
27	0	0		.01	10		.02	8	
28	0	0		.01	10		.02	8	
29	0	0		.01	10		.03	8	
30	.01	10		.01	10		.03	8	
31	.03	10		.01	10		---	---	
TOTAL	.51	---	0	.21	---	0	.58	---	0
YEAR	119.13		3						

PYRAMID AND WINNEMUCCA LAKES BASIN

10336689 SNOW CREEK AT TAHOE VISTA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
DEC 03...	1010	.46	1.5	60	.07	93	96	100	--
FEB 19...	1645	2.1	3.5	22	.12	68	--	--	--
MAR 25...	1115	2.2	2.0	81	.48	93	93	100	--
MAY 25...	1710	3.1	3.0	67	.56	68	--	--	--
MAY 18...	1820	3.0	8.0	102	.83	17	24	94	100
JUN 25...	1345	.04	24.5	9	.00	73	--	--	--

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°14'26", long 119°56'41", in SW¼NE¼ sec.22, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, on right bank 50 ft (15 m) upstream from culvert on Lakeshore Boulevard, 600 ft (180 m) upstream from mouth, and 3 mi (5 km) east of Crystal Bay.

DRAINAGE AREA.--6.05 mi² (15.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to September 1973, February to September 1975, October 1977 to current year.

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,234.03 ft (1,900.132 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter months, which are fair. One transmountain diversion to Washoe Valley.

AVERAGE DISCHARGE.--8 years (water years 1970-73, 1978-81), 7.46 ft³/s (0.211 m³/s), 5,400 acre-ft/yr (6.66 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110 ft³/s (3.12 m³/s) June 26, 1971, gage height, 3.17 ft (0.966 m); maximum gage height, 3.77 ft (1.149 m) Jan. 23, 1973, backwater from ice; minimum daily discharge, 0.66 ft³/s (0.019 m³/s) on several days during October 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s (0.68 m³/s) May 1, gage height, 2.41 ft (0.735 m), maximum gage height, 3.41 ft (1.039 m) Dec. 8 (backwater from ice), no peak above base of 30 ft³/s (0.85 m³/s); minimum daily discharge, 1.3 ft³/s (0.037 m³/s) on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.1	5.3	4.3	7.2	3.6	4.6	20	7.2	2.2	1.5	1.3
2	3.1	3.1	5.6	4.3	5.6	3.6	4.5	18	6.6	2.2	1.4	1.3
3	3.0	3.1	6.5	4.3	4.6	3.6	4.3	16	9.2	2.1	1.4	1.3
4	3.0	3.3	8.0	4.6	3.8	3.7	4.3	15	6.6	2.1	1.4	1.4
5	3.0	3.3	6.4	4.3	3.3	3.7	4.8	13	4.5	2.0	1.4	1.4
6	3.0	3.3	4.7	4.3	3.1	3.7	5.3	10	5.3	2.0	1.4	1.4
7	3.0	3.7	4.0	4.3	3.2	3.7	5.3	9.8	5.7	2.1	1.4	1.4
8	3.0	6.5	3.7	3.9	3.3	3.7	5.0	9.8	5.5	2.0	1.5	1.4
9	3.0	10	3.6	3.9	3.3	3.8	5.3	11	5.3	2.0	1.5	1.4
10	2.9	9.4	3.5	3.9	3.2	4.0	5.5	11	4.6	2.0	1.6	1.4
11	2.8	6.7	3.5	3.8	3.3	4.0	5.3	10	4.5	2.0	1.5	1.4
12	3.6	5.5	3.7	3.8	3.4	4.0	5.3	9.8	4.5	1.9	1.5	1.4
13	3.3	6.0	4.3	3.8	3.9	4.2	5.3	9.8	4.3	1.8	1.5	1.4
14	3.3	6.3	4.6	3.8	5.6	4.1	5.9	9.8	4.1	1.8	1.4	1.4
15	3.3	6.0	4.8	3.6	4.3	3.9	6.9	8.6	3.9	1.8	1.4	1.4
16	3.2	5.6	5.0	3.6	4.9	3.8	6.9	8.0	3.8	1.8	1.4	1.4
17	3.2	5.7	4.8	3.6	5.8	3.8	6.9	7.2	3.4	1.7	1.4	1.4
18	3.2	5.9	4.8	3.4	5.3	3.9	7.2	9.5	3.3	1.7	1.4	1.4
19	3.2	6.0	4.6	3.4	6.0	4.7	7.7	8.9	3.1	1.7	1.3	1.4
20	3.1	6.1	4.6	3.4	5.1	4.3	6.2	7.4	3.0	1.7	1.4	1.4
21	3.1	5.8	4.6	3.4	4.5	4.8	5.9	7.2	2.9	1.7	1.7	1.3
22	3.5	5.8	4.8	3.4	4.4	4.5	7.7	7.4	2.7	1.7	1.6	1.3
23	5.4	6.0	4.5	3.4	4.4	4.2	12	7.2	2.6	1.7	1.5	1.4
24	5.1	5.5	4.3	3.6	4.3	4.0	15	6.9	2.5	1.7	1.4	1.4
25	3.4	5.6	4.3	3.8	4.1	5.2	14	8.0	2.5	1.7	1.4	1.8
26	3.3	5.8	4.5	4.0	3.9	5.3	11	9.8	2.4	1.7	1.6	1.5
27	3.2	5.7	4.6	4.5	3.7	4.9	10	8.6	2.4	1.6	2.2	1.5
28	3.1	5.2	4.6	8.0	3.6	5.5	12	8.3	2.2	1.6	1.6	1.5
29	3.1	5.0	4.5	14	---	5.0	15	8.9	2.2	1.5	1.4	1.5
30	3.1	5.1	4.5	15	---	6.2	17	7.7	2.2	1.5	1.3	1.5
31	3.1	---	4.5	11	---	4.5	---	7.4	---	1.4	1.3	---
TOTAL	101.7	164.1	145.7	152.4	121.1	131.9	232.1	310.0	123.0	56.4	45.7	42.4
MEAN	3.28	5.47	4.70	4.92	4.33	4.25	7.74	10.0	4.10	1.82	1.47	1.41
MAX	5.4	10	8.0	15	7.2	6.2	17	20	9.2	2.2	2.2	1.8
MIN	2.8	3.1	3.5	3.4	3.1	3.6	4.3	6.9	2.2	1.4	1.3	1.3
AC-FT	202	325	289	302	240	262	460	615	244	112	91	84

CAL YR 1980 TOTAL 4135.7 MEAN 11.3 MAX 60 MIN 2.8 AC-FT 8200
WTR YR 1981 TOTAL 1626.5 MEAN 4.46 MAX 20 MIN 1.3 AC-FT 3230

PYRAMID AND WINNEMUCCA LAKES BASIN

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-73, 1975, 1978 to current year.

SPECIFIC CONDUCTANCE: March to September 1981.

CHEMICAL ANALYSES: Water years 1970-73, 1975, 1978 to current year.

WATER TEMPERATURES: Water years 1980 to current year.

SEDIMENT RECORDS: Water years 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1981.

WATER TEMPERATURES: January 1980 to current year.

SEDIMENT RECORDS: January 1980 to current year.

COOPERATION.--Selected sediment samples and temperature observations furnished by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 350 micromhos Mar. 30, 1981; minimum daily, 24 micromhos May 14, 1981.

WATER TEMPERATURES: Maximum recorded, 19.5°C on several days during June to August 1981; minimum recorded, 0°C on several days during March and April 1981.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 800 mg/L June 18, 1980; minimum daily mean, 0 mg/L on several days during October 1980.

SEDIMENT DISCHARGE: Maximum daily, 123 tons (112 metric tons) June 18, 1980; minimum daily, 0 ton (0 metric ton) on many days during October 1980.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 350 micromhos Mar. 30; minimum daily, 24 micromhos May 14.

WATER TEMPERATURES: Maximum recorded, 19.5°C on several days during June to August; minimum recorded, 0°C on several days during March and April.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 107 mg/L May 1; minimum daily mean, 0 mg/L on several days during October.

SEDIMENT DISCHARGE: Maximum daily, 5.8 tons (5.3 metric tons) May 1; minimum daily, 0 ton (0 metric ton) on many days during October.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) MARCH TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	110	46	---	59	76	81
2						---	93	38	---	62	76	80
3						---	86	37	---	66	77	80
4						---	82	34	---	67	78	78
5						---	80	36	---	67	80	76
6						---	78	40	---	69	81	78
7						---	76	44	---	68	81	79
8						---	77	44	---	68	81	79
9						---	76	43	---	67	82	80
10						---	73	41	---	66	78	81
11						---	73	39	---	66	78	81
12						---	72	35	---	66	79	81
13						---	70	30	44	66	80	81
14						---	69	24	44	62	81	80
15						---	66	26	46	---	82	80
16						---	64	28	49	---	81	80
17						---	64	30	52	---	81	79
18						---	65	34	54	---	80	79
19						---	74	34	55	---	81	82
20						---	70	32	55	---	80	81
21						---	71	36	54	---	75	80
22						---	70	34	57	---	76	79
23						---	71	34	57	---	77	---
24						73	66	38	59	---	79	---
25						79	64	36	62	---	80	---
26						94	68	32	64	---	79	---
27						140	69	---	62	---	70	---
28						94	66	---	61	---	76	---
29						84	65	---	60	---	80	---
30						148	57	---	59	76	81	72
31						90	---	---	---	76	81	---
MONTH						---	73	36	---	---	79	---

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR MARCH TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1											---	---
2											---	---
3											---	---
4											---	---
5											---	---
6											---	---
7											---	---
8											---	---
9											---	---
10											---	---
11											---	---
12											---	---
13											---	---
14											---	---
15											---	---
16											---	---
17											---	---
18											---	---
19											---	---
20											---	---
21											---	---
22											---	---
23											---	---
24											7.5	0.5
25											3.0	0.0
26											2.0	0.0
27											5.5	0.0
28											8.5	0.0
29											7.0	0.0
30											5.5	0.0
31											7.5	0.0
MONTH											---	---

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	1.0	11.5	3.5	---	---	18.0	10.0	17.0	8.5	17.5	11.0
2	8.0	0.5	9.5	2.0	---	---	19.0	11.0	17.0	8.0	17.0	10.5
3	8.5	0.5	9.5	1.0	---	---	19.5	12.0	16.5	8.0	17.0	10.0
4	9.5	0.5	9.5	1.0	---	---	19.0	12.5	17.5	8.5	16.5	9.5
5	11.0	1.0	9.5	2.0	---	---	18.0	12.5	17.5	8.5	15.5	9.0
6	10.5	2.0	9.0	1.0	---	---	19.0	12.0	19.5	10.5	15.5	9.5
7	10.5	1.5	10.0	1.0	---	---	17.5	10.0	19.5	11.0	16.0	9.5
8	10.0	1.0	12.0	2.0	---	---	17.5	9.5	19.5	11.5	13.5	10.5
9	11.0	2.0	12.5	3.5	---	---	17.0	9.0	18.5	12.5	16.0	10.0
10	10.0	1.5	12.5	3.0	---	---	18.0	10.5	17.5	12.5	17.0	10.5
11	9.0	0.5	12.5	3.5	---	---	17.0	9.0	19.0	11.5	17.0	10.5
12	9.5	0.0	13.0	3.5	---	---	16.5	9.0	19.0	11.5	17.5	11.5
13	10.5	1.0	12.5	6.0	12.0	4.0	16.0	7.0	19.5	12.5	17.0	12.5
14	11.5	1.5	11.5	6.0	12.0	4.5	18.0	9.0	19.0	12.0	17.0	11.0
15	9.5	2.0	8.0	4.0	14.0	5.5	---	---	18.5	11.0	17.0	11.0
16	10.0	2.5	10.0	2.0	16.0	7.0	---	---	19.0	11.5	16.0	10.5
17	9.5	2.5	8.5	3.0	16.5	8.0	---	---	16.5	12.5	16.0	11.0
18	6.5	2.0	6.0	3.5	16.5	8.5	---	---	18.5	11.5	16.5	10.5
19	5.0	0.5	10.0	2.5	18.0	10.0	---	---	18.5	12.5	16.5	11.5
20	6.0	1.5	5.5	2.5	18.5	10.0	---	---	17.0	10.0	15.5	10.0
21	9.0	2.5	10.5	3.5	18.5	10.0	---	---	16.5	9.0	14.0	8.0
22	12.5	3.5	12.0	4.5	19.0	11.5	---	---	17.5	9.5	13.0	7.0
23	13.0	3.0	12.0	6.0	18.5	9.5	---	---	17.5	10.0	---	---
24	11.5	3.0	13.0	8.0	18.5	10.0	---	---	17.0	9.5	---	---
25	10.0	2.5	9.5	8.0	19.5	13.0	---	---	17.5	9.5	---	---
26	8.0	2.0	13.0	6.5	19.5	11.5	---	---	18.5	11.0	---	---
27	10.0	1.0	---	---	19.5	11.0	---	---	18.0	10.5	---	---
28	12.0	2.5	---	---	19.5	11.5	---	---	19.0	12.0	---	---
29	12.0	3.5	---	---	19.5	11.0	---	---	18.0	11.0	---	---
30	12.5	3.5	---	---	19.0	11.5	17.5	9.0	18.0	11.5	10.5	6.0
31	---	---	---	---	---	---	17.5	9.0	17.5	11.0	---	---
MONTH	13.0	0.0	13.0	1.0	---	---	---	---	19.5	8.0	---	---

PYRAMID AND WINNEMUCCA LAKES BASIN

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.1	3	.03	3.1	10	.08	5.3	6	.09
2	3.1	2	.02	3.1	10	.08	5.6	5	.08
3	3.0	1	0	3.1	10	.08	6.5	7	.12
4	3.0	1	0	3.3	10	.09	8.0	8	.17
5	3.0	1	0	3.3	11	.10	6.4	7	.12
6	3.0	1	0	3.3	12	.11	4.7	6	.08
7	3.0	1	0	3.7	13	.13	4.0	5	.05
8	3.0	1	0	6.5	18	.32	3.7	5	.05
9	3.0	1	0	10	13	.35	3.6	5	.05
10	2.9	1	0	9.4	12	.30	3.5	5	.05
11	2.8	1	0	6.7	10	.18	3.5	5	.05
12	3.6	4	.04	5.5	9	.13	3.7	5	.05
13	3.3	1	0	6.0	8	.13	4.3	5	.06
14	3.3	0	0	6.3	7	.12	4.6	5	.06
15	3.3	0	0	6.0	7	.11	4.8	8	.10
16	3.2	0	0	5.6	6	.09	5.0	10	.14
17	3.2	0	0	5.7	6	.09	4.8	10	.13
18	3.2	0	0	5.9	5	.08	4.8	12	.16
19	3.2	0	0	6.0	5	.08	4.6	9	.11
20	3.1	0	0	6.1	4	.07	4.6	8	.10
21	3.1	1	0	5.8	4	.06	4.6	8	.10
22	3.5	1	0	5.8	5	.08	4.8	8	.10
23	5.4	1	.01	6.0	5	.08	4.5	8	.10
24	5.1	1	.01	5.5	5	.07	4.3	7	.08
25	3.4	1	0	5.6	5	.08	4.3	6	.07
26	3.3	1	0	5.8	6	.09	4.5	6	.07
27	3.2	2	.02	5.7	7	.11	4.6	7	.09
28	3.1	6	.05	5.2	7	.10	4.6	9	.11
29	3.1	8	.07	5.0	7	.09	4.5	10	.12
30	3.1	8	.07	5.1	6	.08	4.5	10	.12
31	3.1	9	.08	---	---	---	4.5	10	.12
TOTAL	101.7	---	.40	164.1	---	3.56	145.7	---	2.90

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.3	9	.10	7.2	8	.16	3.6	5	.05
2	4.3	9	.10	5.6	12	.18	3.6	5	.05
3	4.3	9	.10	4.6	12	.15	3.6	4	.04
4	4.6	9	.11	3.8	12	.12	3.7	4	.04
5	4.3	9	.10	3.3	10	.09	3.7	4	.04
6	4.3	8	.09	3.1	6	.05	3.7	4	.04
7	4.3	8	.09	3.2	6	.05	3.7	4	.04
8	3.9	8	.08	3.3	6	.05	3.7	4	.04
9	3.9	7	.07	3.3	6	.05	3.8	4	.04
10	3.9	6	.06	3.2	6	.05	4.0	4	.04
11	3.8	5	.05	3.3	7	.06	4.0	4	.04
12	3.8	4	.04	3.4	7	.06	4.0	4	.04
13	3.8	4	.04	3.9	13	.14	4.2	5	.06
14	3.8	4	.04	5.6	26	.39	4.1	5	.06
15	3.6	4	.04	4.3	16	.19	3.9	5	.05
16	3.6	4	.04	4.9	16	.21	3.8	5	.05
17	3.6	4	.04	5.8	13	.20	3.8	5	.05
18	3.4	4	.04	5.3	18	.26	3.9	5	.05
19	3.4	4	.04	6.0	29	.47	4.7	18	.23
20	3.4	4	.04	5.1	18	.25	4.3	16	.19
21	3.4	4	.04	4.5	9	.11	4.8	15	.19
22	3.4	4	.04	4.4	6	.07	4.5	11	.13
23	3.4	4	.04	4.4	5	.06	4.2	7	.08
24	3.6	4	.04	4.3	5	.06	4.0	7	.08
25	3.8	12	.12	4.1	6	.07	5.2	50	.70
26	4.0	11	.12	3.9	6	.06	5.3	30	.43
27	4.5	20	.24	3.7	6	.06	4.9	19	.25
28	8.0	20	.43	3.6	6	.06	5.5	22	.33
29	14	13	.49	---	---	---	5.0	12	.16
30	15	10	.41	---	---	---	6.2	11	.18
31	11	8	.24	---	---	---	4.5	9	.11
TOTAL	152.4	---	3.52	121.1	---	3.73	131.9	---	3.88

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.6	10	.12	20	107	5.8	7.2	8	.16
2	4.5	9	.11	18	66	3.2	6.6	10	.18
3	4.3	7	.08	16	24	1.0	9.2	10	.25
4	4.3	6	.07	15	16	.65	6.6	8	.14
5	4.8	8	.10	13	15	.53	4.5	9	.11
6	5.3	11	.16	10	12	.32	5.3	10	.14
7	5.3	13	.19	9.8	10	.26	5.7	10	.15
8	5.0	14	.19	9.8	9	.24	5.5	10	.15
9	5.3	11	.16	11	9	.27	5.3	11	.16
10	5.5	8	.12	11	13	.39	4.6	11	.14
11	5.3	6	.09	10	16	.43	4.5	10	.12
12	5.3	8	.11	9.8	14	.37	4.5	9	.11
13	5.3	12	.17	9.8	15	.40	4.3	8	.09
14	5.9	15	.24	9.8	32	.85	4.1	7	.08
15	6.9	20	.37	8.6	10	.23	3.9	6	.06
16	6.9	18	.34	8.0	7	.15	3.8	6	.06
17	6.9	13	.24	7.2	7	.14	3.4	5	.05
18	7.2	16	.31	9.5	28	.72	3.3	6	.05
19	7.7	22	.46	8.9	15	.36	3.1	6	.05
20	6.2	6	.10	7.4	7	.14	3.0	6	.05
21	5.9	10	.16	7.2	19	.37	2.9	6	.05
22	7.7	22	.46	7.4	13	.26	2.7	7	.05
23	12	34	1.1	7.2	8	.16	2.6	7	.05
24	15	42	1.7	6.9	9	.17	2.5	7	.05
25	14	30	1.1	8.0	14	.30	2.5	7	.05
26	11	12	.36	9.8	16	.42	2.4	7	.05
27	10	17	.46	8.6	11	.26	2.4	7	.05
28	12	22	.71	8.3	16	.36	2.2	7	.04
29	15	43	1.7	8.9	14	.34	2.2	8	.05
30	17	71	3.3	7.7	12	.25	2.2	8	.05
31	---	---	---	7.4	9	.18	---	---	---
TOTAL	232.1	---	14.78	310.0	---	19.52	123.0	---	2.79
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.2	8	.05	1.5	5	.02	1.3	4	.01
2	2.2	5	.03	1.4	5	.02	1.3	4	.01
3	2.1	5	.03	1.4	6	.02	1.3	4	.01
4	2.1	5	.03	1.4	6	.02	1.4	4	.02
5	2.0	5	.03	1.4	5	.02	1.4	4	.02
6	2.0	5	.03	1.4	5	.02	1.4	4	.02
7	2.1	5	.03	1.4	5	.02	1.4	4	.02
8	2.0	5	.03	1.5	5	.02	1.4	4	.02
9	2.0	5	.03	1.5	5	.02	1.4	4	.02
10	2.0	5	.03	1.6	5	.02	1.4	4	.02
11	2.0	5	.03	1.5	4	.02	1.4	4	.02
12	1.9	4	.02	1.5	4	.02	1.4	4	.02
13	1.8	4	.02	1.5	4	.02	1.4	4	.02
14	1.8	3	.01	1.4	4	.02	1.4	4	.02
15	1.8	3	.01	1.4	4	.02	1.4	4	.02
16	1.8	3	.01	1.4	4	.02	1.4	4	.02
17	1.7	3	.01	1.4	4	.02	1.4	4	.02
18	1.7	3	.01	1.4	4	.02	1.4	4	.02
19	1.7	3	.01	1.3	4	.01	1.4	4	.02
20	1.7	3	.01	1.4	4	.02	1.4	5	.02
21	1.7	3	.01	1.7	4	.02	1.3	15	.05
22	1.7	3	.01	1.6	4	.02	1.3	10	.04
23	1.7	3	.01	1.5	4	.02	1.4	4	.02
24	1.7	3	.01	1.4	4	.02	1.4	5	.02
25	1.7	4	.02	1.4	4	.02	1.8	13	.06
26	1.7	4	.02	1.6	4	.02	1.5	4	.02
27	1.6	4	.02	2.2	4	.02	1.5	4	.02
28	1.6	4	.02	1.6	4	.02	1.5	4	.02
29	1.5	4	.02	1.4	4	.02	1.5	7	.03
30	1.5	4	.02	1.3	4	.01	1.5	3	.01
31	1.4	5	.02	1.3	4	.01	---	---	---
TOTAL	56.4	---	.64	45.7	---	.59	42.4	---	.66
YEAR	1626.5		56.97						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 18...	1625	5.0	4.5	16	.22	67	--	--	--	--	--
JAN 31...	1600	9.2	.0	8	.20	43	--	--	--	--	--
FEB 14...	1210	5.2	4.0	25	.35	76	--	--	--	--	--
19...	1550	8.3	6.0	53	1.2	90	92	95	100	--	--
MAR 19...	1110	5.2	2.0	24	.34	79	--	--	--	--	--
25...	1025	6.9	3.0	107	2.0	67	--	--	--	--	--
APR 08...	1740	5.2	8.0	20	.28	54	--	--	--	--	--
15...	1745	7.2	8.0	34	.66	73	--	--	--	--	--
19...	1015	8.3	2.5	32	.72	68	--	--	--	--	--
24...	1000	13	6.5	25	.88	44	--	--	--	--	--
30...	2330	21	5.0	100	5.7	19	--	--	--	--	--
MAY 01...	1500	18	12.0	76	3.7	18	--	--	--	--	--
01...	2100	24	5.5	194	13	21	32	49	77	97	100
11...	1645	10	12.0	26	.70	28	--	--	--	--	--
14...	1205	9.8	9.5	47	1.2	89	--	--	--	--	--
18...	2145	11	3.5	32	.95	64	--	--	--	--	--
21...	1615	7.7	10.5	68	1.4	98	99	100	--	--	--

10336710 MARLETTE LAKE NEAR CARSON CITY, NV

LOCATION.--Lat 39°10'22", long 119°54'15", in SW¼SE¼ sec.12, T.15 N., R.18 E., Washoe County, Hydrologic Unit 16050101, Toiyabe National Forest, on west shore 1,000 ft (305 m) upstream from left side of dam, and 7.5 mi (12.1 km) west of Carson City.

DRAINAGE AREA.--2.30 mi² (5.96 km²).

PERIOD OF RECORD.--November 1973 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earthfill dam across the outlet of a small natural lake (at one time called Goodwin Lake) on Marlette Creek, built in 1873 to provide water for fluming lumber from Spooner Summit to Carson City. The dam was built higher in 1876 and used to divert water by flume and siphon to Virginia City, until the flume was abandoned prior to 1963. The dam was raised to its present elevation in 1959. Present capacity, 11,780 acre-ft (14.5 hm³) at spillway elevation 7,838.0 ft (2,389.02 m). Figures given herein represent total contents at 2400 hours. Stored water is used for spawning fish for Pyramid and Walker Lakes (stations 10336500, 10288500) and in dry years is pumped over the mountain to the Hobart system for municipal and domestic use outside the basin in Virginia City and Carson City.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,160 acre-ft (15.0 hm³) Jan. 14-16, 1980, elevation, 7,838.87 ft (2,389.29 m); minimum, 10,970 acre-ft (13.5 hm³) Nov. 10-13, 1976, elevation, 7,835.8 ft (2,388.35 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,060 acre-ft (14.9 hm³) Jan. 28-30, elevation, 7,838.64 ft (2,389.17 m); minimum, 11,090 acre-ft (13.7 hm³) Sept. 30, elevation, 7,836.17 ft (2,388.465 m).

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

7,835	10,650	7,837	11,410
7,836	11,030	7,839	12,220

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11780	11770	11860	11890	12040	11950	12000	12010	11910	11760	11500	11250
2	11770	11770	11860	11890	12030	11950	11990	12000	11910	11760	11490	11240
3	11770	11770	11900	11900	12020	11940	11990	12000	11900	11750	11480	11230
4	11780	11780	11920	11910	12010	11940	11980	12000	11900	11740	11470	11220
5	11780	11780	11910	11910	12000	11940	11970	11990	11890	11740	11470	11220
6	11780	11770	11910	11910	12000	11940	11970	11980	11890	11710	11460	11200
7	11770	11770	11900	11910	11990	11940	11970	11980	11880	11710	11450	11200
8	11770	11780	11910	11910	11990	11930	11970	11980	11880	11710	11450	11190
9	11770	11780	11910	11910	11990	11930	11960	11960	11880	11700	11440	11190
10	11770	11800	11910	11910	11990	11920	11960	11960	11860	11690	11430	11190
11	11760	11830	11910	11910	11980	11920	11960	11960	11830	11680	11430	11180
12	11760	11830	11910	11910	11980	11920	11960	11940	11840	11660	11430	11170
13	11750	11830	11910	11900	11980	11940	11950	11940	11840	11660	11420	11170
14	11760	11830	11910	11900	11990	11930	11960	11920	11830	11650	11410	11170
15	11760	11830	11910	11900	11980	11930	11960	11920	11830	11650	11400	11160
16	11760	11830	11910	11910	11990	11930	11960	11900	11830	11630	11390	11160
17	11760	11830	11910	11910	11980	11930	11960	11900	11830	11630	11390	11160
18	11760	11830	11910	11910	11980	11930	11980	11900	11830	11620	11380	11160
19	11760	11830	11910	11910	11970	11940	12000	11920	11820	11610	11370	11140
20	11760	11830	11910	11900	11960	11940	12000	11930	11820	11600	11350	11140
21	11770	11830	11910	11900	11960	11950	12000	11930	11820	11590	11350	11130
22	11770	11840	11910	11900	11950	11950	12000	11930	11810	11580	11340	11130
23	11770	11850	11910	11910	11940	11940	12010	11930	11810	11580	11330	11120
24	11770	11830	11910	11910	11950	11940	12010	11930	11810	11570	11320	11110
25	11780	11840	11910	11910	11960	11980	12000	11930	11800	11560	11310	11120
26	11770	11840	11910	11930	11950	12000	12010	11930	11790	11550	11300	11120
27	11770	11850	11910	12020	11960	11990	12010	11930	11790	11540	11290	11110
28	11770	11850	11910	12060	11950	11990	12010	11930	11790	11540	11280	11110
29	11770	11830	11900	12060	---	11990	12010	11930	11780	11530	11270	11100
30	11770	11860	11900	12060	---	11990	12010	11930	11770	11520	11270	11090
31	11770	---	11900	12050	---	11990	---	11920	---	11510	11250	---
MAX	11780	11860	11920	12060	12040	12000	12010	12010	11910	11760	11500	11250
MIN	11750	11770	11860	11890	11940	11920	11950	11900	11770	11510	11250	11090
†	7837.95	7838.17	7838.27	7838.61	7838.39	7838.47	7838.53	7838.32	7837.95	7837.26	7836.59	7836.17
‡	+190	+90	+40	+150	-100	+40	+20	-90	-150	-260	-260	-160
CAL YR 1980	MAX	12160	MIN	11750	†	-40						
WTR YR 1981	MAX	12060	MIN	11090	‡	-490						

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

PYRAMID AND WINNEMUCCA LAKES BASIN

10336715 MARLETTE CREEK NEAR CARSON CITY, NV

LOCATION.--Lat 39°10'20", long 119°54'25", in SE4SW4 sec.12, T.15 N., R.18 E., Washoe County, Hydrologic Unit 16050101, Toiyabe National Forest, on left bank 300 ft (90 m) below dam on Marlette Lake, 0.7 mi (1.1 km) upstream from Marlette Reservoir, and 7 mi (11 km) west of Carson City.

DRAINAGE AREA.--2.86 mi² (7.41 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,760 ft (2,365 m), from topographic map.

REMARKS.--Records good. Flow regulated by Marlette Lake (station 10336710).

AVERAGE DISCHARGE.--8 years, 2.06 ft³/s (0.058 m³/s), 1,490 acre-ft/yr (1.84 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19 ft³/s (0.538 m³/s) Jan. 12, 1980, gage height, 2.64 ft (0.805 m); no flow July 12-15, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.2 ft³/s (0.261 m³/s) Jan. 29, gage height, 2.27 ft (0.692 m); minimum daily, 0.01 ft³/s (<0.001 m³/s) Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.15	.32	1.2	6.7	2.6	4.9	5.0	2.4	.04	.02	.02
2	.05	.14	.72	1.2	6.3	2.6	4.9	5.0	2.1	.03	.02	.02
3	.05	.16	.86	1.3	5.7	2.4	4.4	4.6	2.0	.04	.02	.02
4	.05	.15	1.6	1.6	5.3	2.3	4.0	4.4	1.9	.07	.02	.02
5	.05	.12	1.3	1.6	4.9	2.5	3.8	4.3	1.7	.08	.02	.03
6	.05	.14	1.3	1.5	4.1	2.3	3.6	4.0	1.5	.12	.01	.03
7	.05	.25	1.2	1.4	3.8	2.2	3.5	3.8	1.5	.03	.01	.02
8	.05	.19	1.2	1.4	3.7	2.1	3.3	3.4	1.6	.03	.02	.03
9	.05	.14	1.2	1.4	3.8	2.1	3.2	3.2	1.2	.03	.02	.03
10	.05	.14	1.1	1.4	3.6	2.0	3.1	3.2	1.1	.03	.03	.03
11	.05	.14	1.1	1.4	3.5	2.0	3.0	2.9	1.0	.03	.03	.03
12	.03	.20	1.1	1.3	3.2	1.8	2.7	2.8	1.1	.03	.03	.03
13	.05	.21	1.1	1.3	3.3	2.4	2.7	2.8	.69	.03	.03	.03
14	.05	.20	1.1	1.3	3.5	2.5	2.6	3.2	.64	.03	.03	.03
15	.05	.32	1.1	1.3	3.3	2.5	2.6	3.1	.47	.05	.05	.03
16	.05	.25	1.0	1.5	3.2	2.6	2.6	2.5	.55	.05	.05	.03
17	.05	.14	1.0	1.6	3.1	2.4	2.6	2.3	.36	.05	.05	.05
18	.05	.14	1.1	1.6	2.9	2.3	2.8	3.2	.33	.10	.05	.05
19	.05	.14	1.1	1.6	3.4	2.9	4.6	3.9	.30	.14	.05	.05
20	.05	.12	1.1	1.5	3.0	3.2	4.6	3.7	.27	.07	.03	.05
21	.05	.22	1.2	1.5	2.7	3.3	4.4	3.5	.24	.03	.03	.05
22	.05	.11	1.2	1.5	2.5	3.1	4.3	3.3	.27	.02	.02	.07
23	.05	.19	1.1	1.8	2.5	2.9	4.4	3.2	.20	.05	.03	.05
24	.06	.15	1.2	2.1	2.9	2.8	4.6	3.3	.14	.03	.02	.05
25	.07	.07	1.2	1.9	2.9	3.8	4.8	3.1	.13	.03	.02	.03
26	.07	.05	1.2	2.0	2.9	5.8	5.1	3.4	.09	.02	.02	.03
27	.09	.05	1.3	3.9	2.7	5.3	4.8	3.3	.04	.02	.02	.03
28	.14	.06	1.2	7.1	2.6	4.8	4.7	3.0	.03	.02	.02	.03
29	.17	.08	1.2	8.3	---	5.2	4.6	2.9	.03	.02	.02	.03
30	.19	.18	1.2	8.5	---	4.6	4.8	2.8	.03	.02	.02	.03
31	.18	---	1.2	7.6	---	4.4	---	2.6	---	.02	.02	---
TOTAL	2.09	4.60	34.80	74.6	102.0	93.7	116.0	105.7	23.91	1.36	.83	1.03
MEAN	.067	.15	1.12	2.41	3.64	3.02	3.87	3.41	.80	.044	.027	.034
MAX	.19	.32	1.6	8.5	6.7	5.8	5.1	5.0	2.4	.14	.05	.07
MIN	.03	.05	.32	1.2	2.5	1.8	2.6	2.3	.03	.02	.01	.02
AC-FT	4.1	9.1	69	148	202	186	230	210	47	2.7	1.6	2.0
CAL YR 1980 TOTAL	1157.13			MEAN 3.16	MAX 14	MIN .03	AC-FT 2300					
WTR YR 1981 TOTAL	560.62			MEAN 1.54	MAX 8.5	MIN .01	AC-FT 1110					

PYRAMID AND WINNEMUCCA LAKES BASIN
10336715 MARLETTE CREEK NEAR CARSON CITY, NV--Continued

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1977 to current year.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
OCT 22...	1145	.05	57	9.0
DEC 24...	1225	.86	42	4.0
MAR 31...	1100	4.4	44	1.0
MAY 29...	1120	2.9	40	13.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA

LOCATION.--Lat 38°55'12", long 119°58'17", in NW¼SE¼ sec.3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 5 ft (1.52 m) upstream from Martin Avenue Bridge, 500 ft (152 m) upstream from Heavenly Valley Creek, and 1.8 mi (2.9 km) east of Tahoe Valley.

DRAINAGE AREA.--36.7 mi² (95.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,250 ft (1,905 m), from topographic map.

REMARKS.--Records good except those for November to February and August to September, which are fair. Minor diversions for local water supply.

AVERAGE DISCHARGE.--21 years, 34.6 ft³/s (0.980 m³/s), 25,070 acre-ft/yr (30.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 535 ft³/s (15.2 m³/s) Feb. 1, 1963, gage height, 11.14 ft (3.395 m), from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of computation of peak flow (weir formula); no flow for part of Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62 ft³/s (1.76 m³/s) Apr. 30, gage height, 6.78 ft (2.067 m), no peak above base of 100 ft³/s (2.83 m³/s); minimum daily, 5.2 ft³/s (0.15 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	19	17	23	18	22	52	35	13	7.5	5.4
2	19	20	20	17	23	18	20	51	34	13	7.4	5.6
3	19	20	23	18	23	17	20	44	34	12	7.4	5.7
4	19	20	29	18	23	17	20	42	32	12	7.3	5.8
5	19	20	25	18	21	17	22	40	32	12	7.3	5.9
6	18	20	23	18	20	17	25	37	31	12	7.3	6.0
7	18	20	21	18	19	17	25	36	31	12	7.2	6.1
8	18	22	20	18	18	17	24	35	31	11	7.2	6.2
9	18	20	19	18	16	17	26	36	31	11	7.1	6.5
10	18	20	19	18	16	18	27	38	29	11	7.0	6.6
11	18	22	19	18	16	18	25	38	28	10	6.9	6.6
12	22	21	19	18	16	17	24	37	27	10	6.9	6.4
13	21	20	19	18	20	17	25	37	26	10	6.8	6.5
14	20	20	19	18	36	17	28	39	25	10	6.8	7.2
15	21	20	19	18	24	17	31	36	23	9.8	6.7	7.3
16	21	21	19	19	21	17	32	35	22	9.6	6.6	7.0
17	21	21	19	18	27	17	33	33	21	9.5	6.6	6.7
18	20	20	19	18	24	17	34	37	20	9.1	6.6	6.9
19	20	20	19	19	27	19	37	38	19	9.2	6.5	6.2
20	20	19	19	18	26	18	32	33	18	8.7	6.4	6.1
21	20	19	19	18	23	18	31	30	18	8.0	6.2	6.4
22	20	19	21	19	22	18	37	29	17	7.5	6.1	6.3
23	19	19	19	20	21	18	44	29	16	7.2	5.8	6.3
24	19	18	18	18	17	18	48	29	16	7.8	5.4	6.1
25	19	18	19	19	23	27	45	34	15	7.5	5.3	9.8
26	20	18	19	27	20	27	43	38	15	7.5	5.6	8.2
27	20	18	19	26	19	23	37	40	15	7.5	5.4	7.1
28	20	18	19	21	19	23	40	36	14	7.5	5.3	7.1
29	20	18	18	22	---	25	47	34	14	7.5	5.3	7.3
30	21	18	19	22	---	25	50	35	14	7.5	5.2	7.0
31	21	---	18	22	---	22	---	35	---	7.5	5.3	---
TOTAL	608	589	616	594	603	591	954	1143	703	297.9	200.4	198.3
MEAN	19.6	19.6	19.9	19.2	21.5	19.1	31.8	36.9	23.4	9.61	6.46	6.61
MAX	22	22	29	27	36	27	50	52	35	13	7.5	9.8
MIN	18	18	18	17	16	17	20	29	14	7.2	5.2	5.4
AC-FT	1210	1170	1220	1180	1200	1170	1890	2270	1390	591	397	393

CAL YR 1980 TOTAL 19258.0 MEAN 52.6 MAX 254 MIN 15 AC-FT 38200
WTR YR 1981 TOTAL 7097.6 MEAN 19.4 MAX 52 MIN 5.2 AC-FT 14080

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974, 1978, 1980 to current year.

SPECIFIC CONDUCTANCE: February to September 1981.

WATER TEMPERATURES: Water years 1974, 1978, 1980 to current year.

SEDIMENT RECORDS: Water years 1974, 1978, 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February to September 1981.

WATER TEMPERATURES: February to September 1981.

SEDIMENT RECORDS: October 1973 to September 1974, October 1977 to June 1978, March 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 160 micromhos Aug. 24, 1981, minimum recorded, 27 micromhos on many days during May and June 1981.

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug 12, 1981; minimum recorded, 0°C on many days during February to April 1981.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 223 mg/L July 9, 1974; minimum daily mean, 0 mg/L Oct. 15, 16, 1973.

SEDIMENT DISCHARGE: Maximum daily, 67 tons (61 metric tons) July 9, 1974; minimum daily, 0 ton (0 metric ton) Oct. 15, 16, 1973.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 160 micromhos Aug. 24, minimum recorded, 27 micromhos many days during May and June.

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug 12, minimum recorded, 0°C on many days during February to April.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 65 mg/L Apr. 24; minimum daily mean, 1 mg/L on many days during September to November.

SEDIMENT DISCHARGE: Maximum daily, 8.4 tons (7.6 metric tons) Apr. 24; minimum daily, 0.02 ton (0.02 metric ton) Sept. 21-24.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), FEBRUARY TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	45	42	30	29	35	43	53
2					---	45	43	29	28	36	44	53
3					---	45	44	31	28	37	44	52
4					---	45	44	32	29	38	44	53
5					---	45	43	32	30	39	44	53
6					---	46	42	32	29	38	44	52
7					---	46	42	34	29	38	45	51
8					---	46	42	34	29	38	46	52
9					---	46	42	33	29	39	47	53
10					---	46	42	32	30	39	49	53
11					---	45	42	31	30	40	48	54
12					---	45	43	31	29	40	47	54
13					---	44	43	30	29	39	47	54
14					---	45	43	30	29	39	47	54
15					---	45	41	30	29	39	48	56
16					---	45	40	31	30	40	48	55
17					---	45	39	31	32	41	48	53
18					---	45	36	31	32	41	48	53
19					50	45	36	32	33	42	50	54
20					48	45	38	32	34	42	52	55
21					50	44	39	33	35	41	52	54
22					47	45	37	33	35	42	53	54
23					47	44	33	33	36	42	52	54
24					47	45	31	33	37	41	61	53
25					45	42	31	31	38	41	54	54
26					43	41	33	30	39	41	53	56
27					45	42	33	30	37	41	53	58
28					44	43	34	30	36	41	53	57
29					---	42	33	31	35	41	51	56
30					---	43	31	30	35	41	52	57
31					---	42	---	29	---	44	52	---
MONTH					---	44	39	31	32	40	49	54

PYRAMID AND WINNEMUCCA LAKES BASIN

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER TO SEPTEMBER 1981

DAY	MAX	OCT DAILY	MIN	MAX	NOV DAILY	MIN	MAX	DEC DAILY	MIN	MAX	JAN DAILY	MIN	MAX	FEB DAILY	MIN	MAX	MAR DAILY	MIN
1	--	--	--	--	--	--	--	--	--	--	2.0	--	--	--	--	2.0	--	0.0
2	--	8.5	--	--	--	--	--	3.0	--	--	--	--	--	--	--	4.0	--	1.0
3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.5	--	0.0
4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.5	--	0.5
5	--	--	--	--	6.0	--	--	--	--	--	--	--	--	--	--	3.0	--	0.5
6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0	--	0.5
7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	0.5
8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.5	--	0.0
9	--	--	--	--	--	--	--	0.0	--	--	1.0	--	--	--	--	7.0	--	0.0
10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.5	--	0.5
11	--	--	--	--	3.5	--	--	--	--	--	--	--	--	--	--	7.0	--	0.0
12	--	--	--	--	--	--	--	0.5	--	--	--	--	--	--	--	6.0	--	0.0
13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5	--	0.5
14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.5	--	0.0
15	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	5.0	--	0.0
16	--	--	--	--	--	--	--	--	--	--	3.0	--	--	--	--	7.0	--	0.5
17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0	--	0.0
18	--	--	--	--	2.0	--	--	--	--	--	--	--	--	--	--	3.0	--	0.0
19	--	--	--	--	--	--	--	--	--	--	--	--	5.5	--	1.5	4.0	--	0.5
20	--	--	--	--	--	--	--	--	--	--	--	--	4.0	--	0.0	5.0	--	0.0
21	--	--	--	--	--	--	--	--	--	--	4.5	--	3.0	--	0.0	4.5	--	0.0
22	--	--	--	--	--	--	--	--	--	--	--	--	4.0	--	0.0	7.5	--	1.0
23	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	0.5	6.5	--	0.0
24	--	--	--	--	--	--	--	--	--	--	--	--	1.5	--	0.0	7.0	--	0.0
25	--	--	--	--	0.0	--	--	--	--	--	--	--	1.0	--	0.0	4.5	--	1.0
26	--	--	--	--	--	--	--	3.0	--	--	--	--	2.5	--	0.0	3.5	--	0.0
27	--	--	--	--	--	--	--	--	--	--	1.5	--	1.5	--	0.0	3.0	--	0.0
28	--	5.5	--	--	--	--	--	--	--	--	--	--	2.0	--	0.0	7.0	--	0.0
29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	0.5
30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.5	--	0.0
31	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	4.5	--	0.0
MONTH	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.2	--	0.2

DAY	MAX	APR DAILY	MIN	MAX	MAY DAILY	MIN	MAX	JUN DAILY	MIN	MAX	JUL DAILY	MIN	MAX	AUG DAILY	MIN	MAX	SEP DAILY	MIN
1	5.0	--	0.5	10.0	--	6.0	14.0	--	8.0	19.5	--	10.0	20.5	--	9.5	22.0	--	10.5
2	7.5	--	0.5	10.5	--	6.0	15.5	--	9.0	20.0	--	11.5	20.5	--	9.0	22.0	--	9.5
3	8.0	--	0.0	10.0	--	3.0	15.5	--	7.5	20.5	--	11.5	20.0	--	8.5	22.0	--	9.5
4	8.5	--	0.0	10.0	--	3.0	17.0	--	8.5	21.0	--	12.5	21.0	--	9.5	21.5	--	9.0
5	8.5	--	1.0	10.0	--	3.5	17.5	--	10.0	21.0	--	13.0	21.0	--	9.0	21.5	--	9.0
6	8.5	--	1.5	10.0	--	3.0	17.5	--	10.0	18.0	--	13.0	22.5	--	10.5	22.0	--	9.0
7	8.5	--	1.0	10.0	--	2.5	16.5	--	9.5	19.5	--	10.5	23.0	--	11.5	21.5	--	9.0
8	9.0	--	1.0	11.5	--	3.0	14.0	--	10.5	19.5	--	9.5	22.5	--	11.5	16.0	--	10.0
9	8.5	--	2.0	12.5	--	4.5	17.0	--	9.5	19.5	--	9.5	22.0	--	12.5	21.5	--	10.0
10	8.5	--	2.0	12.5	--	5.0	15.5	--	8.5	19.5	--	10.5	23.0	--	13.0	22.5	--	10.5
11	8.5	--	1.0	12.5	--	4.5	13.5	--	8.0	19.0	--	9.5	23.5	--	12.5	23.0	--	10.5
12	8.5	--	0.5	13.0	--	5.0	14.0	--	8.0	18.5	--	9.0	24.0	--	12.5	21.5	--	11.0
13	9.5	--	1.0	13.5	--	5.5	12.5	--	5.0	18.5	--	7.5	23.5	--	12.5	20.0	--	11.5
14	10.0	--	1.5	11.5	--	7.0	13.0	--	5.0	19.5	--	9.0	23.5	--	12.5	20.5	--	10.5
15	8.5	--	2.5	7.0	--	4.5	14.0	--	5.0	20.5	--	10.0	23.0	--	11.5	20.0	--	11.0
16	9.5	--	2.5	10.5	--	3.5	16.0	--	7.0	20.0	--	11.0	22.0	--	12.0	18.5	--	10.5
17	8.5	--	3.0	10.5	--	3.0	16.5	--	8.0	20.5	--	10.5	18.5	--	12.5	15.5	--	10.0
18	6.5	--	3.5	8.0	--	5.5	17.5	--	9.0	20.0	--	9.5	20.0	--	11.0	18.0	--	8.5
19	6.5	--	2.0	10.0	--	4.5	19.0	--	9.5	20.5	--	9.0	20.5	--	11.5	19.0	--	10.0
20	8.5	--	2.0	8.0	--	3.5	19.5	--	10.0	20.5	--	10.0	20.5	--	9.5	19.0	--	9.5
21	8.5	--	2.5	11.0	--	4.5	19.0	--	10.0	20.0	--	9.5	20.0	--	9.0	18.0	--	8.0
22	11.5	--	3.5	12.5	--	5.0	19.5	--	11.0	20.0	--	9.5	21.0	--	10.0	17.0	--	6.5
23	10.0	--	4.5	11.5	--	6.5	19.5	--	10.5	20.0	--	10.5	21.0	--	9.5	13.5	--	6.5
24	8.5	--	5.5	11.5	--	7.5	19.0	--	10.0	20.5	--	10.0	21.0	--	9.5	10.5	--	6.0
25	8.5	--	4.0	10.5	--	8.0	20.0	--	12.5	20.0	--	10.0	21.0	--	9.5	13.5	--	7.5
26	6.0	--	3.5	10.5	--	7.0	20.5	--	11.5	20.5	--	10.5	22.0	--	11.0	15.0	--	7.0
27	9.0	--	2.0	13.0	--	6.5	20.0	--	11.5	21.0	--	11.5	22.5	--	11.5	15.0	--	7.5
28	11.5	--	3.5	14.5	--	6.5	20.5	--	11.5	21.0	--	11.0	22.5	--	12.0	13.0	--	8.5
29	12.0	--	4.5	14.5	--	7.5	20.5	--	11.5	20.5	--	10.5	22.0	--	11.0	14.5	--	8.0
30	10.0	--	6.0	15.5	--	8.0	19.0	--	11.5	20.0	--	9.5	22.0	--	11.0	15.0	--	6.5
31	--	--	--	15.0	--	7.5	--	--	--	20.5	--	9.5	22.5	--	10.5	--	--	--
MONTH	8.7	--	2.3	11.3	--	5.2	17.1	--	9.2	20.0	--	10.3	21.7	--	10.9	18.4	--	9.0

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	19	5	.26	20	1	.05	19	4	.21
2	19	5	.26	20	1	.05	20	4	.22
3	19	5	.26	20	1	.05	23	14	1.1
4	19	5	.26	20	1	.05	29	20	1.6
5	19	5	.26	20	1	.05	25	23	1.6
6	18	4	.19	20	1	.05	23	24	1.5
7	18	4	.19	20	1	.05	21	24	1.4
8	18	4	.19	22	1	.06	20	24	1.3
9	18	4	.19	20	1	.05	19	24	1.2
10	18	4	.19	20	1	.05	19	25	1.3
11	18	4	.19	22	3	.18	19	26	1.3
12	22	5	.30	21	3	.17	19	26	1.3
13	21	4	.23	20	3	.16	19	26	1.3
14	20	4	.22	20	7	.38	19	22	1.1
15	21	3	.17	20	9	.49	19	10	.51
16	21	3	.17	21	9	.51	19	7	.36
17	21	3	.17	21	9	.51	19	7	.36
18	20	2	.11	20	9	.49	19	7	.36
19	20	2	.11	20	9	.49	19	7	.36
20	20	2	.11	19	9	.46	19	6	.31
21	20	2	.11	19	9	.46	19	5	.26
22	20	2	.11	19	9	.46	21	5	.28
23	19	2	.10	19	9	.46	19	6	.31
24	19	1	.05	18	9	.44	18	6	.29
25	19	1	.05	18	9	.44	19	5	.26
26	20	1	.05	18	9	.44	19	4	.21
27	20	1	.05	18	9	.44	19	4	.21
28	20	1	.05	18	9	.44	19	4	.21
29	20	1	.05	18	5	.24	18	8	.39
30	21	1	.06	18	4	.19	19	10	.51
31	21	1	.06	---	---	---	18	9	.44
TOTAL	608	---	4.77	589	---	8.36	616	---	22.06

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	17	5	.23	23	20	1.2	18	11	.53
2	17	6	.28	23	20	1.2	18	11	.53
3	18	3	.15	23	20	1.2	17	10	.46
4	18	2	.10	23	20	1.2	17	8	.37
5	18	5	.24	21	18	1.0	17	5	.23
6	18	6	.29	20	15	.81	17	4	.18
7	18	6	.29	19	15	.77	17	4	.18
8	18	6	.29	18	15	.73	17	4	.18
9	18	6	.29	16	15	.65	17	3	.14
10	18	6	.29	16	12	.52	18	3	.15
11	18	6	.29	16	10	.43	18	3	.15
12	18	6	.29	16	8	.35	17	3	.14
13	18	6	.29	20	24	1.7	17	3	.14
14	18	6	.29	36	55	5.3	17	2	.09
15	18	5	.24	24	10	.65	17	2	.09
16	19	3	.15	21	13	.74	17	2	.09
17	18	2	.10	27	15	1.1	17	2	.09
18	18	2	.10	24	10	.65	17	3	.14
19	19	2	.10	27	10	.73	19	3	.15
20	18	2	.10	26	11	.77	18	3	.15
21	18	2	.10	23	11	.68	18	3	.15
22	19	2	.10	22	11	.65	18	3	.15
23	20	2	.11	21	10	.57	18	3	.15
24	18	10	.49	17	10	.46	18	3	.15
25	19	10	.51	23	12	.75	27	52	4.6
26	27	37	3.0	20	12	.65	27	40	2.9
27	26	36	2.9	19	12	.62	23	20	1.2
28	21	22	1.2	19	12	.62	23	7	.43
29	22	20	1.2	---	---	---	25	4	.27
30	22	20	1.2	---	---	---	25	9	.61
31	22	20	1.2	---	---	---	22	16	.95
TOTAL	594	---	16.41	603	---	26.70	591	---	15.74

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	22	10	.59	52	34	4.8	35	11	1.0
2	20	8	.43	51	18	2.5	34	13	1.2
3	20	6	.32	44	18	2.1	34	11	1.0
4	20	4	.22	42	13	1.5	32	9	.78
5	22	4	.24	40	11	1.2	32	10	.86
6	25	5	.34	37	9	.90	31	9	.75
7	25	4	.27	36	8	.78	31	10	.84
8	24	4	.26	35	8	.76	31	9	.75
9	26	6	.42	36	12	1.2	31	8	.67
10	27	4	.29	38	13	1.3	29	8	.63
11	25	5	.34	38	13	1.3	28	7	.53
12	24	4	.26	37	9	.90	27	6	.44
13	25	6	.41	37	9	.90	26	5	.35
14	28	8	.60	39	13	1.4	25	5	.34
15	31	11	.92	36	7	.68	23	5	.31
16	32	12	1.0	35	5	.47	22	5	.30
17	33	11	.98	33	5	.45	21	5	.28
18	34	11	1.0	37	10	1.0	20	5	.27
19	37	13	1.3	38	11	1.1	19	5	.26
20	32	6	.52	33	11	.98	18	5	.24
21	31	9	.75	30	13	1.1	18	4	.19
22	37	28	3.1	29	10	.78	17	4	.18
23	44	64	7.6	29	7	.55	16	4	.17
24	48	65	8.4	29	6	.47	16	4	.17
25	45	30	3.6	34	7	.64	15	4	.16
26	43	11	1.3	38	9	.92	15	4	.16
27	37	12	1.2	40	20	2.2	15	4	.16
28	40	15	1.6	36	12	1.2	14	3	.11
29	47	25	3.2	34	10	.92	14	3	.11
30	50	33	4.5	35	8	.76	14	3	.11
31	---	---	---	35	9	.85	---	---	---
TOTAL	954	---	45.96	1143	---	36.61	703	---	13.32

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	13	3	.11	7.5	6	.12	5.4	3	.04
2	13	4	.14	7.4	6	.12	5.6	3	.05
3	12	5	.16	7.4	6	.12	5.7	3	.05
4	12	5	.16	7.3	6	.12	5.8	3	.05
5	12	6	.19	7.3	7	.14	5.9	3	.05
6	12	7	.23	7.3	7	.14	6.0	3	.05
7	12	8	.26	7.2	7	.14	6.1	3	.05
8	11	9	.27	7.2	7	.14	6.2	4	.07
9	11	11	.33	7.1	7	.13	6.5	4	.07
10	11	10	.30	7.0	7	.13	6.6	4	.07
11	10	9	.24	6.9	6	.11	6.6	4	.07
12	10	8	.22	6.9	6	.11	6.4	4	.07
13	10	6	.16	6.8	6	.11	6.5	4	.07
14	10	5	.14	6.8	6	.11	7.2	4	.08
15	9.8	5	.13	6.7	5	.09	7.3	3	.06
16	9.6	5	.13	6.6	5	.09	7.0	3	.06
17	9.5	5	.13	6.6	5	.09	6.7	3	.05
18	9.1	5	.12	6.6	5	.09	6.9	2	.04
19	9.2	5	.12	6.5	5	.09	6.2	2	.03
20	8.7	5	.12	6.4	5	.09	6.1	2	.03
21	8.0	5	.11	6.2	4	.07	6.4	1	.02
22	7.5	5	.10	6.1	4	.07	6.3	1	.02
23	7.2	4	.08	5.8	4	.06	6.3	1	.02
24	7.8	4	.08	5.4	4	.06	6.1	1	.02
25	7.5	4	.08	5.3	4	.06	9.8	5	.13
26	7.5	4	.08	5.6	4	.06	8.2	4	.09
27	7.5	4	.08	5.4	4	.06	7.1	4	.08
28	7.5	4	.08	5.3	3	.04	7.1	4	.08
29	7.5	4	.08	5.3	3	.04	7.3	4	.08
30	7.5	5	.10	5.2	3	.04	7.0	4	.08
31	7.5	6	.12	5.3	3	.04	---	---	---
TOTAL	297.9	---	4.65	200.4	---	2.88	198.3	---	1.73
YEAR	7097.6		199.19						

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
NOV										
25...	1140	18	.0	9	.44	55	--	--	--	--
DEC										
09...	1330	19	.0	24	1.2	53	--	--	--	--
JAN										
27...	1440	35	1.5	66	6.2	37	--	--	--	--
FEB										
14...	1450	39	2.5	72	7.6	33	--	--	--	--
MAR										
25...	1225	26	2.5	58	4.1	62	--	--	--	--
25...	1740	39	3.5	100	11	44	60	84	97	100
APR										
15...	1440	29	8.0	9	.70	66	--	--	--	--
17...	1750	30	8.0	9	.73	70	--	--	--	--
19...	0535	38	2.0	14	1.4	56	--	--	--	--
22...	1915	44	9.5	40	4.8	54	--	--	--	--
23...	2335	59	6.5	122	19	27	--	--	--	--
26...	0315	48	5.0	16	2.1	53	--	--	--	--
28...	1915	43	10.0	11	1.3	100	--	--	--	--
30...	2130	62	10.0	58	9.7	37	--	--	--	--
MAY										
03...	2255	46	6.5	17	2.1	44	--	--	--	--
04...	0640	42	3.0	9	1.0	58	--	--	--	--
06...	0545	39	3.0	10	1.1	54	--	--	--	--
09...	1350	34	11.5	10	.92	49	--	--	--	--
16...	1705	35	10.0	7	.66	64	--	--	--	--
18...	2145	46	6.5	18	2.2	57	--	--	--	--
25...	2200	36	8.5	9	.87	48	--	--	--	--
26...	2145	42	8.5	12	1.4	57	--	--	--	--
27...	1040	41	8.0	19	2.1	35	--	--	--	--
JUN										
05...	0035	32	12.0	8	.69	63	--	--	--	--
JUL										
09...	1235	12	16.5	12	.39	53	--	--	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

10337000 LAKE TAHOE AT TAHOE CITY, CA

LOCATION.--Lat 30°10'51", long 120°07'06", in NE¼NE¼ sec.5, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050101, on U.S. Coast Guard pier at Lake Forest, 1.1 mi (1.8 km) northeast of Tahoe City, and 1.8 mi (2.9 km) northeast of Lake Tahoe outlet dam on Truckee River at Tahoe City.

DRAINAGE AREA.--506 mi² (1,311 km²), at lake outlet.

PERIOD OF RECORD.--April 1900 to current year. Monthend elevations only for October 1943 to September 1957, published in WSP 1734. Prior to October 1961, published as "at Tahoe."

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,220.00 ft (1,895.856 m) Bureau of Reclamation datum, 6,218.86 ft (1,895.508 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1957, nonrecording gages at several sites near outlet of lake at same datum. Oct. 1, 1957, to May 8, 1958, water-stage recorder on left wingwall of dam at outlet of lake at same datum. May 9, 1958, to Sept. 30, 1968, water-stage recorder on pier, 1,000 ft (300 m) east of dam at lake outlet.

REMARKS.--Lake levels regulated by a 17-gate concrete dam at outlet of lake; storage began about 1874. Monthly figures given herein represent usable contents. Usable capacity, 744,600 acre-ft (918 hm³) between elevations 6,223 ft (1,896.8 m), natural rim of lake and 6,229.1 ft (1,898.63 m), maximum permissible elevation by Federal Court decree. Lake elevations are referred to Bureau of Reclamation datum because that datum is used as the official reference point by all local, State, and Federal agencies. There are minor diversions for domestic purposes, irrigation, and power.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,231.26 ft (1,899.288 m) July 14, 15, 17, 18, 1907; minimum, 6,221.74 ft (1,896.386 m) Dec. 26, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,226.53 ft (1,897.846 m) June 6, 8; minimum, 6,224.54 ft (1,897.240 m) Sept. 30.

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

6,223	0	6,227	486,800
6,224	121,400	6,228	609,300
6,225	243,000	6,229	732,300
6,226	364,800		

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.39	6.08	5.78	5.67	5.87	5.89	6.07	6.26	6.52	6.26	5.69	5.10
2	6.38	6.08	5.80	5.65	5.86	5.89	6.06	6.24	6.48	6.25	5.67	5.09
3	6.38	6.07	5.92	5.67	5.85	5.89	6.06	6.25	6.49	6.24	5.67	5.08
4	6.37	6.07	5.85	5.68	5.85	5.89	6.05	6.25	6.50	6.22	5.63	5.05
5	6.37	6.06	5.82	5.66	5.83	5.89	6.05	6.25	6.50	6.22	5.63	5.03
6	6.37	6.06	5.80	5.65	5.83	5.88	6.05	6.25	6.53	6.20	5.61	5.02
7	6.37	6.07	5.80	5.65	5.83	5.88	6.05	6.25	6.51	6.16	5.60	4.98
8	6.36	6.02	5.76	5.65	5.83	5.88	6.04	6.26	6.53	6.12	5.60	4.96
9	6.35	6.00	5.74	5.65	5.83	5.88	6.04	6.27	6.48	6.11	5.57	4.95
10	6.34	6.02	5.73	5.64	5.83	5.88	6.05	6.27	6.48	6.08	5.57	4.94
11	6.38	6.02	5.73	5.63	5.83	5.87	6.03	6.27	6.52	6.06	5.56	4.92
12	6.32	6.02	5.72	5.63	5.83	5.88	6.04	6.28	6.45	6.03	5.53	4.91
13	6.30	6.00	5.72	5.63	5.92	5.90	6.04	6.28	6.43	6.00	5.52	4.90
14	6.26	5.97	5.71	5.63	5.89	5.89	6.04	6.28	6.42	6.02	5.50	4.88
15	6.25	5.96	5.71	5.62	5.89	5.89	6.04	6.29	6.41	5.98	5.48	4.87
16	6.26	5.95	5.70	5.62	5.90	5.88	6.05	6.30	6.38	5.97	5.47	4.86
17	6.25	5.93	5.70	5.61	5.90	5.88	6.06	6.33	6.39	5.95	5.45	4.85
18	6.24	5.92	5.71	5.60	5.90	5.87	6.09	6.40	6.39	5.95	5.43	4.82
19	6.23	5.92	5.70	5.60	5.90	5.91	6.12	6.39	6.39	5.92	5.41	4.81
20	6.23	5.90	5.70	5.60	5.92	5.91	6.13	6.38	6.37	5.91	5.36	4.79
21	6.23	5.88	5.70	5.60	5.89	5.92	6.13	6.38	6.37	5.89	5.35	4.73
22	6.22	5.87	5.70	5.59	5.89	5.92	6.14	6.39	6.36	5.87	5.35	4.71
23	6.20	5.85	5.70	5.61	5.98	5.92	6.15	6.40	6.35	5.87	5.31	4.70
24	6.18	5.84	5.68	5.59	5.90	5.92	6.15	6.43	6.35	5.85	5.30	4.66
25	6.20	5.83	5.68	5.58	5.91	6.01	6.22	6.42	6.34	5.84	5.27	4.65
26	6.17	5.82	5.68	5.58	5.90	6.06	6.19	6.45	6.33	5.83	5.23	4.63
27	6.17	5.82	5.68	5.83	5.90	6.05	6.20	6.46	6.31	5.81	5.22	4.62
28	6.12	5.85	5.68	5.87	5.89	6.04	6.21	6.47	6.30	5.78	5.21	4.57
29	6.13	5.77	5.67	5.88	---	6.06	6.21	6.48	6.28	5.76	5.17	4.55
30	6.12	5.79	5.67	5.88	---	6.06	6.23	6.48	6.27	5.74	5.14	4.54
31	6.12	---	5.67	5.87	---	6.10	---	6.49	---	5.72	5.14	---
MEAN	6.27	5.95	5.73	5.67	5.88	5.93	6.10	6.34	6.41	5.99	5.44	4.84
MAX	6.39	6.08	5.92	5.88	5.98	6.10	6.23	6.49	6.53	6.26	5.69	5.10
MIN	6.12	5.77	5.67	5.58	5.83	5.87	6.03	6.24	6.27	5.72	5.14	4.54
†	379400	339200	324600	348900	351400	377000	392900	424600	397700	330700	260100	187100
‡	-33000	-40200	-14600	+24300	+2500	+25600	+15900	+31700	-26900	-67000	-70600	-73000

CAL YR 1980 † +240800

WTR YR 1981 † -225300

† Usable contents, in acre-feet, at end of month.

‡ Change in contents, in acre-feet.

NOTE.--Add 6,220 ft to obtain elevation, Bureau of Reclamation datum, at 2400 hours.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA

LOCATION.--Lat 39°09'59", long 120°08'36", in NE&NW¼ sec.7, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050102 (revised), on left bank 510 ft (155 m) downstream from dam at outlet of Lake Tahoe at Tahoe City.

DRAINAGE AREA.--507 mi² (1,313 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1895 to February 1896, March 1900 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Prior to October 1961, published as "at Tahoe."

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,216.59 ft (1,894.817 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1912, nonrecording gage at site 370 ft (113 m) upstream at different datum. Nov. 12, 1912, to Sept. 30, 1937, nonrecording gage, Oct. 1, 1937, to Aug. 21, 1957, water-stage recorder at datum 2.26 ft (0.689 m) higher and Aug. 22, 1957, to July 10, 1960, at datum 2.42 ft (0.738 m) higher; all at site 270 ft (82 m) upstream.

REMARKS.--Records excellent. Flow regulated by Lake Tahoe, operating capacity, 744,600 acre-ft (918 hm³). There are several diversions for irrigation, power, and domestic water supply. In addition, sewer effluent is pumped from the Lake Tahoe basin.

AVERAGE DISCHARGE (unadjusted).--81 years (water years 1901-81), 242 ft³/s (6.853 m³/s), 175,300 acre-ft/yr (216 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft³/s (74.5 m³/s) June 19, 1969, gage height, 9.32 ft (2.841 m); no flow for parts of many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 482 ft³/s (13.7 m³/s) Aug. 16, gage height, 4.70 ft (1.433 m); minimum daily, 12 ft³/s (0.34 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	142	218	182	145	60	62	72	72	418	424	431
2	75	144	178	182	145	62	61	72	73	404	424	432
3	75	144	175	182	145	66	61	71	72	405	425	430
4	76	143	176	182	142	67	60	71	72	405	425	428
5	76	143	172	182	140	67	59	71	70	404	426	428
6	76	119	172	182	140	67	66	70	70	394	427	428
7	75	101	171	181	139	66	80	70	70	375	427	430
8	75	99	172	181	139	66	76	69	71	373	426	419
9	76	100	172	183	139	66	73	70	83	386	426	365
10	42	101	170	183	139	66	70	71	139	421	425	354
11	13	102	172	182	140	65	70	70	162	421	425	354
12	13	101	174	182	139	65	69	69	162	419	427	353
13	13	101	174	187	141	65	69	69	162	419	428	353
14	14	101	176	207	143	69	69	69	161	424	426	329
15	13	101	176	213	139	76	70	69	197	426	452	289
16	13	103	176	213	138	75	69	69	287	426	480	289
17	12	112	176	213	116	71	69	67	313	424	458	289
18	13	128	176	214	82	66	69	71	311	424	434	288
19	13	132	176	209	67	66	70	70	311	424	430	292
20	99	131	176	198	59	65	69	69	311	421	428	295
21	150	131	181	178	57	66	69	64	310	419	430	293
22	142	133	181	153	57	65	71	70	328	424	430	292
23	141	133	181	141	59	65	71	70	345	426	361	291
24	144	149	181	137	58	66	71	71	347	426	261	289
25	144	179	181	137	57	72	71	72	374	424	235	290
26	144	179	181	137	59	68	70	73	420	421	281	291
27	143	179	179	141	61	66	68	72	424	421	368	289
28	140	179	179	144	61	63	69	70	423	421	424	290
29	141	180	177	145	---	62	70	70	423	421	435	292
30	143	220	182	145	---	62	70	71	424	424	434	297
31	143	---	182	144	---	62	---	70	---	421	433	---
TOTAL	2512	4010	5513	5440	3046	2053	2061	2172	6987	12861	12735	10190
MEAN	81.0	134	178	175	109	66.2	68.7	70.1	233	415	411	340
MAX	150	220	218	214	145	76	80	73	424	426	480	432
MIN	12	99	170	137	57	60	59	64	70	373	235	288
AC-FT	4980	7950	10940	10790	6040	4070	4090	4310	13860	25510	25260	20210
CAL YR 1980	TOTAL	40329	MEAN 110	MAX 337	MIN 12	AC-FT	79990					
WTR YR 1981	TOTAL	69580	MEAN 191	MAX 480	MIN 12	AC-FT	138000					

10337500 TRUCKEE RIVER AT TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD. - -

CHEMICAL ANALYSES: Water years 1978 to current year.

COOPERATION.--Chemical-quality records furnished by California Department of Water Resources.

DATE	TIME	STREAM FLOW, INST-CFS	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM CA,DISS (MG/L)	MGNSIUM MG,DISS (MG/L)
80/10/29	10 50	141	95	7.7		8.8			30	9	2
80/11/26	12 40	179	95	7.6		9.5			30	9	2
80/12/29	10 40	177	92	7.6		9.7			30	9	2
81/02/02	11 00	145	93	8.3		10.1			30	9	2
81/03/02	13 00	62	94	7.9		10.5			30	9	2
81/03/25	12 40	79		7.4		10.1	13	1.1	28	8	2
81/04/30	09 15	70	96	7.6		9.4			30	9	2
81/05/29	11 30	70	94	8.0		9.1			30	9	2
81/06/24	10 25	345	94	7.8		8.6			30	9	2

DATE	TIME	SODIUM NA+DISS (MG/L)	POTASSIUM K+DISS (MG/L)	ALKALINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)
80/10/29	10 50	6	1.7	39	3	2	66		0.00	0.00
80/11/26	12 40	6	1.7	40	2	2	48		0.00	0.00
80/12/29	10 40	6	1.8	39	1	2	50		0.00	0.00
81/02/02	11 00	6	1.7	40	1	2	57		0.02	0.00
81/03/02	13 00	6	1.7	41	0	2	63		0.00	0.00
81/03/25	12 40		1.6	37	0	9		71	0.01	0.00
81/04/30	09 15	6	1.7	40	0	1	53		0.00	0.00
81/05/29	11 30	6	1.7	40	0	1	63		0.00	0.00
81/06/24	10 25	6	1.7	40	0	2	62		0.01	0.00

DATE	TIME	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)	PHOS-DIS ORTHO P (MG/L)	BORON B+DISS (UG/L)	ORGANIC CARBON T (MG/L)
80/10/29	10 50	0.10	0.00	0.00	0	
80/11/26	12 40	0.30	0.02	0.00	0	
80/12/29	10 40	0.00	0.00	0.00	0	
81/02/02	11 00	0.00	0.00	0.00	0	
81/03/02	13 00	0.00	0.00	0.00	0	
81/03/25	12 40	0.20	0.11	0.00	0	4.0
81/04/30	09 15	0.00	0.00	0.00	0	
81/05/29	11 30	0.10	0.00	0.00	200	
81/06/24	10 25	0.10	0.01	0.00	0	

[illegible]

LOCATION.--Lat 39°17'17", long 120°12'16", in SW¼NE¼ sec.28, T.17 N., R.16 E., Placer County, Hydrologic Unit 16050102, Tahoe National Forest, on left bank 1.4 mi (2.3 km) downstream from Cabin Creek and 2.5 mi (4.0 km) southwest of Truckee.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WDR CA-77-3: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,860 ft (1,786 m), from topographic map.

REMARKS.--Records excellent. Flow regulated by Lake Tahoe (station 10337000), operating capacity, 744,600 acre-ft (918 hm³).

AVERAGE DISCHARGE---20 years (water years 1946-61, 1978-81), 319 ft³/s (9.034 m³/s), 231,100 acre-ft/yr (285 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft³/s (220 m³/s) Dec. 23, 1955, gage height, 7.92 ft (2.414 m), from rating curve extended above 3,100 ft³/s (87.8 m³/s) on basis of slope-area measurements at gage heights 7.62 ft (2.323 m) and 7.92 ft (2.414 m); minimum daily, 7.7 ft³/s (0.22 m³/s) Nov. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 471 ft³/s (13.3 m³/s) Aug. 15, gage height, 2.34 ft (0.713 m); minimum daily, 25 ft³/s (0.71 m³/s) Oct. 17-19.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	153	228	182	158	87	131	356	178	428	423	426
2	83	154	185	181	157	85	126	305	177	412	423	423
3	80	155	194	184	156	87	121	249	163	412	423	423
4	80	154	217	188	154	89	122	222	159	412	423	423
5	79	154	183	184	153	87	133	202	158	412	423	422
6	79	140	178	181	151	86	155	185	151	407	426	421
7	79	121	175	181	150	87	176	177	139	386	424	422
8	77	130	173	183	151	87	174	179	133	386	422	420
9	77	116	171	183	150	93	178	195	131	386	421	374
10	70	116	170	182	149	98	178	208	161	423	422	356
11	33	122	172	181	151	102	167	206	189	428	421	356
12	36	114	175	181	151	102	160	203	186	428	423	356
13	31	113	174	186	176	102	163	209	179	428	423	356
14	27	112	175	202	355	98	175	216	173	428	421	344
15	26	111	177	211	240	106	194	189	192	434	437	298
16	26	111	178	214	222	105	200	164	277	428	470	295
17	25	116	178	213	249	101	201	152	318	428	456	295
18	25	128	179	212	177	96	202	242	318	428	428	295
19	25	135	178	210	169	110	192	217	318	428	421	297
20	51	134	178	200	158	103	169	172	318	428	421	298
21	141	134	189	190	127	106	178	155	314	428	421	298
22	143	134	198	165	116	107	225	160	323	428	421	295
23	145	135	187	161	113	105	273	165	351	428	382	295
24	150	136	185	151	112	106	343	190	351	428	283	297
25	154	173	186	145	103	184	288	238	366	428	240	299
26	155	174	186	146	94	178	245	250	423	428	271	295
27	153	175	186	179	93	144	205	218	428	428	350	295
28	149	174	185	177	89	140	218	205	428	423	414	297
29	149	174	181	169	---	144	266	207	428	423	428	297
30	153	200	183	164	---	134	334	205	434	423	427	298
31	153	---	184	158	---	128	---	186	---	423	426	---
TOTAL	2738	4198	5688	5644	4424	3387	5892	6427	7864	13038	12614	10266
MEAN	88.3	140	183	182	158	109	196	207	262	421	407	342
MAX	155	200	228	214	355	184	343	356	434	434	470	426
MIN	25	111	170	145	89	85	121	152	131	386	240	295
AC-FT	5430	8330	11280	11190	8780	6720	11690	12750	15600	25860	25020	20360
CAL YR 1980	TOTAL	92825	MEAN 254	MAX 3000	MIN 25	AC-FT 184100						
WTR YR 1981	TOTAL	82180	MEAN 225	MAX 470	MIN 25	AC-FT 163000						

PYRAMID AND WINNEMUCCA LAKES BASIN

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-66, 1977 to current year.

CHEMICAL ANALYSES: Water years 1951-66.

SPECIFIC CONDUCTANCE: Water years 1977 to current year.

WATER TEMPERATURES: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1977 to current year.

WATER TEMPERATURES: July 1977 to current year.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperatures since July 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 231 micromhos Oct. 14, 1977; minimum recorded, 40 micromhos

June 7, 9, 14, 1978.

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug. 4, 1978; minimum recorded, 0.0°C on many days in every year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 140 micromhos Mar. 30; minimum recorded, 43 micromhos May 1.

WATER TEMPERATURES: Maximum recorded, 23.0°C July 3, 4; ; minimum recorded, 0.0°C Feb. 24.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	99	96	97	---	101	100	50	70	92	---	93
2	102	99	98	97	---	102	102	56	69	92	---	93
3	103	98	96	97	101	102	101	62	73	92	---	94
4	103	99	95	96	100	101	99	66	73	92	---	94
5	103	99	100	98	100	101	94	69	72	92	93	94
6	103	99	99	98	99	100	88	72	73	92	93	94
7	104	100	100	98	100	100	86	73	76	92	93	94
8	104	100	100	98	99	100	87	72	77	92	93	94
9	104	101	99	98	99	99	86	68	78	92	93	94
10	---	101	99	98	99	98	84	65	83	92	93	94
11	---	101	99	97	99	96	86	65	87	92	93	94
12	---	102	99	98	99	96	87	65	88	---	93	94
13	---	102	99	98	98	97	85	63	90	---	93	94
14	---	102	98	97	79	99	82	62	91	---	93	94
15	---	102	98	97	91	96	77	67	91	---	93	95
16	---	102	98	98	94	97	76	75	91	---	93	94
17	---	101	97	97	85	98	75	77	91	---	93	95
18	---	100	97	97	92	97	75	68	91	---	93	95
19	---	100	97	97	92	96	77	72	91	---	93	95
20	---	100	98	97	91	99	81	78	91	---	93	95
21	100	100	98	97	97	105	80	79	91	---	94	95
22	99	99	95	98	98	103	73	79	91	---	94	95
23	99	99	97	100	97	102	64	76	91	---	94	95
24	99	101	97	99	95	101	56	69	92	---	95	95
25	99	98	97	---	96	90	61	62	91	---	95	96
26	99	98	97	---	102	93	68	62	91	---	94	95
27	99	98	96	---	101	100	73	65	92	---	93	95
28	99	97	97	---	101	101	70	66	92	---	93	95
29	99	96	97	---	---	99	61	65	92	---	93	95
30	99	97	97	---	---	107	53	65	92	---	93	95
31	99	---	98	---	---	104	---	68	---	---	93	---
MONTH	---	100	98	---	96	99	80	68	85	---	93	94

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	9.0	11.0	8.0	6.5	3.0	6.5	4.0	---	---	6.5	2.0
2	18.0	11.0	11.0	7.5	6.0	5.0	6.5	4.0	---	---	7.0	3.0
3	18.5	11.0	12.0	8.0	5.0	4.0	7.0	4.5	5.0	1.5	7.5	2.0
4	18.5	11.0	12.0	8.0	4.5	3.0	6.0	4.5	5.5	1.5	5.5	3.5
5	18.5	11.0	12.0	8.5	5.5	3.5	6.0	4.5	5.0	2.5	6.0	3.5
6	18.5	11.0	12.0	8.0	4.5	2.5	5.5	3.0	5.0	2.0	8.5	2.5
7	18.0	10.5	11.0	7.5	4.5	2.0	5.5	3.5	5.5	2.0	8.0	3.5
8	18.0	10.0	11.5	8.0	3.0	0.5	6.0	3.5	5.0	3.0	9.0	3.0
9	17.5	9.5	10.0	7.0	4.0	2.0	6.0	3.0	6.5	4.0	9.0	3.0
10	---	---	10.5	7.0	4.5	2.0	5.5	3.0	6.0	2.5	9.5	3.5
11	---	---	8.5	7.5	6.0	3.0	5.0	3.5	7.5	4.5	9.0	3.0
12	---	---	9.5	6.5	5.5	3.0	6.0	4.0	8.0	4.5	8.5	3.0
13	---	---	8.5	5.0	5.5	3.5	7.0	4.5	6.5	4.5	6.0	3.5
14	---	---	8.0	4.5	6.0	3.0	6.5	4.0	5.5	3.0	8.5	3.0
15	---	---	7.5	4.5	7.0	4.5	7.0	5.0	7.0	3.5	7.5	4.0
16	---	---	6.0	3.5	6.5	4.5	7.0	5.5	7.5	3.5	9.0	3.5
17	---	---	7.5	4.0	7.0	4.5	6.5	5.5	8.0	4.0	8.0	2.5
18	---	---	8.0	5.0	7.0	6.0	7.5	5.5	8.0	4.0	6.0	3.5
19	---	---	8.0	5.0	7.0	5.0	7.0	5.5	7.0	3.5	6.0	3.0
20	---	---	8.0	4.5	7.0	5.0	7.0	5.0	6.0	2.0	5.0	2.0
21	12.5	8.5	7.5	5.0	6.5	4.5	7.5	6.5	6.0	1.0	8.0	2.5
22	13.0	8.5	8.5	6.0	7.0	5.0	7.5	6.0	7.0	1.5	8.5	4.5
23	13.0	8.5	8.5	6.0	6.0	3.5	6.5	5.0	7.0	2.5	9.5	3.5
24	12.5	9.0	7.0	4.5	6.0	4.0	6.0	3.0	4.0	0.0	10.5	3.5
25	10.5	9.0	6.5	4.0	7.5	5.5	---	---	3.0	0.5	7.5	2.0
26	11.5	8.0	7.0	4.5	7.5	5.0	---	---	3.5	0.5	4.5	1.5
27	11.0	8.5	8.0	5.0	7.0	5.0	---	---	5.0	0.5	6.0	2.5
28	10.5	6.5	8.5	5.5	7.0	5.0	---	---	5.5	0.5	9.5	2.5
29	11.0	6.5	7.0	5.5	7.0	4.0	---	---	---	---	7.0	3.5
30	11.0	7.5	5.5	3.0	6.5	4.0	---	---	---	---	8.5	1.5
31	11.5	7.5	---	---	6.0	3.5	---	---	---	---	9.0	3.5
MONTH	---	---	12.0	3.0	7.5	0.5	---	---	8.0	0.0	10.5	1.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	3.5	13.0	5.5	17.0	9.0	21.5	15.5	---	---	20.5	16.0
2	9.0	3.5	12.0	5.0	15.5	10.5	22.0	16.5	---	---	20.5	16.0
3	9.5	3.5	11.5	4.0	17.0	9.5	23.0	17.5	---	---	21.0	16.0
4	10.5	3.5	12.0	4.5	19.5	11.0	23.0	18.0	---	---	20.5	16.0
5	11.0	4.5	11.0	4.5	19.5	12.0	22.5	19.0	21.5	15.5	20.5	16.0
6	11.0	4.5	11.5	4.0	19.5	12.5	21.0	17.5	22.0	16.5	20.5	16.0
7	9.5	4.5	12.0	4.5	19.0	12.0	20.5	15.5	22.0	17.0	20.5	16.0
8	10.0	4.0	13.0	5.0	17.0	13.0	21.0	15.5	22.5	17.0	19.5	16.5
9	11.0	4.5	14.0	6.0	19.0	12.0	22.0	16.0	22.5	17.5	20.0	16.5
10	10.5	4.0	13.5	6.0	17.5	11.5	22.0	17.0	20.5	17.5	21.0	16.5
11	10.0	3.5	14.0	6.0	18.0	11.5	21.0	16.0	22.0	17.5	20.5	16.5
12	10.0	3.0	14.5	6.0	16.5	11.5	---	---	21.5	17.5	20.0	16.5
13	11.0	4.0	14.0	6.5	16.0	9.5	---	---	22.0	17.5	20.0	17.0
14	12.0	4.5	12.5	7.5	17.0	10.0	---	---	22.0	17.5	21.0	16.5
15	11.5	5.0	9.0	6.5	19.0	10.5	---	---	22.0	17.0	21.0	16.5
16	11.5	4.5	11.5	5.0	19.5	13.5	---	---	21.5	17.0	21.0	16.5
17	10.5	5.0	12.5	5.5	19.5	13.0	---	---	21.0	18.0	19.5	16.5
18	8.0	5.0	9.5	5.5	20.0	14.0	---	---	22.0	17.5	20.5	16.0
19	7.5	5.0	11.0	5.0	21.0	15.0	---	---	21.5	18.0	20.0	16.0
20	9.0	4.5	10.5	5.0	21.0	15.0	---	---	21.0	16.5	19.5	15.5
21	9.5	5.0	12.5	6.0	21.0	14.5	---	---	21.5	16.0	18.5	14.0
22	13.0	5.0	11.5	6.5	21.0	15.0	---	---	22.0	16.5	18.0	13.5
23	13.0	5.0	13.0	8.0	20.0	14.0	---	---	21.5	16.5	17.0	13.5
24	11.5	5.5	13.0	8.5	21.0	14.5	---	---	21.0	16.5	16.5	13.0
25	9.0	4.5	10.0	8.5	20.5	16.0	---	---	20.5	15.0	17.5	13.5
26	8.5	4.5	11.0	7.0	22.0	15.5	---	---	21.0	15.5	17.5	13.5
27	11.5	3.5	13.5	7.0	21.5	16.0	---	---	21.0	15.5	17.5	14.0
28	13.0	4.5	15.5	7.0	22.0	16.5	---	---	21.5	17.0	15.5	14.5
29	13.0	5.5	15.5	8.5	22.0	16.5	---	---	21.0	16.5	16.5	12.5
30	12.5	6.0	16.0	8.5	21.0	17.0	---	---	21.0	16.5	16.0	12.0
31	---	---	16.5	8.0	---	---	---	---	20.5	16.0	---	---
MONTH	13.0	3.0	16.5	4.0	22.0	9.0	---	---	22.5	15.0	21.0	12.0

LOCATION.--Lat 39°19'25", long 120°14'00", in SW¼NW¼ sec.17, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, in Donner Memorial State Park, on left bank 10 ft (3 m) downstream from bridge on Donner Memorial State Park road, 0.2 mi (0.3 km) downstream from outlet of Donner Lake, 0.7 mi (1.1 km) upstream from Cold Creek, and 2.5 mi (4.0 km) west of Truckee.

PERIOD OF RECORD.--November 1909 to August 1910, January 1929 to October 1935, January 1936 to March 1938, July to October 1938, January 1939 to February 1943, June 1943 to December 1953, May 1955 to December 1957, October 1958 to current year. Monthly discharge only prior to October 1958, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder. Altitude of gage is 5,930 ft (1,807 m), from topographic map. Nov. 1, 1909, to Aug. 31, 1910, nonrecording gage at different datum. January 1929 to December 1957, water-stage recorder at same site at unknown datum.

AVERAGE DISCHARGE (unadjusted).--44 years (water years 1930-35, 1937, 1940-42, 1944-52, 1956-57, 1959-81), 33.1 ft³/s (0.937 m³/s), 23,980 acre-ft/yr (29.6 hm³/yr).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 179 ft³/s (5.07 m³/s) Oct. 27, gage height, 3.36 ft (1.024 m); minimum daily, 0.04 ft³/s (0.001 m³/s) Jan. 18.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	93	7.4	.14	24	36	.71	.63	30	3.6	1.8	1.6
2	.86	81	9.0	.12	22	34	1.0	.69	30	3.5	1.7	1.6
3	.71	70	12	.12	20	32	1.3	.56	25	3.3	1.3	1.6
4	.80	60	19	.11	19	31	.63	.50	20	3.4	1.2	1.5
5	.56	52	18	.09	18	30	.56	9.9	12	3.4	1.2	1.3
6	.56	45	17	.09	17	28	.48	21	7.9	3.1	1.0	1.2
7	.56	43	15	.07	16	27	.44	33	7.1	3.0	.90	1.4
8	.56	42	14	.07	15	26	.55	49	6.5	2.8	.56	1.4
9	3.1	36	13	.07	15	25	.97	40	6.2	2.9	.47	1.3
10	7.8	31	12	.07	14	25	.54	40	5.7	2.8	.33	1.2
11	7.1	28	12	.06	14	25	.37	25	5.5	2.8	1.8	1.3
12	6.4	25	11	.05	13	24	.34	16	5.2	2.9	3.5	1.7
13	6.1	22	10	.05	16	24	.30	20	4.6	2.8	3.4	1.7
14	4.7	20	9.8	.05	34	25	.28	21	4.3	2.8	3.1	1.8
15	4.1	17	9.3	.05	42	24	.40	26	4.0	2.8	2.8	1.6
16	4.0	15	9.1	.05	43	24	.57	29	3.6	2.5	2.8	1.5
17	3.9	14	8.9	.05	48	24	.56	25	3.4	2.1	2.7	1.5
18	3.8	13	8.6	.04	49	24	.56	53	3.3	2.1	2.6	1.6
19	3.6	12	8.6	13	51	14	.56	125	2.9	2.3	2.4	1.6
20	3.0	11	8.4	20	54	3.0	.57	143	2.9	2.3	2.4	1.6
21	65	11	9.0	18	51	2.8	.56	98	2.9	2.3	2.4	1.5
22	134	9.9	10	17	49	2.8	.48	56	3.0	2.3	2.3	1.3
23	123	9.5	10	18	47	2.6	.48	40	3.2	2.1	2.3	1.1
24	114	9.0	10	18	49	2.6	.50	39	3.3	2.1	2.4	1.0
25	106	8.4	9.7	17	49	2.1	.48	39	3.3	2.0	2.3	1.0
26	100	8.0	9.1	16	44	1.6	.54	32	3.3	1.9	2.3	1.0
27	135	7.4	9.2	23	41	1.6	.50	23	3.4	1.9	2.3	1.0
28	160	7.1	9.4	30	39	1.2	.50	23	3.5	2.0	2.1	.96
29	140	7.1	4.5	33	---	1.0	.51	27	3.6	1.9	1.8	.90
30	122	7.7	.48	30	---	.80	.61	32	3.7	1.9	1.6	.94
31	106	---	.16	27	---	.80	---	30	---	1.8	1.6	---
TOTAL	1368.21	815.1	313.64	281.35	913	524.90	16.85	1117.28	223.3	79.4	61.36	40.70
MEAN	44.1	27.2	10.1	9.08	32.6	16.9	.56	36.0	7.44	2.56	1.98	1.36
MAX	160	93	19	33	54	36	1.3	143	30	3.6	3.5	1.8
MIN	.56	7.1	.16	.04	13	.80	.28	.50	2.9	1.8	.33	.90
AC-FT	2710	1620	622	558	1810	1040	33	2220	443	157	122	81
CAL YR 1980	TOTAL	18350.35	MEAN	50.1	MAX	443	MIN	.16	AC-FT	36400		
WTR YR 1981	TOTAL	5755.09	MEAN	15.8	MAX	160	MIN	.04	AC-FT	11420		

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA

LOCATION.--Lat 39°18'08", long 120°07'13", in SW¼SW¼ sec.20, T.17 N., R.17 E., Placer County, Hydrologic Unit 16050102, 4.0 mi (6.4 km) southeast of Truckee. Water-quality samples are collected 150 ft (50 m) downstream from State Highway 267. Thermograph records are obtained about 300 ft (90 m) upstream from highway, off left bank immediately downstream from confluence of main stem and Middle Martis Creek.

DRAINAGE AREA.--25.8 mi² (66.8 km²).

PERIOD OF RECORD.--Water years 1975 to current year.

CHEMICAL ANALYSES: Water years 1975 to current year.

WATER TEMPERATURES: Water years 1975 to current year.

SEDIMENT RECORDS: Water years 1975, 1977 to current year.

REVISED RECORDS.--WDR CA-80-3: Drainage area.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October to November 1974, August 1975 to current year.

INSTRUMENTATION.--Temperature recorder October to November 1974, and since August 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 27.5°C July 30, Aug. 3, 1977; minimum recorded, -0.5°C Jan. 5, 10-16, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 25.0°C on several days during June and July; minimum recorded, 0.0°C on many days during October to January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
NOV 17...	1230	6.2	124	8.0	4.5	1	--	11.3	66
APR 02...	0830	17	73	7.3	2.5	4	--	11.0	33
JUN 03...	1020	4.6	121	7.6	10.5	--	1.1	9.3	66
AUG 05...	1015	2.2	128	7.1	10.0	--	.00	10.1	74

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 17...	.000	.23	.120	.32	.55	.030	.040	3	2
APR 02...	.010	.09	--	.53	--	.040	.030	--	44
JUN 03...	.010	.64	.140	.60	1.2	.070	.060	14	12
AUG 05...	.020	.16	.270	.40	.56	.040	.040	5	4

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 17...	270	80	20	5	30	10	60	50
APR 02...	340	190	23	2	30	--	80	80
JUN 03...	380	120	--	--	80	30	260	50
AUG 05...	190	110	5	1	30	16	30	<3

< Actual value is known to be less than the value shown.

PYRAMID AND WINNEMUCCA LAKES BASIN

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	5.0	8.5	2.0	5.0	0.0	3.0	0.0	0.5	0.5	6.0	0.5
2	15.5	5.5	9.0	2.0	4.0	2.0	3.0	0.0	0.5	0.5	6.5	1.5
3	15.0	5.5	9.0	1.5	3.5	1.0	5.5	0.5	0.5	0.5	8.0	0.5
4	15.5	5.5	9.0	1.5	2.0	1.0	4.0	0.5	0.5	0.5	7.0	1.5
5	15.0	6.0	9.0	1.5	3.5	0.0	5.0	1.0	0.5	0.5	5.5	2.5
6	15.0	5.5	9.5	2.0	0.5	0.0	3.5	0.0	1.0	0.5	10.0	1.0
7	15.0	5.0	10.0	3.0	0.5	0.0	3.5	0.0	1.0	0.5	8.0	2.0
8	14.5	5.0	10.0	4.5	0.0	0.0	3.0	0.0	2.0	0.5	10.5	0.5
9	14.5	5.0	8.0	2.5	0.5	0.0	3.5	0.0	4.0	0.5	10.5	0.5
10	13.5	4.0	6.5	3.5	0.0	0.0	2.5	0.0	3.0	0.5	11.0	1.5
11	11.5	4.0	6.0	4.0	0.5	0.0	1.5	0.0	5.5	1.5	10.0	0.5
12	12.0	6.0	7.5	2.0	0.5	0.0	3.0	0.0	5.5	1.0	9.5	0.5
13	10.0	2.5	5.5	0.0	0.5	0.0	5.0	0.5	3.5	1.0	5.0	1.5
14	7.0	3.5	5.0	0.0	1.0	0.0	4.5	0.0	2.0	0.5	10.0	2.0
15	6.0	3.0	5.0	0.5	2.5	0.0	5.5	0.5	4.0	1.0	9.0	1.0
16	7.5	3.0	3.5	0.0	3.0	0.0	5.5	1.5	5.0	0.5	10.0	1.0
17	9.0	2.5	5.5	0.5	3.0	0.0	6.0	1.0	6.0	1.5	8.5	0.5
18	9.5	1.0	5.0	0.0	3.0	1.5	6.5	1.5	7.0	1.0	6.5	1.0
19	10.0	1.5	4.5	0.0	4.0	0.5	5.5	1.5	7.0	1.5	6.5	2.5
20	10.0	1.5	4.5	0.0	4.0	0.0	5.5	0.5	6.5	0.5	7.0	0.5
21	9.0	2.5	3.5	0.0	3.5	0.5	6.5	3.0	6.0	0.5	10.0	1.5
22	10.0	2.5	5.5	1.5	5.0	0.5	7.0	3.0	7.0	0.5	11.5	3.0
23	9.5	2.0	5.0	1.0	2.5	0.0	5.5	2.0	8.0	0.5	10.5	1.0
24	9.5	2.0	3.5	0.0	4.0	0.5	5.0	0.5	2.5	0.5	9.0	0.5
25	7.0	4.0	1.5	0.0	5.5	2.0	4.5	0.0	3.0	0.5	6.5	1.0
26	8.0	3.0	2.0	0.0	6.0	1.5	4.5	0.5	4.0	0.5	5.5	0.5
27	8.5	3.5	3.0	0.0	6.0	1.5	2.0	0.5	4.5	0.5	6.5	1.5
28	8.0	1.0	4.0	0.0	5.5	1.0	0.5	0.5	5.5	0.5	11.5	0.5
29	8.0	0.0	4.5	1.0	5.0	0.0	0.5	0.0	---	---	8.5	1.5
30	7.0	0.5	3.0	0.0	4.0	0.0	0.5	0.0	---	---	10.0	0.5
31	7.5	1.0	---	---	3.0	0.0	0.5	0.5	---	---	10.5	1.0
MONTH	15.5	0.0	10.0	0.0	6.0	0.0	7.0	0.0	8.0	0.5	11.5	0.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	1.5	18.0	7.0	19.5	7.5	23.5	8.5	21.5	6.5	20.5	8.0
2	11.0	1.5	16.0	6.5	18.5	9.5	25.0	10.0	21.5	5.5	20.5	7.0
3	11.0	1.0	16.0	4.0	22.5	7.5	25.0	11.0	21.5	6.0	20.5	7.0
4	12.0	1.0	15.5	4.0	24.0	8.5	23.5	11.0	22.0	6.5	20.0	6.5
5	13.0	1.5	15.0	4.5	23.0	10.0	23.0	12.5	23.0	6.5	20.0	6.0
6	13.0	2.0	15.0	3.0	22.5	10.0	23.0	11.5	24.5	8.0	20.0	6.0
7	12.0	2.0	15.5	3.0	22.0	10.0	23.5	9.0	24.5	9.5	20.0	6.0
8	12.0	1.5	16.5	3.5	15.5	11.5	23.0	8.0	24.5	9.5	15.0	7.5
9	12.5	2.0	18.0	5.0	22.0	10.0	22.5	7.5	24.0	10.5	19.0	7.5
10	12.0	2.0	18.0	5.5	20.5	8.5	22.5	9.5	22.0	11.0	20.5	7.5
11	11.5	1.5	18.5	5.5	19.5	7.0	22.0	7.5	24.5	10.0	19.5	7.5
12	12.0	1.0	18.0	5.5	19.0	8.0	21.5	7.5	20.5	10.0	16.5	8.0
13	13.0	2.0	20.0	6.0	18.5	4.0	22.5	5.5	24.0	10.0	16.0	9.0
14	14.0	2.0	18.5	8.5	19.0	5.0	23.5	7.5	23.0	10.0	20.0	8.0
15	13.0	3.0	15.0	7.0	22.0	5.0	24.0	8.5	22.5	8.5	19.0	8.0
16	12.5	3.5	16.5	5.5	22.0	7.5	24.5	9.5	21.5	9.0	20.5	8.0
17	12.5	4.0	13.0	4.0	23.5	7.5	23.0	7.5	18.0	10.5	16.0	9.0
18	8.5	4.5	12.0	7.0	24.0	9.0	23.0	7.0	21.0	9.0	18.5	7.0
19	9.0	4.0	16.0	5.5	25.0	10.0	23.0	7.0	21.5	10.0	19.0	9.0
20	11.5	3.5	11.5	5.0	25.0	10.0	23.5	8.0	21.0	7.5	18.5	7.5
21	11.0	4.0	16.0	6.0	25.0	10.0	23.0	7.5	21.0	6.5	16.5	4.5
22	15.5	4.0	17.0	6.0	24.5	10.5	23.0	7.5	22.0	7.0	16.0	4.0
23	16.5	4.5	15.5	7.5	23.5	9.0	23.5	8.0	21.5	7.5	12.5	4.0
24	15.5	6.0	15.5	9.0	24.5	9.0	23.0	8.5	21.0	8.0	12.5	4.5
25	12.5	5.0	14.0	9.5	24.5	13.5	23.5	8.5	21.0	7.0	16.0	6.5
26	12.0	4.5	15.0	8.5	25.0	10.5	25.0	9.0	22.5	9.0	16.5	5.5
27	14.5	2.5	18.5	8.0	24.5	10.0	24.5	10.0	22.5	8.0	17.0	7.5
28	16.5	4.0	21.0	6.5	25.0	10.5	23.5	8.5	22.0	10.0	13.5	9.0
29	17.0	5.5	18.0	8.5	25.0	10.0	22.5	7.5	21.5	8.5	15.0	6.0
30	18.0	7.0	21.0	8.0	21.0	10.5	22.5	7.0	21.5	9.5	14.5	3.0
31	---	---	22.0	7.5	---	---	22.5	7.0	21.5	7.5	---	---
MONTH	18.0	1.0	22.0	3.0	25.0	4.0	25.0	5.5	24.5	5.5	20.5	3.0

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 17...	1230	6.2	4.5	2	.03
APR 02...	0830	17	2.5	5	.23
JUN 03...	1020	4.6	10.5	6	.07
AUG 05...	1015	2.2	10.0	0	.00

PYRAMID AND WINNEMUCCA LAKES BASIN

10339380 MARTIS CREEK LAKE NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'38", long 120°06'48", in NE¼NW¼ sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, Tahoe National Forest, in control house at Martis Creek Dam, 2.0 mi (3.2 km) upstream from mouth, and 3.5 mi (5.6 km) east of Truckee.

DRAINAGE AREA.--39.6 mi² (102.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to May 1972 (occasional readings only), June 1972 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by rolled-earthfill dam. Storage began Oct. 7, 1971. Total capacity, 20,400 acre-ft (25.2 hm³) between elevations 5,745 ft (1,751.1 m), streambed elevation at dam, and 5,838 ft (1,779.4 m), elevation of spillway crest. Figures given herein represent total contents, which include 775 acre-ft (960,000 m³) of inactive storage below elevation, 5,780 ft (1,761.7 m), intake crest. Reservoir is used for flood control, enhancement of fishery, and recreation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,700 acre-ft (9.49 hm³) May 11, 12, 1980, elevation, 5,815.16 ft (1,772.461 m); minimum (since storage began), 768 acre-ft (947,000 m³) Aug. 24, 1977, elevation, 5,779.88 ft (1,761.707 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 840 acre-ft (103,600 m³) Feb. 14, elevation, 5,781.02 ft (1,762.055 m); minimum, 773 acre-ft (953,100 m³) on several days during July and August, elevation 5,779.97 ft (1,761.735 m).

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

5,779	716	5,800	3,255
5,780	775	5,810	5,884
5,785	1,139	5,820	9,718
5,790	1,646		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	786	787	788	788	791	795	809	801	787	779	774	774
2	786	787	791	788	791	796	806	799	787	779	774	774
3	786	787	803	789	791	796	803	798	787	779	774	774
4	786	786	806	792	791	794	801	796	787	779	774	774
5	786	786	794	791	789	793	803	795	786	779	774	774
6	786	786	789	789	789	793	804	795	784	778	774	774
7	785	788	788	789	789	793	804	794	784	778	774	774
8	785	788	786	788	789	792	804	794	784	777	774	775
9	785	787	786	788	789	793	805	793	784	776	774	776
10	785	788	786	788	789	793	804	792	784	775	774	776
11	784	789	786	787	789	793	803	791	783	774	774	776
12	787	789	786	788	789	793	803	790	783	774	774	776
13	786	788	786	788	803	794	803	789	783	774	774	777
14	788	788	786	788	840	796	803	789	783	774	774	778
15	788	788	786	788	817	794	804	789	784	774	774	778
16	789	787	786	788	820	794	805	789	783	774	774	778
17	788	788	787	788	817	793	805	788	783	774	774	778
18	788	788	787	788	813	793	806	802	783	774	774	778
19	788	788	787	788	818	803	810	799	783	774	774	776
20	787	788	787	788	808	801	806	795	782	775	774	776
21	789	788	789	789	803	800	805	793	782	775	774	776
22	790	788	789	790	799	798	805	792	781	774	774	776
23	790	788	788	793	798	798	806	791	780	775	774	776
24	788	787	788	791	796	797	807	789	781	775	773	778
25	789	787	788	789	798	837	806	790	781	775	773	780
26	790	787	788	789	796	825	805	793	780	774	774	780
27	789	788	788	817	794	819	803	792	780	774	774	779
28	789	788	788	799	794	815	801	790	780	774	774	778
29	788	786	788	793	---	811	801	789	780	774	773	778
30	788	789	787	793	---	811	801	788	779	773	773	778
31	787	---	788	792	---	806	---	788	---	774	774	---
MAX	790	789	806	817	840	837	810	802	787	779	774	780
MIN	784	786	786	787	789	792	801	788	779	773	773	774
†	5780.19	5780.22	5780.20	5780.27	5780.31	5780.49	5780.42	5780.20	5780.06	5779.98	5779.98	5780.05
‡	+1	+2	-1	+4	+2	+12	-5	-13	-9	-5	0	+4
CAL YR 1980	‡ -32											
WTR YR 1981	‡ -8											

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

10339380 MARTIS CREEK LAKE NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
 CHEMICAL ANALYSES: Water years 1975 to current year.
 SEDIMENT RECORDS: Water years 1975-76, 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
NOV 17...	1320	132	8.0	7.5	--	2.0	10.4	69
APR 02...	0935	118	7.0	8.0	15	--	9.5	45
JUN 03...	1210	115	9.1	18.5	--	.70	10.3	63
AUG 05...	1215	130	9.6	21.0	--	1.8	9.6	71

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 17...	.000	.05	.030	.56	.61	.040	.010	3	2
APR 02...	.010	--	.060	.63	--	.060	.040	13	4
JUN 03...	.000	.26	.110	.61	.87	.040	.030	4	3
AUG 05...	.020	.17	.210	.85	1.0	.050	.040	9	1

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	HANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	HANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 17...	250	80	19	4	30	20	70	20
APR 02...	730	90	62	7	50	20	130	10
JUN 03...	180	60	67	--	30	7	60	20
AUG 05...	90	60	11	2	--	26	90	60

SUSPENDED SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)
NOV 17...	1320	7.5	8
APR 02...	0935	8.0	10
JUN 03...	1210	18.5	3
AUG 05...	1215	21.0	6

LOCATION.--Lat 39°19'44", long 120°07'00", in NE¼NW¼ sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, Tahoe National Forest, on left bank 0.2 mi (0.3 km) downstream from Martis Creek Lake Dam, 1.8 mi (2.9 km) upstream from mouth, and 3.5 mi (5.6 km) east of Truckee.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Altitude of gage is 5,730 ft (1,747 m), from topographic map. Prior to July 10, 1972, at site 1.0 mi (1.6 km) downstream at different datum.

AVERAGE DISCHARGE (unadjusted).--23 years, 22.9 ft³/s (0.649 m³/s), 16,590 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft³/s (53.2 m³/s) Feb. 1, 1963, gage height, 6.16 ft (1.878 m), site and datum then in use; minimum, 1.1 ft³/s (0.031 m³/s) July 19, 20, 1961. Maximum discharge since construction of Martis Creek Lake Dam in 1971, 648 ft³/s (18.4 m³/s) Apr. 2, 1974, gage height, 6.01 ft (1.832 m); minimum daily, 0.20 ft³/s (0.006 m³/s) Nov. 9-14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86 ft³/s (2.44 m³/s) Feb. 14, gage height, 3.01 ft (0.917 m); minimum daily, 2.9 ft³/s (0.082 m³/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	8.1	10	9.3	12	15	26	20	7.3	4.1	3.1	3.6
2	7.8	7.9	11	9.4	12	15	26	19	7.0	4.0	3.1	3.6
3	7.8	7.9	15	10	12	16	23	18	6.9	4.0	3.1	3.7
4	7.7	7.9	31	13	12	15	21	16	6.7	4.2	3.1	3.7
5	7.6	7.8	19	12	11	14	21	15	6.5	4.2	3.2	3.7
6	7.6	7.7	12	11	11	14	23	14	6.2	4.3	3.2	3.7
7	7.2	8.1	11	10	11	13	23	14	5.9	3.7	3.2	3.7
8	7.0	9.4	9.6	10	11	13	23	13	5.8	3.7	3.4	3.9
9	7.0	8.8	9.8	10	11	13	23	13	5.9	3.6	3.3	4.0
10	7.0	8.7	9.3	9.7	11	14	24	12	5.6	3.5	3.3	4.0
11	7.0	9.8	9.4	9.3	11	14	23	11	5.6	3.3	3.4	4.0
12	7.9	9.8	9.5	9.4	11	14	22	10	5.5	3.3	3.4	4.0
13	8.1	9.1	9.5	10	13	15	22	9.7	5.3	3.1	3.4	4.1
14	8.1	8.9	9.4	9.8	59	15	22	9.4	5.4	3.3	3.3	4.3
15	9.1	9.3	9.6	10	45	15	23	9.4	5.4	3.3	3.3	4.3
16	9.4	8.9	9.8	10	32	14	24	9.5	5.6	3.3	3.3	3.5
17	9.1	9.2	9.9	10	37	13	24	9.4	5.2	3.1	3.4	4.3
18	8.8	9.1	10	10	31	13	24	13	5.2	3.2	3.5	4.3
19	8.5	9.0	10	10	31	18	28	19	5.2	3.2	3.6	4.2
20	8.2	8.8	10	10	32	21	26	14	4.8	3.3	3.5	3.8
21	9.3	9.0	10	10	23	19	24	12	4.5	3.3	3.5	3.7
22	9.9	9.3	11	11	20	18	24	11	4.5	3.3	3.5	3.8
23	10	9.6	11	14	19	18	24	9.9	4.3	3.4	3.5	3.7
24	9.4	9.3	10	13	18	16	26	9.5	4.3	3.4	3.5	3.8
25	9.2	8.7	10	11	16	32	25	9.3	4.3	3.3	3.4	4.4
26	10	9.0	11	11	16	50	24	11	4.3	3.3	3.3	4.5
27	9.5	9.1	11	30	15	38	22	11	4.2	3.2	3.5	4.5
28	9.1	9.2	10	25	14	34	20	9.5	4.1	2.9	3.5	4.3
29	8.9	9.4	10	15	---	31	20	8.3	4.1	3.0	3.6	4.1
30	8.9	10	9.7	13	---	29	20	7.8	4.1	3.0	3.5	4.1
31	8.5	---	9.5	13	---	27	---	7.5	---	3.0	3.5	---
TOTAL	261.2	266.8	348.0	368.9	557	606	700	375.2	159.7	106.8	104.4	119.3
MEAN	8.43	8.89	11.2	11.9	19.9	19.5	23.3	12.1	5.32	3.45	3.37	3.98
MAX	10	10	31	30	59	50	28	20	7.3	4.3	3.6	4.5
MIN	7.0	7.7	9.3	9.3	11	13	20	7.5	4.1	2.9	3.1	3.5
AC-FT	518	529	690	732	1100	1200	1390	744	317	212	207	237
CAL YR 1980	TOTAL	13478.3	MEAN	36.8	MAX	534	MIN	1.8	AC-FT	26730		
WTR YR 1981	TOTAL	3973.3	MEAN	10.9	MAX	59	MIN	2.9	AC-FT	7880		

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

CHEMICAL ANALYSES: Water years 1975 to current year.

WATER TEMPERATURES: Water years 1975 to current year.

SEDIMENT RECORDS: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1974 to current year.

INSTRUMENTATION.--Temperature recorder since October 1974.

REMARKS.--Unpublished chemical-quality, water temperatures, and sediment data prior to October 1974, available at district office in Carson City, NV.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 24.0°C on several days in 1977 and 1979; minimum recorded, 0.5°C Jan. 13, 14, Feb. 20, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.5°C on several days during June to August; minimum recorded, 1.0°C Jan. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
NOV 17...	1400	9.3	135	8.0	7.0	2	--	10.4	68
APR 02...	1150	26	111	7.0	8.5	16	--	9.8	46
JUN 03...	1257	6.7	117	9.1	19.5	--	1.2	9.4	60
AUG 05...	1530	3.2	130	9.2	22.5	--	2.6	8.8	71

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 17...	.000	.18	.140	.86	1.0	.030	.030	3	3
APR 02...	.010	1.8	.050	.71	2.5	.060	.030	7	1
JUN 03...	.000	.51	.080	1.00	1.5	.050	.040	5	2
AUG 05...	.030	.61	.210	1.10	1.7	.060	.040	4	2

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 17...	290	90	15	6	40	30	70	40
APR 02...	700	160	24	10	40	10	130	--
JUN 03...	190	30	--	--	30	10	40	6
AUG 05...	350	110	21	1	60	15	60	12

PYRAMID AND WINNEMUCCA LAKES BASIN

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	4.5	2.5	5.5	3.0	3.5	1.5	---	---
2	15.5	11.5	---	---	4.0	3.0	5.0	3.0	3.5	2.0	---	---
3	15.5	11.5	---	---	4.0	3.0	5.5	3.0	3.5	1.5	6.0	3.5
4	16.0	12.0	---	---	3.5	2.5	5.0	3.5	4.0	2.0	5.5	4.0
5	16.0	12.0	---	---	3.0	2.5	5.0	4.0	4.0	2.0	5.5	4.0
6	16.0	12.5	9.5	6.5	4.0	2.0	5.0	3.5	4.0	2.0	6.5	4.0
7	16.0	12.0	10.0	7.0	4.0	2.5	5.0	3.0	---	---	6.5	4.5
8	16.0	12.0	10.0	7.5	4.5	2.5	4.5	3.0	---	---	7.0	4.5
9	16.0	12.0	9.5	7.0	5.0	2.5	5.0	2.5	---	---	8.0	4.5
10	16.0	12.0	8.5	7.5	5.0	2.5	5.0	2.5	---	---	8.0	5.5
11	15.5	12.0	8.0	7.0	5.0	3.0	4.5	3.0	---	---	8.5	5.0
12	15.0	12.0	8.5	6.5	5.5	3.0	4.5	3.0	---	---	8.5	5.5
13	13.0	10.5	8.0	6.0	5.0	3.0	5.5	3.0	---	---	7.5	5.5
14	13.0	10.5	8.0	5.5	5.5	3.0	5.5	3.5	---	---	9.0	6.0
15	12.0	10.0	7.5	5.5	5.5	3.5	5.5	3.5	---	---	7.5	6.0
16	---	---	6.5	5.0	5.5	3.5	5.5	4.0	---	---	8.5	6.0
17	---	---	7.0	4.5	5.5	3.5	5.5	4.0	---	---	8.5	5.5
18	---	---	6.5	4.0	5.0	4.0	6.0	4.0	---	---	7.0	6.0
19	---	---	6.5	4.5	5.5	3.5	6.0	4.0	---	---	7.0	6.0
20	---	---	6.0	4.0	5.5	3.5	5.5	4.0	---	---	8.0	5.5
21	---	---	5.5	3.5	5.0	3.5	6.0	4.5	---	---	8.0	6.0
22	---	---	5.5	4.0	5.5	3.5	6.0	4.5	---	---	8.5	6.5
23	---	---	5.5	4.0	5.0	3.0	5.5	4.5	---	---	9.0	6.5
24	---	---	5.5	3.5	5.0	3.5	5.5	4.0	---	---	8.5	6.5
25	---	---	4.5	3.0	5.5	4.0	5.5	3.5	---	---	8.0	6.5
26	---	---	5.0	2.5	5.5	4.0	5.0	3.5	---	---	7.5	6.0
27	---	---	5.5	3.0	6.0	4.0	4.0	2.5	---	---	6.5	5.5
28	---	---	6.0	3.0	6.0	4.0	3.0	1.5	---	---	7.5	5.0
29	---	---	5.5	3.5	6.0	4.0	2.5	1.0	---	---	7.0	5.5
30	---	---	4.0	2.5	6.0	3.5	3.0	1.5	---	---	7.0	5.0
31	---	---	---	---	5.5	3.5	3.5	1.5	---	---	8.0	5.0
MONTH	---	---	10.0	2.5	6.0	2.0	6.0	1.0	---	---	9.0	3.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	5.5	16.5	13.0	19.0	14.5	23.5	16.5	---	---	21.5	15.5
2	8.0	6.0	16.0	13.5	19.0	15.0	23.5	17.0	---	---	22.0	15.0
3	8.0	6.0	16.0	13.5	19.5	14.5	23.5	17.5	---	---	21.5	15.0
4	8.5	6.0	16.0	13.0	20.0	15.0	23.5	17.5	---	---	---	---
5	10.0	6.5	15.5	12.5	20.0	15.5	22.5	18.0	---	---	---	---
6	10.5	7.5	15.0	12.0	21.0	15.5	23.0	17.5	23.0	15.0	---	---
7	10.0	8.0	15.0	11.5	21.0	16.0	23.0	17.0	22.5	15.5	---	---
8	11.5	8.5	15.5	12.0	18.0	16.0	22.5	16.0	23.0	15.5	---	---
9	11.0	9.0	15.5	12.0	20.0	15.5	22.5	16.0	23.0	16.0	---	---
10	11.5	9.0	16.0	12.5	19.5	15.0	22.0	16.0	22.5	16.5	---	---
11	11.0	8.5	16.5	12.5	20.0	15.0	22.5	15.5	23.0	16.0	---	---
12	11.0	8.5	16.5	12.5	19.0	14.0	---	---	23.0	16.0	---	---
13	12.0	9.0	17.0	13.0	18.5	13.5	---	---	23.5	16.5	---	---
14	12.5	9.0	16.5	13.5	18.5	13.5	---	---	23.0	16.5	---	---
15	12.5	10.0	16.5	13.5	19.0	13.5	---	---	23.5	16.0	---	---
16	12.5	10.0	16.0	12.5	19.5	14.0	---	---	23.5	16.0	---	---
17	12.5	10.0	15.0	12.0	20.0	14.0	---	---	21.0	17.0	---	---
18	11.5	10.5	13.5	12.5	20.5	14.5	---	---	22.0	16.5	---	---
19	11.0	10.0	14.5	12.0	20.5	15.0	---	---	22.5	16.5	---	---
20	11.0	9.5	14.0	12.0	21.0	15.0	---	---	22.0	16.0	---	---
21	10.5	9.5	15.0	12.0	21.5	15.0	---	---	22.5	15.5	---	---
22	12.5	9.0	15.0	12.0	21.5	15.5	---	---	22.5	15.5	---	---
23	13.5	10.5	15.0	12.5	21.5	15.5	---	---	22.0	15.0	---	---
24	14.5	12.0	15.5	13.0	22.0	15.5	---	---	21.5	15.5	---	---
25	13.5	12.0	14.5	13.0	22.5	17.0	---	---	21.5	15.0	---	---
26	13.5	11.0	16.0	13.0	23.0	16.5	---	---	23.0	15.5	---	---
27	13.5	10.5	16.5	13.0	23.0	16.5	---	---	22.5	15.5	---	---
28	13.5	10.5	17.0	13.0	23.5	16.5	---	---	22.0	16.0	---	---
29	14.5	11.5	17.5	13.5	23.5	16.5	---	---	22.0	15.5	---	---
30	16.0	12.5	19.0	14.0	23.0	17.0	---	---	22.5	16.0	---	---
31	---	---	19.0	14.0	---	---	---	---	22.0	15.0	---	---
MONTH	16.0	5.5	19.0	11.5	23.5	13.5	---	---	23.5	15.0	---	---

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 17...	1400	9.3	7.0	2	.05
APR 02...	1150	26	8.5	11	.77
JUN 03...	1257	6.7	19.5	2	.04
AUG 05...	1530	3.2	22.5	12	.10

PYRAMID AND WINNEMUCCA LAKES BASIN

10340300 PROSSER CREEK RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'40", long 120°08'10", in NW¼SW¼ sec.30, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house at Prosser Creek Dam on Prosser Creek, 1.4 mi (2.3 km) upstream from mouth, and 4.2 mi (6.8 km) northeast of Truckee.

DRAINAGE AREA.--50.3 mi² (130.3 km²).

PERIOD OF RECORD.--January 1963 to current year. Prior to October 1976, published as "near Boca."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REVISED RECORDS.--WDR CA-76-3: 1975. WDR CA-79-3: Drainage area.

REMARKS.--Reservoir is formed by rolled-earth and rockfill dam. Storage began Jan. 30, 1963. Usable capacity, 28,640 acre-ft (35.3 hm³) between elevations, 5,660.6 ft (1,725.35 m) top of inactive storage, and 5,741.2 ft (1,749.92 m) spillway crest. Inactive storage, 1,200 acre-ft (1.48 hm³), includes 83 acre-ft (102,000 m³) dead storage below elevation 5,660.6 ft (1,725.35 m). Figures given herein represent total contents at 0800 hours. Reservoir is used for flood control, enhancement of fishery, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,269 acre-ft (39.8 hm³) June 1, 1973, elevation, 5,744.33 ft (1,750.872 m); minimum observed, 83 acre-ft (0.10 hm³) Aug. 18, 1976 to Apr. 18, 1977, July 8 to Dec. 26, 1977, Feb. 19 to Mar. 21, 1978; minimum elevation observed, 5,637.01 ft (1,718.161 m) July 20 to Dec. 19, 1977, Feb. 24 to Mar. 17, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,543 acre-ft (20.4 hm³) June 8, elevation, 5,719.80 ft (1,743.395 m); minimum observed, 8,969 acre-ft (11.1 hm³) Feb. 4, elevation, 5,701.07 ft (1,737.686 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	5713.73	13702	--
Oct. 31.....	5701.84	9216	-4486
Nov. 30.....	5702.10	9300	+84
Dec. 31.....	5702.10	9300	0
CAL YR 1980.....	--	--	-239
Jan. 31.....	5702.45	9414	+114
Feb. 28.....	5701.70	9171	-243
Mar. 31.....	5702.65	9480	+309
Apr. 30.....	5709.45	11932	+2452
May 31.....	5717.22	15286	+3354
June 30.....	5718.61	15955	+669
July 31.....	5718.08	15696	-259
Aug. 31.....	5717.33	15338	-358
Sept. 30.....	5711.57	12785	-2553
WTR YR 1981.....	--	--	-917

10340500 PROSSER CREEK BELOW PROSSER CREEK DAM, NEAR TRUCKEE, CA

LOCATION (REVISED).--Lat 39°22'24", long 120°07'50", NW¼NE¼ sec.31, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 300 ft (91 m) downstream from Station Creek, 0.5 mi (0.8 km) downstream from Prosser Creek Dam, 0.9 mi (1.4 km) upstream from mouth, and 4.2 mi (6.7 km) northeast of Truckee.

DRAINAGE AREA.--52.9 mi² (137.0 km²).

PERIOD OF RECORD.--October 1902 to June 1903 (gage heights only), October 1942 to December 1950, June 1951 to current year. Prior to October 1976, published as "near Boca". Monthly discharge only for October 1942 to December 1950, published in WSP 1734. Records for April 1889 to November 1890, published in the 11th and 12th Annual Reports, Part 2, have been found to be unreliable and should not be used.

REVISED RECORDS.--WDR-CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,602.31 ft (1,707.584 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). See WSP 2127 for history of changes prior to September 1956. October 1956 to May 1976, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 29.69 ft (9.050 m) lower.

REMARKS.--Records good. Flow regulated by Prosser Creek Dam since Jan. 31, 1963.

AVERAGE DISCHARGE (adjusted for change in contents in Prosser Creek Reservoir since 1963).--38 years (water years 1943-50, 1952-81), 84.5 ft³/s (2.393 m³/s), 61,220 acre-ft/yr (75.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1943-81): Maximum discharge, 4,560 ft³/s (129 m³/s) Dec. 23, 1955, gage height, 10.13 ft (3.088 m) present datum, from rating curve extended above 910 ft³/s (25.8 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 11.0 ft (3.35 m) from floodmarks, present datum, Nov. 20, 1950; minimum discharge, 0.4 ft³/s (0.001 m³/s) July 18, 1961, result of work on dam upstream. Maximum discharge since construction of Prosser Creek Dam in 1963, 1,610 ft³/s (45.6 m³/s) Dec. 25, 1964, gage height, 6.28 ft (1.914 m); minimum daily, 0.02 ft³/s (<0.001 m³/s) Jan. 2, 1975, result of temporary closing of Prosser Creek Dam for spillway maintenance.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 264 ft³/s (7.48 m³/s) Oct. 6, gage height, 4.13 ft (1.259 m); minimum daily, 5.0 ft³/s (0.14 m³/s) May 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	40	42	47	75	43	42	119	5.6	11	7.1	9.5
2	62	40	42	47	75	42	41	126	5.8	11	7.1	11
3	143	23	42	47	76	42	60	126	5.7	11	7.1	10
4	198	9.3	43	47	39	42	74	111	5.6	11	7.1	10
5	196	9.3	42	47	12	42	74	103	8.9	11	7.1	10
6	224	9.3	42	43	12	42	54	66	11	12	7.1	10
7	241	9.7	42	23	12	42	41	41	11	12	7.1	11
8	238	9.5	43	9.8	12	42	61	23	44	12	7.1	11
9	237	9.3	43	9.8	12	42	75	10	68	12	7.1	31
10	98	9.3	24	9.8	12	42	89	10	169	12	7.0	44
11	10	9.8	11	10	12	42	98	10	162	12	7.5	71
12	10	9.8	11	10	12	42	98	10	53	11	7.7	87
13	9.8	9.8	11	10	13	21	85	10	43	9.3	7.3	86
14	10	9.8	11	10	16	6.0	76	10	43	7.3	7.3	86
15	10	9.8	11	10	13	5.8	55	56	43	7.3	7.3	86
16	10	9.9	11	10	62	5.8	42	90	43	7.3	7.3	62
17	41	25	11	10	102	5.7	61	89	44	7.3	7.3	44
18	59	35	11	10	145	5.6	77	41	44	7.4	6.9	68
19	59	21	11	10	173	6.3	77	5.7	25	7.5	6.6	85
20	59	10	11	10	130	61	90	52	12	7.3	6.6	84
21	59	10	11	11	103	99	100	83	12	7.3	6.6	84
22	59	10	11	12	103	99	100	82	27	7.3	6.3	84
23	59	10	11	12	102	84	100	82	39	7.3	6.5	60
24	59	10	32	12	102	75	65	83	39	7.3	6.6	44
25	59	10	47	12	102	56	42	37	38	7.3	6.6	43
26	59	10	47	29	101	42	42	5.0	22	7.3	6.6	43
27	48	10	47	44	47	91	109	51	11	7.3	6.3	43
28	38	29	47	61	30	123	153	83	11	7.3	6.3	23
29	23	42	47	75	---	123	85	98	11	7.3	6.3	10
30	9.3	42	47	75	---	72	79	108	11	7.3	6.3	10
31	26	---	47	73	---	42	---	47	---	7.3	6.3	---
TOTAL	2477.1	501.6	909	846.4	1705	1528.2	2245	1867.7	1067.6	279.0	213.4	1360.5
MEAN	79.9	16.7	29.3	27.3	60.9	49.3	74.8	60.2	35.6	9.00	6.88	45.4
MAX	241	42	47	75	173	123	153	126	169	12	7.7	87
MIN	9.3	9.3	11	9.8	12	5.6	41	5.0	5.6	7.3	6.3	9.5
AC-FT	4910	995	1800	1680	3380	3030	4450	3700	2120	553	423	2700
CAL YR 1980 TOTAL	43295.7		MEAN 118	MAX 1490	MIN 9.3	AC-FT 85880	MEAN ± 118	AC-FT ± 85640				
WTR YR 1981 TOTAL	15000.5		MEAN 41.1	MAX 241	MIN 5.0	AC-FT 29750	MEAN ± 39.8	AC-FT ± 28830				

‡ Adjusted for change in contents in Prosser Creek Reservoir.

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°27'20", long 120°17'13", in SW¼NW¼ sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, on left bank 0.3 mi (0.5 km) downstream from Independence Lake outlet, and 10.5 mi (16.9 km) northwest of Truckee.

DRAINAGE AREA.--8.10 mi² (20.98 km²).

PERIOD OF RECORD.--November 1902 to September 1907, November 1909 to June 1910, August 1968 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,940 ft (2,115 m), from topographic map. July 1, 1904, to June 30, 1910, water-stage recorder 75 ft (25 m) downstream from Independence Lake outlet; prior to July 1, 1904, water-stage recorder 600 ft (180 m) downstream at approximately same datum.

REMARKS.--Records fair October to November, poor thereafter. Flow regulated by Independence Lake, usable capacity, 17,500 acre-ft (21.6 hm³).

AVERAGE DISCHARGE (unadjusted).--18 years (water years 1903-7, 1969-81), 26.6 ft³/s (0.753 m³/s), 19,270 acre-ft/yr (23.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 286 ft³/s (8.10 m³/s) June 23, 1907, gage height, 3.9 ft (1.19 m) site and datum then in use; no flow Sept. 28 to Nov. 10, 1905, June 1, 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 82 ft³/s (2.32 m³/s) Nov. 7, gage height, 3.52 ft (1.073 m) maximum gage height, 4.67 ft (1.423 m) Oct. 22, backwater from beaver dam; minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	61	14	8.5	5.9	3.8	6.4	4.4	3.9	3.7	2.3	1.9
2	20	61	14	8.4	5.8	3.8	6.3	4.4	3.8	4.0	2.3	1.8
3	20	61	14	8.3	5.7	3.8	6.5	4.3	3.8	3.8	2.3	1.8
4	20	61	13	8.1	5.6	3.8	6.5	4.3	3.8	3.7	2.3	1.8
5	20	60	13	8.0	5.5	3.8	7.0	4.3	3.8	3.7	2.2	1.8
6	20	71	13	7.9	5.4	3.8	7.3	4.3	3.8	3.6	2.2	1.7
7	20	82	13	7.8	5.3	3.9	7.3	4.3	3.8	3.6	2.2	1.7
8	21	80	13	7.7	5.2	4.2	7.5	4.3	3.7	3.6	2.2	1.7
9	20	79	12	7.6	5.1	4.0	7.6	4.2	3.7	3.6	2.2	1.6
10	20	78	12	7.5	5.0	4.1	7.4	4.2	3.7	3.5	2.2	1.6
11	20	79	12	7.4	4.9	4.2	6.6	4.2	3.7	3.5	2.1	1.6
12	20	79	12	7.3	4.8	4.4	6.4	4.2	3.7	3.5	2.1	1.6
13	20	77	12	7.5	4.8	4.6	6.6	4.2	3.7	3.4	2.1	1.5
14	19	76	11	7.5	4.7	4.7	6.8	4.1	3.7	3.4	2.1	1.5
15	19	76	11	7.5	4.6	4.8	6.2	4.1	3.7	3.3	2.1	1.5
16	19	75	11	7.6	4.6	4.9	6.6	4.1	3.8	3.3	2.1	1.4
17	18	74	11	7.6	4.5	4.8	6.4	4.1	3.8	3.2	2.0	1.4
18	18	74	11	7.8	4.4	5.0	6.1	4.1	3.8	3.2	2.0	1.4
19	18	73	10	8.3	4.4	5.2	5.7	4.1	3.8	3.1	2.0	1.3
20	17	72	10	7.8	4.3	5.2	5.6	4.1	3.8	3.1	2.0	1.3
21	17	72	10	8.1	4.2	5.2	5.3	4.0	3.8	3.0	2.0	1.3
22	16	71	10	7.5	4.2	5.5	5.8	4.0	3.8	2.9	2.0	1.2
23	31	71	9.8	7.3	4.1	5.8	5.5	4.0	3.7	2.8	2.0	1.2
24	45	40	9.6	7.2	4.1	6.0	5.0	4.0	3.8	2.8	1.9	1.2
25	56	16	9.4	7.0	4.0	6.5	4.5	4.0	4.2	2.7	1.9	1.1
26	62	16	9.3	6.8	4.0	6.4	4.5	4.0	4.3	2.6	1.9	1.1
27	62	15	9.2	6.7	3.9	6.3	4.5	3.9	3.9	2.6	1.9	1.1
28	61	15	9.0	6.5	3.9	6.5	4.4	3.9	3.8	2.5	1.9	1.0
29	61	15	8.9	6.4	---	6.7	4.4	3.9	3.7	2.5	1.9	1.0
30	61	14	8.8	6.2	---	6.7	4.4	3.9	3.7	2.3	1.9	1.0
31	61	---	8.6	6.1	---	6.3	---	3.9	---	2.3	1.9	---
TOTAL	922	1794	344.6	231.9	132.9	154.7	181.1	127.8	114.0	98.8	64.2	43.1
MEAN	29.7	59.8	11.1	7.48	4.75	4.99	6.04	4.12	3.80	3.19	2.07	1.44
MAX	62	82	14	8.5	5.9	6.7	7.6	4.4	4.3	4.0	2.3	1.9
MIN	16	14	8.6	6.1	3.9	3.8	4.4	3.9	3.7	2.3	1.9	1.0
AC-FT	1830	3560	684	460	264	307	359	253	226	196	127	85
CAL YR 1980 TOTAL	12873.6			MEAN 35.2	MAX 146	MIN 8.6	AC-FT 25530					
WTR YR 1981 TOTAL	4209.1			MEAN 11.5	MAX 82	MIN 1.0	AC-FT 8350					

LOCATION (REVISED).--Lat 39°25'54", long 120°14'13", in NE¼NE¼ sec.7, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on left bank 2.2 mi (3.5 km) upstream from bridge on State Highway 89, and 7.5 mi (12.1 km) north of Truckee.

WATER-DISCHARGE RECORDS

REVISED RECORDS. --WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,320 ft (1,926 m), from topographic map. Prior to Dec. 2, 1953, nonrecording gage at site 100 ft (30 m) upstream at different datum.

AVERAGE DISCHARGE.--28 years, 11.8 ft³/s (0.334 m³/s), 8,550 acre-ft/yr (10.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 765 ft³/s (21.7 m³/s) Feb. 1, 1963, gage height, 4.64 ft (1.414 m) from floodmarks, from rating curve extended above 130 ft³/s (3.68 m³/s) on basis of slope-area measurement at gage height 4.28 ft (1.305 m); minimum, 0.6 ft³/s (0.017 m³/s) Aug. 8, 1960, Aug. 7, 1961, result of temporary regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33 ft³/s (0.93 m³/s) Apr. 24, gage height, 2.39 ft (0.728 m), no peak above base of 50 ft³/s (1.42 m³/s); minimum daily, 1.3 ft³/s (0.037 m³/s) on many days during August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.6	3.1	3.1	3.7	4.7	7.5	20	5.5	1.9	1.4	1.4
2	2.3	2.6	3.8	3.1	3.6	4.6	7.1	18	5.4	1.9	1.4	1.4
3	2.3	2.6	5.6	3.4	3.7	4.6	7.0	15	5.1	1.8	1.4	1.4
4	2.3	2.6	7.6	3.6	3.6	4.7	7.6	14	4.7	1.8	1.4	1.4
5	2.3	2.6	4.1	3.5	3.5	4.5	9.8	13	4.5	1.7	1.4	1.4
6	2.3	2.6	3.6	3.2	3.4	4.6	12	11	4.3	1.7	1.4	1.4
7	2.2	3.2	3.3	3.1	3.4	4.5	12	11	4.0	1.7	1.3	1.4
8	2.2	3.7	3.1	3.0	3.4	4.6	12	10	4.0	1.6	1.3	1.5
9	2.3	2.9	3.0	3.0	3.4	4.8	14	10	3.8	1.6	1.3	1.5
10	2.3	2.8	2.9	2.9	3.4	5.1	14	9.6	3.5	1.6	1.3	1.4
11	2.3	3.4	2.8	2.8	3.5	5.4	12	9.0	3.4	1.6	1.3	1.5
12	4.0	3.3	2.8	2.8	3.6	5.4	12	8.5	3.4	1.6	1.3	1.5
13	2.9	3.0	2.8	2.9	6.3	5.4	14	8.2	3.3	1.6	1.3	1.5
14	3.2	2.8	2.8	2.9	22	5.2	16	9.0	3.2	1.6	1.3	1.5
15	3.1	2.9	2.9	2.9	9.6	5.2	17	8.8	3.0	1.5	1.3	1.5
16	3.2	2.7	2.9	3.0	8.3	5.1	19	8.0	2.9	1.5	1.3	1.5
17	3.0	2.8	3.0	3.0	9.1	5.0	20	7.3	2.8	1.5	1.4	1.5
18	2.9	2.7	3.2	3.1	7.8	4.9	19	19	2.6	1.5	1.4	1.5
19	2.8	2.7	3.2	3.1	9.9	5.3	18	13	2.6	1.5	1.3	1.5
20	2.7	2.7	3.2	3.2	8.7	5.0	16	9.7	2.6	1.5	1.3	1.5
21	2.7	2.7	4.0	3.8	7.0	5.2	17	8.5	2.6	1.4	1.3	1.5
22	2.7	2.9	4.5	4.3	6.4	5.6	20	7.9	2.4	1.4	1.3	1.5
23	2.6	2.9	3.7	4.4	6.2	5.7	23	7.5	2.3	1.4	1.3	1.5
24	2.6	2.8	3.4	3.7	6.0	5.9	26	7.3	2.3	1.4	1.3	1.6
25	3.3	2.7	4.0	3.4	5.7	14	24	8.6	2.2	1.4	1.3	2.3
26	3.4	2.7	4.2	3.4	5.2	11	21	10	2.2	1.4	1.3	1.7
27	3.1	2.7	4.3	4.0	5.0	8.0	17	8.1	2.1	1.4	1.3	1.7
28	2.8	2.8	3.9	4.0	4.9	8.5	18	7.0	2.1	1.4	1.3	1.7
29	2.8	2.8	3.6	3.9	---	8.6	19	6.6	2.0	1.4	1.3	1.7
30	2.7	3.1	3.5	3.9	---	7.9	20	6.3	2.0	1.4	1.3	1.6
31	2.7	---	3.3	3.9	---	7.4	---	5.8	---	1.4	1.3	---
TOTAL	84.3	85.3	112.1	104.3	170.3	186.4	471.0	315.7	96.8	48.1	41.1	46.0
MEAN	2.72	2.84	3.62	3.36	6.08	6.01	15.7	10.2	3.23	1.55	1.33	1.53
MAX	4.0	3.7	7.6	4.4	22	14	26	20	5.5	1.9	1.4	2.3
MIN	2.2	2.6	2.8	2.8	3.4	4.5	7.0	5.8	2.0	1.4	1.3	1.4
AC-FT	167	169	222	207	338	370	934	626	192	95	82	91
CAL YR 1960	TOTAL	6401.8	MEAN	17.5	MAX	173	MIN	2.2	AC-FT	12700		
WTR YR 1981	TOTAL	1761.4	MEAN	4.83	MAX	26	MIN	1.3	AC-FT	3490		

PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT					
05...	1600	2.2	10.0	9	.05
13...	0740	3.0	--	2	.02
20...	0845	2.7	--	2	.01
27...	0930	3.1	--	2	.02
NOV					
03...	0920	2.6	--	1	.01
10...	0830	2.8	--	2	.02
17...	0950	2.7	--	2	.01
24...	0900	2.6	--	1	.01
DEC					
01...	1400	3.1	--	3	.03
03...	0800	3.6	--	3	.03
22...	1220	4.3	--	4	.05
29...	0900	3.6	--	3	.03
JAN					
05...	1300	3.4	--	2	.02
17...	1015	3.0	--	1	.01
19...	1538	3.1	--	4	.03
28...	1030	4.3	--	40	.46
FEB					
02...	1550	3.6	--	2	.02
14...	1530	21	--	11	.62
18...	1415	7.6	--	3	.06
24...	1430	6.2	--	3	.05
MAR					
02...	1515	4.7	--	2	.03
09...	1130	4.7	--	1	.01
17...	0915	5.7	--	2	.03
24...	1200	5.1	--	2	.03
30...	1030	7.9	--	5	.11
APR					
05...	1630	13	--	3	.11
06...	1630	15	--	5	.20
13...	1020	11	--	6	.18
16...	1750	24	--	9	.58
17...	1820	24	--	6	.39
18...	1740	19	--	2	.10
20...	1710	19	--	4	.21
22...	1550	24	--	10	.65
23...	1655	31	--	23	1.9
24...	0930	22	--	4	.24
24...	1700	33	--	20	1.8
25...	1840	26	--	5	.35
27...	0910	16	--	2	.09
27...	1825	19	--	3	.15
28...	1900	23	--	4	.25
29...	1930	23	--	3	.19
30...	2040	24	--	4	.26
MAY					
01...	1800	24	--	4	.26
04...	0835	14	--	1	.04
09...	1630	9.7	11.0	3	.08
11...	1130	9.0	--	3	.07
13...	1830	8.2	--	9	.20
17...	1645	7.1	8.5	2	.04
18...	1130	25	--	15	1.0
18...	1615	30	6.0	21	1.7
25...	1130	9.0	--	2	.05
JUN					
01...	1335	5.5	--	2	.03
08...	0900	4.1	--	2	.02
15...	1115	3.3	--	1	.01
22...	1030	3.1	--	2	.02
29...	0830	2.1	--	2	.01
JUL					
06...	0800	1.7	--	2	.01
13...	0950	1.6	--	1	.00
20...	0900	1.6	--	1	.00
27...	0840	1.5	--	1	.00
AUG					
03...	1315	1.4	--	2	.01
10...	0900	1.4	--	3	.01
17...	0950	1.4	--	3	.01
24...	1410	1.3	--	1	.00
31...	0615	1.3	--	0	.00
SEP					
07...	0815	1.5	--	0	.00
14...	1015	1.6	--	0	.00
21...	0830	1.6	--	2	.01
28...	1030	1.7	--	2	.01

10344300 STAMPEDE RESERVOIR NEAR TRUCKEE, CA

LOCATION (REVISED).--Lat 39°28'16", long 120°06'10", in NW¼NW¼ sec.28, T.19 N., R.17 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, in control house near base of spillway of Stampede Dam on Little Truckee River, 0.2 mi (0.3 km) upstream from Worn Mill Canyon, and 11.0 mi (17.7 km) northeast of Truckee.

DRAINAGE AREA.--136 mi² (352 km²).

PERIOD OF RECORD.--August 1969 to current year. August 1969 to September 1977 (monthend elevations and contents only). Prior to October 1976, published as "near Boca."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by rolled-earth and rockfill dam. Storage began Aug. 1, 1969. Total capacity, 226,500 acre-ft (279 hm³) at elevation, 5,948.7 ft (1,813.16 m), spillway crest. Inactive storage, 5,010 acre-ft (6.18 hm³), includes 660 acre-ft (814,000 m³) dead storage below elevation 5,798.3 ft (1,767.52 m). Figures given herein, including extremes, represent total contents at 0800 hours. Reservoir is used for flood control, municipal water supply, enhancement of fishery, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 226,500 acre-ft (279 hm³) June 19, 21, 1974, elevation, 5,948.7 ft (1,813.16 m); minimum since reservoir first filled, 30,772 acre-ft (37.9 hm³) Jan. 31, Feb. 1, 1978, elevation, 5,853.60 ft (1,784.177 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 146,344 acre-ft (180 hm³) Dec. 4, elevation, 5,922.37 ft (1,805.138 m); minimum, 70,893 acre-ft (87.4 hm³) Sept. 30, elevation, 5,886.95 ft (1,794.342 m).

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

5,850.00	27,915	5,900.00	94,535
5,855.00	31,951	5,910.00	115,865
5,860.00	36,470	5,920.00	140,141
5,865.00	41,505	5,930.00	167,355
5,870.00	47,204	5,940.00	197,630
5,875.00	53,295	5,950.00	231,005
5,880.00	60,185	5,960.00	267,386
5,890.00	76,008		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145445	144602	145947	141288	142093	142483	142640	142353	80508	76573	74574	72625
2	145405	144603	146013	141262	142119	142327	142692	141495	80311	76512	74498	72542
3	145366	144524	146079	141297	142015	142171	142744	140483	80204	76452	74422	72475
4	145348	144392	146344	141332	141911	142015	142944	139472	80151	76423	74337	72409
5	145330	144261	146105	141366	141742	141898	143144	137504	80222	76394	74252	72354
6	145313	144209	145824	141340	141573	141781	143345	136818	80275	76366	74210	72299
7	145287	144157	145543	141314	141478	141634	143489	134798	80320	76271	74168	72243
8	145261	144253	145261	141249	141383	141487	143632	132523	80365	76177	74117	72185
9	145221	144349	145089	141184	141288	141340	143777	130089	80383	76099	74066	72127
10	145182	144445	144918	141184	141132	141132	143921	127655	80400	76022	74016	72094
11	145112	144643	144721	141184	140977	140925	144052	125221	80391	75932	73965	72061
12	145042	144840	144524	141184	140860	140796	144183	121567	80382	75842	73915	72000
13	144971	144919	144105	141223	140744	140667	144314	120273	80275	75751	73856	71939
14	144905	144997	143686	141262	140865	140572	144538	117773	80159	75708	73797	71879
15	144840	145076	143266	141184	140986	140477	144761	115273	80044	75665	73724	71821
16	144919	145155	142966	141107	141107	140382	144985	112277	79902	75613	73651	71764
17	144997	145234	142666	141150	141327	140382	145208	109478	79635	75562	73578	71722
18	144962	145327	142353	141193	141547	140382	145630	106680	79493	75494	73519	71681
19	144927	145419	142041	141236	141742	140525	145709	103925	79157	75426	73461	71610
20	144892	145525	141859	141249	141937	140667	145498	101170	78858	75357	73394	71539
21	144892	145630	141677	141262	142119	140770	145076	98215	78559	75297	73327	71467
22	144892	145709	141495	141353	142301	140874	145577	95261	78260	75237	73266	71401
23	144866	145788	141417	141444	142483	140977	144301	92090	77810	75186	73205	71336
24	144840	145868	141340	141418	142588	141029	144025	89609	77631	75135	73143	71286
25	144945	145868	141314	141392	142692	141081	143894	87437	77345	75067	73059	71237
26	145050	145868	141288	141366	142613	141431	143842	85450	77040	74999	72976	71193
27	145155	145828	141245	141730	142535	141781	143790	84191	76798	74931	72917	71149
28	145050	145788	141202	142093	142562	141902	143436	83036	76729	74863	72859	71106
29	144945	145868	141158	142106	---	142023	143083	82163	76677	74795	72798	71057
30	144853	145947	141171	142119	---	142145	142822	81386	76642	74718	72737	70893
31	144761	---	141184	142223	---	142249	---	80865	---	74642	72675	---
MAX	145445	145947	146344	142223	142692	142483	145709	142353	80508	76573	74574	72625
MIN	144761	144157	141158	141107	140744	140382	142640	80865	76642	74642	72675	70893
†	5921.77	5922.22	5920.40	5920.80	5920.93	5920.81	5921.03	5892.77	5890.37	5889.20	5888.03	5886.95
‡	-684	+1186	-4763	+1039	+339	-313	+573	-61957	-4223	-2000	-1967	-1782

CAL YR 1980 † +81733

WTR YR 1981 ‡ -74552

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR TRUCKEE, CA

LOCATION.--Lat 39°26'09", long 120°05'00", in SW¼SW¼ sec.3, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 1 mi (2 km) upstream from Boca Reservoir, 1.5 mi (2.4 km) upstream from Dry Creek, 3.0 mi (4.8 km) downstream from Stampede Dam, and 5.5 mi (8.8 km) northeast of Truckee.

DRAINAGE AREA.--146 mi² (378 km²).

PERIOD OF RECORD.--June 1903 to October 1910, September 1939 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Published as "at Pine Station" June 1903 to December 1907, as "at Starr" January 1908 to October 1910, and as "near Boca" September 1939 to September 1976.

REVISED RECORDS.--WSP 1564: 1903-4, 1906-7, 1910, drainage area at site used in 1903-7.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,618.67 ft (1,712.571 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). June 1903 to October 1910, nonrecording gages at different sites and datums.

REMARKS.--Records excellent. Flow regulated by Independence Lake, capacity, 17,500 acre-ft (21.6 hm³), one transbasin diversion to Sierra Valley, and Stampede Reservoir (station 11344300) since 1969.

AVERAGE DISCHARGE (adjusted for change in contents in Stampede Reservoir since 1969).--49 years (water years 1904-10, 1940-81), 185 ft³/s (5.239 m³/s), 134,000 acre-ft/yr (165 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s (377 m³/s) Feb. 1, 1963, gage height, 9.00 ft (2.743 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft³/s (0.008 m³/s) Sept. 16-21, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) May 18, gage height, 3.22 ft (0.981 m); minimum, 24 ft³/s (0.68 m³/s) on many days during July and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	108	33	34	79	118	38	637	240	25	24	26
2	31	108	34	38	87	128	38	734	174	25	24	26
3	32	124	45	43	87	128	38	773	125	25	25	26
4	32	141	109	43	96	128	37	773	88	25	24	26
5	32	123	250	42	103	128	37	830	64	24	24	26
6	32	110	109	42	103	128	37	1100	41	24	24	26
7	32	67	108	42	103	128	37	1250	30	24	24	26
8	32	35	108	42	103	128	37	1360	29	24	24	26
9	31	34	108	39	103	128	37	1390	29	24	25	26
10	31	35	108	34	103	128	37	1420	28	24	25	26
11	31	35	134	34	103	128	36	1440	28	24	25	26
12	33	35	189	34	103	128	36	1500	38	24	25	26
13	32	34	212	34	94	130	36	1530	56	24	25	26
14	33	34	212	34	92	128	36	1540	62	24	25	26
15	33	34	211	34	87	128	37	1580	90	24	25	26
16	34	34	211	34	59	75	37	1660	119	24	25	26
17	33	34	211	34	41	38	37	1680	125	24	25	26
18	32	34	212	34	41	37	94	1710	143	24	25	26
19	32	32	165	34	41	38	265	1700	151	24	25	26
20	32	32	108	34	40	37	303	1690	151	24	25	26
21	32	32	108	34	38	37	364	1690	152	24	25	26
22	32	32	107	34	38	37	404	1610	155	24	25	26
23	32	32	106	34	37	37	405	1470	155	24	25	26
24	32	32	87	34	38	37	445	1410	154	24	25	26
25	32	32	57	34	66	41	403	1250	154	24	25	27
26	32	32	57	39	85	41	289	1010	138	24	25	26
27	50	32	57	48	96	40	329	770	86	24	25	26
28	108	32	57	47	105	40	359	639	37	24	25	26
29	110	32	49	46	---	40	410	532	25	24	25	63
30	153	34	34	57	---	40	538	437	25	24	25	150
31	141	---	34	68	---	38	---	336	---	24	25	---
TOTAL	1393	1545	3630	1214	2171	2565	5236	37451	2892	748	768	950
MEAN	44.9	51.5	117	39.2	77.5	82.7	175	1208	96.4	24.1	24.8	31.7
MAX	153	141	250	68	105	130	538	1710	240	25	25	158
MIN	29	32	33	34	37	37	36	336	25	24	24	26
AC-FT	2760	3060	7200	2410	4310	5090	10390	74280	5740	1480	1520	1880

CAL YR 1980 TOTAL 48778.6 MEAN 133 MAX 1630 MIN 5.4 AC-FT 96750 MEAN ‡ 246 AC-FT ‡ 178500
WTR YR 1981 TOTAL 60563.0 MEAN 166 MAX 1710 MIN 24 AC-FT 120100 MEAN ‡ 62.9 AC-FT ‡ 45550

‡ Adjusted for change in contents in Stampede Reservoir.

10344490 BOCA RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'20", long 120°05'43" (revised), in NE¼NW¼ sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house at Boca Dam on Little Truckee River 1,800 ft (550 m) upstream from mouth, and 6.5 mi (10.5 km) northeast of Truckee.

DRAINAGE AREA.--172 mi² (445 km²).

PERIOD OF RECORD.--December 1938 to current year. Prior to October 1976 published as "at Boca." Monthend contents only for December 1938 to September 1957, published in WSP 1734.

REVISED RECORDS.--WSP 1634: Drainage area.

GAGE.--Pressure gage with mercury column read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1938. Usable capacity, 40,870 acre-ft (50.4 hm³) between elevations 5,521 ft (1,682.8 m) outlet sill, and 5,605 ft (1,708.4 m) top of spillway gates. Elevation of spillway (gate open) is 5,589.01 ft (1,703.530 m). Dead storage, 241 acre-ft (297,000 m³). Figures given herein represent usable contents at 0800 hours. Water is used for irrigation in the State of Nevada and for power development.

COOPERATION.--Records furnished by Bureau of Reclamation, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 41,440 acre-ft (51.1 hm³) Dec. 23, 1955, elevation, 5,605.55 ft (1,708.572 m); minimum, 37 acre-ft (45,600 m³) Mar. 4-9, 1955, elevation, 5,521.65 ft (1,682.999 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 35,579 acre-ft (43.9 hm³) May 16, elevation, 5,599.40 ft (1,706.697 m); minimum, 17,105 acre-ft (21.1 hm³) Jan. 26, 30, 31, elevation, 5,575.60 ft (1,699.443 m).

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

5,548	4,352	5,576	17,359
5,552	5,636	5,580	20,002
5,556	7,112	5,585	23,589
5,560	8,778	5,590	27,488
5,564	10,627	5,595	31,699
5,568	12,671	5,600	36,128
5,572	14,915	5,605	40,868

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29723	24572	18425	18755	17422	21685	27003	28387	31850	28223	29177	28141
2	29386	24611	18196	18589	17614	21972	27124	28511	31177	28264	29218	28141
3	28968	24649	18066	18491	17742	22225	27205	28760	30488	28305	29218	28099
4	28885	24726	18066	18392	17871	22517	27245	29051	29765	28387	29218	28099
5	28801	24802	18131	18327	18066	22773	27326	29135	29135	28429	29218	28099
6	28760	24879	18458	18196	18327	23068	27407	29428	28305	28470	29218	28099
7	28760	24802	18524	18066	18524	23365	27488	30232	27732	28470	29218	28058
8	28843	24649	18556	17936	18722	23664	27569	31264	27245	28470	29218	28058
9	28885	24306	18556	17775	18921	23889	27650	32326	26763	28511	29218	28058
10	28926	24040	18589	17678	19054	24192	27732	33290	26325	28511	29218	28058
11	28429	23589	18589	17614	19188	24420	27772	33867	26285	28511	29218	28058
12	27854	23365	18589	17422	19390	24687	27813	34358	26127	28553	29218	28099
13	27407	22994	18722	17359	19593	24918	27854	34808	25891	28553	29218	28099
14	26883	22700	18954	17295	19763	25188	27895	35124	25734	28635	29218	28099
15	26484	22407	19054	17232	19866	25421	27895	35442	25538	28677	29218	28099
16	25891	22189	19188	17232	20023	25694	27895	35579	25499	28718	29218	28099
17	25421	22008	19262	17232	20347	25718	27977	35442	25616	28760	29218	28099
18	25034	21721	19593	17232	20382	25734	28017	35351	25812	28760	29218	28099
19	24611	21435	19661	17232	20520	25812	27732	34943	26166	28801	29218	28099
20	24230	21151	19695	17232	20569	25891	27732	34853	26523	28843	29218	28099
21	23814	20835	19661	17232	20625	25969	27854	34853	26683	28885	29135	28058
22	23701	20590	19627	17232	20695	26048	27977	34943	26963	28885	29177	28058
23	23739	20276	19593	17232	20765	26048	28223	34853	27124	28926	29177	28058
24	23776	20037	19525	17168	20870	26127	28429	34492	27326	28968	29051	28058
25	23852	19661	19424	17168	20975	26206	29135	34492	27569	29009	28760	28058
26	23927	19323	19323	17105	21116	26364	29302	34672	27813	29051	28511	28099
27	24002	19121	19390	17168	21258	26523	28926	34492	28058	29051	28223	28099
28	24078	18854	19255	17232	21471	26603	28718	34224	28182	29051	28182	28099
29	24116	18755	19121	17168	---	26723	28387	33778	28223	29093	28182	28141
30	24306	18589	18988	17105	---	26843	28223	33158	28223	29093	28141	28223
31	24534	---	18854	17105	---	26923	---	32457	---	29135	28141	---
MAX	29723	24879	19695	18755	21471	26923	29302	35579	31850	29135	29218	28223
MIN	23701	18589	18066	17105	17422	21685	27003	28387	25499	28223	28141	28058
†	5586.25	5577.90	5578.30	5575.60	5582.10	5589.30	5590.90	5595.90	5590.90	5592.00	5590.80	5590.90
‡	-5741	-5945	+265	-1741	+1366	+5152	+1300	+1231	-1231	+112	-994	+82

CAL YR 1980 † +5170

WTR YR 1981 † -2052

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

PYRAMID AND WINNEMUCCA LAKES BASIN

10344500 LITTLE TRUCKEE RIVER BELOW BOCA DAM, NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'13", long 120°05'40", in NE¼NW¼ sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank 800 ft (244 m) upstream from mouth, 1,000 ft (305 m) downstream from Boca Dam, and 6.2 mi (10.0 km) northeast of Truckee.

DRAINAGE AREA.--173 mi² (448 km²).

PERIOD OF RECORD.--April to October 1890 (monthly discharge only), January 1911 to September 1915, January 1939 to current year. Prior to October 1976 published as "at Boca". Monthly discharge only for January 1939 to September 1957, published in WSP 1734.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,500 ft (1,676 m), from topographic map. Jan. 1, 1911, to Sept. 30, 1915, nonrecording gage at site 650 ft (200 m) downstream at different datum. January 1939 to September 1957, records computed from daily log of rated settings of needle valve in dam, and from computed flow over spillway.

REMARKS.--Records good. Flow regulated by Boca Reservoir (station 10344490), capacity, 40,870 acre-ft (50.4 hm³), Independence Lake, capacity, 17,500 acre-ft (21.6 hm³), one transmountain diversion to Sierra Valley, and Stampede Reservoir (station 10344300), capacity, 226,500 acre-ft (279 hm³) since 1969.

AVERAGE DISCHARGE (unadjusted).--46 years (water years 1912-15, 1940-81), 182 ft³/s (5.154 m³/s), 131,900 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft³/s (249 m³/s) Dec. 24, 1955, from records of Washoe County Water Conservation District; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) May 18, gage height, 5.55 ft (1.692 m); minimum daily, 0.40 ft³/s (0.011 m³/s) Feb. 4-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	99	122	100	.45	.45	.59	586	552	.74	.78	17
2	187	79	122	100	.45	.45	.61	629	509	.76	.78	17
3	126	77	110	100	.45	.45	.61	631	467	.74	9.3	17
4	60	98	100	100	.40	.45	.61	717	420	.70	18	17
5	60	110	86	101	.40	.45	.61	752	413	.71	18	17
6	33	118	67	102	.40	.45	.65	727	370	.70	18	17
7	.80	140	67	109	.40	.45	.67	732	278	.70	18	17
8	.80	159	79	119	16	.49	.67	789	245	.70	18	17
9	.80	159	108	106	42	.50	.67	895	244	.70	18	17
10	155	181	118	92	42	.50	.67	1010	134	.71	18	17
11	294	196	128	91	26	.50	.68	1130	47	.70	18	17
12	270	189	133	80	11	.50	.67	1190	120	.67	18	17
13	265	185	140	69	11	2.3	18	1250	145	.71	18	17
14	264	172	141	56	11	16	38	1270	141	.78	18	17
15	281	161	141	41	11	16	23	1370	125	.78	18	17
16	291	160	142	41	11	16	.95	1590	87	.78	18	17
17	247	160	142	41	11	16	21	1660	28	.78	18	17
18	227	160	142	41	4.0	16	230	1750	.73	.79	18	17
19	228	173	135	41	.45	16	298	1730	13	.80	18	17
20	228	179	129	41	.45	9.7	301	1580	24	.79	18	17
21	161	179	129	41	.45	.50	301	1580	28	.78	18	17
22	21	179	129	41	.45	.50	313	1580	43	.78	18	17
23	.45	179	128	41	.45	.50	323	1570	43	.78	31	17
24	.45	179	122	41	.45	.50	219	1440	32	.78	130	17
25	.50	178	114	41	.45	.58	196	1160	24	.77	148	17
26	.50	168	88	41	.45	.56	401	1060	15	.77	148	17
27	18	148	67	42	.45	.56	508	940	.78	.78	86	17
28	45	135	122	42	.45	.55	507	837	.77	.75	26	17
29	45	122	111	42	---	.57	516	833	.76	.75	16	17
30	45	122	100	42	---	.56	524	786	.76	.77	17	53
31	71	---	100	18	---	.55	---	669	---	.77	17	---
TOTAL	3878.30	4544	3562	2003	203.45	119.57	4745.66	34443	4550.80	23.22	971.86	546
MEAN	125	151	115	64.6	7.27	3.86	158	1111	152	.75	31.4	18.2
MAX	294	196	142	119	42	16	524	1750	552	.80	148	53
MIN	.45	77	67	18	.40	.45	.59	586	.73	.67	.78	17
AC-FT	7690	9010	7070	3970	404	237	9410	68320	9030	46	1930	1080
CAL YR 1980	TOTAL	52134.80	MEAN 142	MAX 863	MIN .45	AC-FT 103400						
WTR YR 1981	TOTAL	59590.86	MEAN 163	MAX 1750	MIN .40	AC-FT 118200						

10346000 TRUCKEE RIVER AT FARAD, CA

LOCATION.--Lat 39°25'41", long 120°01'59", in SE¼NE¼ sec.12, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.5 mi (0.8 km) upstream from Mystic Canyon, 0.7 mi (1.1 km) downstream from Farad powerplant, 2.5 mi (4.0 km) north of Floriston, 3.4 mi (5.5 km) downstream from Bronco Creek, and 3.5 mi (5.6 km) upstream from California-Nevada State line.

DRAINAGE AREA.--932 mi² (2,414 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to October 1890 (monthly discharge only), September 1899 to current year. Monthly discharge only for January 1944 to July 1957, published in WSP 1734. Published as "near Boca" March to October 1890, "at or near Nevada-California State line" September 1899 to August 1912, and as "at Iceland" August 1912 to December 1937.

REVISED RECORDS.--WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,153.21 ft (1,570.698 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). See WSP 2127 for history of changes prior to Aug. 26, 1957.

REMARKS.--Records good. Flow regulated by Lake Tahoe, Martis Creek Lake, Prosser Creek, Stampede, and Boca Reservoirs (stations 10337000, 10339380, 10340300, 10343300, and 10344490), Donner and Independence Lakes, and by several powerplants.

AVERAGE DISCHARGE.--82 years (water years 1900-81), 784 ft³/s (22.20 m³/s), 568,000 acre-ft/yr (700 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s (496 m³/s) Nov. 21, 1950, gage height, 14.5 ft (4.420 m) present datum, from floodmarks, from slope-area measurement of peak flow; minimum, 28 ft³/s (0.793 m³/s) Dec. 18, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,530 ft³/s (71.6 m³/s) May 18, gage height, 5.59 ft (1.704 m); minimum, 221 ft³/s (6.26 m³/s) Mar. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	476	438	483	394	320	255	281	1290	888	472	468	493
2	406	413	435	392	317	249	274	1290	841	458	469	495
3	395	384	435	395	319	246	281	1180	792	452	472	494
4	407	381	516	409	295	249	294	1180	716	451	480	493
5	405	380	430	400	246	239	305	1200	713	453	485	491
6	404	383	381	396	243	231	321	1120	664	451	487	491
7	390	368	375	386	240	232	329	1070	560	428	484	493
8	386	410	372	380	247	230	345	1130	523	423	484	494
9	385	388	404	374	282	232	370	1220	550	419	483	469
10	404	396	396	351	278	237	390	1350	547	454	482	448
11	417	426	391	350	273	244	390	1460	511	469	483	469
12	391	412	400	343	254	245	372	1500	452	467	486	494
13	380	400	403	332	265	242	381	1580	460	465	488	496
14	376	386	404	329	546	225	408	1640	451	462	486	489
15	387	373	408	330	506	231	417	1730	419	466	486	442
16	397	369	407	331	441	232	390	1980	463	467	533	413
17	374	379	410	328	594	225	408	2040	465	466	532	388
18	383	400	413	324	519	221	607	2210	425	463	502	405
19	384	413	411	328	523	234	713	2300	416	462	491	426
20	384	401	397	332	527	250	679	2060	409	461	489	437
21	439	399	399	327	414	290	690	2010	402	464	486	430
22	427	401	428	303	386	295	765	1980	430	462	489	420
23	395	400	412	307	374	284	862	1940	472	466	479	414
24	390	399	411	289	376	263	874	1860	463	465	469	389
25	387	424	419	275	359	315	724	1620	456	465	438	411
26	388	433	415	289	347	420	862	1490	495	464	446	398
27	390	407	363	367	299	366	956	1360	477	466	472	397
28	454	409	428	385	242	392	1020	1270	475	465	476	384
29	424	410	417	385	---	401	1050	1260	474	463	493	365
30	392	418	395	373	---	349	1140	1260	474	464	492	387
31	401	---	396	347	---	280	---	1090	---	463	494	---
TOTAL	12418	12000	12754	10851	10032	8404	16898	47670	15883	14216	15004	13315
MEAN	401	400	411	350	358	271	563	1538	529	459	484	444
MAX	476	438	516	409	594	420	1140	2300	888	472	533	496
MIN	374	368	363	275	240	221	274	1070	402	419	438	365
AC-FT	24630	23800	25300	21520	19900	16670	33520	94550	31500	28200	29760	26410
CAL YR 1980 TOTAL	286320		MEAN 782	MAX 5100	MIN 301	AC-FT 567900						
WTR YR 1981 TOTAL	189445		MEAN 519	MAX 2300	MIN 221	AC-FT 375800						

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-61, 1964-81. Published as Truckee River at Floriston (station 10345900) January 1964 to September 1971.
 CHEMICAL ANALYSES: Water years 1951-61, 1964 to April 1981 (discontinued).
 BIOLOGICAL DATA: Water years 1975-77, 1980.
 SPECIFIC CONDUCTANCE: Water years 1964-80.
 WATER TEMPERATURES: Water years 1964 to March 1981 (discontinued).
 SEDIMENT RECORDS: Water years 1974-78.

PERIOD OF DAILY RECORD.--
 SPECIFIC CONDUCTANCE: January 1964 to September 1980.
 WATER TEMPERATURES: January 1964 to March 1981 (discontinued).

REMARKS.--Water quality at this site is considered comparable with that of Truckee River at Floriston (station 10345900), which was operated 2.5 mi (4.0 km) upstream. Daily specific conductance and temperature data were collected at Farad powerplant, 0.7 mi (1.1 km) upstream from gage when the powerplant is in operation. Unpublished specific conductance records are included in extremes and are available in files of district office. This station was part of a National Water Quality Surveillance System.

COOPERATION.--Conductivity and temperature data furnished by Sierra Pacific Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 377 micromhos Dec. 27, 1979; minimum observed, 39 micromhos Dec. 23, 1964.
 WATER TEMPERATURES: Maximum observed, 21.0°C Aug. 2, 6, 1971; minimum observed, 0.0°C on several days during winter periods of most years.

EXTREMES FOR PERIOD.--

SPECIFIC CONDUCTANCE: Maximum daily observed, 116 micromhos Feb. 5; minimum observed, 84 micromhos Mar. 25.
 WATER TEMPERATURES: Maximum observed, 9.0°C Oct. 21, 22, 24, Nov. 5; minimum observed, 0.0°C Dec. 8, Jan. 28, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	ALKA- LINEITY FIELD (MG/L AS CAC03)
OCT										
03...	1100	401	86	7.9	12.5	3.2	9.6	12	K3	38
NOV										
05...	0915	374	116	7.9	8.0	1.0	10.1	13	K20	--
20...	1140	401	96	7.6	6.0	.90	11.1	13	K1	42
DEC										
04...	1050	548	97	7.6	4.5	12	9.8	12	--	--
JAN										
06...	1230	394	102	7.4	4.5	.90	11.1	2	--	--
FEB										
04...	1300	313	113	7.3	3.0	--	11.5	1	--	--
MAR										
05...	1000	246	125	7.6	4.5	--	10.6	13	<1	33
APR										
03...	1040	267	133	6.5	6.5	--	10.6	15	K1	41

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
03...	0	.000	.40	.000	.51	.91	.020	220	3.6
NOV									
05...	0	.000	.00	.070	.62	.62	.050	160	4.1
20...	0	.000	.00	.090	.54	.54	.010	190	4.1
DEC									
04...	17	.000	.05	.040	.55	.60	.100	750	2.9
JAN									
06...	7	.010	.10	.030	.31	.41	.030	260	4.2
FEB									
04...	1	--	.07	--	.65	.72	.020	--	--
MAR									
05...	3	--	.12	.050	.39	.51	.030	--	--
APR									
03...	3	--	.00	--	.69	.69	.020	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).
 < Actual value is known to be less than the value shown.

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1980 TO MARCH 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8.0	3.5	---	---	4.0						
2	---	8.0	---	3.0	---	5.0						
3	---	7.5	4.5	4.5	---	3.5						
4	---	7.5	4.0	4.0	---	---						
5	---	9.0	3.0	4.5	0.5	---						
6	---	8.0	2.5	3.5	1.0	3.5						
7	---	8.5	2.5	3.0	---	5.0						
8	---	---	0.0	2.5	---	4.0						
9	---	---	0.5	3.0	---	---						
10	---	8.0	0.5	---	---	5.0						
11	---	8.0	1.0	---	---	5.0						
12	---	7.5	2.0	2.0	---	6.0						
13	---	6.0	3.0	4.0	---	4.5						
14	---	6.0	3.0	3.0	3.0	4.5						
15	---	---	3.0	3.5	3.0	5.0						
16	---	---	---	4.0	3.5	7.0						
17	---	6.0	3.0	4.0	4.5	4.5						
18	---	5.0	---	4.5	4.5	5.0						
19	---	5.5	---	---	---	5.0						
20	---	5.5	3.5	5.0	4.0	5.5						
21	9.0	4.5	3.5	---	3.5	4.0						
22	9.0	4.5	5.0	5.0	4.5	---						
23	8.5	6.0	3.5	---	4.0	5.0						
24	9.0	4.0	3.0	4.5	---	7.5						
25	---	---	5.0	2.0	3.0	6.0						
26	---	4.0	4.0	2.5	3.0	3.5						
27	8.0	4.0	---	4.0	2.0	---						
28	7.5	4.0	4.5	0.0	2.0	5.0						
29	7.5	4.0	3.5	0.0	---	---						
30	8.5	4.0	3.0	0.5	---	4.5						
31	7.0	---	---	---	---	---						
MONTH	---	6.0	3.0	---	---	---						

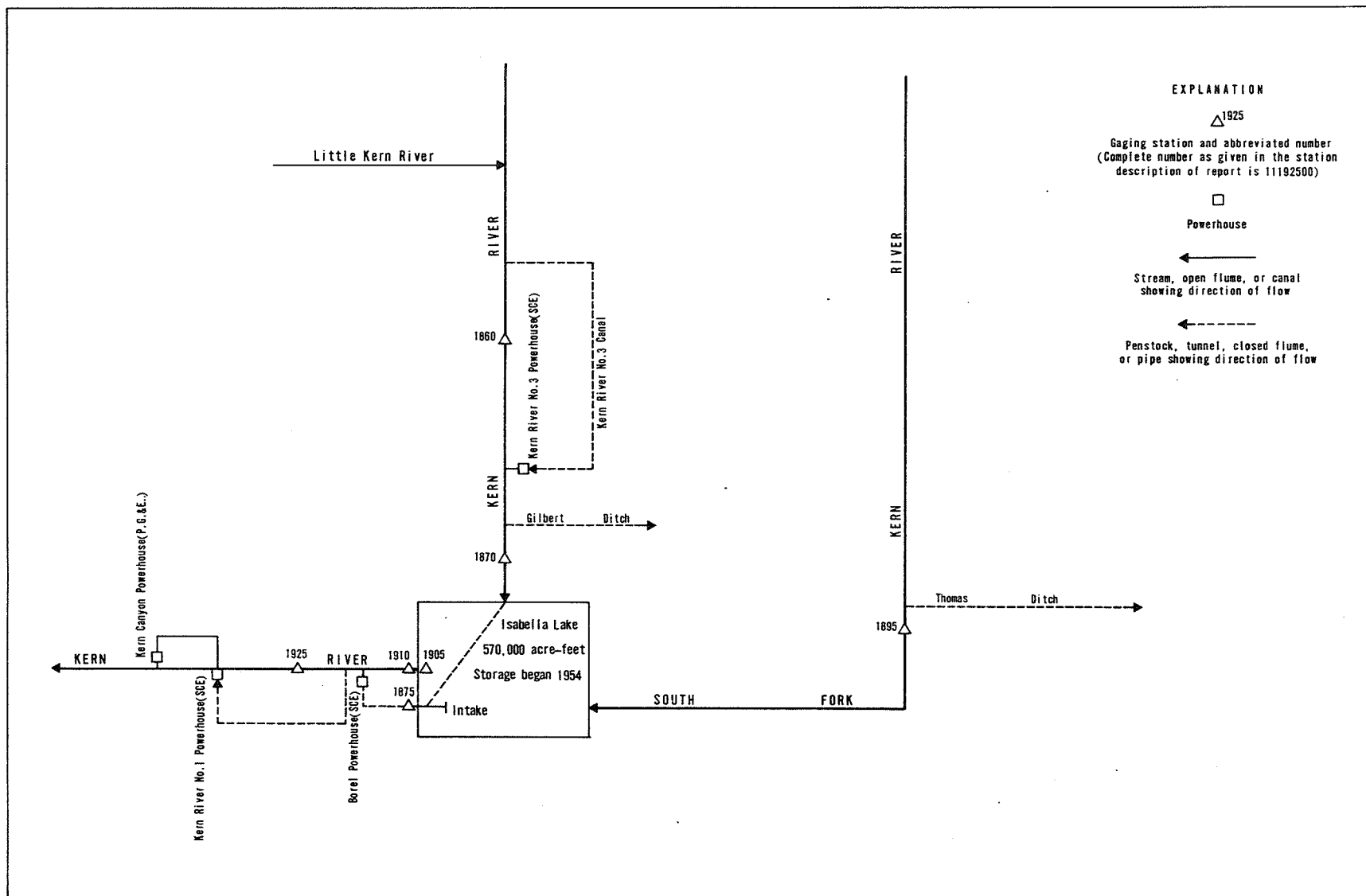


FIGURE 4. — Schematic diagram showing diversions and storage in Kern River basin.

11186000 KERN RIVER NEAR KERNVILLE, CA

LOCATION.--Lat 35°56'43", long 118°28'36", unsurveyed, Tulare County, Hydrologic Unit 18030001, on left bank at Packsaddle Canyon Creek, 100 ft (30 m) downstream from diversion dam, and 13.4 mi (21.6 km) north of Kernville.

DRAINAGE AREA.--846 mi² (2,191 km²).

PERIOD OF RECORD.--January 1912 to current year. Records for water year 1912 incomplete, yearly estimates published in WSP 1315-A. March 1921 to October 1953, records for river and canal published separately; combined flow only, October 1953 to September 1960.

REVISED RECORDS.--WSP 1445: 1912, 1916(M). WSP 1930: 1914(M), 1918(M).

GAGE.--Water-stage recorder on river; water-stage recorder and rectangular concrete-line flume for canal diversion. Altitude of gage is 3,620 ft (1,103 m), from topographic map. Prior to Apr. 1, 1913, at site 1.4 mi (2.3 km) downstream at different datum. Apr. 1 to Sept. 14, 1913, nonrecording gage and Sept. 15, 1913, to Sept. 30, 1967, water-stage recorder, at site 1.2 mi (1.9 km) downstream at different datum.

REMARKS.--Records good. Since 1921 Kern River No. 3 Canal diverts up to 630 ft³/s (17.8 m³/s) 100 ft (30 m) upstream from station, from left bank of Kern River for power development; water is returned to river 15 mi (24 km) downstream from station. See schematic diagram of Kern River basin. For records of combined discharge of river and canal, see following page.

COOPERATION.--Gage-height record and 18 discharge measurements for Kern River and gage-height record and 13 discharge measurements for canal furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 9 years (water years 1912-20), 790 ft³/s (22.37 m³/s), 571,900 acre-ft/yr (705 hm³/yr); 54 years (water years 1921-53, 1961-81), 373 ft³/s (10.56 m³/s), 270,200 acre-ft/yr (333 hm³/yr).
Combined river and diversion: 61 years (water years 1921-81), 723 ft³/s (20.48 m³/s), 523,800 acre-ft/yr (646 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 60,000 ft³/s (1,700 m³/s) Dec. 6, 1966, gage height, 22.77 ft (6.940 m) site and datum then in use, from floodmarks, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of computed flow over dam at gage height 17.55 ft (5.349 m), basic data for computation furnished by Southern California Edison Co., and slope-area measurement of maximum flow; no flow many days in 1924, 1925.

Combined river and diversion: Maximum discharge, 60,000 ft³/s (1,700 m³/s) Dec. 6, 1966; minimum daily, 78 ft³/s (2.21 m³/s) Aug. 30, 31, Sept. 17, 19, 1924.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 1,590 ft³/s (45.0 m³/s) May 2, gage height, 6.18 ft (1.884 m); minimum daily, 34 ft³/s (0.96 m³/s) Jan. 31, Feb. 1.

Combined river and diversion: Maximum discharge, 2,200 ft³/s (62.3 m³/s) May 2; minimum daily, 168 ft³/s (4.76 m³/s) Sept. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	44	44	42	34	69	99	1170	961	100	83	69
2	50	41	43	44	39	70	98	1410	969	103	83	69
3	50	41	40	42	40	72	96	1250	850	106	86	72
4	50	41	85	40	40	72	96	1020	881	102	87	71
5	50	41	41	41	40	72	96	911	1020	100	87	71
6	50	41	41	40	40	72	96	784	1080	102	87	71
7	50	41	41	40	41	72	96	690	937	103	87	71
8	50	41	41	40	41	72	96	644	832	106	87	71
9	50	41	41	40	41	72	99	728	861	101	87	72
10	51	42	42	40	41	72	140	852	806	104	87	74
11	51	41	41	39	41	72	145	955	650	104	87	75
12	51	42	40	40	41	72	125	1020	558	104	87	76
13	51	42	41	41	41	72	117	1160	407	104	87	77
14	51	42	40	41	41	71	137	1290	250	104	87	76
15	51	42	40	208	41	71	203	1020	137	104	88	75
16	51	42	40	45	41	71	291	738	113	96	88	75
17	50	42	42	42	41	72	348	618	127	90	89	73
18	49	42	43	41	41	72	368	612	132	89	89	70
19	48	43	43	41	41	72	318	569	145	89	92	72
20	48	43	42	41	41	72	208	497	158	89	92	72
21	49	43	42	41	41	71	158	409	166	89	92	72
22	49	43	42	41	41	72	193	360	145	89	91	134
23	49	43	42	41	41	72	386	421	140	89	92	75
24	49	43	42	41	41	71	610	464	111	88	91	70
25	49	43	42	41	41	71	755	634	96	88	91	72
26	49	44	42	41	41	77	720	737	97	88	89	69
27	49	44	42	41	41	70	626	709	98	87	87	69
28	49	44	41	40	44	70	616	722	98	87	88	69
29	49	44	41	40	---	72	688	817	95	87	88	70
30	50	44	41	39	---	72	914	931	97	87	89	70
31	50	---	42	34	---	70	---	1040	---	86	89	---
TOTAL	1544	1270	1330	1428	1138	2220	8938	25182	13017	2965	2734	2222
MEAN	49.8	42.3	42.9	46.1	40.6	71.6	298	812	434	95.6	80.2	74.1
MAX	51	44	85	208	44	77	914	1410	1080	106	92	134
MIN	48	41	40	34	34	69	96	360	95	86	83	69
AC-FT	3060	2520	2640	2830	2260	4400	17730	49950	25820	5880	5420	4410
CAL YR 1980 TOTAL	410661			1122	MAX 6800	MIN 40	AC-FT 814500					
WTR YR 1981 TOTAL	63988			175	MAX 1410	MIN 34	AC-FT 126900					

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KERN RIVER AND KERN RIVER
NO. 3 CANAL NEAR KERNVILLE, CA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	367	323	285	298	341	387	531	1770	1550	476	229	187
2	363	320	292	294	363	383	516	2000	1570	455	223	182
3	359	317	299	304	360	370	487	1830	1440	434	222	180
4	357	315	678	298	350	368	473	1590	1470	413	219	178
5	355	312	471	279	341	364	500	1500	1610	405	214	176
6	352	310	340	273	334	356	564	1390	1670	396	209	175
7	350	307	317	272	325	355	613	1290	1530	404	206	176
8	347	306	312	274	340	358	627	1230	1430	396	202	188
9	345	302	318	278	423	368	672	1310	1460	383	201	196
10	344	302	319	271	404	374	719	1430	1410	360	201	209
11	342	303	316	272	389	385	719	1540	1250	342	202	207
12	343	323	316	279	389	384	698	1600	1150	335	210	211
13	343	322	325	284	382	405	694	1730	994	322	221	217
14	347	315	325	278	390	373	747	1860	832	309	228	211
15	358	311	324	285	422	382	809	1600	719	304	251	201
16	366	294	344	279	410	381	869	1320	696	304	260	194
17	369	305	349	274	439	387	922	1190	710	313	245	191
18	370	307	344	271	455	390	941	1190	716	317	235	195
19	365	307	334	271	458	435	887	1140	730	303	245	197
20	358	306	328	268	473	554	783	1070	745	289	238	190
21	352	301	322	268	460	514	741	983	753	283	222	187
22	347	308	320	269	444	599	774	940	734	276	214	171
23	343	306	322	289	440	595	974	1000	732	271	208	177
24	338	305	313	282	430	550	1190	1040	700	269	199	174
25	335	291	312	256	406	562	1330	1210	665	266	194	175
26	342	298	315	258	398	652	1290	1320	607	261	194	172
27	343	294	326	308	371	569	1190	1300	556	251	191	169
28	338	297	326	363	373	534	1180	1310	535	243	194	168
29	332	297	316	334	---	544	1280	1400	509	239	198	169
30	329	293	305	238	---	562	1520	1520	491	240	194	171
31	326	---	299	312	---	540	---	1630	---	248	190	---
TOTAL	10825	9197	10412	8779	11110	13980	25240	43233	29964	10107	6659	5594
MEAN	349	307	336	283	397	451	841	1395	999	326	215	186
MAX	370	323	678	363	473	652	1520	2000	1670	476	260	217
MIN	326	291	285	238	325	355	473	940	491	239	190	168
AC-FT	21470	18240	20650	17410	22040	27730	50060	85750	59430	20050	13210	11100
CAL YR 1980	TOTAL	588774	MEAN	1609	MAX	7390	MIN	253	AC-FT	1168000		
WTR YR 1981	TOTAL	185100	MEAN	507	MAX	2000	MIN	168	AC-FT	367100		

11187000 KERN RIVER AT KERNNVILLE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 35°45'16", long 118°25'21", in NE&SW¼ sec.15, T.25 S., R.33 E., Kern County, Hydrologic Unit 18030001, on right bank 300 ft (91 m) downstream from highway bridge at Kernville, 1.1 mi (1.8 km) upstream from Caldwell Creek, 8.9 mi (14.3 km) upstream from Isabella Dam, and 42 mi (68 km) northeast of Bakersfield.

DRAINAGE AREA.--1,009 mi² (2,613 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1912, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,621.57 ft (799.055 m) National Geodetic Vertical Datum of 1929. January 1905 to September 1912, nonrecording gage at two sites 3.5 mi (5.6 km) downstream at different datums. October 1953 to Feb. 20, 1967, at present site and datum. Feb. 20, 1967, to Oct. 11, 1976, water-stage recorder 0.6 mi (1.0 km) upstream at datum 2,634.57 ft (803.017 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight regulation at times by operation of Kern River No. 3 canal and powerplant. A few small diversions for irrigation above station. Gilbert irrigation ditch diverts up to 7 ft³/s (0.20 m³/s) around station during irrigation season.

COOPERATION.--Thirteen discharge measurements furnished by Southern California Edison Co.

AVERAGE DISCHARGE.--35 years, 863 ft³/s (24.44 m³/s), 625,200 acre-ft/yr (771 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft³/s (2,100 m³/s) Dec. 6, 1966, gage height, 20.2 ft (6.16 m), revised, from floodmarks, present site, from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of slope-area measurement of maximum flow; minimum, 70 ft³/s (1.98 m³/s) Sept. 29, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known from at least 1912 to December 1966, 18.4 ft (5.61 m) from floodmarks, Nov. 19, 1950, site and datum then in use, discharge, 38,700 ft³/s (1,100 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 2	1030	*2,370 67.1	7.03 2.143
May 14	1345	2,120 60.0	6.85 2.088

Minimum daily, 154 ft³/s (4.36 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	321	285	298	384	418	606	1840	1580	466	206	178
2	357	315	290	293	413	435	607	2140	1570	454	204	169
3	353	311	301	303	408	413	565	1990	1500	448	201	163
4	354	308	670	297	398	410	541	1670	1490	436	204	163
5	351	309	470	278	386	406	575	1520	1630	425	200	164
6	347	311	340	278	377	396	651	1390	1720	413	191	163
7	344	307	318	277	364	391	709	1270	1600	417	185	166
8	342	306	312	279	388	397	728	1210	1460	407	182	176
9	339	303	318	283	553	411	781	1270	1490	391	177	185
10	336	300	318	275	513	416	826	1410	1450	365	177	210
11	334	304	316	278	463	426	837	1520	1290	345	178	211
12	333	326	316	287	464	425	807	1580	1160	332	184	216
13	338	327	325	295	447	459	779	1720	1020	312	206	228
14	343	318	326	289	447	418	792	1890	902	299	221	218
15	360	314	325	240	490	426	843	1650	750	292	245	202
16	366	296	345	345	476	423	952	1330	692	291	255	192
17	373	304	349	294	500	431	994	1150	686	293	244	188
18	373	309	344	290	521	435	1010	1120	710	303	248	198
19	370	301	334	289	520	477	994	1110	704	293	253	194
20	364	301	328	285	542	651	884	1040	716	277	247	185
21	355	292	322	284	530	600	834	947	722	268	229	180
22	350	298	320	286	503	721	836	897	722	265	220	154
23	345	298	322	313	499	711	999	932	704	259	194	191
24	331	298	313	311	496	647	1250	1000	698	251	188	175
25	331	285	312	271	468	652	1440	1150	660	244	183	173
26	342	295	315	270	456	746	1410	1320	582	241	183	171
27	342	293	325	329	423	668	1290	1310	538	230	178	167
28	331	294	325	425	423	621	1250	1300	527	224	176	164
29	328	295	315	422	---	632	1320	1380	509	216	176	163
30	321	291	305	279	---	660	1530	1500	494	215	174	163
31	321	---	299	349	---	630	---	1630	---	228	171	---
TOTAL	10744	9130	10403	9292	12852	15952	27640	43186	30276	9900	6280	5470
MEAN	347	304	336	300	459	515	921	1393	1009	319	203	182
MAX	373	327	670	425	553	746	1530	2140	1720	466	255	228
MIN	321	285	285	240	364	391	541	897	494	215	171	154
AC-FT	21310	18110	20630	18430	25490	31640	54820	85660	60050	19640	12460	10850
CAL YR 1980 TOTAL	643310			1758	9900	270	AC-FT	1276000				
WTR YR 1981 TOTAL	191125			524	2140	154	AC-FT	379100				

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNNVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

CHEMICAL ANALYSES: Water years 1975 to current year.

BIOLOGICAL DATA: Water years 1978 to current year.

WATER TEMPERATURES: Water years 1962 to current year.

SEDIMENT RECORDS: Water years 1967-74, 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1962 to current year.

INSTRUMENTATION.--Temperature recorder since June 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 20, 1972; minimum recorded, 0.0°C on several days in 1976, 1978-79.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 25.0°C Aug. 8-10, 12; minimum recorded, 1.0°C Jan. 31, Feb. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-HF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 05...	1300	311	119	7.8	10.0	.60	10.2	15	K5	37	0	12
JAN 28...	0915	507	140	7.4	5.0	3.3	11.6	K12	58	42	0	13
MAR 25...	1030	668	118	7.4	9.0	2.7	--	--	K3	35	0	11
MAY 12...	1130	1680	48	7.1	12.5	.50	9.8	K9	24	16	0	5.3
JUL 22...	0845	263	109	7.0	20.0	.50	8.2	K3	18	32	0	10
SEP 22...	1000	97	159	7.4	18.0	1.6	8.7	--	--	47	0	15

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 100 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 05...	1.7	11	38	.8	1.4	51	7.1	3.8	.2	17	89	89
JAN 28...	2.4	12	37	.8	1.6	54	9.2	4.1	.2	18	86	92
MAR 25...	1.8	11	40	.8	1.4	48	10	2.8	.2	19	83	82
MAY 12...	.7	4.2	35	.5	.7	20	.7	1.1	.1	9.9	37	37
JUL 22...	1.6	10	39	.8	1.6	40	7.0	3.7	.2	13	65	71
SEP 22...	2.4	15	40	1.0	2.1	58	9.0	5.8	.2	17	98	97

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 05...	.00	.00	.080	.050	--	.46	--	.51	.030	.030	--
JAN 28...	.08	.10	.040	.010	.39	.33	.43	.34	.020	.020	--
MAR 25...	.00	.00	.040	.000	.44	.47	.48	.47	.050	.030	5.2
MAY 12...	.09	.05	.080	.060	.47	.43	.55	.49	.150	.030	--
JUL 22...	.01	.02	.000	.020	1.3	.84	1.30	.86	.010	.000	1.4
SEP 22...	.04	.00	<.060	<.060	--	--	--	--	<.010	.010	--

See footnotes at end of table.

11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
NOV 05...	1300	5	4	100	20	0	<1	0	0	1	<3
JAN 28...	0915	5	3	0	20	0	1	0	0	1	<3
MAY 12...	1130	3	2	0	10	0	<1	10	0	0	<3
SEP 22...	1000	7	5	0	22	1	2	0	0	1	0

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 05...	5	3	210	50	4	0	20	5	.0	.0
JAN 28...	13	3	570	60	12	10	30	5	.1	.0
MAY 12...	4	2	310	40	20	7	20	3	1.4	.9
SEP 22...	4	1	210	63	5	2	20	11	.1	.0

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
NOV 05...	5	3	0	0	0	0	20	10	8.9	.2
JAN 28...	4	0	0	0	0	0	30	10	7.2	.7
MAY 12...	1	0	0	0	0	0	10	9	15	.1
SEP 22...	2	2	0	0	0	0	10	7	21	.2

K Results based on colony count outside the acceptable range (non-ideal colony count).
 < Actual value is known to be less than the value shown.

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNNVILLE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE TIME	JAN 28,81 0915	MAR 25,81 1030	MAY 12,81 1130	JUL 22,81 0845	SEP 22,81 1000					
TOTAL CELLS/ML	400	360	2000	120	1500					
DIVERSITY: DIVISION	0.9	1.0	0.9	1.0	0.1					
..CLASS	0.9	1.0	0.9	1.0	0.1					
..ORDER	1.7	1.7	1.7	1.8	1.5					
...FAMILY	1.7	1.7	1.8	2.1	2.5					
....GENUS	1.7	1.9	1.9	2.1	2.5					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
....ACHNANTHES	26	6	--	-	70	3	13	11	110	7
....RHOICOSPHENIA	--	-	--	-	14	1	--	-	--	-
..BACILLARIALES										
...NITZSCHIA	64#	16	52	14	70	3	--	-	200	14
....NITZSCHIA										
...EPITHEMIALES										
....EPITHEMIA	13	3	--	-	110	6	26#	22	--	-
...EUPODISCALES										
....COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	28	1	--	-	--	-
..FRAGILARIALES										
...FRAGILARIA	--	-	--	-	14	1	--	-	140	9
....SYNEURA	13	3	26	7	28	1	--	-	--	-
...NAVICULALES										
....CYMBELLACEAE										
....CYMBELLA	13	3	--	-	14	1	13	11	410#	28
...GOMPHONEIS	--	-	--	-	14	1	--	-	--	-
....GOMPHONEA	--	-	--	-	56	3	13	11	420#	29
...NAVICULACEAE										
....NAVICULA	13	3	26	7	42	2	--	-	150	10
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....SCENEDESMUS	--	-	--	-	--	-	52#	44	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	28	1	--	-	27	2
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	42	2	--	-	--	-
...NOSTOCALES										
....NOSTOCACEAE										
....ANABAENA	--	-	--	-	56	3	--	-	--	-
...OSCILLATORIALES										
....OSCILLATORIA	260#	65	180#	50	1400#	71	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

11187000 KERN RIVER AT KERNNVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	14.0	10.0	6.5	5.0	3.0	5.0	3.0	3.5	1.0	5.5	4.0
2	17.0	14.0	10.0	7.0	5.5	3.0	5.0	3.5	3.5	1.5	6.5	4.0
3	17.0	14.0	10.5	7.0	6.0	3.5	6.0	4.5	4.0	2.0	8.0	4.0
4	17.5	14.0	11.0	8.0	6.5	4.5	6.0	4.5	4.5	2.0	7.0	4.5
5	17.5	14.0	12.5	8.5	6.0	3.5	5.0	3.5	4.5	3.0	6.5	5.0
6	16.5	14.0	11.0	9.0	5.0	2.5	4.5	2.5	4.0	3.0	7.5	5.0
7	17.0	13.0	10.5	8.5	4.0	2.0	4.0	2.5	4.5	2.5	8.5	4.5
8	16.5	13.5	10.5	7.5	3.5	1.5	4.0	2.5	4.0	3.5	9.5	6.5
9	16.5	13.5	10.5	7.0	3.0	1.5	4.5	3.0	5.5	2.0	9.5	7.0
10	16.5	13.0	10.0	7.0	3.0	1.5	4.5	3.0	6.5	3.5	9.5	7.0
11	15.0	12.5	10.0	8.0	3.5	1.5	5.0	3.5	7.5	4.5	9.5	7.5
12	14.0	11.5	10.5	7.5	4.0	2.0	6.5	4.5	7.5	5.0	9.5	7.5
13	13.5	11.0	9.5	7.5	4.5	2.5	7.5	6.0	7.0	4.0	8.5	7.0
14	12.0	10.0	7.5	6.0	5.0	3.0	7.0	5.5	8.5	5.5	8.0	5.5
15	11.5	9.5	8.0	5.5	5.0	3.0	9.5	6.0	8.5	5.5	8.5	6.0
16	9.0	7.5	6.0	4.0	6.5	4.0	7.0	5.0	8.5	5.0	10.0	7.5
17	8.5	6.5	---	---	6.5	4.5	6.5	4.5	9.0	6.5	10.0	7.5
18	9.5	7.0	---	---	6.5	5.0	6.0	4.5	8.5	6.5	9.0	7.0
19	10.0	7.0	---	---	6.5	4.5	6.5	4.5	8.5	5.5	8.5	7.5
20	10.5	8.0	---	---	6.0	4.5	6.5	4.5	9.0	5.5	8.0	6.0
21	11.5	9.0	---	---	5.5	4.0	6.5	4.0	8.0	6.5	7.5	5.5
22	11.5	9.0	---	---	6.0	4.5	7.0	4.5	8.0	5.5	9.5	6.5
23	12.0	9.5	6.5	4.0	6.5	5.0	8.0	5.5	8.0	6.0	9.5	7.5
24	12.0	9.5	7.5	4.5	5.5	4.5	7.5	5.0	7.5	6.0	10.0	6.0
25	10.5	9.0	5.5	3.5	5.5	3.5	6.0	3.5	7.0	4.5	10.0	8.0
26	11.0	8.5	5.0	3.5	6.5	4.0	4.5	3.0	7.0	4.5	9.5	6.5
27	10.5	8.0	5.0	3.0	7.0	5.5	5.0	3.0	7.0	4.5	8.5	6.0
28	10.0	8.0	5.5	3.0	7.0	5.5	5.5	4.0	5.5	4.0	9.0	6.0
29	9.5	7.0	5.5	3.5	6.5	5.0	5.0	2.0	---	---	10.5	7.5
30	9.0	6.5	5.5	3.0	6.0	4.0	4.0	2.0	---	---	11.0	9.0
31	10.0	7.0	---	---	5.0	3.5	3.0	1.0	---	---	10.0	7.5
MONTH	17.5	6.5	12.5	3.0	7.0	1.5	9.5	1.0	9.0	1.0	11.0	4.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	7.5	15.5	13.0	17.0	14.0	20.5	18.5	22.0	19.0	23.0	19.5
2	9.5	7.0	15.0	12.0	17.0	14.5	20.5	18.0	22.0	19.0	22.5	19.0
3	10.0	7.0	13.0	11.0	17.0	14.0	21.0	18.0	22.0	18.5	22.0	19.0
4	11.0	7.5	13.0	10.0	18.0	14.5	22.0	18.5	22.5	18.5	22.0	18.0
5	12.0	8.5	13.0	10.5	19.0	15.5	22.0	19.5	22.5	19.0	22.5	19.0
6	12.5	9.5	13.0	10.0	19.0	15.5	23.0	20.0	22.5	20.0	22.0	18.5
7	12.0	10.0	13.5	10.0	18.5	15.5	22.5	20.5	24.0	20.0	23.0	19.0
8	12.0	9.0	14.0	10.5	19.0	15.5	22.0	19.5	25.0	21.0	22.0	19.0
9	12.5	9.5	15.0	11.5	19.5	16.0	22.0	19.0	25.0	21.5	22.0	19.0
10	12.0	10.0	15.0	12.0	19.5	16.0	21.5	18.5	25.0	22.0	21.5	19.0
11	12.0	9.0	15.5	12.0	19.0	15.5	21.5	18.0	24.5	21.5	21.5	18.5
12	10.5	8.5	15.5	12.0	18.5	15.5	20.5	17.5	25.0	21.5	21.0	17.0
13	11.5	8.0	15.5	12.5	17.0	14.0	21.0	17.0	24.0	21.0	20.5	17.0
14	12.5	9.5	15.0	13.0	16.5	13.0	21.0	17.5	23.5	21.0	20.5	17.5
15	14.5	10.5	13.5	11.5	17.0	13.5	22.0	18.5	22.5	19.5	20.5	17.5
16	13.0	11.0	13.5	10.0	18.0	14.5	23.0	20.0	23.0	19.5	21.5	18.0
17	12.5	10.5	13.5	10.0	18.5	15.5	23.0	20.0	22.5	19.5	21.5	18.0
18	11.5	9.0	14.5	11.0	19.5	16.5	22.0	19.0	22.5	19.5	21.0	17.5
19	9.0	7.5	13.0	11.5	19.5	17.0	22.5	19.0	23.0	20.0	21.0	18.0
20	10.0	7.0	13.0	10.0	20.0	17.0	22.0	18.5	22.0	18.5	21.5	18.0
21	11.5	8.5	14.0	10.5	21.0	18.5	23.0	19.5	21.5	18.0	21.0	18.0
22	14.0	10.0	15.0	12.0	21.5	19.0	23.0	20.0	21.5	17.5	22.0	17.5
23	15.5	12.5	15.5	13.0	21.5	19.5	22.5	20.0	22.0	18.5	20.0	16.5
24	15.5	12.5	16.0	12.5	21.5	19.0	23.0	19.5	22.0	18.5	19.5	16.0
25	14.5	12.5	15.0	13.5	21.0	18.5	22.5	19.0	23.5	19.0	19.0	15.5
26	14.0	11.5	14.0	12.5	20.5	18.0	22.5	19.5	24.0	20.5	19.0	15.0
27	14.0	10.5	14.0	12.5	21.0	18.0	23.0	19.5	24.5	20.5	19.5	15.5
28	14.0	11.0	15.5	12.0	20.5	18.5	23.5	20.0	23.5	20.5	19.0	16.0
29	15.0	11.5	17.5	13.5	20.5	18.5	23.0	20.0	24.0	20.5	17.0	15.5
30	16.0	12.5	17.5	14.5	20.5	18.0	23.0	19.5	24.0	20.5	17.5	14.5
31	---	---	17.0	14.5	---	---	22.0	19.0	23.0	19.5	---	---
MONTH	16.0	7.0	17.5	10.0	21.5	13.0	23.5	17.0	25.0	17.5	23.0	14.5

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNVILLE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 05...	1300	311	10.0	1	.84	52
JAN 28...	0915	507	5.0	16	21	69
MAR 25...	1030	668	9.0	6	10	18
MAY 12...	1130	1680	12.5	12	54	28
JUL 22...	0845	263	20.0	1	.71	63
SEP 22...	1000	97	18.0	2	.52	50

11187500 BOREL CANAL BELOW ISABELLA DAM, CA

LOCATION.--Lat 35°38'32", long 118°28'09", in SW¼NE¼ sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030001, on right bank 500 ft (152 m) downstream from Isabella Dam, and 3 mi (5 km) upstream from point where canal crosses Erskine Creek.

PERIOD OF RECORD.--January 1910 to September 1914, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as Kern River Power Co.'s Canal at or near Kernville 1910-14. Published as "at Tillie Creek" 1925-51.

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft (774 m), from topographic map. Prior to Apr. 29, 1952, at site 4 mi (6 km) upstream at different datum.

REMARKS.--Records good. Canal diverts from right bank of Kern River 5.5 mi (8.8 km) upstream from Isabella Dam, and above South Fork Kern River. When capacity of Isabella Reservoir is above 110,000 acre-ft (136 hm³), the diversion is at the dam. Canal is used to supply Borel powerplant of Southern California Edison Co., 6 mi (10 km) downstream from station, at which point water is returned to the Kern River.

COOPERATION.--Twenty-two discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--60 years, 376 ft³/s (10.65 m³/s), 272,400 acre-ft/yr (336 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 634 ft³/s (18.0 m³/s) Mar. 13, 14, 1952; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	573	570	3.0	405	386	582	591	551	556	556	558	451
2	574	575	0	392	405	582	591	544	556	554	557	390
3	575	573	0	366	405	568	585	538	555	549	558	318
4	572	570	0	357	407	577	562	537	560	551	558	271
5	573	571	0	366	410	536	580	544	561	549	559	212
6	572	571	0	363	410	523	591	546	559	549	556	194
7	573	575	0	318	410	559	590	538	559	551	558	194
8	573	573	0	356	409	575	591	539	557	549	559	231
9	572	571	0	341	442	575	592	538	552	549	556	256
10	573	571	0	341	500	339	591	536	553	550	565	247
11	570	574	0	341	522	600	591	461	553	548	567	240
12	570	575	0	340	481	599	590	498	549	549	572	256
13	571	575	0	339	449	594	590	537	549	551	579	254
14	573	578	0	351	429	602	589	537	550	28	570	238
15	570	576	0	355	419	601	591	538	539	197	567	230
16	574	576	0	355	454	601	593	537	460	578	566	230
17	573	578	0	355	282	601	593	537	502	588	567	229
18	570	579	0	353	10	600	592	560	540	589	580	233
19	570	581	0	357	383	593	593	561	540	589	574	233
20	571	578	231	356	521	588	593	562	540	588	570	221
21	570	575	545	379	531	585	591	561	539	593	552	199
22	573	572	317	404	547	586	572	566	543	595	478	186
23	572	575	0	404	545	597	560	574	555	594	447	163
24	572	579	358	405	509	601	561	575	556	596	509	155
25	570	577	468	405	514	591	559	575	555	595	561	144
26	572	498	468	405	573	589	560	572	557	596	565	135
27	574	446	439	405	582	590	561	569	556	594	525	135
28	573	435	409	406	582	591	554	572	554	593	485	181
29	574	419	403	406	---	591	550	558	555	595	464	191
30	571	419	405	385	---	591	551	564	561	594	450	171
31	573	---	406	345	---	590	---	564	---	561	459	---
TOTAL	17736	16585	4452.0	11456	12517	17897	17398	16989	16421	16818	16791	6788
MEAN	572	553	144	370	447	577	580	548	547	543	542	226
MAX	575	581	545	406	582	602	593	575	561	596	580	451
MIN	570	419	0	318	10	339	550	461	460	28	447	135
AC-FT	35180	32900	8830	22720	24830	35500	34510	33700	32570	33360	33300	13460
CAL YR 1980	TOTAL	191277.0	MEAN	523	MAX	599	MIN	0	AC-FT	379400		
WTR YR 1981	TOTAL	171848.0	MEAN	471	MAX	602	MIN	0	AC-FT	340900		

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA

LOCATION.--Lat 35°44'22", long 118°10'33", unsurveyed, T.25 S., R.35 E., Kern County, Hydrologic Unit 18030002, on left bank 0.8 mi (1.3 km) north of State Highway 178, 1.6 mi (2.6 km) upstream from Canebrake Creek, and 5 mi (8 km) northeast of Onyx.

DRAINAGE AREA.--530 mi² (1,370 km²).

PERIOD OF RECORD.--September 1911 to August 1914, January 1919 to September 1942, October 1947 to current year. Yearly estimate for water year 1927 (incomplete) and monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1151: 1948(M). WSP 1445: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,900 ft (884 m), from topographic map. Sept. 12, 1911, to Aug. 31, 1914, nonrecording gage and Jan. 23, 1919, to Apr. 17, 1936, water-stage recorder, at site 140 ft (43 m) upstream at datum 2.88 ft (0.878 m) lower. Apr. 18, 1936, to September 1942, and October 1947 to Feb. 8, 1967, at datum 6.88 ft (2.097 m) higher. Feb. 9, 1967, to May 31, 1972, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Lowell and Thomas ditches divert above station for irrigation of 160 acres (64.8 hm²) below station; combined capacity, 7 ft³/s (0.20 m³/s).

AVERAGE DISCHARGE.--57 years (water years 1912-13, 1920-25, 1927, 1930-42, 1947-81), 120 ft³/s (3.398 m³/s), 86,940 acre-ft/yr (107 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft³/s (813 m³/s) Dec. 6, 1966, gage height, 18.9 ft (5.76 m) from floodmarks, present datum, from rating curve extended above 3,300 ft³/s (93.5 m³/s) on basis of slope-area measurement of maximum flow; no flow for several days in 1929, 1934, 1960-61.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 10	1145	*332 9.40	5.21 1.588
Apr. 17	1645	302 8.55	5.10 1.554
Apr. 24	1645	302 8.55	5.10 1.554

Minimum daily, 3.2 ft³/s (0.091 m³/s) Sept. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	48	56	56	43	87	157	205	72	15	5.2	6.4
2	41	48	52	57	56	83	162	205	68	17	5.7	3.5
3	40	49	58	61	61	88	149	196	65	15	6.1	3.3
4	40	50	108	59	64	91	138	180	62	15	5.6	3.2
5	40	50	73	54	65	90	147	170	58	14	5.4	3.2
6	40	51	54	52	64	85	178	160	55	13	5.0	3.2
7	40	51	50	52	63	92	216	152	51	12	4.7	3.7
8	40	52	43	52	74	93	240	146	47	12	4.5	7.5
9	40	52	49	55	80	94	272	141	45	11	4.1	8.4
10	40	52	52	54	78	96	297	136	43	11	3.9	8.9
11	40	51	54	54	76	97	280	132	39	10	3.5	12
12	40	53	56	60	80	95	251	126	34	9.7	4.7	14
13	42	55	62	64	78	107	228	121	33	9.3	3.9	18
14	43	55	56	59	77	98	220	118	32	8.9	3.8	19
15	46	53	56	59	85	93	232	113	31	8.7	5.0	20
16	48	50	61	60	84	93	256	110	30	8.7	8.6	19
17	50	47	62	61	90	94	271	107	29	8.5	8.2	19
18	51	47	65	59	91	93	270	104	28	8.3	8.0	18
19	53	52	66	59	92	102	255	102	27	8.2	7.5	18
20	53	51	64	59	94	157	224	104	25	7.9	6.5	14
21	53	51	63	58	94	125	199	102	24	7.5	6.1	11
22	51	52	63	59	93	148	207	97	23	7.3	6.8	15
23	51	57	64	63	92	147	247	92	22	6.9	6.3	17
24	51	58	61	65	92	137	273	90	21	6.6	9.1	17
25	51	50	59	54	89	138	279	88	20	6.3	11	12
26	52	50	62	49	87	151	258	92	19	6.1	10	8.7
27	49	52	64	56	83	145	234	95	18	5.9	9.9	8.6
28	45	53	66	74	80	132	216	98	17	5.7	9.5	8.6
29	44	56	65	62	---	131	207	90	16	5.4	9.3	8.8
30	44	56	62	44	---	140	207	81	15	5.0	9.7	14
31	46	---	56	42	---	148	---	77	---	5.2	9.6	---
TOTAL	1405	1552	1882	1772	2205	3470	6770	3830	1069	291.1	207.2	343.0
MEAN	45.3	51.7	60.7	57.2	78.8	112	226	124	35.6	9.39	6.68	11.4
MAX	53	58	108	74	94	157	297	205	72	17	11	20
MIN	40	47	43	42	43	83	138	77	15	5.0	3.5	3.2
AC-FT	2790	3080	3730	3510	4370	6880	13430	7600	2120	577	411	680
CAL YR 1980	TOTAL	130917.0	MEAN	358	MAX	3210	MIN	40	AC-FT	259700		
WTR YR 1981	TOTAL	24796.3	MEAN	67.9	MAX	297	MIN	3.2	AC-FT	49180		

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA

LOCATION.--Lat 35°38'46", long 118°28'41", in SE¼SW¼ sec.19, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030001, in main control tower near left abutment of main dam on Kern River, 1.5 mi (2.4 km) north of town of Lake Isabella, and 2.8 mi (4.5 km) upstream from Erskine Creek.

DRAINAGE AREA.--2,074 mi² (5,372 km²).

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1968, published as Isabella Reservoir near Isabella. October 1968 to September 1970 published as "Isabella Reservoir."

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with sidehill spillway and auxiliary earthfill dam completed in 1954. Regulation began Apr. 15, 1954. Usable capacity, 567,891 acre-ft (700 hm³) between elevations 2,470.0 ft (752.86 m), invert of main outlet and 2,605.5 ft (794.16 m), spillway crest. Dead storage 184 acre-ft (227,000 m³). Surcharge flood control storage, 272,528 acre-ft (336 hm³) between ungrated spillway crest and elevation 2,627.0 ft (800.71 m), maximum design spillway flood pool. Records, including extremes, represent total contents at 2400 hours. Water is released to Kern River through tunnel in left abutment of main dam and to Borel Canal (station 11187500) through concrete conduit in auxiliary dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 585,381 acre-ft (722 hm³) July 3, 1980, elevation, 2,607.00 ft (794.614 m); minimum since reservoir first filled, 34,504 acre-ft (42.5 hm³) Dec. 14, 16, 1977, elevation, 2,524.35 ft (769.422 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 327,931 acre-ft (404 hm³) Oct. 1, elevation, 2,581.79 ft (786.930 m); minimum, 171,498 acre-ft (211 hm³) Sept. 30, elevation, 2,560.67 ft (780.492 m).

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

2,500	6,154	2,540	74,802
2,505	9,345	2,550	114,845
2,510	13,612	2,570	233,425
2,515	19,161	2,590	403,846
2,520	26,226	2,620	746,024
2,530	45,919		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327931	268816	230532	229741	231686	237949	241486	267637	306510	281644	217430	177334
2	325484	267480	230460	229669	231830	237728	241783	270471	307610	279872	215626	176720
3	323136	265992	230748	229669	231903	237435	242153	273083	308456	278106	213692	176292
4	320881	264510	231543	229741	232047	237142	242450	274991	309390	276426	212943	175925
5	318634	263031	231903	229741	232120	236997	242671	276586	310579	274353	210470	175741
6	316138	261480	231903	229741	232265	237068	243117	277705	311858	272210	208834	175558
7	313652	259778	231903	229669	232265	236924	243489	278588	312456	269918	207140	175436
8	311091	258238	231903	229597	232845	236850	244085	279631	312456	267794	205522	175191
9	308456	256626	231903	229669	233641	236704	244755	280758	312456	265445	203711	174949
10	306004	255020	231903	229669	234005	236484	245427	281887	312285	263031	201776	174827
11	303561	253267	232047	229597	234151	236338	246251	283182	311773	260551	200850	174705
12	300793	251749	231975	229669	234369	236338	246774	285047	311176	258007	198532	174522
13	297706	250159	232047	229741	234515	236045	247149	287000	310324	255555	196955	174279
14	294804	248425	232047	229741	234660	235826	247449	289289	309560	252963	195579	174097
15	292739	246849	232047	229669	235098	235680	247750	290600	308541	250688	194082	173975
16	291093	245278	232120	229812	235315	235388	248275	291997	307102	248275	192591	173793
17	289615	243564	231975	229812	235972	235242	249179	292821	305751	245951	191107	173672
18	288060	241931	231686	229812	237288	235098	250310	293482	304233	243936	189631	173430
19	286674	240230	231543	229741	237508	235461	251294	294141	302720	242079	188161	173188
20	285128	238537	231254	229741	238169	235826	252127	294638	301296	240230	186762	172946
21	283585	236924	230893	229669	238169	236484	252887	294969	299873	238243	185623	172704
22	282129	235461	230604	229669	238243	237142	253724	295301	298289	236338	184928	172402
23	280758	233787	230460	229669	238243	237655	254791	295713	296627	234515	184297	172281
24	279389	232555	230316	229526	238390	238169	256319	296378	294886	232410	183481	171979
25	277865	231830	230172	229382	238463	238758	258315	297126	293152	230532	182604	171920
26	276506	231398	230028	229166	238463	239271	259855	298456	291340	228807	181729	171920
27	275388	231254	229956	229166	238096	239787	261170	299790	289533	227018	180920	171920
28	273955	231109	230028	229669	237875	240157	262332	300877	287570	225095	180236	171800
29	272686	230965	230028	231109	---	240452	263652	302217	285614	223252	179555	171619
30	271103	230172	229956	231182	---	240894	265290	303645	283585	221208	178688	171498
31	269997	---	229812	231543	---	241264	---	305160	---	219244	178011	---
MAX	327931	268816	232120	231543	238463	241264	265290	305160	312456	281644	217430	177334
MIN	269997	230172	229812	229166	231686	235098	241486	267637	283585	219244	178011	171498
†	2574.83	2569.55	2569.50	2569.74	2570.61	2571.07	2574.23	2579.14	2576.53	2568.01	2561.74	2560.67
‡	-60391	-59825	-360	+1731	+6332	+3389	+24026	+39870	-21575	-64341	-41233	-6513
††	4557	2447	1561	1158	1319	1622	3385	5368	8646	8662	6959	5032

CAL YR 1980 † +21044

WTR YR 1981 ‡ -158890

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

BUENA VISTA LAKE BASIN

11191000 KERN RIVER BELOW ISABELLA DAM, CA

LOCATION.--Lat 35°38'21", long 118°29'02", in SW¼NW¼ sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030003, on right bank 200 ft (61 m) downstream from highway bridge, 0.6 mi (1.0 km) downstream from Isabella Dam, and 1.6 mi (2.6 km) southwest of town of Lake Isabella.

DRAINAGE AREA.--2,074 mi² (5,372 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1945 to current year. Prior to October 1952, published as "below Isabella damsite."

REVISED RECORDS.--WSP 1515: 1956. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,435.07 ft (742.209 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 12, 1952, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datum. Mar. 12, 1952, to July 26, 1953, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated by Isabella Lake (station 11190500) beginning Apr. 15, 1954. Borel Canal (station 11187500) diverts above station. Diversion for irrigation of 3,500 acres (14.2 km²) between head of Isabella Lake and upstream stations. An additional 6,500 acres (26.3 km²) in the lakebed can be irrigated when the lake is low.

AVERAGE DISCHARGE (adjusted for diversion to Borel Canal since 1945 and for change in contents in and evaporation from Isabella Lake since 1954).--36 years, 914 ft³/s (25.88 m³/s), 662,200 acre-ft/yr (816 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft³/s (1,100 m³/s) Nov. 19, 1950, gage height, 28.6 ft (8.72 m) from floodmarks, present site and datum, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurement of maximum flow; minimum, 2.1 ft³/s (0.059 m³/s), regulated, Nov. 27, 1951. Maximum discharge since construction of Isabella Dam in 1954, 7,300 ft³/s (207 m³/s) May 3, 1969, gage height, 17.67 ft (5.386 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) July 14, gage height, 8.81 ft (2.685 m); minimum daily, 0.60 ft³/s (0.017 m³/s) Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	400	413	4.4	3.2	108	3.6	129	278	857	502	4.7
2	1090	463	373	4.0	3.0	94	3.6	73	354	797	469	4.7
3	1010	552	349	3.7	4.0	115	3.6	129	408	712	458	4.7
4	951	563	375	3.6	5.1	151	3.6	198	445	692	409	4.7
5	962	579	414	3.4	5.2	73	3.6	234	427	767	406	4.7
6	1040	556	414	3.4	4.4	2.6	3.6	241	418	855	413	4.7
7	1070	567	414	3.4	3.7	3.2	3.5	265	533	883	454	4.7
8	1120	605	414	3.2	3.7	5.3	3.5	258	722	923	447	4.7
9	1120	595	412	3.0	3.9	9.8	57	234	833	978	470	4.7
10	1040	623	412	2.9	3.6	289	42	289	871	996	510	4.7
11	969	633	412	2.8	3.6	52	60	359	854	987	454	4.7
12	1060	631	411	2.7	3.4	74	102	264	785	978	374	4.7
13	1150	605	412	2.8	3.2	59	189	165	682	973	350	4.7
14	1110	616	412	2.8	3.2	22	236	125	673	1450	360	4.7
15	890	619	436	2.9	2.9	45	280	132	725	1350	369	4.1
16	631	634	448	2.9	2.6	72	259	149	891	943	360	4.1
17	585	657	519	2.9	2.6	59	140	188	939	861	374	4.2
18	552	683	555	3.0	5.6	36	80	213	917	659	359	4.7
19	584	706	555	3.1	5.8	18	104	170	926	586	338	4.7
20	617	687	280	3.2	4.8	9.1	108	198	942	573	283	4.4
21	591	624	.60	5.5	4.6	4.4	42	266	939	597	136	4.1
22	555	595	234	7.0	4.5	4.3	6.8	239	958	586	3.6	3.5
23	527	595	527	4.8	4.4	6.2	19	179	997	584	3.6	3.3
24	501	456	133	5.3	4.3	6.8	17	138	1030	608	3.6	4.3
25	440	205	6.9	3.8	38	6.5	8.1	132	1000	554	16	5.2
26	425	53	5.5	2.9	32	4.0	112	167	973	501	14	4.6
27	425	6.1	5.2	5.1	86	3.9	197	184	925	544	4.7	4.4
28	446	2.7	5.4	5.3	130	3.7	250	136	941	560	4.7	4.2
29	509	5.8	5.9	4.1	---	3.7	262	128	941	572	4.7	3.7
30	519	6.2	6.9	3.6	---	3.6	191	177	878	597	4.7	4.5
31	462	---	6.9	3.2	---	3.6	---	214	---	578	4.7	---
TOTAL	24071	14522.8	9367.30	114.7	381.3	1347.7	2790.5	5973	23205	24101	8359.3	133.8
MEAN	776	484	302	3.70	13.6	43.5	93.0	193	774	777	270	4.46
MAX	1150	706	555	7.0	130	289	280	359	1030	1450	510	5.2
MIN	425	2.7	.60	2.7	2.6	2.6	3.5	73	278	501	3.6	3.3
AC-FT	47740	28810	18580	228	756	2670	5530	11850	46030	47800	16580	265
MEAN ‡	441	409	465	420	599	702	1174	147	1104	414	254	206
AC-FT ‡	27090	24330	28610	25840	33240	43180	67450	90790	65670	25480	15610	12240

CAL YR 1980 TOTAL 563433.00 MEAN 1539 MAX 4000 MIN .60 AC-FT 1118000 MEAN ‡ 2169 AC-FT ‡ 1575000
WTR YR 1981 TOTAL 114367.40 MEAN 313 MAX 1450 MIN .60 AC-FT 226800 MEAN ‡ 635 AC-FT ‡ 459500

‡ Adjusted for change in contents and evaporation from Lake Isabella and diversion to Borel Canal.

WATER-QUALITY RECORDS

WATER TEMPERATURES: Water years 1971 to current year.

WATER TEMPERATURES: November 1970 to current year.

WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 24, 1981; minimum recorded, 4.0°C Jan. 4, 1972, Feb. 1, 1973, Jan. 30, 31, 1979.

WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 24; minimum recorded, 5.0°C Feb. 7,8.

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	16.0	15.5	12.0	10.5	---	---	9.5	6.5	---	---
2	---	---	16.0	15.0	12.0	9.5	---	---	9.5	6.5	---	---
3	---	---	16.0	15.0	11.5	10.5	---	---	9.5	6.5	---	---
4	---	---	16.0	15.5	11.5	9.5	---	---	9.5	6.5	---	---
5	---	---	15.5	15.5	---	---	---	---	9.5	6.0	---	---
6	---	---	15.5	15.5	---	---	---	---	9.0	6.0	---	---
7	---	---	15.5	15.0	---	---	---	---	9.5	5.0	---	---
8	---	---	15.5	15.0	---	---	---	---	7.5	5.0	---	---
9	---	---	15.5	15.0	---	---	---	---	---	---	---	---
10	---	---	15.5	15.0	---	---	---	---	---	---	11.0	8.0
11	---	---	15.5	15.0	---	---	---	---	---	---	10.0	7.5
12	---	---	15.5	14.5	---	---	---	---	---	---	10.5	8.0
13	---	---	15.5	14.5	---	---	---	---	---	---	9.5	8.0
14	---	---	15.0	14.5	---	---	---	---	---	---	10.0	8.5
15	---	---	15.0	14.5	---	---	---	---	---	---	10.0	8.0
16	---	---	15.0	14.0	---	---	---	---	---	---	10.0	8.5
17	19.0	18.0	14.5	13.5	---	---	---	---	---	---	10.5	8.5
18	18.5	17.0	14.0	13.0	---	---	---	---	---	---	10.5	9.0
19	18.0	17.0	13.5	13.0	---	---	---	---	---	---	11.0	8.0
20	18.0	17.0	14.0	12.5	---	---	9.5	7.0	---	---	11.0	9.0
21	17.5	16.5	13.5	12.5	---	---	9.0	7.0	---	---	12.0	7.5
22	18.0	16.5	13.5	11.0	---	---	9.0	8.0	---	---	12.5	7.5
23	18.0	16.5	13.0	12.0	---	---	9.5	8.0	---	---	12.5	8.0
24	17.5	16.5	13.0	12.0	---	---	9.5	7.5	---	---	13.0	8.0
25	17.5	16.5	13.0	12.0	---	---	9.5	7.5	---	---	13.0	9.0
26	17.0	16.5	13.5	11.0	---	---	9.5	5.5	---	---	11.0	8.5
27	17.0	16.5	12.5	10.0	---	---	9.5	6.5	---	---	12.5	7.5
28	16.5	16.5	12.0	9.5	---	---	9.0	7.0	---	---	13.5	8.5
29	16.5	16.5	12.0	9.0	---	---	9.5	6.0	---	---	14.0	9.0
30	16.5	16.0	12.0	8.5	---	---	9.0	6.5	---	---	13.5	9.0
31	16.0	15.5	---	---	---	---	9.5	6.5	---	---	13.5	8.5
MONTH	---	---	16.0	8.5	---	---	---	---	---	---	---	---

BUENA VISTA LAKE BASIN

11191000 KERN RIVER BELOW ISABELLA DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	9.0	13.5	11.5	17.0	15.0	---	---	25.0	22.5	---	---
2	11.5	9.0	13.5	12.5	17.0	17.0	---	---	25.5	22.5	---	---
3	13.0	8.5	13.5	12.5	17.0	17.0	---	---	25.5	23.0	---	---
4	14.5	8.5	14.0	13.0	17.5	17.0	---	---	25.5	22.5	---	---
5	14.5	9.0	14.0	13.5	17.5	16.0	---	---	26.0	22.5	---	---
6	15.0	9.5	14.5	13.5	17.5	16.0	---	---	25.5	23.0	---	---
7	14.5	10.0	14.5	14.0	18.0	16.0	---	---	26.0	23.5	---	---
8	15.0	9.0	14.0	14.0	18.5	16.5	---	---	26.0	23.5	---	---
9	11.5	9.5	14.5	13.5	18.0	17.5	---	---	26.0	23.5	25.0	18.5
10	11.5	10.0	14.5	14.0	19.0	18.0	---	---	26.5	23.5	24.5	20.5
11	11.5	10.5	15.0	13.0	19.0	18.0	---	---	26.5	23.5	24.5	20.5
12	11.5	10.0	15.0	14.5	19.5	18.0	---	---	26.5	23.5	25.0	20.5
13	12.0	10.5	15.0	14.0	19.5	18.0	---	---	27.0	24.0	25.0	20.5
14	12.0	10.5	15.0	14.5	19.5	18.0	---	---	27.0	23.5	25.5	20.5
15	12.0	10.5	15.0	14.5	19.5	19.0	21.5	20.5	27.0	23.5	25.0	20.5
16	12.0	11.0	15.0	14.5	19.5	19.0	23.0	20.5	26.5	24.0	24.5	20.5
17	12.0	11.0	15.5	14.0	20.0	18.0	23.5	20.5	27.5	24.5	24.0	20.5
18	---	---	15.5	13.5	20.0	17.5	24.0	20.0	27.0	24.0	25.5	20.5
19	---	---	15.5	15.0	20.0	19.0	23.5	20.5	27.0	24.5	25.0	20.5
20	---	---	15.5	15.0	20.5	18.5	23.5	20.5	27.0	24.5	25.0	20.5
21	---	---	16.0	15.0	20.5	18.5	24.0	20.5	28.0	24.0	24.0	20.5
22	---	---	16.0	15.0	21.0	18.5	24.0	20.5	28.0	22.5	23.5	19.5
23	13.5	11.0	16.0	14.5	21.0	18.5	24.0	21.0	28.0	22.5	23.5	19.0
24	12.0	11.0	16.0	14.5	21.0	19.0	24.5	21.0	28.5	22.5	22.5	19.0
25	14.5	11.5	16.0	14.5	---	---	24.5	21.5	27.0	23.0	22.5	17.0
26	12.5	11.5	16.0	15.0	---	---	25.0	21.5	---	---	23.0	16.5
27	13.5	11.5	16.0	15.0	---	---	24.5	21.5	---	---	22.5	16.0
28	13.5	12.0	16.5	15.5	---	---	24.5	21.5	---	---	21.5	18.0
29	13.5	12.5	16.5	15.5	---	---	24.5	21.5	---	---	20.0	17.5
30	13.5	13.0	16.0	15.5	---	---	25.0	22.0	---	---	21.0	17.5
31	---	---	17.0	15.0	---	---	25.0	22.5	---	---	---	---
MONTH	15.0	8.5	17.0	11.5	21.0	15.0	---	---	28.5	22.5	---	---

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA

LOCATION.--Lat 35°31'15", long 118°40'34", in NE¼SE¼ sec.6, T.28 S., R.31 E., Kern County, Hydrologic Unit 18030003, on left bank 1.0 mi (1.6 km) southwest of Democrat Springs, and 2.1 mi (3.4 km) upstream from Cow Creek.

DRAINAGE AREA.--2,258 mi² (5,848 km²).

PERIOD OF RECORD.--July 1950 to current year. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder for conduit diversion. Datum of gage is 1,837.7 ft (560.13 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Kern River No. 1 conduit diverts up to about 420 ft³/s (11.9 m³/s) from left bank of Kern River 0.4 mi (0.6 km) upstream from station in sec.13, T.28 S., R.30 E., for power development; water is returned to river 10 mi (16 km) below station. Flow regulated by Isabella Lake 22 mi (35 km) upstream beginning in 1954 (station 11190500). Many diversions above station for irrigation. See schematic diagram of Kern River basin. For records of combined discharge of river and conduit, see following page.

COOPERATION.--Gage-height record and 12 discharge measurements for river and gage-height record and 12 discharge measurements for conduit furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only, 31 years, 597 ft³/s (16.91 m³/s), 432,500 acre-ft/yr (533 hm³/yr).
Combined river and diversion, 31 years, 931 ft³/s (26.37 m³/s), 674,500 acre-ft/yr (832 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 40,000 ft³/s (1,130 m³/s) Nov. 19, 1950, gage height, 30.7 ft (9.36 m), from rating curve extended above 8,700 ft³/s (246 m³/s) on basis of computation of maximum flow over dam (basic data for computation furnished by Southern California Edison Co.); minimum daily, 0.7 ft³/s (0.020 m³/s) Nov. 17-19, 1951. Maximum discharge since construction of Isabella Dam in 1954, 10,100 ft³/s (286 m³/s) Dec. 6, 1966, gage height, 18.55 ft (5.654 m); no flow May 26-28, 1977.
Combined flow: Maximum discharge, 40,000 ft³/s (1,130 m³/s) Nov. 19, 1950; minimum daily, 123 ft³/s (3.48 m³/s) Sept. 22, 1951. Maximum discharge since construction of Isabella Dam in 1954, 10,100 ft³/s (286 m³/s) Dec. 6, 1966; minimum daily, 10 ft³/s (0.28 m³/s) Dec. 17, 1968.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 1,280 ft³/s (36.2 m³/s) Oct. 14, gage height, 9.41 ft (2.868 m); minimum daily, 3.9 ft³/s (0.110 m³/s) Jan. 16, 17, 19.
Combined flow: Maximum discharge, 1,670 ft³/s (47.3 m³/s) Oct. 14; minimum daily, 129 ft³/s (3.65 m³/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	553	83	68	7.8	272	200	303	384	976	691	88
2	1230	578	49	64	33	248	203	250	473	945	608	55
3	1150	700	17	44	33	262	197	232	517	848	644	51
4	1110	698	26	29	33	297	176	323	575	810	564	51
5	1080	719	68	31	37	295	175	381	569	854	580	50
6	1150	713	61	36	37	121	189	384	534	961	558	49
7	1180	689	60	180	36	144	184	406	605	980	623	49
8	1220	765	62	15	41	165	186	404	808	1020	618	49
9	1250	731	67	4.9	174	168	197	387	922	1080	612	50
10	1180	770	63	4.5	160	199	242	397	977	1100	683	50
11	1110	771	61	6.9	166	245	242	434	963	1100	661	50
12	1140	794	61	20	141	266	251	391	931	1080	551	50
13	1270	753	59	11	90	262	342	342	812	1090	535	50
14	1250	770	61	4.1	66	218	398	276	781	1090	520	50
15	1100	772	71	4.1	47	212	424	277	835	1110	550	49
16	785	781	97	3.9	61	256	449	292	886	1070	515	50
17	741	807	130	3.9	408	249	327	312	1010	1060	549	50
18	701	832	198	4.0	78	230	273	373	1020	852	525	49
19	712	856	200	3.9	172	220	267	341	1020	773	515	50
20	764	864	193	4.0	446	235	315	331	1060	732	468	49
21	740	795	214	4.2	133	210	253	410	1040	772	384	48
22	712	753	186	28	143	197	192	405	1070	773	164	48
23	676	754	189	36	136	202	183	370	1090	751	66	48
24	665	726	155	33	115	202	194	313	1140	787	120	47
25	598	430	140	32	83	197	175	301	1110	764	176	47
26	579	269	138	31	201	216	214	315	1100	660	211	47
27	581	116	126	32	200	225	346	361	1040	705	169	47
28	578	110	84	50	293	213	394	315	1030	724	125	47
29	659	87	70	54	---	215	417	279	1070	729	109	48
30	663	85	69	55	---	212	368	303	993	763	79	47
31	647	---	71	7.4	---	207	---	363	---	755	93	---
TOTAL	28451	19041	3129	904.8	3570.8	6860	7973	10571	26365	27714	13266	1513
MEAN	918	635	101	29.2	128	221	266	341	879	894	428	50.4
MAX	1270	864	214	180	446	297	449	434	1140	1110	691	88
MIN	578	85	17	3.9	7.8	121	175	232	384	660	66	47
AC-FT	56430	37770	6210	1790	7080	13610	15810	20970	52290	54970	26310	3000
CAL YR 1980 TOTAL	630380.9			1722	MAX 4470	MIN 1.7	AC-FT 1250000					
WTH YR 1981 TOTAL	149358.6			409	MAX 1270	MIN 3.9	AC-FT 296300					

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KERN RIVER AND KERN RIVER
NO. 1 CONDUIT NEAR DEMOCRAT SPRINGS, CA., WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1620	934	430	421	378	671	596	702	784	1370	1090	478
2	1620	959	392	417	422	648	599	649	872	1340	1000	434
3	1540	1090	356	396	422	662	593	631	917	1250	1040	365
4	1500	1090	369	378	422	696	572	722	975	1210	959	318
5	1470	1110	416	379	426	694	571	779	970	1250	974	266
6	1540	1100	413	384	426	521	585	781	935	1350	951	212
7	1570	1080	413	360	425	544	580	804	1010	1380	1020	198
8	1610	1150	414	378	430	565	582	802	1210	1420	1010	204
9	1640	1120	414	356	561	568	593	784	1320	1480	1010	256
10	1570	1160	412	357	546	597	637	793	1380	1500	1080	264
11	1500	1160	413	353	552	644	637	829	1360	1500	1060	249
12	1530	1180	412	357	527	664	647	786	1330	1480	946	256
13	1660	1140	412	357	476	660	739	739	1210	1490	930	254
14	1640	1160	412	360	452	617	795	675	1180	1490	915	248
15	1480	1160	423	372	433	610	822	676	1240	1510	944	257
16	1170	1170	452	371	446	654	847	692	1290	1470	909	238
17	1130	1190	486	371	490	647	725	713	1410	1460	943	237
18	1090	1220	557	370	129	627	671	772	1420	1250	919	232
19	1100	1240	558	373	223	617	665	739	1420	1170	909	240
20	1160	1250	549	372	560	632	713	729	1460	1130	862	237
21	1130	1180	570	375	522	607	651	808	1440	1170	778	217
22	1100	1140	542	418	537	594	591	802	1470	1170	553	202
23	1060	1140	549	425	533	598	582	766	1490	1150	448	189
24	1050	1110	511	422	515	599	593	709	1540	1180	507	164
25	984	805	494	421	483	594	574	695	1510	1160	565	155
26	962	634	492	420	601	613	613	713	1500	1060	602	155
27	963	469	480	421	600	622	744	761	1440	1100	559	155
28	960	462	435	439	692	609	792	715	1430	1120	514	142
29	1040	436	421	442	---	612	815	678	1470	1120	498	158
30	1050	434	421	442	---	608	766	702	1390	1160	467	196
31	1030	---	423	381	---	603	---	762	---	1150	482	---
TOTAL	40469	30473	14041	12088	13229	19197	19890	22908	38373	40040	25444	7176
MEAN	1305	1016	453	390	472	619	663	739	1279	1292	821	239
MAX	1660	1250	570	442	692	696	847	829	1540	1510	1090	478
MIN	960	434	356	353	129	521	571	631	784	1060	448	142
AC-FT	80270	60440	27850	23980	26240	38080	39450	45440	76110	79420	50470	14230
CAL YR 1980	TOTAL											

11194000 KERN RIVER NEAR BAKERSFIELD, CA

LOCATION.--Lat 35°25'54", long 118°56'43", in NW¼SW¼ sec.2, T.29 S., R.28 E., Kern County, Hydrologic Unit 18030012, 0.8 mi (1.3 km) northeast of Oil City, 1.9 mi (3.1 km) upstream from Sacramento Gulch, and 5.8 mi (9.3 km) northeast of Bakersfield Post Office.

DRAINAGE AREA.--2,407 mi² (6,234 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1954-66, October 1979 to current year.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM CA, DISS (MG/L)	MAGNESIUM MG, DISS (MG/L)	SODIUM NA, DISS (MG/L)
80/10/21	09 45	116	7.5	11.0	9.5	10	0.8	33	10	2	9
81/01/27	12 00	153	7.8	10.0	10.6	6.0	1.3	45	13	3	14
81/03/24	13 30	151	8.2	16.0	11.0	9.0	1.7	50	15	3	16
81/06/24	11 00	104	8.1	23.0	8.7			30	9	2	10

DATE	TIME	POTASSIUM K, DISS (MG/L)	ALKALINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/10/21	09 45	1.4	40	6	3	60	6	0.08	0.00	0.30	0.03
81/01/27	12 00	1.7	52	13	5	99	6	0.03	0.01	0.30	0.02
81/03/24	13 30	1.8	62	14	7	118	8	0.01	0.00	0.30	0.04
81/06/24	11 00	1.4	40	6	4	80					

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B, DISS (UG/L)
80/10/21	09 45	0.01	4.7	100
81/01/27	12 00	0.00	3.3	100
81/03/24	13 30	0.00	1.2	200
81/06/24	11 00			0

DATE	TIME	ARSENIC AS, DISS (UG/L)	BARIUM BA, DISS (UG/L)	CADMIUM CD, DISS (UG/L)	CHROMIUM CR, DISS (UG/L)	COPPER CU, DISS (UG/L)	IRON FE, DISS (UG/L)	LEAD PB, DISS (UG/L)	MANGANESE MN, DISS (UG/L)	MERCURY HG, TOTAL (UG/L)	SELENIUM SE, DISS (UG/L)
80/10/21	09 45	10	0	0	0	0	60	0	0	0.0	0
81/01/27	12 00	0	0	0	0	0	20	0	10	0.0	0

BUENA VISTA LAKE BASIN

11195500 SAN EMIGDIO CREEK AT SAN EMIGDIO RANCHHOUSE, CA

LOCATION.--Lat 34°58'54", long 119°11'03", in San Emigdio Grant, Kern County, Hydrologic Unit 18030012, on left bank 50 ft (15 m) downstream from unnamed tributary, 0.8 mi (1.3 km) upstream from San Emigdio Ranchhouse, and 13 mi (21 km) west of Wheeler Ridge.

DRAINAGE AREA.--48.8 mi² (126.4 km²).

PERIOD OF RECORD.--March 1959 to September 1981 (discontinued).

GAGE.--Water-stage recorder and sharp-crested weir with rectangular flume for flows below 7 ft³/s (0.2 m³/s). Datum of gage is 1,617.57 ft (493.035 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Small diversions for stock and domestic use above station.

AVERAGE DISCHARGE.--22 years, 2.62 ft³/s (0.074 m³/s), 1,900 acre-ft/yr (2.34 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,690 ft³/s (189 m³/s) Aug. 5, 1961, gage height, 19.87 ft (6.056 m) from floodmarks, from rating curve extended above 20 ft³/s (0.57 m³/s) on basis of slope-area measurements at gage heights 10.94 ft (3.335 m) and 19.87 ft (6.056 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Apr. 23, 24, 1962 and many days in 1965-66.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1938 (from information by local residents), that of Aug. 5, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27 ft³/s (0.76 m³/s) Feb. 9 (0930 hrs), gage height, 9.43 ft (2.874 m), no other peak above base of 25 ft³/s (0.71 m³/s); minimum daily, 2.1 ft³/s (0.059 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	5.4	5.3	5.7	5.9	11	5.0	4.3	3.9	3.4	2.8	2.5
2	5.2	5.3	5.2	5.6	5.7	6.9	11	4.6	3.9	3.4	2.8	2.5
3	5.1	5.3	5.2	5.6	5.7	6.9	6.4	4.7	3.8	3.4	2.8	2.4
4	5.1	5.3	5.7	5.6	5.7	6.7	5.6	4.8	3.7	3.5	2.7	2.5
5	5.1	5.2	5.7	5.5	5.6	9.3	5.3	4.8	3.5	3.6	2.7	2.5
6	5.1	5.3	5.6	5.4	5.6	7.6	5.1	4.8	3.3	3.6	2.6	2.5
7	5.2	5.2	5.4	5.3	5.5	5.9	5.0	4.8	3.3	3.6	2.5	2.4
8	5.2	5.2	5.3	5.2	8.3	5.2	5.0	4.7	3.5	3.6	2.4	2.3
9	5.2	5.3	5.2	5.1	19	4.8	5.2	4.5	3.5	3.6	2.4	2.1
10	5.2	5.3	5.1	5.0	8.3	4.8	5.2	4.1	3.5	3.4	2.4	2.2
11	5.2	5.2	5.1	5.0	6.5	4.8	5.1	4.1	3.6	3.4	2.4	2.2
12	5.3	5.2	4.9	5.0	6.6	4.5	5.3	4.1	3.7	3.5	2.5	2.2
13	5.4	5.3	4.9	4.9	6.6	5.6	5.3	4.0	3.9	3.5	2.5	2.3
14	5.5	5.3	4.9	5.0	6.4	5.7	4.5	4.0	3.9	3.5	2.5	2.5
15	5.8	5.4	4.8	4.8	6.4	5.3	4.3	4.3	3.7	3.4	2.6	2.5
16	5.7	5.4	4.7	4.8	6.4	5.3	4.4	4.5	3.6	3.4	2.5	2.6
17	5.7	5.4	4.8	4.7	6.3	5.0	4.5	4.3	3.5	3.4	2.5	2.9
18	5.7	5.4	5.3	4.7	6.4	4.7	8.3	4.1	3.5	3.4	2.5	2.9
19	5.6	5.3	5.7	4.6	6.2	6.9	12	4.7	3.5	3.3	2.6	2.3
20	5.6	5.3	6.0	4.7	6.0	5.5	9.3	4.8	3.3	3.2	2.6	2.3
21	5.5	5.3	6.2	4.8	6.3	3.5	6.9	4.6	3.3	3.2	2.6	2.3
22	5.5	5.2	6.2	4.8	6.3	3.8	6.3	4.4	3.2	3.1	2.5	2.3
23	5.4	5.2	6.2	5.2	6.3	3.8	5.7	4.0	3.2	3.2	2.5	2.2
24	5.4	5.2	6.1	5.2	6.4	4.0	5.5	3.7	3.3	3.1	2.6	2.2
25	5.5	5.3	6.1	5.2	6.9	3.8	4.5	3.9	3.3	3.0	2.6	2.2
26	5.4	5.3	6.0	5.2	6.4	5.9	4.8	4.0	3.3	3.0	2.6	2.3
27	5.5	5.3	5.9	5.2	6.0	7.9	4.9	4.5	3.3	3.0	2.6	2.3
28	5.5	5.2	5.9	5.6	6.0	7.9	4.8	4.2	3.3	3.0	2.5	2.3
29	5.5	5.2	5.9	11	---	7.2	4.7	4.0	3.4	2.9	2.4	2.3
30	5.5	5.3	5.9	7.6	---	5.3	4.4	3.9	3.4	2.9	2.4	2.3
31	5.4	---	5.8	6.0	---	5.0	---	3.9	---	2.9	2.5	---
TOTAL	167.2	158.5	171.0	168.0	189.7	180.5	174.3	134.1	105.1	102.4	79.1	71.3
MEAN	5.39	5.28	5.52	5.42	6.78	5.82	5.81	4.33	3.50	3.30	2.55	2.38
MAX	5.8	5.4	6.2	11	19	11	12	4.8	3.9	3.6	2.8	2.9
MIN	5.1	5.2	4.7	4.6	5.5	3.5	4.3	3.7	3.2	2.9	2.4	2.1
AC-FT	332	314	339	333	376	358	346	266	208	203	157	141

CAL YR 1980 TOTAL 2561.8 MEAN 7.00 MAX 88 MIN 2.4 AC-FT 5080
WTR YR 1981 TOTAL 1701.2 MEAN 4.66 MAX 19 MIN 2.1 AC-FT 3370

11196400 CALIENTE CREEK ABOVE TEHACHARI CREEK, NEAR CALIENTE, CA

LOCATION.--Lat 35°18'41", long 118°34'10", in SE¼SW¼ sec.17, T.30 S., R.32 E., Kern County, Hydrologic Unit 18030003, on right bank 0.5 mi (0.8 km) upstream from Harper Canyon, 1.0 mi (1.6 km) upstream from Oiler Canyon, and 3.6 mi (5.8 km) northeast of Caliente.

DRAINAGE AREA.--165 mi² (427 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,617.27 ft (492.944 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Small diversion above station for stock and domestic use.

AVERAGE DISCHARGE.--20 years, 3.93 ft³/s (0.111 m³/s), 2,850 acre-ft/yr (3.51 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,060 ft³/s (86.7 m³/s) Feb. 10, 1978, gage height, 9.72 ft (2.963 m) from floodmarks, from rating curve extended above 190 ft³/s (5.38 m³/s) on basis of slope-area measurement of peak flow; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.1 ft³/s (0.26 m³/s) May 26, gage height, 1.66 ft (0.506 m), no peak above base of 50 ft³/s (1.42 m³/s); minimum daily, 0.04 ft³/s (0.001 m³/s) on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	1.2	1.3	1.4	2.7	1.9	4.4	1.7	1.4	.12	.08	.04
2	.01	1.2	1.3	1.4	2.4	1.9	6.0	1.7	1.2	.12	.08	.04
3	.04	1.3	1.3	1.4	2.2	1.8	5.5	1.8	1.2	.12	.08	.04
4	.06	1.3	1.6	1.4	2.1	1.7	4.7	1.8	1.1	.11	.07	.04
5	.04	1.2	1.9	1.4	2.0	2.7	4.1	1.8	.93	.11	.07	.04
6	.07	1.3	1.6	1.4	1.8	2.6	3.8	1.8	.83	.11	.07	.04
7	.90	1.3	1.5	1.4	1.8	2.1	3.6	1.8	.80	.11	.07	.04
8	.93	1.3	1.5	1.5	1.9	1.9	3.4	1.7	.75	.11	.07	.04
9	.97	1.4	1.5	1.4	5.4	1.8	3.2	1.7	.74	.11	.06	.04
10	.96	1.4	1.4	1.4	4.2	1.7	2.8	1.6	.74	.11	.06	.04
11	1.0	1.4	1.4	1.3	3.2	1.7	2.7	1.5	.68	.11	.06	.04
12	1.1	1.5	1.4	1.3	2.6	1.7	2.7	1.4	.65	.10	.06	.04
13	1.2	1.5	1.4	1.4	2.3	2.0	2.6	1.4	.66	.10	.05	.04
14	1.3	1.5	1.4	1.3	2.2	2.2	2.4	1.4	.68	.10	.04	.08
15	1.5	1.5	1.4	1.3	2.1	1.9	2.3	1.5	.60	.09	.04	.16
16	1.5	1.5	1.3	1.3	2.0	1.9	2.3	1.5	.45	.09	.04	.16
17	1.4	1.4	1.3	1.4	1.9	1.8	2.3	1.5	.36	.09	.04	.21
18	1.4	1.4	1.4	1.3	1.8	1.7	2.9	1.4	.34	.09	.04	.24
19	1.4	1.4	1.4	1.3	1.8	1.9	3.6	1.5	.28	.09	.04	.20
20	1.2	1.4	1.5	1.4	1.8	3.4	3.0	1.9	.23	.09	.04	.28
21	1.1	1.5	1.5	1.4	1.7	2.6	2.6	1.8	.21	.09	.04	.33
22	1.1	1.5	1.4	1.4	1.6	2.3	2.4	1.6	.18	.09	.04	.51
23	1.1	1.5	1.4	1.6	1.6	2.2	2.2	1.5	.15	.08	.04	.60
24	1.0	1.5	1.4	1.5	1.6	2.1	2.1	1.4	.14	.08	.04	.64
25	1.1	1.4	1.4	1.5	1.7	2.0	2.1	1.4	.13	.08	.04	.68
26	1.4	1.4	1.4	1.5	2.1	3.5	2.2	1.9	.13	.08	.04	.90
27	1.4	1.3	1.4	1.4	1.8	6.5	2.2	3.7	.12	.08	.04	1.1
28	1.3	1.3	1.4	2.7	1.8	5.5	2.0	2.3	.12	.08	.04	1.1
29	1.3	1.3	1.4	4.4	---	5.4	1.9	1.9	.12	.08	.04	.84
30	1.2	1.3	1.4	4.8	---	5.3	1.8	1.6	.12	.08	.04	.96
31	1.2	---	1.4	3.8	---	4.8	---	1.5	---	.08	.04	---
TOTAL	35.00	41.4	44.3	53.4	62.1	82.5	89.8	53.0	16.04	2.98	1.60	9.51
MEAN	1.13	1.38	1.43	1.72	2.22	2.66	2.99	1.71	.53	.096	.052	.32
MAX	1.5	1.5	1.9	4.8	5.4	6.5	6.0	3.7	1.4	.12	.08	1.1
MIN	.01	1.2	1.3	1.3	1.6	1.7	1.8	1.4	.12	.08	.04	.04
AC-FT	69	82	88	106	123	164	178	105	32	5.9	3.2	19

CAL YR 1980 TOTAL 1107.32 MEAN 3.03 MAX 57 MIN .40 AC-FT 2200
WTR YR 1981 TOTAL 491.63 MEAN 1.35 MAX 6.5 MIN .04 AC-FT 975

NOTE.--No gage-height record Aug. 30 to Sept. 30.

BUENA VISTA LAKE BASIN

11196420 TEHACHAPI CREEK NEAR TEHACHAPI, CA

LOCATION.--Lat 35°10'26", long 118°28'43", in NE4SW4 sec.6, T.32 S., R.33 E., Kern County, Hydrologic Unit 18030003, on right bank 1.3 mi (2.1 km) downstream from Brite Creek, and 5.2 mi (5.1 km) northwest of Tehachapi.

DRAINAGE AREA.--53.2 mi² (137.8 km²).

PERIOD OF RECORD.--September 1962 to current year.

REVISED RECORDS.--WDR CA-72-2: 1967.

GAGE.--Water-stage recorder and steel-weir in concrete channel. Datum of gage is 3,534.48 ft (1,077.310 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 5, 1964, at site 0.2 mi (0.3 km) upstream at different datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--19 years, 0.44 ft³/s (0.012 m³/s), 319 acre-ft/yr (393,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft³/s (48.1 m³/s) Aug. 8, 1963, gage height, 5.30 ft (1.615 m) in gage well, 6.40 ft (1.951 m) from floodmarks, site and datum then in use, from slope-area measurement of maximum flow; no flow for parts of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52 ft³/s (1.47 m³/s) Mar. 6 (1430 hrs), gage height, 0.92 ft (0.28 m), no other peak above base of 10 ft³/s (0.28 m³/s); minimum, no flow for several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.04	.04	.01	.02	.07	.23	.13	.09	.01	.02	0
2	.01	.04	.04	.02	.01	.04	.54	.13	.09	.01	.03	0
3	.01	.04	.04	.02	.01	.02	.39	.22	.08	.01	.03	0
4	.01	.04	.10	.02	.02	.02	.25	.21	.07	.01	.03	0
5	.01	.04	.08	.02	.02	.12	.25	.20	.05	.02	.03	.01
6	.01	.04	.07	.02	.02	3.2	.24	.20	.05	.01	.02	.01
7	.01	.04	.06	.02	.02	.07	.21	.20	.05	.01	.02	.01
8	.01	.04	.06	.02	.03	.07	.19	.19	.05	.01	.02	.01
9	.01	.04	.05	.02	.30	.06	.17	.19	.05	.01	.04	.01
10	.01	.05	.02	.02	.02	.07	.15	.19	.05	.01	.01	.01
11	.01	.03	.02	.02	.02	.05	.14	.18	.04	.01	.02	.01
12	.01	.03	.02	.01	.01	.09	.13	.19	.05	.01	.02	.01
13	.01	.02	.02	.01	.01	.09	.12	.19	.04	.02	.02	.01
14	.02	.02	.02	.01	.02	.07	.11	.20	.04	.03	.01	.02
15	.02	.03	.02	.01	.02	.07	.11	.21	.05	.03	0	.04
16	.02	.02	.02	.01	.02	.07	.10	.21	.04	.03	0	.04
17	.02	.02	.02	.01	.02	.07	.10	.20	.04	.03	0	.05
18	.02	.02	.02	.01	.02	.07	.23	.22	.04	.03	0	.06
19	.02	.03	.03	.01	.02	.09	.30	.28	.04	.03	0	.05
20	.02	.04	.04	.01	.02	.19	.26	.33	.02	.04	0	.07
21	.04	.04	.04	.01	.01	.11	.23	.20	.02	.04	.01	.08
22	.04	.04	.04	.01	.01	.10	.21	.19	.02	.03	.01	.13
23	.04	.04	.03	.02	.01	.10	.20	.17	.02	.04	.01	.15
24	.04	.04	.02	.02	.02	.09	.20	.17	.01	.02	.01	.16
25	.04	.04	.02	.01	.02	.09	.20	.17	.01	.02	0	.17
26	.08	.04	.01	.01	.04	1.1	.21	.16	.01	.02	0	.22
27	.04	.04	.01	.01	.02	2.3	.21	.18	.01	.02	0	.27
28	.04	.04	.02	.07	.02	.97	.18	.14	.01	.02	0	.28
29	.04	.04	.01	.07	---	.54	.16	.13	.01	.02	0	.21
30	.04	.04	.01	.04	---	.33	.14	.11	.01	.02	0	.24
31	.04	---	.01	.02	---	.24	---	.10	---	.02	0	---
TOTAL	.75	1.07	1.01	.59	.80	10.57	6.16	5.79	1.16	.64	.36	2.33
MEAN	.024	.036	.033	.019	.029	.34	.21	.19	.039	.021	.012	.078
MAX	.08	.05	.10	.07	.30	3.2	.54	.33	.09	.04	.04	.28
MIN	.01	.02	.01	.01	.01	.02	.10	.10	.01	.01	0	0
AC-FT	1.5	2.1	2.0	1.2	1.6	21	12	11	2.3	1.3	.7	4.6

CAL YR 1980 TOTAL 204.25 MEAN .56 MAX 42 MIN .01 AC-FT 405
WTR YR 1981 TOTAL 31.23 MEAN .086 MAX 3.2 MIN 0 AC-FT 62

11197250 AVENAL CREEK NEAR AVENAL, CA

LOCATION.--Lat 35°51'15", long 120°07'34", in SW¼SW¼ sec.10, T.24 S., R.17 E., Kings County, Hydrologic Unit 18030011, on right bank 550 ft (168 m) downstream from road ford, 0.4 mi (0.6 km) downstream from unnamed tributary, and 10 mi (16 km) south of Avenal.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 825 ft (251.5 m), from topographic map.

REMARKS.--Records good. Minor diversions for stock above station.

AVERAGE DISCHARGE.--20 years, 3.45 ft³/s (0.098 m³/s), 2,500 acre-ft/yr (3.08 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s (74.6 m³/s) Feb. 24, 1969, gage height, 7.89 ft (2.405 m), from rating curve extended above 510 ft³/s (14.4 m³/s) on basis of slope-area measurements at gage heights 5.72 ft (1.743 m) and 7.54 ft (2.298 m); no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 366 ft³/s (10.4 m³/s) Mar. 21 (1845 hrs), gage height, 3.48 ft (1.061 m), no other peak above base of 50 ft³/s (0.85 m³/s); minimum, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.37	.37	.56	.61	2.0	1.6	.38	.08			
2	.29	.39	.36	.61	.58	1.3	2.3	.42	.04			
3	.28	.41	.36	.63	.58	.79	1.8	.53	.07			
4	.27	.43	.48	.59	.56	.91	1.3	.62	.07			
5	.25	.41	.43	.63	.56	11	1.1	.59	.04			
6	.26	.42	.43	.63	.55	6.0	1.0	.56	0			
7	.28	.43	.46	.63	.52	1.7	1.0	.57	0			
8	.28	.43	.49	.63	.60	.89	1.1	.51	0			
9	.27	.43	.50	.63	.92	.60	.99	.48	0			
10	.27	.40	.50	.63	.56	.54	.97	.41	0			
11	.31	.43	.50	.63	.50	.51	.90	.29	0			
12	.30	.42	.43	.63	.47	.50	.86	.27	0			
13	.36	.42	.43	.56	.46	.65	.81	.26	0			
14	.41	.43	.43	.56	.54	.66	.69	.27	0			
15	.48	.44	.42	.56	.44	.58	.58	.31	0			
16	.50	.46	.43	.56	.43	.58	.53	.34	0			
17	.48	.44	.42	.56	.46	.50	.48	.24	0			
18	.44	.43	.41	.56	.46	.51	.67	.22	0			
19	.43	.45	.41	.53	.45	19	.80	.28	0			
20	.43	.45	.47	.54	.43	13	.72	.31	0			
21	.42	.40	.50	.54	.48	79	.62	.26	0			
22	.42	.36	.49	.52	.49	41	.53	.18	0			
23	.41	.36	.52	.75	.48	14	.37	.15	0			
24	.36	.35	.53	.62	.51	8.5	.31	.12	0			
25	.39	.39	.56	.61	.78	5.1	.33	.14	0			
26	.43	.43	.56	.62	.75	4.1	.36	.21	0			
27	.43	.43	.56	.88	.58	3.2	.41	.15	0			
28	.43	.43	.56	1.2	.77	2.3	.43	.13	0			
29	.43	.43	.56	4.4	---	1.9	.38	.09	0			
30	.43	.43	.56	1.8	---	1.6	.35	.08	0			
31	.40	---	.56	.70	---	1.4	---	.08	---			---
TOTAL	11.44	12.50	14.69	24.50	15.52	224.32	24.29	9.45	.30	0	0	0
MEAN	.37	.42	.47	.79	.55	7.24	.81	.30	.010	0	0	0
MAX	.50	.46	.56	4.4	.92	79	2.3	.62	.08	0	0	0
MIN	.25	.35	.36	.52	.43	.50	.31	.08	0	0	0	0
AC-FT	23	25	29	49	31	445	48	19	.6	0	0	0
CAL YR 1980	TOTAL	3438.64	MEAN	9.40	MAX	462	MIN	.18	AC-FT	6620		
WTR YR 1981	TOTAL	337.01	MEAN	.92	MAX	79	MIN	0	AC-FT	668		

TULARE LAKE BASIN

11197800 POSO CREEK NEAR OILDALE, CA

LOCATION.--Lat 35°30'50", long 118°54'17", in SW¼SW¼ sec.6, T.28 S., R.29 E., Kern County, Hydrologic Unit 18030012, on downstream side of highway bridge opposite mouth of Hillvale Canyon, 10 mi (16 km) northeast of Oildale, and 12 mi (19 km) northeast of Bakersfield.

DRAINAGE AREA.--230 mi² (600 km²).

PERIOD OF RECORD.--July 1959 to current year.

REVISED RECORDS.--WSP 1735: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 700 ft (213 m), from topographic map.

REMARKS.--Records good. Oilfield waste comprises most of low flow.

AVERAGE DISCHARGE.--22 years, 30.5 ft³/s (0.864 m³/s), 22,100 acre-ft/yr (27.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,700 ft³/s (190 m³/s) Feb. 25, 1969, gage height, 12.85 ft (3.917 m), from rating curve extended above 820 ft³/s (23.2 m³/s) on basis of contracted-opening measurement at gage height 11.57 ft (3.527 m); no flow for many days in 1975-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 4, 1958, reached a stage of 8.6 ft (2.62 m) from floodmarks, discharge, 2,750 ft³/s (77.9 m³/s), furnished by Kern County Land Co.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft³/s (1.98 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 10	0300	*254	7.19	8.61	2.624
Mar. 27	1730	217	6.15	8.49	2.588

Minimum, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	1.2	8.2	11	29	26	97	32	11			
2	0	1.4	8.7	11	25	32	93	31	8.2			
3	0	1.3	8.7	11	24	30	91	30	6.2			
4	0	1.6	10	10	23	27	82	29	7.2			
5	0	2.2	14	11	22	27	72	27	5.4			
6	0	1.6	17	10	22	30	66	25	3.3			
7	0	1.6	14	9.8	20	28	60	23	1.9			
8	0	1.9	14	9.3	21	24	56	22	1.9			
9	0	3.0	13	9.8	59	23	54	20	3.3			
10	0	2.6	13	9.8	180	22	49	19	3.3			
11	0	4.2	12	8.8	77	22	46	18	1.7			
12	0	4.8	12	9.8	51	22	43	16	1.0			
13	0	5.4	12	11	43	26	41	15	1.2			
14	0	5.8	11	12	37	34	38	14	1.2			
15	.20	5.4	11	11	36	33	35	14	1.0			
16	4.2	5.1	12	10	35	31	32	15	.63			
17	4.8	5.4	11	8.7	33	30	31	16	.31			
18	3.3	6.7	11	7.6	31	27	70	15	.26			
19	2.6	6.2	11	9.3	30	27	97	16	.20			
20	2.2	7.2	10	10	29	61	94	20	.04			
21	1.9	8.2	11	11	28	83	65	22	0			
22	1.2	8.7	11	9.3	26	96	60	19	0			
23	1.2	9.3	10	10	25	91	51	17	0			
24	1.1	9.8	11	12	23	72	49	15	0			
25	1.0	9.3	11	13	24	60	43	13	0			
26	1.2	8.7	12	12	26	68	41	14	0			
27	1.9	8.2	11	18	28	170	40	16	0			
28	2.2	8.7	11	37	26	175	39	18	0			
29	2.0	8.7	11	49	---	151	36	14	0			
30	2.6	8.7	11	47	---	147	34	13	0			
31	3.0	---	11	35	---	121	---	11	---			---
TOTAL	36.60	162.9	354.6	454.2	1033	1816	1705	589	59.24	0	0	0
MEAN	1.18	5.43	11.4	14.7	36.9	58.6	56.8	19.0	1.97	0	0	0
MAX	4.8	9.8	17	49	180	175	97	32	11	0	0	0
MIN	0	1.2	8.2	7.6	20	22	31	11	0	0	0	0
AC-FT	73	323	703	901	2050	3600	3380	1170	118	0	0	0
CAL YR 1980	TOTAL	21238.61	MEAN	50.0	MAX	1340	MIN	0	AC-FT	42130		
WTR YR 1981	TOTAL	6210.54	MEAN	17.0	MAX	180	MIN	0	AC-FT	12320		

11199500 WHITE RIVER NEAR DUCOR, CA

LOCATION.--Lat 35°48'36", long 118°55'03", in NW4SE4 sec.26, T.24 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.6 mi (1.0 km) upstream from Tyler Gulch, and 9.0 mi (14.5 km) southeast of Ducor.

DRAINAGE AREA.--90.6 mi² (234.7 km²).

PERIOD OF RECORD.--October 1942 to September 1953, February 1971 to current year. Monthly discharge only for October 1942 to September 1944, published in WSP 1315-A.

GAGE.--Water-stage recorder. Altitude of gage is 715 ft (218 m), from topographic map. October 1942 to September 1946, at site 3,800 ft (1,160 m) downstream and October 1946 to September 1953, at site 4,300 ft (1,310 m) downstream, and October 1971 to November 1978, at site 4,000 ft (1,220 m) downstream, all at different datum.

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

AVERAGE DISCHARGE.--21 years (water years 1943-53, 1972-81), 9.55 ft³/s (0.270 m³/s), 6,920 acre-ft/yr (8.53 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s (65.1 m³/s), estimated by Bureau of Reclamation, Mar. 9, 1943; no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 29	2130	42	1.19	1.65	0.503	Mar. 20	0645	168	4.76	2.46	.750
Feb. 9	1845	47	1.33	1.70	.518	Mar. 27	0830	*178	5.04	2.50	.762

Minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	1.0	2.1	2.3	6.2	6.5	15	7.6	2.6			
2	.04	.97	2.2	2.3	5.4	9.5	17	7.4	2.4			
3	.02	1.0	2.3	2.3	5.2	7.2	15	7.1	2.2			
4	0	.95	4.5	2.3	4.8	7.0	13	6.9	2.1			
5	0	.89	4.4	2.3	4.5	7.9	12	6.5	1.8			
6	0	.85	3.5	2.2	4.5	8.3	11	6.2	1.6			
7	0	.90	3.1	2.2	4.2	7.5	11	5.9	1.5			
8	0	.92	2.8	2.3	4.5	7.2	9.9	5.6	1.4			
9	0	.93	2.8	2.3	27	7.1	9.5	5.2	1.4			
10	0	1.0	2.8	2.3	20	7.1	9.4	4.9	1.4			
11	0	1.2	2.7	2.3	10	7.3	8.7	4.6	1.3			
12	0	1.6	2.6	2.4	8.0	7.4	8.5	4.3	1.2			
13	0	1.6	2.5	2.6	6.9	14	8.5	4.0	1.2			
14	0	1.6	2.5	2.8	6.7	14	8.4	3.9	1.4			
15	.20	1.7	2.5	2.6	6.7	11	8.4	3.9	1.3			
16	.75	1.7	2.5	2.5	6.6	9.8	8.1	4.2	.92			
17	1.3	1.9	2.5	2.4	6.2	9.5	8.1	4.2	.66			
18	1.3	1.9	2.5	2.3	5.9	9.0	9.7	3.7	.53			
19	1.3	1.8	2.5	2.5	5.8	12	24	4.0	.44			
20	1.3	1.8	2.5	2.7	5.6	91	20	5.0	.15			
21	1.3	1.7	2.5	2.7	5.6	34	14	5.1	.01			
22	1.1	1.9	2.5	2.6	5.3	34	12	4.4	0			
23	.95	2.0	2.5	2.9	4.9	22	11	4.0	0			
24	.84	2.1	2.5	3.2	4.8	17	11	3.6	0			
25	.81	2.2	2.6	3.4	5.1	14	10	3.5	0			
26	1.2	2.2	2.6	3.5	9.5	46	10	4.1	0			
27	1.5	2.2	2.6	3.7	7.6	111	9.9	5.6	0			
28	1.7	2.2	2.4	7.2	6.1	49	9.0	5.0	0			
29	1.5	2.2	2.3	17	---	29	8.5	3.8	0			
30	1.4	2.1	2.3	15	---	21	7.9	3.1	0			
31	1.2	---	2.3	8.4	---	17	---	2.9	---			---
TOTAL	19.77	47.01	82.9	117.5	203.6	654.3	338.5	150.2	27.51	0	0	0
MEAN	.64	1.57	2.67	3.79	7.27	21.1	11.3	4.85	.92	0	0	0
MAX	1.7	2.2	4.5	17	27	111	24	7.6	2.6	0	0	0
MIN	0	.85	2.1	2.2	4.2	6.5	7.9	2.9	0	0	0	0
AC-FT	39	93	164	233	404	1300	671	298	55	0	0	0

CAL YR 1980 TOTAL 4729.92 MEAN 12.9 MAX 194 MIN 0 AC-FT 9380
WTR YR 1981 TOTAL 1641.29 MEAN 4.50 MAX 111 MIN 0 AC-FT 3260

NOTE.--No gage-height record Nov. 4 to Jan. 25.

TULARE LAKE BASIN

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA

LOCATION.--Lat 35°56'30", long 118°49'19", in SE4NE4 sec.10, T.23 S., R.29 E., Tulare County, Hydrologic Unit 18030005, on left bank 1.0 mi (1.6 km) upstream from Pothole Creek, 6.3 mi (10.1 km) northeast of Fountain Springs, and 12 mi (19 km) east of Terra Bella.

DRAINAGE AREA.--83.3 mi² (215.7 km²).

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 980 ft (299 m), from topographic map.

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

AVERAGE DISCHARGE.--13 years, 31.7 ft³/s (0.898 m³/s), 22,970 acre-ft/yr (28.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s (94.6 m³/s) Feb. 24, 1969, gage height, 9.85 ft (3.002 m), from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurements at gage heights 8.83 ft (2.691 m) in gage well, 9.18 ft (2.798 m) from floodmarks, and 12.54 ft (3.822 m) from floodmarks; no flow Aug. 14-22, 1968 and for several months in 1972, 1976-77.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 6, 1966, reached a stage of 12.54 ft (3.822 m), from floodmarks, discharge, 5,330 ft³/s (151 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 29	1630	135 3.82	3.83 1.167	Mar. 20	0445	206 5.83	4.25 1.295
Feb. 9	0930	*238 6.74	4.43 1.350	Mar. 27	0530	135 3.82	3.83 1.167

Minimum, no flow several days during July to September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	7.9	9.1	9.8	23	21	53	28	11	1.8	0	0
2	5.0	8.2	9.5	9.8	24	27	60	28	10	1.7	0	0
3	4.6	8.3	9.4	9.9	23	22	53	26	11	2.2	0	0
4	4.5	8.3	24	10	21	20	47	25	11	2.5	0	0
5	4.2	8.1	24	9.9	20	20	44	25	10	2.5	0	0
6	4.4	7.8	15	9.7	19	20	42	24	8.9	2.2	.19	0
7	4.9	8.3	13	9.5	18	18	40	23	7.2	1.8	.40	0
8	4.9	8.3	12	9.8	19	18	38	22	6.0	2.3	.15	.38
9	4.9	8.3	11	9.8	133	17	36	21	6.3	2.4	0	.36
10	4.7	8.3	11	9.8	66	17	36	20	6.5	2.2	.05	.26
11	5.0	8.7	11	9.6	37	17	34	19	6.6	1.6	.08	.19
12	5.0	9.1	11	9.6	31	17	33	17	6.7	1.4	0	.36
13	6.0	9.1	11	9.8	28	33	32	16	7.3	1.1	0	1.3
14	7.6	9.1	11	9.8	28	28	31	16	7.3	.80	0	1.4
15	9.5	9.5	11	10	29	25	30	15	6.4	1.3	0	.92
16	11	9.5	11	9.9	27	23	29	16	6.2	1.4	0	1.0
17	10	9.5	11	10	26	22	28	16	5.5	1.1	0	1.3
18	10	9.5	11	9.8	26	21	32	15	5.8	.67	0	1.4
19	9.8	9.4	11	9.9	24	28	79	17	5.7	.68	0	1.2
20	8.6	9.4	11	10	24	140	58	22	5.0	.56	0	.86
21	7.8	9.0	11	9.6	23	80	48	21	4.4	.37	0	1.1
22	7.9	9.1	11	9.6	20	96	46	18	3.4	.68	.55	1.9
23	7.9	9.1	11	15	19	70	42	16	3.6	.59	.73	1.9
24	7.3	9.5	11	17	18	57	38	15	3.2	.44	.76	1.9
25	7.2	9.4	10	13	18	50	37	14	3.3	.39	.45	1.5
26	8.5	9.5	10	12	24	83	37	14	2.9	.45	.29	2.0
27	9.5	9.3	10	13	21	108	35	27	2.5	.36	.23	2.4
28	9.3	9.1	10	32	19	77	33	20	2.4	.17	.17	2.5
29	8.9	9.2	10	64	---	72	31	16	2.6	0	.07	2.9
30	8.4	9.1	9.9	43	---	66	29	14	2.0	.11	.30	3.0
31	8.2	---	9.8	28	---	57	---	12	---	0	.20	---
TOTAL	220.8	266.9	361.7	452.6	808	1370	1211	598	180.7	35.77	4.62	32.03
MEAN	7.12	8.90	11.7	14.6	28.9	44.2	40.4	19.3	6.02	1.15	.15	1.07
MAX	11	9.5	24	64	133	140	79	28	11	2.5	.76	3.0
MIN	4.2	7.8	9.1	9.5	18	17	28	12	2.0	0	0	0
AC-FT	438	529	717	898	1600	2720	2400	1190	358	71	9.2	64

CAL YR 1980 TOTAL 17821.00 MEAN 48.7 MAX 705 MIN 4.2 AC-FT 35350
WTR YR 1981 TOTAL 5542.12 MEAN 15.2 MAX 140 MIN 0 AC-FT 10990

11201200 DEER CREEK DIVERSION NEAR TERRA BELLA, CA

LOCATION.--Lat 35°59'27", long 118°59'06", in NE¼NE¼ sec.30, T.22 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on right bank 1,000 ft (305 m) downstream from diversion structure, 3.8 mi (6.1 km) northeast of Terra Bella.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 510 ft (155 m), from topographic map.

REMARKS.--Records fair. Diversion receives water from Deer Creek 1,000 ft (305 m) upstream. Water is used for ground-water recharge.

AVERAGE DISCHARGE.--11 years, 1.68 ft³/s (0.048 m³/s), 1,220 acre-ft/yr (1.50 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 15 ft³/s (0.42 m³/s) Dec. 28, 1977; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.41	5.4	6.9	8.5	7.1	1.3	7.9	3.9			
2	0	.48	5.8	6.9	8.4	8.0	8.7	7.6	2.1			
3	0	.59	6.6	6.9	8.3	7.2	8.4	7.2	.32			
4	0	.76	8.1	7.0	8.0	6.8	8.1	6.9	.43			
5	0	.79	10	7.0	5.5	6.8	8.2	6.7	.29			
6	0	.84	7.3	6.8	.02	6.9	8.9	6.4	.01			
7	0	.92	6.0	6.8	0	6.8	9.7	6.7	0			
8	0	1.1	5.8	6.7	0	6.5	9.5	7.3	0			
9	0	1.5	6.7	6.8	0	6.2	9.6	7.2	0			
10	0	1.7	7.2	6.9	0	6.1	9.6	6.9	0			
11	0	2.1	7.3	6.9	2.0	6.1	9.4	6.5	0			
12	0	2.9	7.3	6.9	5.2	6.0	9.2	7.3	0			
13	0	3.3	7.1	6.8	5.9	7.3	9.0	7.2	0			
14	0	3.4	7.1	6.8	6.4	8.5	8.9	7.4	0			
15	0	3.8	7.2	4.5	6.8	7.7	8.8	6.9	0			
16	0	4.2	7.4	4.2	7.5	7.5	8.8	7.4	0			
17	0	4.6	7.5	3.8	8.5	7.3	8.8	7.5	0			
18	0	4.6	7.4	1.7	8.7	6.9	9.3	7.0	0			
19	0	4.8	7.2	.05	8.4	7.2	12	6.8	0			
20	0	4.9	7.5	6.4	8.1	11	12	11	0			
21	0	5.3	7.6	7.0	7.9	8.9	11	9.1	0			
22	0	4.9	7.6	6.9	7.5	9.4	11	6.3	0			
23	0	5.2	7.5	6.6	7.2	8.8	11	5.2	0			
24	0	5.5	7.4	6.4	7.0	8.5	10	4.5	0			
25	0	5.8	7.4	5.9	6.7	8.2	9.9	4.6	0			
26	0	5.6	7.5	6.8	8.0	8.8	9.6	4.9	0			
27	.08	5.6	7.4	8.0	7.7	8.1	9.5	6.4	0			
28	.39	5.6	7.4	9.2	6.8	.12	9.1	7.3	0			
29	.48	5.7	7.4	12	---	0	8.6	6.2	0			
30	.37	5.5	7.4	12	---	0	8.3	5.9	0			
31	.40	---	7.2	9.5	---	0	---	4.9	---			---
TOTAL	1.72	102.39	223.7	207.05	165.02	204.72	276.2	211.1	7.05	0	0	0
MEAN	.056	3.41	7.22	6.68	5.89	6.60	9.21	6.81	.24	0	0	0
MAX	.48	5.8	10	12	8.7	11	12	11	3.9	0	0	0
MIN	0	.41	5.4	.05	0	0	1.3	4.5	0	0	0	0
AC-FT	3.4	203	444	411	327	406	548	419	14	0	0	0
CAL YR 1980	TOTAL	1474.33	MEAN 4.03	MAX 12	MIN 0	AC-FT 2920						
WTR YR 1981	TOTAL	1398.95	MEAN 3.83	MAX 12	MIN 0	AC-FT 2770						

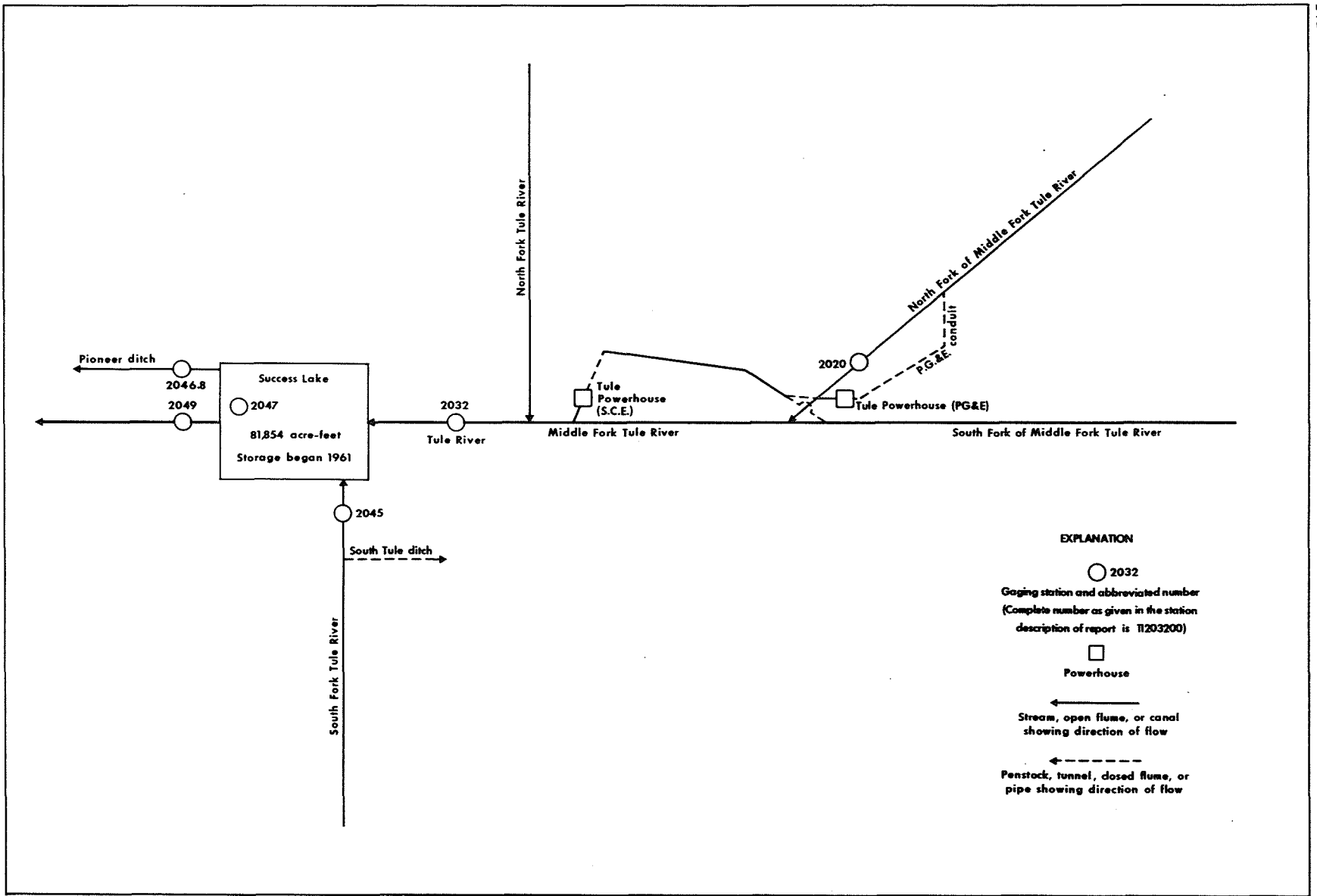


FIGURE 5.--Schematic diagram showing diversions and storage in Tule River basin.

LOCATION.--Lat 36°10'29", long 118°41'41", in T.20 S., R.30 E., unsurveyed, Tulare County, Hydrologic Unit 18030006, on right bank 1.2 mi (1.9 km) upstream from mouth, 2.2 mi (3.5 km) downstream from Hossack Creek, and 7.4 mi (11.9 km) northeast of Springville.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-A. January 1909 to December 1912 at site 2 mi (3 km) upstream, records not equivalent. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REMARKS.--Pacific Gas and Electric Co. conduit diverts 2.5 mi (4.0 km) upstream from station; water is returned to North Fork of Middle Fork Tule River 1.1 mi (1.8 km) downstream from station. See schematic diagram of Tule River basin. For records of combined discharge of river and conduit, see following page.

AVERAGE DISCHARGE.--River only: 42 years, 26.2 ft³/s (0.742 m³/s), 18,980 acre-ft/yr (23.4 hm³/yr).
Combined river and diversion: 42 years, 57.7 ft³/s (1.634 m³/s), 41,800 acre-ft/yr (51.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 16,900 ft³/s (479 m³/s) Dec. 6, 1966, gage height, 13.83 ft (4.215 m), from floodmarks, from rating curve extended above 270 ft³/s (7.65 m³/s) on basis of critical-depth determinations at gage heights 9.67 ft (2.947 m) and 12.47 ft (3.801 m); no flow Sept. 10, 11, 1955.
Combined flow, maximum discharge, 16,900 ft³/s (479 m³/s) Dec. 6, 1966; minimum daily, 6.7 ft³/s (0.19 m³/s) Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 93 ft³/s (2.63 m³/s) May 1, gage height, 3.65 ft (1.113 m); minimum daily, 1.7 ft³/s (0.048 m³/s) July 30, 31.
Combined flow, maximum discharge, 161 ft³/s (4.56 m³/s) May 1; minimum daily, 14 ft³/s (0.40 m³/s) many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	4.5	4.3	3.5	11	5.8	7.3	73	4.9	2.3	1.8	2.3
2	23	3.6	3.9	3.2	11	7.4	7.9	78	4.3	2.3	1.8	2.2
3	19	3.3	4.0	3.3	11	7.0	7.7	63	4.1	2.3	1.9	2.1
4	3.7	3.2	29	3.4	8.7	5.9	7.1	46	4.1	2.3	1.9	1.9
5	3.7	3.4	9.0	3.4	5.7	5.6	6.9	35	3.9	2.3	2.2	1.9
6	3.9	3.8	4.4	3.5	5.3	5.3	7.0	26	3.7	2.7	2.2	1.9
7	3.8	4.1	3.9	3.5	5.1	5.1	7.6	19	3.5	2.4	2.2	1.9
8	3.5	3.5	3.5	3.4	6.0	5.0	6.9	16	3.4	2.2	2.1	2.0
9	3.4	3.7	3.7	3.4	15	4.9	7.6	17	3.2	2.1	2.1	2.1
10	3.3	3.9	3.4	3.3	12	4.9	11	19	3.1	2.1	2.1	2.2
11	3.2	4.0	3.4	3.4	7.7	4.8	8.3	23	2.9	2.1	2.1	2.2
12	3.2	5.8	3.3	3.4	6.8	5.5	7.8	24	2.9	2.1	2.1	2.3
13	3.6	3.1	3.3	3.4	6.3	7.7	8.0	28	2.9	2.1	2.1	2.3
14	3.8	3.1	3.2	3.3	6.4	6.9	12	27	3.1	2.0	2.1	2.4
15	4.0	3.2	3.2	3.3	7.1	6.4	21	18	3.1	2.1	2.1	2.3
16	3.8	3.5	3.4	3.3	6.7	6.2	28	12	2.9	2.0	2.2	2.1
17	3.9	3.0	3.3	3.3	6.2	6.0	29	7.8	2.6	2.0	6.4	2.1
18	4.9	3.1	3.4	3.3	6.2	6.0	28	5.3	2.7	2.1	15	2.1
19	4.3	3.0	3.4	3.3	6.5	8.6	30	5.6	2.9	2.6	15	2.0
20	4.2	3.0	3.4	3.2	5.6	24	17	9.2	3.1	2.6	14	1.9
21	3.9	3.1	3.4	3.2	5.5	17	11	5.8	3.6	2.5	13	1.9
22	3.9	3.2	3.4	3.2	5.3	22	17	4.9	3.7	2.5	11	2.0
23	3.8	3.7	3.4	4.1	5.2	15	36	4.5	2.9	2.4	11	2.0
24	3.8	12	3.4	4.2	5.1	10	55	8.8	2.4	2.4	12	2.0
25	4.2	21	3.3	3.8	4.9	8.9	55	9.3	2.3	2.9	11	2.1
26	5.8	13	3.3	3.7	5.9	25	44	8.0	2.3	3.0	6.1	2.2
27	4.2	3.3	3.3	4.8	5.3	14	42	8.0	2.3	3.0	6.4	2.4
28	4.3	3.1	3.3	9.9	5.4	11	41	5.5	2.3	2.9	6.3	2.8
29	3.6	3.5	3.3	20	---	10	60	5.6	2.3	2.7	6.3	2.5
30	3.4	4.1	3.3	11	---	8.9	62	6.1	2.3	1.7	6.2	2.7
31	3.5	---	3.6	11	---	7.8	---	5.6	---	1.7	5.4	---
TOTAL	173.6	141.8	139.4	146.0	198.9	288.6	689.1	624.0	93.7	72.4	178.1	64.8
MEAN	5.60	4.73	4.50	4.71	7.10	9.31	23.0	20.1	3.12	2.34	5.75	2.16
MAX	23	21	29	20	15	25	62	78	4.9	3.0	15	2.8
MIN	3.2	3.0	3.2	3.2	4.9	4.8	6.9	4.5	2.3	1.7	1.8	1.9
AC-FT	344	281	276	290	345	572	1370	1240	186	144	353	129
CAL YR 1980	TOTAL	30089.3	MEAN	82.2	MAX	2390	MIN	1.2	AC-FT	59680		
WTR YR 1981	TOTAL	2810.4	MEAN	7.70	MAX	78	MIN	1				

TULARE LAKE BASIN

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF NORTH FORK OF MIDDLE FORK TULE RIVER AND
PACIFIC GAS AND ELECTRIC CO. CONDUIT NEAR SPRINGVILLE, CA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	24	22	22	29	34	57	141	69	25	18	14
2	24	24	22	21	29	36	58	146	64	25	18	14
3	29	23	22	21	28	34	54	131	61	24	18	14
4	26	23	71	21	29	32	53	114	58	24	17	14
5	25	23	36	21	28	31	59	102	55	23	17	14
6	25	23	27	21	27	30	68	93	53	24	17	14
7	25	23	26	21	26	29	70	86	51	23	16	14
8	25	24	25	20	31	29	65	83	47	23	16	14
9	24	23	25	20	54	30	70	84	46	22	16	15
10	24	23	24	20	43	31	77	86	44	22	16	15
11	24	23	24	20	38	30	72	90	42	22	16	15
12	24	25	24	21	36	32	73	91	41	21	16	16
13	25	24	23	20	36	36	74	95	40	21	16	16
14	26	24	23	20	41	33	81	94	39	21	16	15
15	30	24	23	20	43	33	90	85	37	21	16	15
16	28	24	23	20	43	33	96	78	36	21	17	14
17	27	23	23	20	45	34	97	72	35	20	14	14
18	27	23	23	20	46	35	96	69	34	20	16	14
19	26	23	23	20	48	45	98	70	33	20	16	14
20	26	23	23	20	47	63	85	73	32	20	15	14
21	26	23	22	20	45	58	81	64	32	20	15	14
22	25	22	22	20	43	74	86	62	31	20	14	14
23	25	23	22	23	42	66	104	62	30	19	14	14
24	25	21	22	22	40	60	123	66	28	18	14	14
25	24	23	22	21	37	61	123	72	27	19	17	14
26	26	24	22	21	37	92	112	73	27	19	14	14
27	25	22	22	29	34	68	110	75	26	18	14	14
28	25	22	22	36	33	61	109	71	26	18	14	15
29	25	22	22	41	---	61	128	69	25	19	14	15
30	24	22	21	30	---	60	130	71	26	18	14	15
31	24	---	22	29	---	58	---	71	---	18	15	---
TOTAL	788	693	773	701	1058	1409	2599	2639	1195	648	486	432
MEAN	25.4	23.1	24.9	22.6	37.8	45.5	86.6	85.1	39.8	20.9	15.7	14.4
MAX	30	25	71	41	54	92	130	146	69	25	18	16
MIN	24	21	21	20	26	29	53	62	25	18	14	14
AC-FT	1560	1370	1530	1390	2100	2790	5160	5230	2370	1290	964	857
CAL YR 1980	TOTAL	46705	MEAN 128	MAX 2450	MIN 21	AC-FT 92640						
WTR YR 1981	TOTAL	13421	MEAN 36.8	MAX 146	MIN 14	AC-FT 26620						

11203200 TULE RIVER NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°06'02", long 118°52'07", in NE4SW4 sec.17, T.21 S., R.29 E., Tulare County, Hydrologic Unit 18030006, on left bank 10 ft (3 m) downstream from highway bridge, 3.5 mi (5.6 km) southwest of Springville, and 4.1 mi (6.6 km) upstream from Success Dam.

DRAINAGE AREA.--247 mi² (640 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 680 ft (207 m), from topographic map. Prior to Mar. 20, 1968, at site 1.9 mi (3.1 km) upstream at different datum.

REMARKS.--Records good. Many small diversions above station for irrigation. Power is developed on Middle Fork and tributaries. Diversion to Tule River diversion ditch starts 400 ft (122 m) upstream most of which is returned to the river 0.5 mi (0.8 km) downstream. Records since Mar. 20, 1968, include flow diverted to Tule River diversion ditch.

AVERAGE DISCHARGE.--24 years, 145 ft³/s (4.106 m³/s), 105,100 acre-ft/yr (130 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s (1,400 m³/s) Dec. 6, 1966, gage height, 17.18 ft (5.236 m) in gage well, 19.7 ft (6.00 m) from floodmarks, site and datum then in use, from rating curve extended above 7,400 ft³/s (210 m³/s) on basis of slope-area measurement of maximum flow; no flow many days in 1961 and Aug. 16, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1955 reached a stage of 13.7 ft (4.18 m) previous site and datum, from floodmarks, discharge, 21,000 ft³/s (595 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Date	Time	Discharge (ft ³ /s) (m ³ /s)
Jan. 29	1500	839 23.8	Mar. 20	0745	*971 27.5
Feb. 9	0930	478 13.5	Apr. 19	0930	373 10.6

Minimum daily, 1.6 ft³/s (0.045 m³/s) Aug. 15, 19, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	33	43	50	123	124	194	248	111	20	3.8	2.6
2	29	32	44	49	115	150	203	259	108	19	4.8	2.5
3	27	34	45	49	107	139	197	236	101	18	4.1	2.5
4	29	34	166	49	102	120	180	205	92	17	4.4	2.5
5	26	33	141	49	98	113	181	186	86	17	4.5	2.2
6	25	36	87	49	94	110	193	170	79	16	4.0	2.5
7	25	36	72	47	91	104	202	161	76	16	4.1	2.1
8	25	37	66	46	91	102	191	152	70	15	3.9	1.9
9	27	34	62	45	359	98	191	149	67	14	3.3	2.0
10	27	35	61	45	224	98	202	148	65	11	3.5	2.1
11	27	37	60	45	156	98	192	151	61	9.2	4.1	2.1
12	27	40	60	45	138	96	188	150	57	10	3.3	3.2
13	28	45	58	45	129	119	183	146	55	8.6	1.9	2.7
14	31	44	57	45	131	122	187	146	54	8.2	2.0	2.8
15	37	42	57	45	152	112	196	143	53	7.8	1.6	3.0
16	45	42	56	45	139	111	204	137	48	6.6	1.8	3.2
17	44	39	56	45	138	110	209	134	43	7.2	1.9	2.7
18	42	37	57	45	142	107	215	125	40	7.2	2.0	3.3
19	42	39	57	44	140	176	342	123	35	6.8	1.6	4.2
20	42	38	57	43	138	655	261	147	33	6.5	1.7	3.6
21	40	42	53	43	136	305	224	135	32	5.3	2.1	3.9
22	39	43	53	41	125	399	221	122	29	6.5	1.8	3.7
23	35	41	53	61	120	309	244	112	29	6.2	1.6	4.2
24	34	40	53	75	117	250	273	110	28	7.3	2.2	4.3
25	33	44	53	60	113	226	281	112	28	6.4	2.9	4.0
26	36	46	53	52	137	375	265	122	27	6.1	4.0	5.0
27	41	42	53	59	118	336	238	134	24	5.0	3.4	7.5
28	41	44	52	146	108	252	224	137	23	5.8	3.4	8.0
29	40	43	52	402	---	230	225	124	22	4.2	2.8	7.6
30	41	42	51	277	---	220	237	112	20	5.5	3.0	8.9
31	39	---	50	159	---	203	---	111	---	3.8	2.8	---
TOTAL	1052	1174	1938	2300	3781	5969	6543	4647	1596	303.2	92.3	110.8
MEAN	33.9	39.1	62.5	74.2	135	193	218	150	53.2	9.78	2.98	3.69
MAX	45	46	166	402	359	655	342	259	111	20	4.8	8.9
MIN	25	32	43	41	91	96	180	110	20	3.8	1.6	1.9
AC-FT	2090	2330	3840	4560	7500	11840	12980	9220	3170	601	183	220
CAL YR 1980	TOTAL	130959.0	MEAN	358	MAX	8790	MIN	25	AC-FT	259800		
WTR YR 1981	TOTAL	29506.3	MEAN	80.8	MAX	655	MIN	1.6	AC-FT	58530		

TULARE LAKE BASIN

11203200 TULE RIVER NEAR SPRINGVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1969 to current year.

CHEMICAL ANALYSES: Water years 1964-66.

WATER TEMPERATURES: Water years 1966-67, 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1965 to September 1967, October 1968 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to September 1967, and since October 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 35.5°C July 1, 1972; minimum recorded, 2.5°C Jan. 5-8, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 31.0°C July 19, Aug. 8, 9, 28; minimum recorded, 5.5°C Dec. 11, 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	22.5	19.0	14.5	12.0	9.5	7.5	8.5	7.5	9.0	7.0	9.5	9.5
2	22.5	19.0	14.5	12.0	9.5	8.0	8.5	6.5	9.5	7.0	11.5	8.5
3	22.5	19.5	14.5	12.0	9.5	8.5	9.5	8.0	9.5	7.0	11.0	9.0
4	22.5	19.5	14.5	12.0	10.0	9.5	9.0	8.0	9.5	7.0	11.0	9.0
5	22.0	19.0	15.0	12.0	9.5	9.0	9.0	8.0	10.0	7.0	10.5	9.0
6	22.0	19.0	15.0	13.0	9.5	8.5	9.0	8.0	9.0	7.0	10.5	8.0
7	22.0	19.0	15.0	12.5	8.5	8.0	8.5	6.5	9.5	7.5	11.5	9.0
8	22.0	19.0	14.5	12.5	8.5	7.0	8.0	7.0	8.5	8.0	13.5	10.0
9	22.0	19.0	14.5	12.5	7.5	6.0	7.5	6.0	10.0	8.5	14.5	11.0
10	21.5	18.5	14.0	12.0	7.0	6.0	7.5	6.0	10.5	9.5	15.0	12.0
11	20.5	18.0	13.5	12.5	7.0	5.5	7.0	6.0	12.0	9.5	15.0	12.0
12	19.5	17.0	13.5	12.0	7.5	5.5	9.5	6.5	12.0	10.0	15.0	12.0
13	19.0	16.0	13.0	11.0	7.5	6.5	10.0	7.5	11.5	10.0	14.0	11.5
14	18.0	15.5	12.0	10.0	7.5	6.0	10.0	7.5	13.5	11.0	12.5	10.5
15	16.0	14.0	11.5	9.5	7.5	6.0	10.0	8.0	13.0	11.5	12.5	9.5
16	14.5	13.0	10.5	8.5	8.5	6.5	11.0	9.0	13.0	12.0	14.0	11.5
17	15.0	12.0	10.0	8.5	9.0	7.5	11.0	9.0	13.0	12.0	14.0	12.0
18	15.0	12.0	10.0	7.5	9.5	8.0	11.0	8.5	14.0	12.0	14.0	10.5
19	15.5	12.5	9.5	7.5	9.0	8.0	11.0	8.5	13.5	11.5	13.0	12.0
20	15.5	12.5	9.5	7.0	9.0	8.0	11.0	8.5	13.0	11.5	12.5	10.0
21	16.0	13.0	9.0	7.0	9.0	7.5	11.0	9.0	12.5	10.0	12.0	10.5
22	16.0	13.5	10.0	8.0	9.5	8.5	11.0	9.5	12.5	10.0	13.5	11.0
23	16.5	13.5	9.5	8.0	9.5	8.0	11.5	10.5	13.0	10.0	13.5	11.5
24	16.5	13.5	10.0	8.5	9.5	8.0	10.5	9.0	12.0	10.5	14.0	11.5
25	15.5	13.5	10.0	8.0	9.0	8.0	10.0	8.0	11.0	9.5	14.0	12.5
26	15.5	14.0	9.0	7.5	9.5	8.0	9.0	7.5	11.0	9.0	14.0	11.0
27	15.0	13.0	9.0	7.0	9.5	8.0	10.0	8.0	11.0	7.5	11.0	10.0
28	15.0	12.5	9.0	7.0	9.0	8.5	10.0	9.0	10.0	9.0	13.0	10.0
29	14.5	12.0	9.5	7.5	9.5	8.5	9.0	7.5	---	---	14.0	11.5
30	14.0	11.5	9.5	7.5	9.0	8.0	7.5	7.0	---	---	13.5	12.0
31	14.5	12.0	---	---	9.0	8.0	7.5	6.0	---	---	13.0	10.5
MONTH	22.5	11.5	15.0	7.0	10.0	5.5	11.5	6.0	14.0	7.0	15.0	8.0

11203200 TULE RIVER NEAR SPRINGVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	11.5	19.0	16.5	22.0	18.5	28.0	24.0	27.0	23.0	29.5	23.5
2	12.0	10.5	18.5	16.5	22.0	19.0	27.5	23.0	28.0	23.0	29.0	23.5
3	12.5	10.0	16.5	14.0	21.5	18.0	28.0	23.0	27.5	23.0	29.0	23.0
4	13.5	10.5	16.0	13.5	23.0	19.0	28.5	23.5	28.5	23.0	28.5	22.5
5	15.0	12.0	16.0	13.0	24.0	20.0	28.5	24.0	29.0	23.5	28.0	23.5
6	16.0	13.0	16.0	13.0	24.5	21.0	28.5	24.0	28.5	24.0	28.5	23.0
7	15.5	13.0	16.0	13.0	24.0	21.0	30.0	24.0	30.0	24.5	28.5	23.5
8	15.0	12.5	16.5	13.5	24.0	20.0	30.5	23.5	31.0	26.0	29.0	23.5
9	15.5	13.0	17.5	14.5	24.0	20.5	30.5	23.5	31.0	26.0	28.5	23.5
10	16.0	14.0	18.5	15.0	24.0	20.0	30.5	23.0	30.0	25.5	28.5	23.5
11	15.5	13.0	19.0	16.0	23.5	20.0	30.0	22.5	30.5	26.0	27.0	23.0
12	15.0	12.5	19.0	16.0	23.0	19.5	30.0	22.5	30.0	26.0	29.0	22.5
13	15.5	12.5	19.0	16.0	21.5	18.0	29.0	22.0	30.0	25.5	28.5	23.0
14	16.0	13.0	18.5	16.0	21.5	17.0	30.0	22.5	29.5	25.0	27.5	22.5
15	17.0	14.0	17.0	15.5	22.0	18.0	30.0	24.0	29.0	25.5	29.0	22.5
16	16.5	14.0	16.0	13.5	23.5	19.0	29.5	24.0	29.5	25.0	28.5	23.0
17	16.0	14.0	16.0	12.0	24.0	19.5	30.0	24.0	30.0	25.5	26.5	23.5
18	15.5	12.5	16.5	14.0	24.5	20.5	30.0	23.5	29.5	25.0	29.0	22.5
19	12.0	11.5	16.0	15.0	25.0	21.0	31.0	23.5	28.0	24.5	28.5	23.0
20	12.0	11.0	15.0	13.0	26.0	22.0	30.5	24.0	28.5	23.5	29.0	22.5
21	13.5	11.0	16.0	12.5	27.0	22.5	30.0	24.5	29.0	23.5	27.5	22.0
22	16.0	12.5	17.5	14.0	27.0	23.0	30.5	24.5	29.5	23.0	26.0	21.0
23	17.5	14.5	19.0	16.0	27.0	23.0	29.5	24.0	28.5	23.5	25.5	20.0
24	17.5	15.5	20.0	17.0	27.0	23.0	30.5	24.0	29.0	23.5	24.5	19.0
25	17.5	15.5	19.0	18.0	27.5	23.0	30.0	23.5	29.5	23.5	24.0	18.5
26	16.5	13.5	19.5	17.0	27.5	23.0	30.0	24.0	30.5	24.0	24.5	18.5
27	15.5	12.5	18.0	17.0	27.5	23.0	29.5	24.0	30.5	24.5	25.0	19.5
28	16.5	13.5	20.0	16.5	27.5	23.0	30.5	25.0	31.0	24.0	23.5	20.0
29	17.5	14.5	21.5	18.0	27.0	23.0	29.5	24.5	30.0	25.0	22.5	20.5
30	18.5	15.5	21.5	18.5	27.5	23.0	29.5	24.0	30.0	24.5	22.0	19.0
31	---	---	21.0	18.5	---	---	28.0	23.5	29.0	23.5	---	---
MONTH	18.5	10.0	21.5	12.0	27.5	17.0	31.0	22.0	31.0	23.0	29.5	18.5

TULARE LAKE BASIN

11204500 SOUTH FORK TULE RIVER NEAR SUCCESS, CA

LOCATION.--Lat 36°02'33", long 118°51'24", in NW¼SW¼ sec.4, T.22 S., R.29 E., Tulare County, Hydrologic Unit 18030006, on left bank 0.5 mi (0.8 km) upstream from Crew Creek, 4 mi (6 km) southeast of Success, and 5 mi (8 km) upstream from mouth.

DRAINAGE AREA. - - 109 mi² (282 km²).

PERIOD OF RECORD.--June 1930 to December 1954, January 1956 to current year. Monthly and yearly discharge only for some periods, published in WSP 1735.

REVISED RECORDS. -- WSP 1315-A: 1931-32(M). WSP 1445: 1952-53(P), drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 770 ft (235 m), from topographic map. Prior to June 26, 1951, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records good. Diversions for irrigation of about 640 acres (92.59 km²) above station.

AVERAGE DISCHARGE.--49 years, 41.9 ft³/s (1.187 m³/s), 30,360 acre-ft/yr (37.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) Dec. 6, 1966, gage height, 12.50 ft (3.810 m) in gage well, 15.3 ft (4.05 m) from floodmarks, from rating curve extended above 4,300 ft³/s (122 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Feb. 9	1000	225	6.37	3.58	1.091
Mar. 20	0530	*350	9.91	3.98	1.213
Mar. 26	1015	292	8.27	3.81	1.161

Minimum daily, 0.05 ft³/s (0.001 m³/s) Sept. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	6.9	7.8	9.4	27	32	75	54	17	2.7	.10	.06
2	4.2	7.0	7.8	9.5	28	37	78	54	16	2.7	.10	.05
3	3.9	7.1	8.3	9.4	26	30	72	50	16	2.7	.09	.05
4	3.8	7.0	40	10	23	26	65	49	16	2.6	.08	.05
5	3.7	6.6	36	9.5	22	26	65	47	14	2.3	.08	.05
6	4.0	6.7	18	8.7	21	24	66	44	12	2.5	.14	.06
7	4.2	6.9	15	8.7	20	22	66	41	12	2.7	.10	.06
8	4.1	6.9	13	9.1	21	21	62	38	12	3.0	.08	.06
9	4.2	7.6	12	9.3	147	21	62	36	12	2.2	.07	.06
10	4.2	7.7	12	9.8	78	21	62	35	11	1.5	.07	.13
11	4.2	7.7	12	10	48	21	59	34	11	1.3	.07	.16
12	4.4	8.8	12	10	42	21	58	31	11	1.2	.07	1.1
13	5.0	9.3	12	11	39	41	56	30	12	.90	.09	1.5
14	6.0	9.0	11	9.8	41	32	54	29	11	.82	.11	1.1
15	8.6	9.2	11	8.7	44	29	54	30	9.6	.72	.11	.20
16	8.7	9.1	11	8.3	40	27	56	30	8.8	.61	.13	.18
17	8.2	8.7	10	8.4	39	26	53	29	8.6	.87	.14	.21
18	8.0	8.4	10	8.3	38	25	58	26	8.9	1.3	.13	.27
19	7.7	7.9	10	7.7	37	54	113	28	9.1	1.1	.12	.28
20	7.4	7.8	10	7.4	36	227	82	42	7.5	.34	.11	.27
21	7.1	7.9	11	7.0	34	112	70	35	6.2	.37	.10	.21
22	6.5	8.1	10	6.6	30	155	69	30	5.9	.22	.09	.21
23	6.7	8.4	10	11	27	105	67	25	5.9	.20	.09	.38
24	6.5	8.8	9.9	17	24	84	66	24	5.1	.24	.08	.36
25	6.5	9.3	10	11	22	76	68	23	4.5	.17	.07	.39
26	8.5	9.0	11	9.8	31	167	67	24	4.6	.16	.07	.45
27	9.4	8.8	11	14	24	164	64	30	5.0	.16	.07	.51
28	8.9	8.9	11	43	23	112	60	26	4.1	.14	.06	.60
29	8.2	8.1	9.9	79	---	100	58	22	3.3	.13	.06	.87
30	7.7	7.6	9.5	52	---	93	55	21	3.0	.12	.06	1.5
31	7.2	---	9.2	33	---	80	---	19	---	.11	.06	---
TOTAL	191.9	241.2	391.4	466.4	1032	2011	1960	1036	283.1	36.08	2.80	11.38
MEAN	6.19	8.04	12.6	15.0	36.9	64.9	65.3	33.4	9.44	1.16	.090	.38
MAX	9.4	9.3	40	79	147	227	113	54	17	3.0	.14	1.5
MIN	3.7	6.6	7.8	6.6	20	21	53	19	3.0	.11	.06	.05
AC-FT	381	478	776	925	2050	3990	3890	2050	562	72	5.6	23
CAL YR 1980	TOTAL	35595.90	MEAN	97.3	MAX	2730	MIN	3.7	AC-FT	70600		
WTH YR 1981	TOTAL	7663.26	MEAN	21.0	MAX	227	MIN	.05	AC-FT	15200		

LOCATION.--Lat 36°03'34", long 118°55'22", in SW¼NW¼ sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030006, on left bank 0.1 mi (0.2 km) downstream from Success Dam, and 5.5 mi (8.8 km) east of Porterville.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 549.00 ft (167.335 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Feb. 1, 1961, at site 0.5 mi (0.8 km) downstream at different datum.

AVERAGE DISCHARGE.--22 years, 6.97 ft³/s (0.197 m³/s), 5,050 acre-ft/yr (6.23 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 29 ft³/s (0.82 m³/s) Apr. 15, 1961; no flow at times in most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	9.3	2.7	3.0	0	0	6.4	11	9.8	12	10	16
2	17	6.6	3.8	3.0	.10	0	6.4	12	12	13	9.1	16
3	17	7.8	4.5	3.0	.10	0	5.6	10	10	13	9.5	16
4	14	9.4	3.3	2.2	.10	0	5.2	9.3	9.4	14	13	12
5	11	13	2.0	1.8	.10	0	5.2	13	9.8	11	15	9.4
6	9.6	12	2.3	1.8	.10	0	5.3	16	13	9.9	15	8.4
7	9.5	9.1	2.4	1.8	.10	0	5.4	12	15	14	16	11
8	12	9.2	1.4	1.8	0	0	5.4	11	15	15	14	14
9	13	9.2	.60	1.8	0	0	5.5	12	11	15	12	15
10	13	9.3	.60	1.8	.10	0	6.1	12	8.2	12	12	12
11	11	9.3	2.9	1.8	.10	0	6.6	12	8.8	9.7	15	11
12	9.8	7.6	3.8	1.4	1.2	0	6.4	13	8.5	8.5	16	11
13	9.6	4.9	0	1.2	3.4	0	8.8	13	6.8	11	15	9.7
14	9.5	4.9	0	1.5	0	0	11	14	8.1	14	12	12
15	8.2	7.5	0	2.1	0	1.5	8.5	15	9.1	16	10	14
16	10	5.9	0	4.4	0	7.8	9.1	12	6.4	14	10	16
17	12	3.4	0	5.1	0	11	12	10	7.6	12	12	15
18	6.8	2.8	0	5.1	0	6.7	10	9.8	13	12	15	11
19	4.0	3.6	0	8.4	0	3.3	7.7	11	15	12	17	7.8
20	3.8	4.5	0	9.4	0	3.3	6.8	11	15	16	15	7.1
21	7.6	4.3	0	5.6	0	3.3	6.8	9.7	12	18	13	7.2
22	9.3	3.5	0	4.7	0	3.3	6.8	9.1	13	19	11	12
23	9.4	2.8	0	7.7	0	4.0	6.8	7.8	14	20	10	15
24	10	3.7	0	9.1	0	4.7	6.8	5.8	17	19	15	14
25	14	4.3	0	9.1	0	5.4	6.8	7.7	18	17	16	13
26	16	3.6	0	9.1	0	5.5	6.8	9.1	16	11	16	9.8
27	13	3.1	5.5	9.1	0	3.5	9.6	6.2	9.4	8.6	13	8.2
28	10	6.2	3.2	9.1	0	.80	7.7	5.6	7.1	9.7	10	9.4
29	10	4.6	2.5	5.8	---	.80	7.3	6.0	7.8	12	9.4	10
30	9.6	2.7	3.1	.10	---	.80	8.7	6.9	8.4	13	9.1	12
31	9.3	---	3.1	.10	---	4.9	---	7.5	---	13	12	---
TOTAL	334.0	188.1	47.70	131.90	5.40	70.60	217.5	320.5	334.2	414.4	397.1	355.0
MEAN	10.8	6.27	1.54	4.25	.19	2.28	7.25	10.3	11.1	13.4	12.8	11.8
MAX	17	13	5.5	9.4	3.4	11	12	16	18	20	17	16
MIN	3.8	2.7	0	.10	0	0	5.2	5.6	6.4	8.5	9.1	7.1
AC-FT	662	373	95	262	11	140	431	636	663	822	788	704
CAL YR 1980	TOTAL	2756.00	MEAN	7.53	MAX	17	MIN	0	AC-FT	5470		
WTR YR 1981	TOTAL	2816.40	MEAN	7.72	MAX	20	MIN	0	AC-FT	5590		

TULARE LAKE BASIN

11204700 SUCCESS LAKE NEAR SUCCESS, CA

LOCATION.--Lat 36°03'40", long 118°55'18", in SE¼NW¼ sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030006, in control tower near right abutment of Success Dam on Tule River, 5 mi (8 km) east of Porterville.

DRAINAGE AREA.--391 mi² (1,013 km²).

PERIOD OF RECORD.--November 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earthfill dam and dike. Storage began November 1961. Usable capacity, 81,734 acre-ft (101 hm³) between elevations 559.0 ft (170.38 m), invert of outlet structure and 652.5 ft (198.88 m), spillway crest. Surge flood control storage, 120,413 acre-ft (148 hm³) between ungated spillway crest and elevation 686.8 ft (209.34 m), maximum spillway design flood pool. Head storage, 557 acre-ft (0.69 hm³). Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 101,300 acre-ft (125 hm³) Dec. 7, 1966, elevation, 658.63 ft (200.750 m); minimum since reservoir first filled, 3,406 acre-ft (4.20 hm³) Oct. 17, 1972, elevation, 579.52 ft (176.638 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 55,735 acre-ft (68.7 hm³) May 30, elevation, 639.80 ft (195.011 m); minimum, 7,411 acre-ft (9.14 hm³) Sept. 30, elevation, 589.20 ft (179.588 m).

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

575	2,975	620	29,183
580	4,241	640	56,084
585	5,813	660	102,684
590	7,747	690	217,100
600	12,902		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19848	11883	11575	11745	14859	22155	37204	51759	54959	38146	17796	12115
2	19224	11688	11626	11705	15047	22468	37759	52214	54295	36849	17526	11970
3	18629	11496	11688	11734	15216	22714	38284	52641	53571	35586	17445	11814
4	18046	11428	12027	11768	15367	22907	38763	53005	52822	34482	17355	11671
5	17504	11423	12356	11797	15504	23085	39247	53320	52035	34101	17230	11513
6	17009	11400	12534	11820	15635	23254	39749	53571	51791	33940	17083	11355
7	16646	11372	12666	11837	15753	23388	40295	53822	51726	33769	16951	11200
8	16345	11344	12793	11848	15907	23522	40781	54075	51661	33597	16820	11040
9	16090	11311	12914	11871	16065	23657	41259	54295	51596	33382	16488	10866
10	15844	11278	13024	11894	17534	23784	41754	54363	51532	32931	16061	10683
11	15607	11255	13135	11912	17872	23920	42187	54396	51338	32406	15621	10523
12	15373	11244	13246	11935	18145	24029	42623	54379	50953	31527	15176	10371
13	15142	11244	13352	11958	18390	24257	43021	54363	50492	30249	14738	10220
14	14919	11244	13458	11975	18652	24459	43423	54295	49923	28956	14323	10055
15	14725	11233	13565	11993	18957	24635	43828	54244	49113	27741	14115	9886
16	14559	11222	13673	12016	19232	24867	44250	54193	48223	26510	13979	9705
17	14395	11217	13781	12027	19495	25128	44675	54278	47258	25297	13851	9516
18	14244	11217	13889	12033	19767	25372	45205	54413	46339	24441	13717	9335
19	14115	11228	13992	12027	20026	25875	46133	54566	45421	24184	13584	9170
20	13986	11239	14037	12027	20287	27641	46634	54754	44505	24065	13477	8999
21	13864	11250	14043	12027	20533	28537	47019	54891	44165	23938	13390	8838
22	13749	11266	13902	12022	20743	29661	47438	54993	44038	23811	13309	8662
23	13616	11283	13685	12109	20940	30515	47874	55079	43898	23657	13222	8478
24	13458	11300	13471	12191	21116	31201	48345	55165	43744	23513	13129	8298
25	13271	11328	13259	12232	21301	31833	48835	55251	43590	23334	13012	8138
26	13061	11372	13049	12250	21555	32942	49284	55337	43118	22784	12884	7993
27	12860	11411	12829	12320	21734	33986	49751	55476	42541	22009	12756	7846
28	12666	11445	12612	12660	21897	34738	50286	55579	41741	21166	12630	7696
29	12480	11484	12397	13679	---	35420	50905	55666	40689	20311	12510	7557
30	12291	11518	12179	14329	---	36075	51338	55735	39440	19439	12379	7411
31	12080	---	11964	14645	---	36654	---	55493	---	18591	12250	---
MAX	19848	11883	14043	14645	21897	36654	51338	55735	54959	38146	17796	12115
MIN	12080	11217	11575	11705	14859	22155	37204	51759	39440	18591	12250	7411
†	598.62	597.64	598.42	602.74	612.28	626.67	637.17	639.66	628.90	608.23	598.91	589.20
‡	-8453	-562	+446	+2681	+7252	+14757	+14684	+4155	-16053	-20849	-6341	-4839
††	342	137	56	67	95	196	501	905	1165	867	491	288

CAL YR 1980 ‡ -642

WTR YR 1981 ‡ -13122

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

11204900 TULE RIVER BELOW SUCCESS DAM, CA

LOCATION.--Lat 36°03'23", long 118°55'22", in NW¼SW¼ sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on right bank 1,000 ft (300 m) downstream from Success Dam, and 5 mi (8 km) east of Porterville.

DRAINAGE AREA.--393 mi² (1,018 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1960, published as "at Worth Bridge, near Porterville."

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 536.00 ft (163.373 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to October 1960, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good. Flow regulated by Success Lake beginning Nov. 23, 1961 (station 11204700). Discharge records during periods of high flow include flow over spillway that bypasses the gaging station. Pioneer ditch (station 11204680) diverts above station for irrigation.

AVERAGE DISCHARGE (adjusted for change in contents, evaporation, and diversion).--28 years, 183 ft³/s (5.183 m³/s), 132,600 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Dec. 23, 1955, gage height, 21.65 ft (6.599 m) site and datum then in use, from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of studies of upstream peaks; no flow at times in 1954-57, 1959-61. Maximum discharge since construction of Success Dam in 1961, 9,050 ft³/s (256 m³/s) Dec. 6, 1966 (includes flow through spillway); no flow at times in 1962, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1950, reached a stage of 26 ft (7.9 m) from floodmarks, site and datum then in use, discharge, 32,000 ft³/s (906 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 743 ft³/s (21.0 m³/s) July 14, gage height, 6.53 ft (1.990 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Mar. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	125	24	170	50	54	.40	64	370	676	405	55
2	318	125	25	83	50	54	8.9	64	439	675	128	55
3	304	124	31	47	50	55	6.8	64	465	672	34	59
4	302	73	24	47	50	56	5.6	64	479	568	34	64
5	282	34	17	48	50	56	5.6	64	481	205	49	66
6	257	47	16	50	50	56	5.6	62	207	81	60	66
7	190	54	16	50	50	56	5.6	60	80	80	53	66
8	159	52	16	50	50	56	2.6	56	76	80	56	66
9	139	52	16	49	51	56	13	54	74	110	150	74
10	130	52	16	48	52	56	21	119	81	212	201	77
11	130	52	16	48	52	56	26	150	129	258	208	72
12	129	52	16	48	52	56	26	159	224	449	206	68
13	129	52	16	48	52	56	33	169	278	649	201	68
14	128	52	16	49	53	56	37	173	324	653	199	70
15	123	52	16	49	53	56	37	171	453	617	97	72
16	117	52	16	47	53	22	37	170	510	625	60	78
17	114	52	17	48	53	.40	37	92	535	618	54	82
18	108	46	17	49	53	.40	37	62	512	422	51	82
19	104	42	17	49	53	.40	37	69	499	127	50	82
20	104	42	47	49	54	.40	99	82	495	48	39	82
21	94	42	64	49	54	.40	105	83	213	45	32	82
22	90	42	134	48	54	.40	94	78	73	48	32	82
23	95	42	178	48	54	.40	94	74	75	56	32	82
24	104	43	176	48	54	.40	99	74	76	56	33	81
25	111	38	176	48	54	.40	100	73	76	74	45	74
26	126	32	175	48	54	.40	92	85	226	271	52	69
27	133	32	175	48	54	.40	57	73	298	391	55	69
28	127	32	174	15	54	.40	48	94	422	424	56	71
29	125	32	172	.50	---	.40	58	84	562	436	56	66
30	125	32	172	29	---	.30	64	71	648	436	56	64
31	125	---	172	50	---	.30	---	238	---	427	55	---
TOTAL	4876	1599	2163	1557.50	1463	862.80	1292.10	2995	9380	10489	2839	2144
MEAN	157	53.3	69.8	50.2	52.3	27.8	43.1	96.6	313	338	91.6	71.5
MAX	354	125	178	170	54	56	105	238	648	676	405	82
MIN	90	32	16	.50	50	.30	.40	54	73	45	32	55
AC-FT	4670	3170	4290	3090	2900	1710	2560	5940	18610	20800	5630	4250

CAL YR 1980 TOTAL 160222.60 MEAN 438 MAX 3120 MIN .60 AC-FT 317800 MEAN ‡ 456 AC-FT ‡ 331000
WTR YR 1981 TOTAL 41660.40 MEAN 114 MAX 676 MIN .30 AC-FT 82630 MEAN ‡ 111 AC-FT ‡ 80210

‡ Adjusted for change in contents in and evaporation from Success Lake and for diversion to Pioneer Ditch.

TULARE LAKE BASIN

11204900 TULE RIVER BELOW SUCCESS DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-69, 1971 to current year.

CHEMICAL ANALYSES: Water years 1962-69, 1971-79.

WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

EXTREMES PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 34.0°C July 15, Sept. 9, 1977; minimum recorded, 3.0°C Jan. 3, 1975.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 27.0°C on several days during August and September; minimum recorded, 7.5°C Jan. 22, 23.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.5	23.5	19.5	17.0	14.0	11.0	10.0	9.0	10.0	8.5	11.0	8.5
2	24.5	23.5	20.0	16.0	13.5	11.5	10.0	9.0	10.0	8.5	12.5	8.5
3	24.5	23.5	20.0	15.5	13.0	11.0	10.0	9.0	10.0	8.0	12.0	9.5
4	24.5	23.5	20.0	15.0	13.0	11.5	9.5	8.5	10.5	8.0	11.5	9.0
5	24.0	23.5	21.5	15.0	14.0	11.5	9.5	8.5	10.5	8.0	11.0	8.5
6	24.0	23.5	19.0	15.0	13.5	11.5	10.0	9.0	10.0	8.0	12.0	9.5
7	24.5	23.5	20.0	14.5	12.5	11.0	10.0	8.5	10.5	8.5	11.0	9.5
8	24.5	23.5	19.5	15.0	12.5	10.5	9.5	8.5	9.5	8.5	12.0	8.5
9	24.5	23.5	19.5	15.0	13.0	10.5	10.0	8.5	10.0	8.5	12.5	9.0
10	24.5	23.5	19.0	16.0	12.5	10.0	10.0	8.5	10.5	8.5	12.5	10.0
11	24.0	23.5	17.5	16.0	12.5	9.5	9.5	8.0	10.5	9.0	12.0	10.0
12	24.0	23.0	17.5	16.0	12.0	9.5	10.0	8.5	10.5	8.5	12.5	10.0
13	24.0	23.0	17.5	16.5	12.0	9.5	10.0	8.5	10.5	8.5	12.0	9.5
14	23.5	21.5	17.0	16.0	12.0	9.5	10.0	8.5	11.0	8.5	12.0	10.0
15	23.5	20.5	16.5	15.0	11.5	9.0	10.0	8.0	10.5	8.5	12.5	9.5
16	22.5	21.0	16.5	14.5	12.0	9.0	10.0	8.0	11.0	9.0	21.0	10.0
17	22.0	20.0	16.0	14.5	11.5	9.0	10.0	8.0	11.0	9.0	21.0	11.5
18	22.0	20.0	16.0	13.5	11.5	8.5	10.0	8.5	11.0	9.0	22.5	9.5
19	21.5	19.5	15.5	13.0	11.0	8.5	10.0	8.5	11.0	9.0	16.0	12.0
20	21.0	19.5	15.0	12.5	10.5	8.5	10.0	8.0	11.0	9.0	22.0	10.0
21	20.5	19.5	15.0	12.5	10.5	8.5	10.0	8.0	11.0	8.5	20.0	11.0
22	20.5	19.0	15.0	12.5	10.5	8.0	10.0	7.5	11.0	8.5	21.0	11.0
23	20.5	19.5	15.0	12.0	10.5	8.5	10.5	7.5	11.0	9.0	22.0	11.5
24	20.5	19.0	15.0	11.5	10.5	8.5	10.5	8.5	11.0	8.5	26.0	14.0
25	20.0	19.0	14.5	12.0	10.5	9.0	10.0	8.5	11.0	8.0	24.0	14.0
26	20.0	19.0	14.0	11.5	10.0	8.5	10.0	8.5	11.0	8.5	20.0	12.5
27	19.5	19.0	14.0	12.0	10.5	9.0	10.5	8.0	11.5	8.5	18.5	11.0
28	19.5	18.5	14.5	11.0	10.0	9.0	14.5	8.5	11.0	8.0	25.5	10.0
29	19.0	18.5	13.5	12.0	10.0	9.0	12.0	9.0	---	---	26.0	13.5
30	19.0	18.0	13.0	11.5	10.0	9.0	10.0	8.5	---	---	23.5	12.5
31	19.0	18.0	---	---	10.0	8.5	10.0	8.5	---	---	25.5	11.5
MONTH	24.5	18.0	21.5	11.0	14.0	8.0	14.5	7.5	11.5	8.0	26.0	8.5

11204900 TULE RIVER BELOW SUCCESS DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.0	12.5	14.0	12.0	15.5	11.5	18.0	17.5	26.0	21.0	27.0	24.0
2	15.0	10.5	13.5	11.5	15.0	12.0	18.5	16.5	23.0	20.5	27.0	24.5
3	18.5	10.0	14.0	11.5	15.5	12.0	19.5	16.0	24.0	21.0	26.5	24.5
4	18.5	9.5	13.5	11.0	15.0	12.5	20.0	16.0	24.5	21.5	26.5	24.5
5	19.0	10.0	15.0	11.0	15.0	14.0	19.0	16.5	24.5	21.0	27.0	24.0
6	19.5	9.5	15.0	12.0	15.5	11.5	18.0	16.5	25.0	21.5	26.5	24.5
7	19.0	10.0	15.0	11.5	15.0	12.0	18.0	16.0	25.5	21.0	26.0	24.0
8	25.0	11.0	14.0	11.0	15.0	12.5	18.0	16.5	26.5	23.5	26.0	24.5
9	16.5	10.5	15.0	11.5	15.5	12.5	19.0	17.0	26.5	25.0	26.5	24.5
10	15.5	10.5	13.5	11.5	15.0	12.0	20.0	16.0	26.5	24.0	26.5	24.5
11	15.5	10.5	14.0	11.0	15.5	11.5	19.0	15.5	26.5	25.5	26.5	24.5
12	16.0	9.5	13.5	11.0	16.0	13.5	20.0	19.0	27.0	24.5	26.5	24.5
13	14.0	9.5	13.5	11.5	15.5	13.0	21.0	20.0	27.0	25.0	26.0	24.0
14	14.5	10.5	13.5	11.5	15.5	13.0	21.5	21.0	27.0	24.5	26.0	24.5
15	14.5	10.5	13.5	11.5	15.0	14.0	22.0	21.0	26.5	24.5	26.5	24.5
16	14.0	10.5	14.0	11.5	15.5	15.0	22.5	22.0	26.0	24.5	26.0	24.5
17	14.5	11.0	14.0	12.5	15.5	15.0	23.0	22.0	26.5	24.5	26.0	24.5
18	12.5	10.5	14.0	12.0	16.0	15.5	22.5	20.5	26.5	24.5	26.0	25.0
19	12.5	11.0	14.5	12.0	16.0	15.5	20.0	17.5	26.5	24.0	26.0	25.0
20	13.0	11.0	14.5	11.5	16.0	15.5	20.5	15.5	26.0	24.0	26.0	25.0
21	12.5	11.0	15.0	12.0	16.5	14.0	20.5	16.5	26.0	24.0	25.5	24.5
22	13.0	11.0	14.5	12.0	16.5	13.5	20.5	19.5	27.0	24.0	25.0	24.5
23	13.0	11.5	15.0	12.0	16.0	14.0	21.0	19.5	27.0	24.5	24.5	24.0
24	13.5	11.5	15.0	11.5	16.0	14.5	21.0	19.5	27.0	25.0	24.5	24.0
25	13.0	12.0	15.5	11.5	16.5	15.0	23.5	20.0	27.0	25.0	24.5	24.0
26	13.0	12.0	15.5	11.0	16.5	15.0	24.5	23.0	27.0	25.0	24.0	23.5
27	14.0	11.0	15.5	11.5	16.5	16.0	25.0	24.0	27.0	25.0	24.0	23.0
28	14.5	11.0	15.0	12.0	17.0	16.0	25.0	24.5	27.0	25.0	24.0	22.0
29	13.5	11.5	15.0	12.0	17.5	16.5	25.5	25.0	27.0	23.5	24.0	22.0
30	14.0	12.0	16.0	11.0	17.5	17.0	26.0	24.0	27.0	24.5	23.5	21.5
31	---	---	15.0	11.5	---	---	26.0	24.0	27.0	25.0	---	---
MONTH	25.0	9.5	16.0	11.0	17.5	11.5	26.0	15.5	27.0	20.5	27.0	21.5

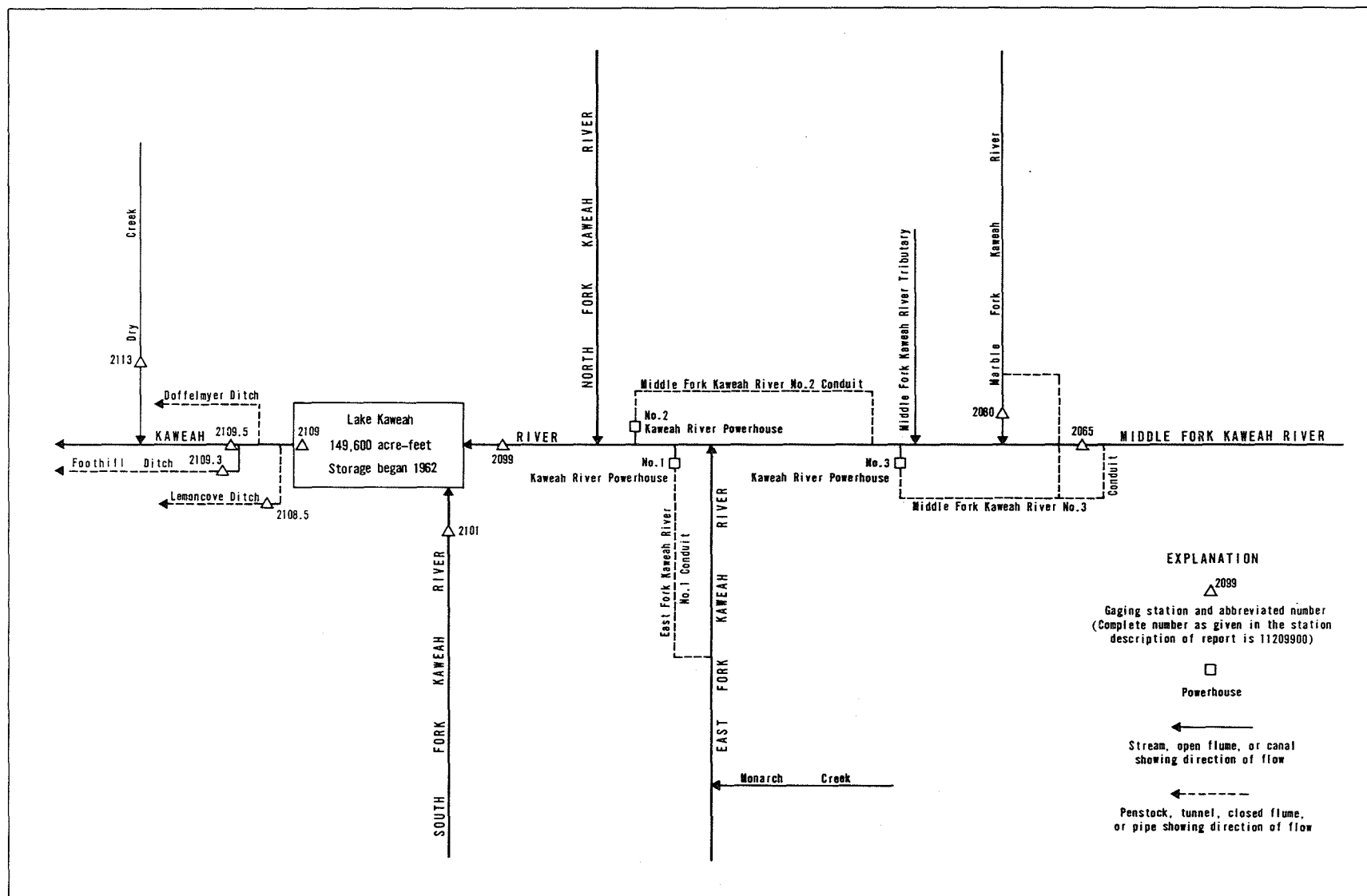


FIGURE 6. — Schematic diagram showing diversions and storage in Kaweah River basin.

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA

LOCATION.--Lat 36°30'48", long 118°47'27", unsurveyed, T.16 S., R.29 E., Tulare County Hydrologic Unit 18030007, Sequoia National Park, on right bank 0.5 mi (0.8 km) southeast of Potwisha Camp, and 0.7 mi (1.1 km) upstream from confluence with Marble Fork Kaweah River.

DRAINAGE AREA.--102 mi² (264 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1949 to current year. Monthly discharge only for water years 1956-57, published in WSP 1735. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

GAGE.--Water-stage recorder and concrete control on river; water-stage recorder and concrete-lined channel for conduit diversion. Altitude of gage is 2,100 ft (640 m), from topographic map. Prior to October 1955, at datum 0.70 ft (0.213 m) higher.

REMARKS.--Records good. Middle Fork No. 3 conduit diverts from left bank of Middle Fork Kaweah River, 0.1 mi (0.2 km) upstream from station. Flow from this conduit joins with that of Marble Fork Kaweah River No. 3 conduit, and the combined flow passes through Kaweah River No. 3 powerhouse of Southern California Edison Co. Water is returned to Kaweah River 2.7 mi (4.3 km) downstream from confluence of Marble and Middle Forks. See schematic diagram of Kaweah River basin. For records of combined discharge of river and conduit, see following page.

COOPERATION.--Gage-height record and 15 discharge measurements for river and gage-height record and 12 discharge measurements for conduit furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 32 years, 135 ft³/s (3.823 m³/s), 97,810 acre-ft/yr (121 hm³/yr); Combined river and diversion: 32 years, 175 ft³/s (4.956 m³/s), 126,800 acre-ft/yr (156 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 46,800 ft³/s (1,330 m³/s) Dec. 23, 1955, gage height, 29.0 ft (8.84 m) from floodmarks, datum then in use, by slope-area measurement of maximum flow; minimum daily, 0.1 ft³/s (0.003 m³/s) Nov. 12-15, 1949. Combined flow, maximum discharge, 46,800 ft³/s (1,330 m³/s) Dec. 23, 1955; minimum daily, 7.7 ft³/s (0.22 m³/s) Oct. 4, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 711 ft³/s (20.1 m³/s) May 1, gage height, 6.38 ft (1.945 m); minimum daily, 8.0 ft³/s (0.23 m³/s) Oct. 1. Combined flow, maximum discharge, 767 ft³/s (21.7 m³/s) May 1; minimum daily, 15 ft³/s (0.42 m³/s) on many days in September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	20	11	13	21	21	89	539	352	23	16	12
2	9.0	11	12	14	24	23	92	577	330	19	16	9.7
3	9.0	10	12	14	18	23	79	468	297	13	16	9.7
4	11	10	151	14	16	19	75	360	342	10	16	10
5	14	11	20	15	15	20	92	306	400	9.5	15	11
6	12	11	9.7	16	14	19	117	258	376	15	17	11
7	13	11	9.5	16	14	20	120	222	311	19	17	11
8	26	11	9.3	16	24	20	116	246	297	19	17	11
9	17	11	9.5	16	62	21	137	288	288	19	16	11
10	11	11	9.3	16	32	21	150	318	262	18	16	11
11	11	11	9.3	16	24	21	142	345	220	18	16	11
12	11	15	9.9	16	21	21	142	357	186	17	17	11
13	11	13	11	16	23	27	154	381	145	17	18	12
14	13	12	12	16	52	24	175	345	117	17	14	11
15	21	12	14	16	41	24	209	260	109	17	14	11
16	22	12	15	16	39	22	239	190	109	17	14	11
17	11	12	12	16	46	24	248	163	110	17	14	11
18	11	12	9.7	16	47	26	255	194	106	17	14	11
19	12	12	9.7	16	51	62	230	194	107	17	15	11
20	11	12	10	16	50	97	180	170	109	17	17	11
21	11	11	11	15	46	90	171	143	106	16	17	11
22	11	11	12	15	42	109	209	156	101	16	16	12
23	11	11	12	20	42	93	315	182	101	17	16	12
24	10	11	12	18	39	88	378	218	88	17	16	12
25	10	11	12	16	32	94	376	345	73	17	17	12
26	11	11	12	16	34	150	323	340	60	17	18	12
27	11	11	13	28	25	101	295	281	55	17	18	12
28	12	11	12	31	26	90	323	308	48	17	17	12
29	12	11	12	34	---	97	395	327	40	16	18	12
30	11	11	12	20	---	94	455	360	28	16	20	12
31	24	---	11	18	---	89	---	368	---	16	17	---
TOTAL	398.0	350	496.9	541	920	1650	6281	9209	5273	517.5	505	337.4
MEAN	12.8	11.7	16.0	17.5	32.9	53.2	209	297	176	16.7	16.3	11.2
MAX	26	20	151	34	62	150	455	577	400	23	20	12
MIN	8.0	10	9.3	13	14	19	75	143	28	9.5	14	9.7
AC-FT	789	694	986	1070	1820	3270	12460	18270	10460	1030	1000	669
CAL YR 1980 TOTAL	110786.0			MEAN 303	MAX 4010	MIN 5.1	AC-FT 219700					
WTR YR 1981 TOTAL	26478.8			MEAN 72.5	MAX 577	MIN 8.0	AC-FT 52520					

TULARE LAKE BASIN

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF MIDDLE FORK KAWEAH RIVER AND MIDDLE FORK KAWEAH RIVER NO. 3 CONDUIT NEAR POTWISHA CAMP, CA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	33	25	35	72	79	144	595	409	89	31	17
2	33	30	27	34	76	81	148	632	387	85	30	16
3	32	28	27	34	68	74	134	523	354	79	29	15
4	32	27	192	33	65	72	130	415	399	75	28	15
5	32	27	72	31	64	68	147	360	457	74	26	16
6	32	27	50	30	60	66	172	312	433	75	26	15
7	30	27	47	29	56	65	175	276	367	76	24	15
8	30	27	41	29	72	63	171	300	353	74	24	15
9	30	27	42	29	118	66	193	343	344	70	23	16
10	31	27	40	28	87	67	206	373	318	65	23	16
11	30	27	40	28	81	69	198	400	276	61	23	16
12	30	47	42	28	80	68	198	412	242	57	24	16
13	31	39	40	28	82	81	210	437	201	54	25	17
14	33	35	41	28	112	74	231	401	172	51	23	16
15	41	34	43	28	101	76	265	316	164	48	23	16
16	51	32	48	28	99	73	294	245	164	48	23	15
17	46	32	50	28	106	77	300	218	165	49	23	15
18	47	30	47	27	108	80	310	250	161	49	23	15
19	47	29	46	27	112	118	285	250	163	48	23	15
20	42	28	42	26	111	154	234	226	165	46	23	15
21	39	27	40	25	107	147	225	199	162	44	23	15
22	37	27	40	26	102	166	264	212	157	42	21	16
23	36	27	40	39	102	149	370	238	157	41	20	15
24	34	27	38	36	99	144	434	274	144	40	20	15
25	33	27	36	30	92	150	432	402	128	38	21	15
26	41	27	38	31	94	207	378	398	115	37	20	15
27	39	26	41	56	83	157	350	337	110	35	19	15
28	37	26	39	79	84	146	378	364	104	34	18	15
29	36	26	38	86	---	153	450	383	96	33	19	15
30	33	26	37	70	---	150	510	417	89	32	21	15
31	31	---	35	68	---	144	---	425	---	31	18	---
TOTAL	1109	879	1424	1134	2493	3284	7936	10933	6956	1680	717	463
MEAN	35.8	29.3	45.9	36.6	89.0	106	265	353	232	54.2	23.1	15.4
MAX	51	47	192	86	118	207	510	632	457	89	31	17
MIN	30	26	25	25	56	63	130	199	89	31	18	15
AC-FT	2200	1740	2820	2250	4940	6510	15740	21690	13800	3330	1420	918
CAL YR 1980	TOTAL	125654	MEAN 343	MAX 4010	MIN 25	AC-FT 249200						
WTR YR 1981	TOTAL	39008	MEAN 107	MAX 632	MIN 15	AC-FT 77370						

11206500 MIDDLE FORK KAWAHI RIVER NEAR POTWISHA CAMP, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: June 1980 to September 1980.

SPECIFIC CONDUCTANCE: October 1979 to September 1981 (discontinued).

WATER TEMPERATURES: October 1979 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to September 1981 (discontinued).

WATER TEMPERATURES: October 1979 to September 1981 (discontinued).

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperatures from Oct. 4, 1979 to Sept. 30, 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 79 micromhos Aug. 23, 1981; minimum recorded, 13 micromhos May 3, 1981.

WATER TEMPERATURES: Maximum recorded, 24.5°C Aug. 11, 1981; minimum recorded, 0.5°C Mar. 3, 7, 1980.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 79 micromhos Aug. 23; minimum recorded, 13 micromhos May 3.

WATER TEMPERATURES: Maximum recorded, 24.5°C Aug. 11; minimum recorded, 2.0°C Dec. 9.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	62	67	65	64	46	35	19	25	43	57	65
2	59	63	68	65	62	47	36	15	25	46	59	64
3	59	63	69	66	63	47	36	14	26	48	60	63
4	59	64	50	67	56	48	37	18	26	50	61	63
5	59	64	55	68	---	49	34	19	24	52	63	62
6	60	65	62	68	---	49	30	20	24	52	65	62
7	60	65	63	68	---	50	28	22	24	51	66	61
8	59	65	62	68	---	51	28	21	24	48	68	62
9	61	66	62	69	---	50	25	23	25	46	70	61
10	61	66	---	69	---	49	24	23	25	46	71	63
11	61	67	63	70	---	48	25	23	26	45	72	---
12	61	65	63	70	---	48	25	19	26	44	72	---
13	61	63	63	70	---	48	23	20	27	42	72	---
14	61	63	63	70	---	46	22	23	30	43	71	---
15	62	63	62	70	---	45	22	25	31	46	73	---
16	60	63	62	71	---	46	20	27	31	48	74	---
17	59	64	61	71	---	46	20	28	31	50	74	---
18	58	64	60	71	---	44	20	27	32	51	75	---
19	57	64	61	72	---	42	21	29	33	51	75	---
20	57	63	62	72	---	40	24	30	33	51	75	---
21	58	64	63	71	---	41	25	31	33	51	76	---
22	58	65	63	72	---	42	24	30	34	51	78	---
23	59	65	63	71	---	45	21	29	35	38	78	---
24	60	65	63	68	---	44	18	28	35	40	---	---
25	62	65	64	69	---	39	19	26	34	49	59	---
26	61	66	65	71	41	32	18	25	35	50	60	---
27	60	66	63	67	42	38	20	26	35	52	62	---
28	60	66	62	62	44	40	19	26	36	54	62	---
29	60	67	63	71	---	38	19	26	38	55	65	---
30	61	67	64	75	---	37	20	26	41	56	---	---
31	61	---	65	67	---	37	---	25	---	57	66	---
MONTH	60	65	63	69	---	44	25	24	30	49	68	---
YEAR	MAX	78	MIN	14	MEAN	50						

TULARE LAKE BASIN

11206500 MIDDLE FORK KANEAH RIVER NEAR POTWISHA CAMP, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.5	14.5	11.0	8.5	6.0	4.5	6.0	5.0	3.5	1.5	5.0	4.0
2	17.5	14.5	10.5	8.5	6.0	5.0	6.0	5.0	4.5	2.5	6.0	4.0
3	17.5	14.5	10.5	8.5	7.5	6.0	6.5	5.5	4.5	3.0	6.0	4.5
4	17.5	14.5	11.5	9.5	8.5	7.0	6.0	5.5	4.5	---	5.5	5.0
5	18.0	15.0	12.0	10.0	7.0	6.0	5.5	4.0	---	---	5.0	4.5
6	17.5	15.0	11.5	10.0	6.0	5.0	4.5	3.5	---	---	6.0	4.5
7	17.5	14.5	11.0	9.5	5.5	4.5	4.5	3.5	---	---	6.5	5.5
8	17.0	14.0	11.0	9.5	4.5	2.5	4.5	3.0	---	---	8.0	5.5
9	17.5	14.5	10.5	9.0	2.5	2.0	4.5	3.0	---	---	9.0	6.0
10	17.5	15.0	10.0	8.5	---	---	4.5	3.5	---	---	9.0	6.5
11	16.5	14.5	9.5	9.0	3.5	2.5	5.0	4.0	---	---	8.5	7.0
12	15.5	13.5	10.5	9.0	4.0	3.0	6.0	4.5	---	---	9.0	6.5
13	14.0	12.5	10.0	8.0	4.5	3.5	6.5	5.0	---	---	7.0	5.0
14	13.0	11.0	8.5	7.0	4.5	3.5	6.5	5.5	---	---	6.5	4.5
15	11.0	8.5	8.0	6.5	5.0	4.0	7.0	5.5	---	---	7.0	4.5
16	9.0	7.5	6.5	5.0	6.0	4.5	7.0	6.0	---	---	7.5	6.0
17	10.0	7.0	6.5	5.0	7.0	5.5	7.0	6.0	---	---	8.5	6.5
18	10.5	7.5	6.0	4.5	7.0	6.0	6.5	5.5	---	---	8.0	5.5
19	11.0	8.0	6.0	4.5	6.0	5.5	7.0	5.5	---	---	7.5	6.0
20	11.5	8.5	6.0	4.0	6.0	5.0	6.5	5.5	---	---	6.0	4.0
21	12.0	9.5	6.0	4.5	6.5	5.0	7.0	5.5	---	---	6.5	5.0
22	12.0	10.0	7.0	5.5	7.5	6.0	7.5	6.5	---	---	9.0	5.5
23	12.5	10.0	6.5	5.0	7.0	6.0	7.5	6.5	---	---	8.5	6.5
24	12.5	10.0	6.5	5.0	6.0	5.0	6.5	5.0	---	---	9.5	6.5
25	11.0	10.0	6.0	4.5	6.0	5.0	5.5	4.0	5.5	4.5	8.5	7.0
26	11.5	10.0	5.5	4.0	7.0	5.5	4.5	3.5	4.0	2.5	8.5	4.5
27	11.0	9.0	5.5	4.0	8.0	7.0	5.5	4.5	5.5	2.5	5.5	4.0
28	10.5	8.5	5.5	4.0	7.5	6.5	5.5	4.5	4.5	3.5	8.0	4.5
29	10.5	8.5	7.0	5.5	6.5	5.5	4.5	3.0	---	---	9.0	6.5
30	10.5	8.0	7.0	5.5	6.5	5.5	2.5	1.0	---	---	8.5	7.0
31	11.0	9.0	---	---	6.0	5.0	2.5	1.0	---	---	9.0	6.0
MONTH	18.0	7.0	12.0	4.0	8.5	2.0	7.5	1.0	---	---	9.5	4.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	6.5	15.0	9.5	16.0	12.0	19.5	17.5	21.5	18.0	22.0	18.5
2	7.5	5.5	12.5	9.0	15.0	12.0	20.0	16.0	21.5	17.5	22.0	19.0
3	7.0	4.5	11.0	7.0	15.5	11.0	20.5	17.0	21.0	17.5	21.5	18.5
4	9.5	5.5	11.0	7.5	17.0	12.5	21.5	17.5	21.5	17.5	21.5	18.0
5	11.0	7.5	11.0	8.0	17.0	13.5	21.5	18.5	22.0	18.0	21.5	18.5
6	11.0	8.0	10.5	7.5	17.5	13.5	22.0	18.5	22.5	18.5	21.0	18.0
7	10.0	8.0	11.0	7.5	17.0	13.5	21.0	18.5	23.0	19.5	21.5	18.0
8	10.5	8.0	12.0	8.0	17.5	13.0	21.0	17.5	24.0	20.0	21.5	18.5
9	11.0	7.5	13.0	9.0	17.5	13.5	20.5	17.5	24.0	20.5	21.5	18.5
10	10.5	8.0	13.5	9.0	17.5	14.0	20.5	17.0	24.0	21.0	21.0	18.5
11	10.5	7.5	13.0	9.5	17.0	13.5	20.5	17.0	24.5	21.0	19.5	18.0
12	9.5	7.5	13.5	9.5	15.5	12.5	20.0	16.5	24.0	21.0	18.5	17.5
13	10.5	7.0	14.0	10.0	14.0	10.5	20.0	16.0	23.5	21.0	19.5	16.5
14	11.5	7.5	13.5	10.5	14.5	11.0	20.5	16.5	23.0	20.5	20.0	17.0
15	12.0	8.0	10.5	9.0	16.0	12.0	21.0	17.5	22.5	19.5	20.5	17.0
16	11.5	7.5	9.0	8.0	17.0	13.5	21.5	18.0	23.5	20.0	20.5	17.5
17	11.5	8.5	11.0	7.0	17.0	13.0	21.5	18.0	22.0	20.0	19.0	18.0
18	10.5	7.0	11.5	9.0	17.5	14.5	21.5	17.5	23.0	19.5	20.5	17.0
19	7.0	5.5	11.0	8.5	18.5	15.0	22.0	18.0	22.5	19.5	21.0	18.0
20	8.5	6.0	9.5	7.5	19.0	15.5	21.5	18.0	21.5	18.5	20.5	17.5
21	10.5	6.5	11.0	8.0	20.0	17.0	22.0	18.0	21.5	18.0	20.0	17.5
22	13.0	8.5	13.0	9.5	20.5	17.0	22.0	18.5	21.0	18.0	19.5	17.0
23	13.5	9.5	14.0	10.5	20.0	17.0	22.0	18.0	21.5	18.0	18.0	15.5
24	13.5	9.0	15.0	11.0	20.0	17.0	22.0	18.0	21.5	18.0	17.5	14.5
25	12.5	8.5	13.5	11.0	19.5	17.0	22.0	18.0	22.0	18.5	17.0	14.0
26	10.5	8.5	12.0	10.5	20.0	17.0	22.5	18.0	22.5	19.0	17.0	13.5
27	11.5	7.5	12.5	10.0	20.0	17.0	22.5	18.5	23.0	20.0	18.0	14.5
28	12.5	8.0	15.0	10.5	19.5	16.5	23.0	19.0	22.5	19.5	---	---
29	14.0	8.5	15.5	11.5	19.5	16.0	23.0	19.5	22.5	19.0	---	---
30	14.5	9.0	16.0	12.0	20.0	16.5	22.5	18.5	22.5	19.0	---	---
31	---	---	16.0	12.0	---	---	22.0	18.0	22.0	18.5	---	---
MONTH	14.5	4.5	16.0	7.0	20.5	10.5	23.0	16.0	24.5	17.5	22.0	13.5

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA

LOCATION (REVISED).--Lat 36°31'08", long 118°48'03", in NE¼SW¼ sec.23, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on left bank 0.1 mi (0.2 km) north of Potwisha Camp, 0.3 mi (0.5 km) upstream from confluence with Middle Fork Kaweah River, and 7.9 mi (12.7 km) northeast of Three Rivers.

DRAINAGE AREA.--51.4 mi² (133.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1950 to current year. Monthly discharge only for March 1950, published in WSP 1315-A. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

GAGE.--Water-stage recorder on river; water-stage recorder and concrete control for conduit diversion. Altitude of gage is 2,150 ft (655 m), from topographic map.

REMARKS.--Records good. Marble Fork Kaweah River No. 3 conduit diverts from left bank of Marble Fork 0.3 mi (0.5 km) above station. Water is returned to Kaweah River 2.7 mi (4.3 km) downstream from confluence of Marble and Middle Forks. See schematic diagram of Kaweah River basin. For records of combined discharge of river and conduit, see following page.

COOPERATION.--Gage-height record and 12 discharge measurements for river and gage-height record and 12 discharge measurements for conduit furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 31 years, 75.4 ft³/s (2.135 m³/s), 54,630 acre-ft/yr (67.4 hm³/yr). Combined river and diversion: 31 years, 99.6 ft³/s (2.821 m³/s), 72,160 acre-ft/yr (89.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,500 ft³/s (354 m³/s) Dec. 23, 1955, gage height, 13.4 ft (4.08 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurement of maximum flow; no flow Sept. 5-15, Oct. 24-28, 1953, Oct. 26-31, 1957. Combined flow, maximum discharge, 12,500 ft³/s (354 m³/s) Dec. 23, 1955; minimum daily, 0.82 ft³/s (0.023 m³/s) Oct. 4, 5, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 430 ft³/s (12.2 m³/s) May 1, gage height, 5.16 ft (1.573 m); minimum daily, 0.94 ft³/s (0.027 m³/s) Dec. 6, 7. Combined flow, maximum discharge, 469 ft³/s (13.3 m³/s) May 1; minimum daily, 2.7 ft³/s (0.076 m³/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	7.4	2.0	8.6	3.7	5.4	31	340	271	6.0	3.5	1.7
2	2.1	1.8	2.0	6.3	3.8	5.4	29	336	235	5.4	3.6	1.6
3	2.3	2.0	3.7	6.0	3.9	6.5	24	287	202	5.3	3.7	1.7
4	2.3	2.1	6.3	6.0	3.7	5.8	19	246	247	5.1	4.5	1.7
5	2.3	2.0	2.4	6.1	4.0	6.0	29	225	275	5.0	4.2	1.7
6	2.3	1.9	.94	6.6	4.0	5.9	49	189	245	5.3	3.3	1.7
7	5.6	2.1	.94	5.7	4.0	5.7	58	159	200	5.7	2.8	1.7
8	11	2.1	2.4	6.4	4.2	5.7	56	183	200	5.6	2.7	1.7
9	2.1	2.1	5.1	6.6	9.0	5.7	71	227	190	5.5	3.6	1.8
10	2.1	2.1	2.1	6.4	5.1	5.9	86	247	160	5.7	5.1	2.0
11	2.1	2.3	2.1	6.4	3.7	6.4	74	255	119	6.0	5.5	3.6
12	2.1	5.7	1.7	6.4	3.7	6.4	73	262	103	6.0	6.0	4.6
13	2.1	2.7	1.1	6.4	3.7	7.0	84	274	78	6.3	6.0	5.3
14	2.5	1.9	1.1	6.4	7.5	6.4	105	258	57	6.8	5.4	4.2
15	7.5	1.9	1.1	6.4	13	6.4	129	179	57	6.9	5.2	2.3
16	6.5	2.0	1.4	6.4	9.7	6.7	145	119	60	7.1	4.9	2.4
17	2.1	1.8	1.6	6.3	14	7.0	150	102	59	7.1	5.7	2.0
18	2.1	1.8	1.3	6.0	19	8.1	142	147	55	7.1	5.5	2.1
19	2.1	1.8	1.3	6.0	22	12	110	120	53	7.0	5.0	2.7
20	2.1	1.8	1.3	6.0	22	20	81	103	51	7.2	4.9	2.7
21	2.1	1.8	1.3	6.0	20	19	78	92	49	7.6	4.9	2.8
22	2.0	1.8	1.3	6.0	16	27	117	111	40	6.2	4.7	2.5
23	1.9	1.8	1.3	7.7	18	30	213	136	35	5.4	4.6	2.0
24	1.9	1.8	1.3	6.1	16	27	260	151	26	5.2	4.7	1.9
25	2.1	1.9	1.3	5.3	9.4	31	250	218	17	5.9	4.4	2.8
26	2.5	1.9	1.4	5.3	6.6	48	223	247	9.5	6.8	4.0	4.4
27	2.0	1.8	2.0	8.2	4.2	32	199	210	6.6	6.1	4.1	4.5
28	2.0	1.8	1.3	9.4	4.3	23	226	226	4.8	5.0	3.9	3.9
29	2.0	1.8	1.3	7.8	---	28	272	238	4.5	5.6	3.6	2.4
30	1.9	2.0	1.3	4.0	---	31	312	259	6.0	4.7	3.5	1.9
31	11	---	1.4	3.7	---	29	---	264	---	3.7	3.9	---
TOTAL	97.0	67.7	113.78	196.9	258.2	469.4	3695	6410	3115.4	184.3	137.4	78.3
MEAN	3.13	2.26	3.67	6.35	9.22	15.1	123	207	104	5.95	4.43	2.61
MAX	11	7.4	6.3	9.4	22	48	312	340	275	7.6	6.0	5.3
MIN	1.9	1.8	.94	3.7	3.7	5.4	19	92	4.5	3.7	2.7	1.6
AC-FT	192	134	226	391	512	931	7330	12710	6180	366	273	155
CAL YR 1980 TOTAL	58680.88			MEAN 160	MAX 2210	MIN .94	AC-FT 116400					
WTR YR 1981 TOTAL	14823.38			MEAN 40.6	MAX 340	MIN .94	AC-FT 29400					

TULARE LAKE BASIN

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF MARBLE FORK KAWEAH RIVER AND MARBLE FORK KAWEAH RIVER NO. 3 CONDUIT AT POTWISHA CAMP, CA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	11	15	25	31	66	379	309	30	5.4	4.0
2	11	11	11	15	23	31	64	373	273	30	5.5	4.2
3	10	11	12	15	21	29	59	327	240	27	5.0	4.6
4	10	11	89	15	20	29	55	286	285	25	4.8	4.8
5	10	11	29	13	20	28	67	264	313	24	4.5	4.8
6	9.8	10	20	13	20	27	87	228	283	22	4.1	4.4
7	12	11	18	12	19	28	95	198	237	23	3.3	4.4
8	14	11	13	13	21	28	91	222	237	22	2.7	4.6
9	9.1	11	14	13	32	30	106	267	227	20	3.6	4.7
10	9.1	10	13	13	29	32	123	287	197	19	5.2	3.9
11	9.1	11	13	13	27	34	113	294	155	17	6.0	4.5
12	9.1	16	14	13	28	32	112	303	139	17	6.5	4.9
13	9.3	14	15	13	29	35	123	316	113	16	6.2	5.5
14	10	13	15	13	36	31	142	299	94	16	5.4	5.9
15	16	12	15	13	43	32	165	220	95	15	5.2	4.5
16	17	12	17	13	40	33	182	159	97	15	4.9	5.1
17	13	12	19	12	44	36	187	142	96	15	5.7	4.9
18	13	12	18	12	49	38	179	188	91	15	5.5	5.0
19	14	12	18	12	51	45	147	160	89	15	5.0	5.6
20	13	11	17	12	51	54	120	143	87	12	4.9	5.8
21	13	11	17	11	51	52	119	132	85	12	4.9	5.7
22	12	11	17	12	48	61	157	151	76	12	4.7	5.8
23	12	11	17	16	50	63	253	176	70	10	4.6	5.5
24	11	11	16	15	48	62	300	192	60	9.7	4.7	5.4
25	11	11	15	13	40	68	289	259	50	8.5	4.4	4.8
26	15	11	17	13	38	83	261	288	44	8.4	4.0	5.7
27	13	11	20	20	34	64	237	251	40	9.1	4.1	5.4
28	13	11	18	25	32	58	266	267	35	7.6	3.9	5.5
29	13	11	17	28	---	63	313	277	33	6.4	3.6	5.3
30	12	11	17	20	---	66	353	297	32	6.2	3.5	5.1
31	15	---	15	26	---	64	---	302	---	5.7	3.9	---
TOTAL	369.5	346	577	462	969	1367	4831	7647	4182	490.6	145.7	150.3
MEAN	11.9	11.5	18.6	14.9	34.6	44.1	161	247	139	15.8	4.70	5.01
MAX	17	16	89	28	51	83	353	379	313	30	6.5	5.9
MIN	9.1	10	11	11	19	27	55	132	32	5.7	2.7	3.9
AC-FT	733	686	1140	916	1920	2710	9580	15170	8290	973	289	298
CAL YR 1980	TOTAL	70979.5	MEAN	194	MAX	2210	MIN	9.1	AC-FT	140800		
WTR YR 1981	TOTAL	21537.1	MEAN	59.0	MAX	379	MIN	2.7	AC-FT	42720		

11208000 MARBLE FORK KAWAHE RIVER AT POTWISHA CAMP, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to September 1981 (discontinued).

CHEMICAL ANALYSES: June to September 1980.

SPECIFIC CONDUCTANCE: Water years 1979 to September 1981 (discontinued).

WATER TEMPERATURE: Water years 1979 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1979 to September 1981 (discontinued).

WATER TEMPERATURE: August 1979 to September 1981 (discontinued).

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperature from August 1979 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 142 micromhos on several days during September 1981; minimum recorded, 13 micromhos Jan. 13, 1980.

WATER TEMPERATURE: Maximum recorded, 23.0°C Aug. 12, 1981; minimum recorded, 2.0°C Dec. 9, 1980, Jan. 31, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 142 micromhos on several days during September; minimum recorded, 32 micromhos June 10.

WATER TEMPERATURE: Maximum recorded, 23.0°C Aug. 12; minimum recorded, 2.0°C Dec. 9, Jan. 31.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	96	102	79	93	77	88	42	53	62	109	138
2	79	98	102	81	94	79	88	41	54	63	110	138
3	84	99	103	82	97	80	89	43	56	64	110	138
4	80	99	90	82	97	81	91	45	57	65	111	138
5	81	100	81	84	96	81	89	45	59	67	112	139
6	82	102	95	85	94	81	85	46	61	68	113	140
7	82	102	102	86	93	81	82	47	60	69	115	140
8	104	103	101	87	91	81	82	48	48	69	117	141
9	106	104	96	88	83	80	79	48	34	70	119	141
10	106	104	92	88	84	79	81	49	32	72	121	141
11	106	105	93	89	87	77	82	40	34	73	123	141
12	106	105	99	89	85	77	82	40	34	75	124	141
13	106	101	89	89	82	77	81	41	36	76	125	140
14	105	98	88	89	78	78	79	38	39	78	124	139
15	103	98	88	89	69	78	53	36	40	79	124	138
16	98	98	85	89	71	77	41	40	41	81	124	138
17	96	98	80	90	68	76	47	42	41	82	122	139
18	95	99	79	90	65	74	48	41	43	83	121	140
19	94	98	79	91	64	74	50	43	43	84	122	141
20	93	99	80	91	66	82	52	44	45	86	124	141
21	94	99	80	91	66	83	52	46	46	92	126	142
22	95	99	81	92	67	82	49	45	47	96	128	142
23	96	100	81	90	67	82	44	43	48	97	129	142
24	97	99	81	86	68	82	44	46	50	98	129	142
25	97	100	82	88	71	81	44	45	53	100	130	142
26	99	99	83	90	73	87	45	50	56	101	132	141
27	96	100	80	91	76	91	45	50	58	103	133	141
28	94	100	78	87	77	93	37	51	60	104	133	141
29	94	101	78	107	---	91	36	49	61	105	133	142
30	95	101	80	124	---	89	41	46	62	107	135	141
31	95	---	80	105	---	89	---	50	---	108	136	---
MONTH	95	100	87	90	79	81	64	45	48	83	123	140

TULARE LAKE BASIN

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	15.5	11.5	9.5	8.0	6.0	7.5	6.5	5.0	3.0	5.5	4.5
2	18.0	16.0	11.5	10.0	6.5	6.0	8.0	6.5	6.0	4.0	6.0	4.5
3	18.0	16.0	11.0	10.0	7.0	6.5	8.0	7.0	6.0	4.0	6.0	4.5
4	18.0	16.0	12.0	10.5	8.0	7.0	7.5	6.5	6.0	4.0	6.0	5.0
5	18.5	16.5	12.5	11.0	7.5	6.0	7.0	5.5	6.0	3.5	5.5	4.5
6	18.0	16.0	13.0	11.0	6.5	5.0	6.5	5.0	5.5	3.5	6.0	4.0
7	18.0	16.0	12.5	10.5	5.5	5.0	6.5	5.0	6.0	3.5	6.5	5.5
8	17.5	15.0	12.0	10.5	5.5	3.5	6.0	4.5	5.5	4.5	8.5	5.0
9	18.0	16.0	12.0	10.0	4.0	2.0	6.0	4.5	6.0	5.0	9.0	5.5
10	17.5	16.0	11.5	10.0	4.0	2.5	6.5	5.0	6.0	4.5	9.5	6.0
11	17.0	15.5	11.0	10.5	4.0	2.5	6.5	5.5	7.0	5.5	8.5	6.0
12	16.5	15.0	10.5	10.0	6.0	3.5	7.5	6.0	7.5	5.0	9.5	6.5
13	15.5	14.0	10.5	9.0	6.5	5.5	8.0	6.0	7.0	5.5	7.5	5.0
14	14.5	12.5	10.0	8.5	6.0	5.0	8.0	6.5	9.0	6.5	6.5	4.5
15	12.5	10.5	9.0	8.0	6.5	5.5	8.5	7.0	7.5	5.0	7.0	4.0
16	10.0	9.0	8.5	6.5	7.5	6.5	8.5	7.5	8.5	5.5	7.5	5.5
17	10.5	8.5	7.5	6.5	8.0	7.0	8.0	7.0	8.0	6.0	8.0	5.5
18	11.0	9.0	7.5	5.5	8.0	7.5	8.0	6.5	8.0	5.0	7.5	5.0
19	11.5	9.5	6.5	5.5	7.5	7.0	8.5	7.0	8.5	6.0	7.0	6.0
20	12.0	10.0	7.0	5.5	7.5	6.5	8.0	6.5	7.0	5.5	6.0	3.5
21	12.5	10.5	7.0	6.0	7.5	6.5	8.5	7.0	7.0	4.0	6.0	4.5
22	13.0	11.0	7.0	6.5	8.5	7.5	9.0	8.0	8.0	5.0	8.5	5.0
23	13.0	11.0	7.5	6.5	8.0	7.0	8.5	7.5	6.0	5.5	8.0	5.5
24	13.5	11.5	7.0	6.5	7.5	6.5	7.5	6.0	7.0	5.0	9.0	5.0
25	13.0	11.5	7.5	6.0	7.5	6.5	6.5	5.0	6.0	4.5	8.0	6.0
26	12.0	11.0	6.5	5.5	8.5	7.0	5.5	4.5	4.5	3.0	7.5	4.0
27	12.0	10.0	6.5	5.5	9.0	8.5	6.5	5.5	6.5	3.0	5.5	3.5
28	11.5	9.5	6.5	5.5	8.5	8.0	6.0	5.5	5.0	4.0	7.5	3.5
29	11.5	9.5	7.0	6.0	8.0	7.0	5.5	4.0	---	---	8.0	5.0
30	11.0	9.5	8.0	7.0	7.5	7.0	4.0	3.0	---	---	7.5	5.5
31	12.0	10.0	---	---	7.5	6.5	4.0	2.0	---	---	8.5	5.0
MONTH	18.5	8.5	13.0	5.5	9.0	2.0	9.0	2.0	9.0	3.0	9.5	3.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	6.0	13.5	8.0	15.0	11.5	19.5	17.5	20.0	17.5	21.0	18.5
2	6.5	4.5	11.5	8.0	13.5	11.0	20.0	17.0	20.0	17.0	21.0	19.0
3	6.0	4.0	10.0	6.0	15.0	10.5	20.5	17.0	20.0	17.0	21.0	18.5
4	9.0	4.5	9.5	6.5	16.0	12.0	21.0	17.0	20.0	16.5	20.5	18.0
5	10.0	6.5	9.0	6.5	17.0	13.0	21.0	18.0	20.0	17.0	20.5	18.5
6	10.0	7.0	8.5	6.0	16.5	12.5	21.5	18.0	21.0	17.5	20.5	18.5
7	8.0	6.5	9.5	6.0	16.0	13.0	21.0	18.0	21.5	18.5	20.5	18.0
8	9.5	6.5	11.0	6.5	17.0	13.0	21.0	17.0	22.0	18.5	21.0	19.0
9	9.5	6.5	12.0	8.0	16.5	13.0	20.5	17.5	22.5	19.5	21.0	19.0
10	8.5	6.0	12.5	8.0	16.0	13.5	20.5	17.0	22.5	20.0	20.5	19.0
11	9.0	6.0	12.0	8.0	16.0	14.0	20.0	16.5	22.5	20.0	19.5	18.5
12	8.5	6.0	12.5	8.0	15.0	12.5	19.5	16.0	23.0	20.0	19.0	17.5
13	9.5	6.0	13.0	9.0	13.5	10.5	19.5	16.0	22.5	20.0	19.5	17.5
14	10.0	6.5	11.0	9.0	13.5	10.5	20.0	16.0	22.0	20.0	19.5	17.5
15	10.5	7.0	9.5	8.0	15.0	11.5	20.0	17.0	22.0	19.5	19.5	17.5
16	10.0	6.0	8.0	7.0	16.5	13.0	21.0	18.0	22.5	19.5	19.5	18.0
17	10.0	7.0	10.0	6.0	16.0	13.0	21.0	18.0	21.0	19.5	19.0	18.0
18	9.0	5.5	10.0	8.5	17.5	14.5	21.0	17.5	22.0	19.0	20.0	17.5
19	5.5	4.5	10.0	7.0	18.0	15.0	21.5	18.0	21.5	19.0	20.0	18.0
20	7.0	5.0	7.5	6.0	19.0	16.0	21.0	17.5	21.0	18.0	20.0	17.5
21	9.0	6.0	9.5	6.5	20.0	17.0	20.0	17.5	20.5	17.5	19.5	18.0
22	11.5	7.5	11.5	8.5	20.0	17.5	20.5	17.5	20.5	17.5	19.0	17.0
23	12.0	8.0	12.0	10.0	20.0	17.5	20.5	17.5	20.5	17.5	18.0	16.0
24	12.0	7.5	14.0	10.5	20.0	17.0	20.5	17.0	20.5	17.5	17.0	15.5
25	11.5	7.0	13.0	10.5	20.0	16.5	20.0	17.0	21.0	18.0	16.5	15.0
26	9.0	7.0	11.0	9.5	20.0	17.0	20.5	17.5	21.5	18.5	16.5	14.5
27	10.5	6.5	11.0	9.5	20.0	17.0	21.0	17.5	21.5	19.0	17.0	15.0
28	11.5	6.5	13.5	9.5	20.0	16.5	21.5	18.0	21.0	18.5	17.0	15.5
29	12.5	7.5	14.5	10.5	19.5	16.5	21.5	18.5	22.0	18.5	17.0	15.5
30	13.0	8.0	15.0	11.0	20.0	17.0	21.0	18.0	21.5	18.5	16.0	15.0
31	---	---	15.5	11.0	---	---	20.5	17.5	21.0	18.5	---	---
MONTH	13.0	4.0	15.5	6.0	20.0	10.5	21.5	16.0	23.0	16.5	21.0	14.5

11209500 NORTH FORK KAWEAH RIVER NEAR THREE RIVERS, CA

LOCATION.--Lat 36°29'25", long 118°55'12", unsurveyed, T.16 S., R.28 E., Tulare County, Hydrologic Unit 18030007, on left bank 1.9 mi (3.1 km) upstream from Mankins Creek, 1.6 mi (2.6 km) north of Kaweah, and 3.6 mi (5.8 km) north of Three Rivers.

DRAINAGE AREA.--129 mi² (334.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to September 1960, water years 1966-67 (annual maximum), August 1980 to September 1981 (discontinued). Records for water year 1911 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORD.--WDR Ca-80-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,027.7 ft (313.24 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 26, 1933, nonrecording gage at site 1 mi (1.6 km) downstream at different datum.

REMARKS.--Records good. Diversion for irrigation of about 60 acres (0.24 km²) above station.

AVERAGE DISCHARGE.--51 years (1910-60, 1981), 99.1 ft³/s (2.807 m³/s), 71,800 acre-ft/yr (88.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (1910-60, 1966-67, 1981).--Maximum discharge, 23,900 ft³/s (677 m³/s) Dec. 5, 1966, gage height, 14.7 ft (4.481 m), from profile of floodmarks, from rating curve extended above 3,200 ft³/s (90.6 m³/s) on basis of slope-area measurement at 14.1 ft. (4.30 m); no flow for many days July to October 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 421 ft³/s (11.90 m³/s) Mar. 20, gage height, 3.69 ft (1.125 m), no peak above base of 700 ft³/s (19.8 m³/s); minimum daily, 4.1 ft³/s (0.12 m³/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	19	24	53	65	135	201	69	20	7.3	4.3
2	15	19	19	23	56	78	139	198	65	20	7.5	4.3
3	15	19	20	23	56	68	130	179	63	20	7.4	4.3
4	14	19	131	23	52	62	116	162	60	19	7.3	4.3
5	15	18	76	23	51	58	126	147	57	18	7.5	4.3
6	15	18	44	23	50	56	160	135	54	17	7.2	4.3
7	15	18	35	22	47	54	173	123	52	17	6.7	4.2
8	14	18	31	22	45	54	158	115	49	16	6.3	4.2
9	14	18	28	22	88	52	172	110	48	16	6.1	4.3
10	14	18	27	22	87	54	186	105	46	15	5.6	4.4
11	14	18	27	22	67	59	173	103	44	15	6.1	4.3
12	14	20	27	22	63	59	174	97	43	14	5.8	4.5
13	14	23	26	22	64	72	173	97	42	13	5.7	4.6
14	15	23	26	22	72	67	186	95	42	13	5.8	4.5
15	18	23	26	22	94	68	198	92	40	12	5.6	4.6
16	29	22	25	23	82	62	205	89	39	12	5.6	4.5
17	26	22	26	22	87	66	209	84	36	12	5.8	4.6
18	24	22	27	22	91	70	213	79	35	12	6.1	4.6
19	23	21	27	22	90	94	243	84	34	11	6.0	4.4
20	23	21	27	22	88	281	203	94	31	11	5.9	4.6
21	22	21	26	22	86	180	195	84	30	10	5.8	4.4
22	21	21	26	22	81	258	201	79	29	10	5.6	4.4
23	20	21	25	32	79	190	225	76	28	9.6	5.3	4.5
24	19	21	25	40	76	158	240	73	27	9.2	5.2	4.5
25	18	21	24	31	69	159	235	70	25	8.8	5.2	4.5
26	21	21	24	27	71	223	225	100	24	8.6	5.0	4.7
27	25	21	25	33	64	200	205	131	23	8.7	4.9	4.8
28	24	20	25	118	61	143	198	102	22	8.5	4.7	5.0
29	23	20	25	183	---	146	200	85	22	8.3	4.5	5.3
30	22	19	25	93	---	150	200	77	21	7.8	4.6	5.6
31	21	---	24	61	---	136	---	73	---	7.3	4.1	---
TOTAL	583	606	968	1110	1970	3442	5596	3339	1200	399.8	182.2	135.8
MEAN	18.8	20.2	31.2	35.8	70.4	111	187	108	40.0	12.9	5.88	4.53
MAX	29	23	131	183	94	281	243	201	69	20	7.5	5.6
MIN	14	18	19	22	45	52	116	70	21	7.3	4.1	4.2
AC-FT	1160	1200	1920	2200	3910	6830	11100	6620	2380	793	361	269

WTR YR 1981 TOTAL 19531.8 MEAN 53.5 MAX 281 MIN 4.1 AC-FT 38740

11209500 NORTH FORK KAWeah RIVER NEAR THREE RIVERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: June to September 1980.

SPECIFIC CONDUCTANCE: August 1980 to September 1981 (discontinued).

WATER TEMPERATURES: August 1980 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1980 to September 1981 (discontinued).

WATER TEMPERATURES: August 1980 to September 1981 (discontinued).

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperatures from August 1980 to September 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 203 micromhos Feb. 1; minimum daily recorded, 55 micromhos May 3, 5.

WATER TEMPERATURES: Maximum recorded, 28.5°C July 6, Aug. 9; minimum recorded, 4.0°C Jan. 31.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	156	171	165	203	113	122	73	86	163	163	181
2	153	157	172	165	193	114	109	73	90	154	165	181
3	152	158	173	165	188	116	99	55	87	145	166	182
4	153	159	141	166	188	121	107	57	86	126	166	182
5	154	160	122	166	185	124	106	55	87	143	166	182
6	151	161	136	167	181	127	95	57	94	161	167	182
7	151	162	149	168	176	127	83	62	92	151	166	181
8	154	162	159	169	176	127	72	71	90	145	167	181
9	152	163	167	170	161	131	68	72	88	133	168	180
10	154	165	170	169	136	126	66	75	87	128	169	179
11	155	166	170	170	140	119	67	73	87	138	168	181
12	157	165	168	169	149	117	68	80	89	139	169	181
13	157	162	168	168	144	111	66	90	92	133	170	179
14	157	162	169	168	138	110	60	91	93	133	171	180
15	156	161	169	168	125	111	57	86	87	142	171	179
16	151	162	168	168	120	113	57	87	100	156	172	179
17	146	163	161	167	120	111	56	75	104	162	173	181
18	147	165	158	167	120	109	56	84	115	191	173	180
19	146	168	158	168	113	106	58	72	120	163	173	179
20	148	168	158	168	114	123	68	61	141	164	174	179
21	151	167	159	169	114	130	71	65	136	158	175	179
22	149	167	159	169	114	131	73	65	143	152	175	180
23	151	167	159	165	119	137	68	65	132	153	176	181
24	153	168	160	155	123	145	69	66	139	154	176	183
25	154	169	161	157	125	148	66	68	144	156	177	185
26	153	169	162	160	127	136	67	62	161	157	176	184
27	151	169	162	159	106	127	74	71	143	157	177	181
28	152	170	162	140	111	139	72	73	123	158	179	180
29	151	171	162	153	---	115	65	85	162	160	180	181
30	152	171	163	183	---	114	63	80	137	162	181	183
31	155	---	163	200	---	116	---	85	---	162	182	---
MONTH	152	164	161	166	143	122	74	72	111	154	172	181

11209500 NORTH FORK KAWAII RIVER NEAR THREE RIVERS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	22.0	17.5	14.0	11.5	9.0	7.0	9.0	6.5	8.5	5.5	8.0	7.0
2	22.0	18.0	14.0	11.5	9.5	8.0	9.0	7.0	9.0	5.5	9.0	7.0
3	22.0	18.0	14.0	11.5	9.5	8.5	10.0	8.0	8.5	5.5	9.0	7.0
4	22.0	18.0	14.0	11.5	10.0	9.0	9.5	8.0	9.0	6.0	9.5	7.0
5	22.0	18.0	14.5	12.0	9.5	8.5	9.0	7.5	9.0	6.0	8.5	8.0
6	22.0	18.0	14.5	12.5	9.0	8.0	8.5	6.5	8.5	6.0	10.5	7.5
7	21.5	18.5	14.5	12.5	8.5	8.0	8.0	6.0	8.5	5.5	10.0	8.5
8	21.5	18.0	14.5	12.5	7.5	6.0	8.0	6.0	7.5	7.0	13.0	8.5
9	22.0	18.5	14.5	12.5	7.0	5.5	7.5	6.0	9.0	7.5	13.5	8.5
10	21.5	18.5	14.0	12.5	6.5	5.0	7.5	5.0	9.0	8.0	14.0	10.0
11	20.5	17.5	13.5	13.0	6.5	4.5	8.0	6.0	10.5	8.5	14.0	10.0
12	19.5	17.0	14.0	12.5	7.0	5.0	9.5	7.0	11.0	7.5	14.0	10.5
13	18.5	16.0	13.5	11.5	7.5	6.0	10.0	7.5	10.5	8.5	11.5	9.5
14	17.0	15.0	12.0	10.0	7.5	6.0	10.5	8.0	12.5	9.5	10.5	8.5
15	15.0	13.5	11.5	9.5	8.0	6.0	10.5	8.5	12.0	9.5	10.5	7.5
16	13.5	12.0	10.5	8.5	8.5	6.5	11.0	9.0	12.0	9.5	12.5	8.5
17	14.0	10.5	10.5	8.0	9.5	7.5	11.5	9.0	11.5	10.5	12.5	10.0
18	14.0	10.5	9.5	7.5	10.0	8.0	11.0	8.5	12.5	10.0	12.5	9.0
19	14.5	11.5	9.0	7.0	9.5	8.0	11.5	9.0	12.0	9.0	11.0	9.5
20	15.0	11.5	9.0	7.0	10.0	8.0	11.0	8.5	11.0	9.5	12.0	7.5
21	15.5	12.0	9.0	7.0	10.0	7.5	11.5	9.0	10.5	7.5	9.0	7.5
22	15.5	12.5	9.5	8.0	10.5	9.0	11.5	9.5	11.0	7.5	12.0	8.5
23	15.5	12.5	9.5	7.5	10.0	8.5	11.5	10.0	11.5	8.0	12.0	9.5
24	16.0	13.0	10.0	8.0	10.0	8.0	11.0	8.5	10.0	8.5	13.0	9.5
25	14.5	13.0	9.5	7.5	9.5	8.0	10.0	8.0	10.0	7.5	12.0	10.0
26	15.5	13.0	9.0	7.0	10.0	8.0	9.0	7.0	8.5	6.5	11.5	7.5
27	14.5	12.0	8.5	6.5	10.5	8.5	8.5	7.5	9.5	5.0	8.5	6.5
28	14.0	11.5	9.0	7.0	10.0	8.5	8.5	7.5	8.0	6.5	11.0	6.5
29	14.0	11.5	9.0	7.0	9.5	7.5	7.5	6.0	---	---	11.5	8.5
30	13.5	11.0	9.5	7.5	9.0	7.5	6.0	5.0	---	---	11.5	9.0
31	14.5	11.5	---	---	9.0	6.5	7.0	4.0	---	---	12.0	8.0
MONTH	22.0	10.5	14.5	6.5	10.5	4.5	11.5	4.0	12.5	5.0	14.0	6.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	9.0	18.5	14.0	22.0	17.5	26.5	22.5	24.5	20.5	26.5	21.0
2	9.5	8.5	18.0	14.0	21.5	18.0	27.0	21.5	25.0	20.0	26.0	21.0
3	9.5	7.5	15.0	11.5	21.5	17.0	27.0	21.5	25.5	20.0	26.0	21.0
4	12.5	7.5	14.0	10.5	23.0	17.5	28.0	22.0	25.5	20.0	25.5	20.5
5	14.0	9.5	14.5	10.0	24.5	19.0	28.0	22.5	26.0	20.5	26.0	20.5
6	14.5	10.5	14.5	10.0	24.5	20.0	28.5	22.5	27.0	21.0	25.5	20.5
7	14.0	10.5	14.5	10.0	24.5	19.5	27.5	22.5	27.5	22.0	25.0	20.5
8	13.5	9.5	15.5	11.0	24.0	19.0	27.5	21.5	28.0	22.5	25.5	21.0
9	13.5	9.5	16.5	12.0	24.0	19.5	27.5	22.0	28.5	23.5	25.5	21.0
10	14.0	10.5	17.5	13.5	24.0	19.0	27.5	21.5	28.0	23.5	25.0	21.0
11	13.5	9.5	18.0	14.0	23.5	18.5	27.0	21.0	28.0	23.5	23.0	21.0
12	13.5	9.5	18.0	14.0	22.5	18.5	26.5	20.5	28.0	23.5	23.0	20.0
13	13.5	9.0	18.5	14.5	21.0	16.5	26.5	20.0	28.0	23.5	24.0	20.0
14	14.5	10.0	18.5	15.0	21.0	15.5	27.0	20.5	28.0	23.0	24.0	20.0
15	15.0	11.0	15.5	13.0	22.0	16.0	27.0	21.5	28.0	23.5	24.5	20.0
16	15.0	11.5	13.5	11.5	23.0	17.0	27.5	22.0	28.0	23.0	24.0	20.5
17	14.5	11.5	14.5	10.0	23.5	18.0	27.5	22.0	27.5	23.0	22.5	21.0
18	12.5	9.5	15.0	12.0	24.5	19.0	27.5	21.5	28.0	23.0	24.0	20.0
19	9.5	8.5	14.0	12.5	25.5	19.5	28.0	22.0	27.0	22.5	24.5	20.5
20	10.0	7.5	13.0	11.5	26.5	20.5	28.0	22.0	26.0	21.0	24.0	20.0
21	12.0	8.0	14.0	10.5	27.5	21.5	26.5	22.0	26.0	20.5	23.5	20.0
22	15.0	9.5	16.0	11.5	27.5	22.0	27.0	21.5	26.0	20.5	22.5	19.0
23	17.0	12.5	18.0	13.5	27.5	22.5	27.0	21.5	26.0	21.0	21.5	17.5
24	16.5	13.5	20.0	15.0	27.5	22.0	27.0	21.0	26.0	20.5	20.5	17.0
25	16.0	13.0	18.5	16.5	28.0	22.0	27.0	21.0	26.5	21.0	20.0	16.5
26	13.0	10.5	17.5	15.0	28.0	22.0	27.0	21.0	27.0	21.5	20.0	16.5
27	13.5	9.5	16.0	14.0	27.5	22.0	27.0	21.5	27.0	22.0	21.0	17.5
28	15.5	10.5	18.5	14.0	27.5	22.0	27.5	22.5	27.5	21.5	20.5	18.0
29	17.0	12.5	20.5	16.0	27.0	21.5	27.5	22.0	27.5	21.5	19.5	18.0
30	17.5	13.0	21.5	17.0	27.0	22.0	26.5	21.5	27.0	21.5	19.0	16.5
31	---	---	21.5	17.5	---	---	26.5	21.0	26.5	21.0	---	---
MONTH	17.5	7.5	21.5	10.0	28.0	15.5	28.5	20.0	28.5	20.0	26.5	16.5

TULARE LAKE BASIN

11209900 KAWEAH RIVER AT THREE RIVERS, CA

LOCATION.--Lat 36°26'38", long 118°54'09", in SW¼SW¼ sec.13, T.17 S., R.28 E., Tulare County, Hydrologic Unit 18030007, on right bank opposite schoolhouse in Three Rivers, 0.2 mi (0.3 km) downstream from North Fork Kaweah River.

DRAINAGE AREA.--418 mi² (1,083 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 809.62 ft (246.772 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions to 200 acres (80.9 hm²) above station. Power is developed on the Middle and East Fork Kaweah River.

AVERAGE DISCHARGE.--23 years, 516 ft³/s (14.61 m³/s), 373,800 acre-ft/yr (461 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s (2,070 m³/s) Dec. 5, 1966, gage height, 16.69 ft (5.087 m) in gage well, 19.0 ft (5.79 m) from floodmarks, from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of slope-area measurements at gage heights 13.68 ft (4.170 m) and 16.69 ft (5.087 m); minimum daily, 14 ft³/s (0.40 m³/s) Sept. 29, Oct. 4, 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 17.9 ft (5.46 m) from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s (55.8 m³/s) May 2 (0015 hr), gage height, 6.52 ft (1.987 m), no other peak above base of 1,800 ft³/s (51.0 m³/s); minimum daily, 27 ft³/s (0.76 m³/s) on several days during September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	84	70	89	186	214	439	1510	1060	170	58	30
2	75	80	71	88	193	247	446	1580	1010	167	57	28
3	74	77	74	88	184	219	413	1360	888	154	56	27
4	70	75	459	89	169	199	372	1130	973	149	54	27
5	68	70	256	84	162	188	418	1020	1080	143	54	27
6	69	76	146	82	158	183	518	901	1030	138	51	27
7	62	73	124	80	149	179	567	808	888	140	48	27
8	68	75	109	79	151	174	527	834	845	136	46	27
9	72	76	105	80	301	180	587	940	838	130	45	27
10	69	76	104	79	278	184	654	1000	772	123	44	29
11	68	77	102	78	213	193	612	1070	668	116	43	29
12	68	96	103	78	206	189	610	1090	607	110	44	30
13	69	103	101	79	205	249	630	1140	509	105	44	35
14	75	101	100	76	243	219	686	1110	425	101	48	30
15	91	93	101	82	310	220	764	881	400	96	45	27
16	115	88	107	79	261	209	840	716	393	93	46	30
17	108	86	112	78	281	213	871	644	387	90	46	31
18	105	85	112	77	297	221	887	722	372	91	45	35
19	106	83	107	76	304	296	873	683	362	88	43	29
20	102	82	104	75	301	755	717	660	360	83	42	28
21	96	81	101	74	290	523	681	591	351	81	41	27
22	92	80	99	74	275	658	748	624	327	78	39	28
23	88	81	102	103	274	534	980	695	320	74	37	28
24	84	81	98	120	264	462	1170	711	290	72	38	27
25	81	79	94	94	239	477	1180	957	258	68	35	27
26	92	77	96	87	250	669	1070	1060	230	67	34	28
27	101	76	102	113	220	554	969	946	211	64	34	28
28	95	75	102	313	207	451	1030	951	198	65	32	29
29	92	74	98	506	---	467	1180	969	184	60	30	29
30	87	72	92	297	---	475	1370	1050	178	60	29	32
31	81	---	94	210	---	434	---	1080	---	59	29	---
TOTAL	2602	2432	3645	3607	6571	10435	22809	29433	16414	3171	1337	863
MEAN	83.9	81.1	118	116	235	337	760	949	547	102	43.1	28.8
MAX	115	103	459	506	310	755	1370	1580	1080	170	58	35
MIN	62	70	70	74	149	174	372	591	178	59	29	27
AC-FT	5160	4820	7230	7150	13030	20700	45240	58380	32560	6290	2650	1710
CAL YR 1980	TOTAL	384396	MEAN	1050	MAX	14700	MIN 62	AC-FT	762400			
WTR YR 1981	TOTAL	103319	MEAN	283	MAX	1580	MIN 27	AC-FT	204900			

11209900 KAWEAH RIVER AT THREE RIVERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-66, 1968 to current year.

CHEMICAL ANALYSES: Water years 1964-66, 1977.

WATER TEMPERATURES: Water years 1966, 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1965 to December 1966, January 1968 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to December 1966, and since January 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 30.0°C July 14, 15, 1972, July 15, 18, 1977; minimum recorded, 0.5°C Jan. 7, 1971, Dec. 12, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 29.5°C Aug. 9; minimum recorded, 3.0°C Dec. 10, 11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.5	16.5	14.5	10.0	8.5	5.5	8.5	5.5	8.0	5.0	7.5	6.5
2	21.5	16.5	14.0	10.0	8.5	6.0	8.5	5.5	8.5	5.0	10.0	6.5
3	21.5	16.5	14.0	9.5	8.5	7.0	9.0	7.0	8.5	5.0	10.0	6.5
4	21.5	16.5	14.5	10.0	9.5	8.5	9.0	6.5	8.5	5.0	9.5	7.0
5	22.0	17.0	15.5	10.5	9.5	8.0	8.5	6.0	9.0	5.0	8.5	7.5
6	21.5	17.0	14.5	11.0	8.5	7.0	8.0	5.5	8.0	5.0	10.0	7.0
7	21.5	16.5	14.5	10.5	7.0	6.5	7.5	4.5	8.5	5.0	10.5	8.0
8	21.5	17.0	14.0	10.5	8.0	4.5	7.0	4.5	7.0	6.0	12.5	8.0
9	21.5	17.0	14.0	10.5	6.5	3.5	7.5	5.0	8.5	7.0	13.5	8.5
10	21.0	17.0	13.5	10.5	6.5	3.0	7.0	4.5	9.5	7.5	15.0	9.5
11	20.0	16.0	---	---	6.5	3.0	---	---	10.0	7.5	14.0	9.5
12	19.0	15.5	---	---	7.0	3.5	---	---	11.0	7.5	14.0	9.5
13	18.0	14.5	13.0	10.0	7.5	4.5	---	---	10.0	7.5	11.5	9.0
14	16.5	14.0	11.5	9.0	7.5	4.5	---	---	12.5	8.5	11.0	8.0
15	14.5	11.0	10.5	8.0	7.5	4.5	---	---	11.5	9.0	11.0	7.0
16	12.0	10.0	9.5	6.5	8.5	5.0	---	---	12.0	9.0	13.0	8.5
17	13.5	8.5	9.5	6.5	9.0	6.0	---	---	12.0	10.0	13.0	9.5
18	13.5	9.0	9.0	5.0	9.5	7.0	---	---	12.5	9.5	12.5	8.5
19	14.0	9.5	9.0	5.0	9.0	6.0	---	---	12.0	9.0	11.0	10.0
20	14.5	10.0	9.0	5.5	8.5	6.0	---	---	10.5	8.5	11.0	8.0
21	15.0	10.5	8.5	5.5	8.5	6.0	---	---	11.0	7.0	9.5	6.5
22	15.5	10.5	9.5	7.0	9.5	7.5	---	---	11.5	7.0	12.0	8.5
23	15.5	10.5	8.5	6.5	9.5	6.5	---	---	11.5	7.5	12.5	9.5
24	16.0	11.0	9.5	6.5	9.0	6.0	10.5	7.5	10.0	7.5	13.5	10.0
25	13.0	11.0	9.0	6.0	8.5	6.0	9.5	6.5	10.0	7.0	12.5	9.5
26	14.5	11.0	9.0	5.5	9.5	6.5	8.0	5.5	8.5	6.0	11.0	8.0
27	14.0	10.5	8.5	5.0	9.5	7.5	8.0	6.5	9.5	5.0	8.5	7.0
28	14.0	9.5	10.0	5.0	9.5	7.5	8.5	7.5	7.5	6.5	11.5	7.0
29	13.5	9.5	9.0	5.5	9.0	7.0	7.5	6.5	---	---	13.0	8.5
30	13.0	9.0	9.0	6.5	9.0	6.5	6.5	5.0	---	---	14.0	9.5
31	14.5	10.0	---	---	8.5	6.0	7.0	4.0	---	---	12.5	8.5
MONTH	22.0	8.5	15.5	5.0	9.5	3.0	---	---	12.5	5.0	15.0	6.5

TULARE LAKE BASIN

11209900 KANEAH RIVER AT THREE RIVERS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	9.0	15.5	11.5	18.0	15.0	24.5	20.5	26.0	21.0	27.0	21.5
2	10.0	8.5	15.0	12.0	17.0	14.5	24.5	19.5	26.5	20.5	26.5	21.5
3	11.5	7.5	12.5	9.5	17.0	14.0	25.0	19.5	26.0	21.0	28.0	21.5
4	13.0	7.5	13.0	10.0	19.0	15.0	25.5	20.0	25.0	20.5	26.0	21.0
5	14.5	9.5	13.0	10.0	20.0	16.0	25.5	21.0	26.5	21.0	26.0	21.5
6	15.0	10.5	13.0	10.0	19.5	16.0	27.0	21.0	27.5	21.5	26.0	21.0
7	14.5	11.0	13.5	9.5	19.5	16.5	26.0	21.5	28.5	23.5	---	---
8	14.5	10.0	14.0	10.5	20.0	15.5	25.5	20.5	29.0	23.5	---	---
9	14.0	10.0	15.0	11.5	20.0	17.0	25.0	20.5	29.5	25.0	---	---
10	14.0	11.0	15.5	12.0	20.0	16.5	25.0	20.0	29.0	24.0	---	---
11	14.0	10.0	15.0	12.0	20.0	16.5	25.5	21.0	29.0	24.0	---	---
12	14.0	10.0	15.0	12.0	19.0	16.0	24.5	19.5	29.0	24.0	---	---
13	14.0	9.5	15.5	12.0	18.0	13.5	24.5	19.0	29.0	24.5	---	---
14	14.5	10.5	15.5	12.5	18.0	13.0	25.0	19.5	29.0	24.0	---	---
15	15.0	11.0	13.0	11.5	19.5	14.0	25.5	20.5	28.5	24.0	---	---
16	14.5	11.5	12.0	9.5	20.5	16.0	25.0	21.0	28.5	24.0	---	---
17	14.0	11.5	13.5	9.0	21.0	15.0	26.0	21.0	28.5	24.5	---	---
18	12.0	9.5	14.0	11.0	24.0	17.0	26.0	20.5	28.0	23.0	---	---
19	9.5	8.5	13.0	11.0	24.0	17.5	26.5	21.0	27.5	23.0	---	---
20	11.0	8.0	12.0	10.0	23.5	20.5	27.0	21.0	26.5	21.0	---	---
21	12.5	8.5	14.0	9.5	24.5	19.5	26.5	21.5	26.5	21.0	---	---
22	15.0	10.0	17.0	11.0	24.5	20.5	27.0	21.0	26.5	21.0	---	---
23	16.0	12.0	17.0	13.0	24.5	21.0	27.0	21.5	26.5	21.0	---	---
24	15.5	12.0	20.5	14.0	24.5	20.0	27.0	21.0	26.5	21.0	---	---
25	14.5	12.0	15.5	14.0	24.0	20.0	27.0	21.0	27.0	21.5	---	---
26	13.0	10.0	14.5	13.0	25.0	19.5	27.5	22.0	27.5	22.0	---	---
27	13.5	9.5	14.5	12.5	25.0	20.0	27.5	22.0	27.5	22.5	---	---
28	14.5	10.5	17.0	12.5	25.0	20.0	27.5	22.5	28.0	22.0	---	---
29	15.5	11.0	18.0	14.5	24.5	19.0	26.5	22.5	27.5	22.0	---	---
30	15.5	11.5	18.0	14.5	24.5	19.5	27.0	22.0	27.0	22.5	---	---
31	---	---	18.0	14.5	---	---	27.0	22.0	26.5	21.5	---	---
MONTH	16.0	7.5	20.5	9.0	25.0	13.0	27.5	19.0	29.5	20.5	---	---

11210100 SOUTH FORK KAWEAH RIVER AT THREE RIVERS, CA

LOCATION.--Lat 36°25'00", long 118°54'48", in SW¼SE¼ sec.26, T.17 S., R.28 E., Tulare County, Hydrologic Unit 18030007, on right bank 200 ft (61 m) upstream from unnamed tributary, 0.5 mi (0.8 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of Three Rivers.

DRAINAGE AREA.--86.7 mi² (224.6 km²).

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 807.22 ft (246.041 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several small diversions above station for irrigation.

AVERAGE DISCHARGE.--23 years, 67.5 ft³/s (1.912 m³/s), 48,900 acre-ft/yr (60.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Dec. 6, 1966, gage height, 9.30 ft (2.835 m) in gage well, 10.4 ft (3.17 m) from floodmarks, from rating curve extended above 2,600 ft³/s (73.6 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in 1960-62.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 23, 1955, reached a stage of 9.5 ft (2.90 m) from floodmarks, discharge, 10,000 ft³/s (283 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 341 ft³/s (9.66 m³/s) May 2, gage height, 3.23 ft (0.985 m) no peak above base of 500 ft³/s (14.2 m³/s); minimum daily 0.16 ft³/s (0.005 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	7.0	9.1	9.8	24	29	53	246	155	11	.56	.18
2	4.7	6.9	9.1	9.6	24	39	55	266	137	10	.54	.18
3	4.6	6.3	9.1	8.9	22	36	52	223	117	9.1	.44	.18
4	4.3	6.1	26	9.6	19	30	47	189	109	7.3	.35	.18
5	4.3	6.1	24	9.6	19	26	49	171	103	7.3	.30	.17
6	4.5	6.3	16	9.4	19	24	54	153	93	7.3	.30	.16
7	4.5	6.5	15	9.2	18	22	59	144	81	6.9	.27	.17
8	4.5	6.6	13	9.1	18	21	55	156	73	6.9	.25	.17
9	4.6	6.9	12	9.1	56	21	57	181	66	6.5	.25	.17
10	4.7	7.0	12	9.1	40	21	63	196	61	5.7	.25	.17
11	4.7	7.4	12	9.1	31	20	61	215	50	5.0	.25	.19
12	4.8	9.6	12	9.1	27	21	60	221	47	4.0	.25	.18
13	5.2	10	11	9.1	25	43	58	236	44	3.9	.23	.18
14	5.6	8.9	11	9.1	28	36	63	228	40	3.8	.22	.17
15	6.4	8.8	11	9.0	37	31	70	172	36	3.5	.22	.17
16	6.8	9.2	11	8.6	31	28	79	139	31	3.4	.21	.17
17	6.8	8.9	11	8.6	29	27	83	126	28	3.1	.25	.18
18	6.5	8.8	10	8.7	28	26	89	140	27	2.7	.35	.17
19	6.8	8.7	11	9.0	28	47	99	128	24	2.8	.34	.19
20	6.9	8.7	11	9.1	28	155	80	108	22	2.4	.40	.19
21	6.4	8.3	11	9.1	27	103	71	95	20	2.0	.42	.22
22	6.3	8.1	11	9.1	25	130	77	108	19	1.9	.35	.26
23	6.4	8.4	11	12	24	83	107	127	18	1.8	.40	.29
24	6.0	8.6	11	15	24	66	143	121	16	1.4	.37	.29
25	6.0	9.0	11	12	22	61	177	170	16	1.7	.32	.33
26	6.8	8.9	11	11	28	95	156	170	16	1.3	.29	.37
27	8.0	8.9	11	14	24	84	142	153	14	1.3	.27	.43
28	8.3	9.0	11	42	23	68	162	150	14	.99	.25	.53
29	8.0	8.7	11	80	---	66	188	145	12	.76	.22	.66
30	7.5	8.8	11	49	---	63	219	157	13	.69	.20	.80
31	7.3	---	10	29	---	56	---	162	---	.57	.20	---
TOTAL	182.9	241.4	376.3	465.0	748	1578	2728	5196	1502	127.01	9.52	7.70
MEAN	5.90	8.05	12.1	15.0	26.7	50.9	90.9	168	50.1	4.10	.31	.26
MAX	8.3	10	26	80	56	155	219	266	155	11	.56	.80
MIN	4.3	6.1	9.1	8.6	18	20	47	95	12	.57	.20	.16
AC-FT	363	479	746	922	1480	3130	5410	10310	2980	252	19	15

CAL YR 1980 TOTAL 49807.90 MEAN 136 MAX 2080 MIN 4.3 AC-FT 98790
WTR YR 1981 TOTAL 13161.83 MEAN 36.1 MAX 266 MIN .16 AC-FT 26110

TULARE LAKE BASIN

11210850 LEMONCOVE DITCH BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'55", long 119°00'22", in SW¼SW¼ sec.25, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030007, on left bank 250 ft (76 m) downstream from outlet tunnel of Terminus Dam, and 2.4 mi (3.9 km) northeast of Lemoncove.

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 546.3 ft (166.51 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records excellent. Ditch receives water from Lake Kaweah (station 11210900) which is used for irrigation. At times up to 3 ft³/s (0.085 m³/s) is diverted 200 ft (61 m) upstream into Doffelmyer ditch for irrigation.

AVERAGE DISCHARGE.--19 years, 4.95 ft³/s (0.140 m³/s), 3,590 acre-ft/yr (4.43 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8.8 ft³/s (0.25 m³/s) May 5, 1970; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	5.9	3.9	2.8	1.0	1.1	1.1	5.1	8.0	7.8	7.9	7.6
2	7.0	5.9	4.0	2.8	1.0	1.1	1.1	5.8	8.0	7.8	7.9	7.6
3	7.0	5.9	4.0	2.8	.90	1.1	1.1	5.8	8.0	7.8	7.9	7.6
4	7.0	5.9	4.0	2.8	.90	1.1	1.1	5.8	8.0	7.8	7.9	7.7
5	7.0	5.9	3.5	2.8	.90	1.1	1.1	5.9	8.0	7.8	7.9	7.8
6	7.0	5.9	3.1	2.8	.90	1.1	2.2	6.0	8.0	7.8	7.9	7.8
7	7.1	5.9	3.1	2.8	.90	1.1	3.0	6.0	8.0	7.7	7.9	7.8
8	7.1	5.9	3.1	2.8	.90	1.1	3.0	6.0	8.0	7.8	7.9	7.8
9	7.1	5.9	3.1	2.8	.90	1.1	3.0	6.0	8.0	8.1	7.9	7.8
10	7.1	5.9	3.1	2.8	.90	1.1	3.0	6.0	7.4	8.2	8.0	7.8
11	7.1	5.9	3.1	2.7	.90	1.1	3.0	6.0	6.9	8.2	8.0	7.8
12	7.1	5.9	3.0	2.8	.90	1.1	3.0	6.6	6.9	8.2	8.0	7.8
13	7.1	5.9	3.0	3.1	.90	1.0	4.0	7.0	6.8	8.2	8.0	7.8
14	6.4	5.9	3.0	2.7	.90	1.0	6.2	7.0	6.8	8.2	8.0	7.8
15	5.9	5.9	3.0	1.8	.90	1.0	6.8	7.7	6.9	8.2	8.0	7.8
16	5.9	5.9	3.0	1.9	.90	1.0	6.8	8.0	7.0	8.2	8.0	7.8
17	5.9	5.0	3.0	2.0	.90	1.0	6.8	8.0	7.0	8.2	8.0	7.8
18	5.9	3.9	3.0	2.0	.90	1.1	6.8	8.0	7.0	8.2	7.8	7.8
19	5.9	3.9	3.1	2.0	1.0	1.1	6.8	8.0	6.8	8.2	7.8	7.8
20	5.9	3.9	2.5	2.2	.90	1.1	5.1	8.0	6.6	8.2	7.8	7.8
21	5.9	3.9	2.4	2.6	.90	1.1	4.0	8.0	6.6	8.2	7.8	7.8
22	5.9	3.9	2.4	2.9	.90	1.0	4.0	8.0	6.6	8.2	7.8	7.8
23	5.9	3.9	2.4	2.9	.90	1.0	4.0	8.0	7.5	8.2	7.8	7.8
24	5.9	3.9	2.5	2.9	.80	1.0	4.0	8.0	8.1	8.0	7.8	7.3
25	5.9	3.9	2.6	2.9	.70	1.0	4.0	8.0	8.1	8.0	7.8	6.9
26	5.9	3.9	2.6	2.9	.70	1.0	4.0	8.0	8.0	8.0	7.8	6.9
27	5.9	3.9	2.6	2.9	.90	1.0	4.0	8.0	8.0	8.0	7.8	6.9
28	5.9	3.9	2.6	1.9	1.1	1.0	4.0	8.0	8.0	8.0	7.8	6.9
29	5.8	3.9	2.6	1.0	---	1.0	4.0	8.0	8.0	7.9	7.8	6.9
30	5.8	3.9	2.8	1.0	---	1.0	4.0	8.0	8.0	7.9	7.8	6.9
31	5.9	---	2.8	1.0	---	1.0	---	8.0	---	7.9	7.8	---
TOTAL	198.2	150.1	92.9	76.1	25.20	32.6	115.0	220.7	225.0	248.9	244.3	227.4
MEAN	6.39	5.00	3.00	2.45	.90	1.05	3.83	7.12	7.50	8.03	7.88	7.58
MAX	7.1	5.9	4.0	3.1	1.1	1.1	6.8	8.0	8.1	8.2	8.0	7.8
MIN	5.8	3.9	2.4	1.0	.70	1.0	1.1	5.1	6.6	7.7	7.8	6.9
AC-FT	393	298	184	151	50	65	228	438	446	494	485	451
CAL YR 1980	TOTAL	1771.70	MEAN	4.84	MAX	8.2	MIN	0	AC-FT	3510		
WTR YR 1981	TOTAL	1856.40	MEAN	5.09	MAX	8.2	MIN	.70	AC-FT	3680		

11210900 LAKE KAWEAH NEAR LEMONCOVE, CA

LOCATION.--Lat 36°24'53", long 119°00'07", in SE¼SW¼ sec.25, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030007, in control tower near left abutment of Terminus Dam on Kaweah River, 2.1 mi (3.4 km) northeast of Lemoncove.

DRAINAGE AREA.--560 mi² (1,450 km²).

PERIOD OF RECORD.--October 1961 to current year. Fragmentary prior to March 1962.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 22, 1962, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam and earthfill auxiliary dam, completed in February 1962. Usable capacity, 142,931 acre-ft (176 hm³) between elevations 520.0 ft (158.50 m) invert of outlet structure, and 694.0 ft (211.53 m) spillway crest. Dead storage, 33 acre-ft (40,700 m³). Spillway design flood pool elevation, 745.1 ft (227.11 m), capacity, 256,167 acre-ft (316 hm³). Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 160,200 acre-ft (198 hm³) July 3, 4, 1967, elevation, 699.39 ft (213.174 m) storage increased by a temporary sandbag dam in the ungated spillway; minimum since reservoir first filled, 7,559 acre-ft (9.32 hm³) Oct. 20, 1970, elevation, 568.38 ft (173.242 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 132,426 acre-ft (163 hm³) June 7, 8, elevation, 688.40 ft (209.824 m); minimum, 7,702 acre-ft (9.50 hm³) Sept. 30, elevation, 572.78 ft (174.583 m).

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

520	33	580	10,112
525	170	600	19,970
530	436	620	35,541
535	832	640	57,212
540	1,347	660	84,644
550	2,703	680	117,289
560	4,509	700	154,644
570	6,903	720	196,552

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12010	12441	15885	14606	12987	19988	41758	85990	129316	88805	26760	10973
2	11909	12537	15991	14379	12053	20547	43035	89191	130086	85990	25580	10762
3	11808	12630	16114	14175	11073	21026	43782	91945	130563	83368	24480	10569
4	11699	12723	16953	13973	10050	21459	44388	94089	131116	80785	23463	10393
5	11587	12803	17573	13887	9633	21859	45085	96000	131835	78214	22271	10216
6	11472	12897	17883	13859	9540	22237	46006	97655	132334	75542	20935	10042
7	11350	12987	18133	13863	9438	22592	47037	99127	132426	72692	19726	9867
8	11217	13082	18344	13882	9354	22951	47880	100660	132426	69789	19008	9683
9	11101	13178	18534	13901	9658	23315	48844	102450	132408	66892	18546	9491
10	10981	13279	18725	13916	9969	23682	49968	104388	132204	64387	18098	9337
11	10859	13376	18815	13930	10603	24075	50991	106359	131632	62112	17641	9178
12	10738	13506	18790	13944	11009	24429	51990	108144	130711	59818	17188	9072
13	10630	13660	18754	13963	11419	24970	52553	109926	129517	57545	16716	9001
14	10542	13802	18713	13978	11888	25468	54177	111618	128073	55259	16232	8947
15	10481	13944	18665	13997	12537	25919	55465	112735	126510	52942	15754	8910
16	10477	14074	18635	13992	13073	26345	56953	113476	124792	50679	15281	8877
17	10580	14204	18569	13973	13632	26776	58501	114030	123013	48552	14825	8840
18	10738	14331	18480	13954	14224	27227	60184	114776	121175	46498	14379	8813
19	10895	14458	18274	13954	14830	27834	61919	115506	119313	44602	13939	8787
20	11041	14581	17993	13963	15436	29785	63212	116204	117411	43003	13506	8754
21	11173	14705	17710	13973	16018	31023	64400	116693	115489	41491	13078	8655
22	11293	14825	17430	13987	16568	32638	65720	117271	113459	39980	12852	8573
23	11403	14951	17081	14069	17109	33735	67563	118079	111412	38455	12692	8457
24	11505	15077	16748	14151	17635	34525	69310	118872	108889	36937	12542	8332
25	11608	15199	16459	14170	18133	35355	71648	120233	106124	35420	12393	8212
26	11733	15322	16184	14146	18671	36727	74294	121816	103325	33861	12215	8090
27	11871	15436	15917	14190	19117	37861	76027	123121	100512	32576	12019	7972
28	12002	15555	15654	14482	19527	38739	77968	124360	97622	31452	11816	7868
29	12125	15665	15389	15143	---	39620	80256	125641	94661	30311	11604	7765
30	12233	15780	15103	14860	---	40524	81790	126945	91710	29149	11395	7702
31	12336	---	14855	13963	---	41347	---	128292	---	27953	11185	---
MAX	12336	15780	18815	15143	19527	41347	81790	128292	132426	88805	26760	10973
MIN	10477	12441	14855	13859	9354	19988	41758	85990	91710	27953	11185	7702
†	585.54	592.73	590.93	589.11	599.29	625.94	658.09	686.15	664.60	611.22	582.78	572.78
‡	+232	+3444	-925	-892	+5564	+21820	+40443	+46502	-36582	-63757	-16768	-3483
††	248	146	69	76	74	182	457	999	1549	1199	475	250

CAL YR 1980 † -1009

WTR YR 1981 ‡ -4402

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

TULARE LAKE BASIN

11210930 FOOTHILL DITCH BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'48", long 119°00'47", in NW¼NE¼ sec.35, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.7 mi (1.1 km) downstream from Terminus Dam, and 2.1 mi (3.4 km) northeast of Lemoncove.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 492.8 ft (150.21 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Ditch receives water from Lake Kaweah (station 11210900) which is used for irrigation.

AVERAGE DISCHARGE.--20 years, 18.2 ft³/s (0.515 m³/s), 13,190 acre-ft/yr (16.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50 ft³/s (1.42 m³/s) Apr. 7, 1979; no flow many days in 1975, 1978-81.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	12	0			0	14	15	14	17	15
2	16	14	12	0			0	13	15	14	17	15
3	16	14	12	0			0	13	15	13	17	15
4	16	14	6.1	0			0	16	16	13	17	15
5	16	13	0	7.7			0	16	16	13	18	15
6	16	13	0	11			0	16	17	13	18	15
7	16	13	0	9.9			0	16	17	13	18	15
8	17	13	0	9.6			4.3	16	17	13	16	15
9	17	13	0	9.6			7.8	17	17	13	15	15
10	17	13	0	9.6			8.3	16	18	13	16	15
11	17	13	0	9.6			8.4	17	18	13	17	15
12	17	14	0	9.4			8.4	17	16	14	16	15
13	16	13	0	9.4			13	17	14	14	16	15
14	16	13	0	9.4			17	17	14	13	17	15
15	16	13	0	9.4			17	17	15	13	17	15
16	16	13	0	9.4			17	17	15	13	17	15
17	15	13	0	9.4			17	16	15	14	17	15
18	14	13	0	9.4			17	16	16	14	16	15
19	14	13	0	9.3			17	16	16	14	17	14
20	14	13	0	3.0			6.7	16	16	14	17	14
21	14	12	0	0			0	14	16	16	17	14
22	14	12	0	0			0	14	16	16	15	13
23	14	12	0	0			0	14	16	16	13	14
24	14	12	0	0			5.0	14	15	16	14	13
25	14	12	0	0			8.0	14	14	16	13	13
26	14	12	0	0			8.1	14	14	16	13	13
27	14	12	0	0			11	14	14	16	14	13
28	14	12	0	0			13	14	13	16	14	13
29	14	12	0	0	---		13	14	13	16	15	13
30	14	12	0	0	---		13	15	13	17	15	13
31	14	---	0	0	---		---	15	---	17	15	---
TOTAL	472	385	42.1	145.1	0	0	230.0	475	462	446	494	430
MEAN	15.2	12.8	1.36	4.68	0	0	7.67	15.3	15.4	14.4	15.9	14.3
MAX	17	14	12	11	0	0	17	17	18	17	18	15
MIN	14	12	0	0	0	0	0	13	13	13	13	13
AC-FT	936	764	84	288	0	0	456	942	916	885	980	853
CAL YR 1980 TOTAL	4596.50		MEAN 12.6	MAX 27	MIN 0	AC-FT 9120						
WTR YR 1981 TOTAL	3581.20		MEAN 9.81	MAX 18	MIN 0	AC-FT 7100						

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'51", long 119°00'42", in SE4SE4 sec.26, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.6 mi (1.0 km) downstream from Terminus Dam, and 2.2 mi (3.5 km) northeast of Lemoncove.

DRAINAGE AREA.--561 mi² (1,453 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CA-71-2: 1963.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 495.90 ft (151.150 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records excellent. Flow regulated by Lake Kaweah (station 11210900). Lemoncove ditch (station 11210850) diverts water from Lake Kaweah for irrigation. Foothill ditch (station 11210930) diverts water from the gage pool for irrigation. Doffelmyer ditch diverts up to 3 ft³/s (0.085 m³/s) above station for irrigation. At times some of this water is returned to the river above the station.

AVERAGE DISCHARGE (adjusted for change in contents, evaporation, and diversion).--20 years, 640 ft³/s (18.12 m³/s), 463,700 acre-ft/yr (572 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,610 ft³/s (159 m³/s) June 3, 1969, gage height, 8.77 ft (2.673 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,780 ft³/s (50.4 m³/s) June 24, gage height, 5.78 ft (1.762 m); minimum daily, 9.1 ft³/s (0.26 m³/s) Nov. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	14	11	241	794	42	78	231	683	1680	656	106
2	96	15	12	227	785	39	72	240	760	1620	648	105
3	96	15	12	216	797	35	95	242	764	1520	597	96
4	96	15	16	214	798	35	118	242	781	1480	546	88
5	96	15	24	143	466	35	119	234	813	1480	630	86
6	96	13	23	87	258	36	101	217	882	1520	722	86
7	98	13	23	73	250	36	100	203	926	1610	660	85
8	110	13	23	61	248	36	133	199	911	1630	402	89
9	110	14	23	63	248	36	143	201	915	1610	256	93
10	109	15	22	63	134	36	146	202	935	1400	246	79
11	109	15	55	63	44	36	154	282	994	1280	249	77
12	109	15	122	64	45	44	156	408	1090	1270	249	61
13	104	14	132	64	41	44	154	476	1150	1260	257	43
14	101	14	133	63	38	34	153	494	1190	1260	265	39
15	99	11	133	63	38	34	167	494	1230	1280	263	33
16	97	11	133	70	39	37	175	485	1290	1250	261	29
17	53	12	157	77	39	40	179	472	1320	1190	253	28
18	11	9.4	177	78	40	40	185	460	1340	1150	247	25
19	11	9.5	227	70	40	41	161	433	1350	1060	244	22
20	13	9.5	268	69	40	26	162	407	1350	927	241	22
21	15	9.2	267	77	41	28	174	405	1370	867	238	25
22	15	9.1	266	77	42	31	161	402	1380	872	140	38
23	15	9.1	297	95	42	65	179	394	1380	869	90	55
24	15	9.1	296	102	42	134	199	391	1590	867	87	59
25	15	9.5	261	103	43	123	205	395	1690	869	82	60
26	15	9.5	261	109	43	95	206	420	1680	890	94	61
27	15	9.5	261	116	42	85	204	431	1670	742	105	61
28	15	9.7	260	205	42	85	203	425	1690	641	105	56
29	15	11	259	312	---	85	204	431	1710	646	108	54
30	14	11	257	595	---	86	214	506	1700	657	107	41
31	14	---	248	784	---	85	---	546	---	666	106	---
TOTAL	1873	359.1	4659	4644	5519	1644	4700	11368	36534	36063	9154	1802
MEAN	60.4	12.0	150	150	197	53.0	157	367	1218	1163	295	60.1
MAX	110	15	297	784	798	134	214	546	1710	1680	722	106
MIN	11	9.1	11	61	38	26	72	199	683	641	82	22
AC-FT	3720	712	9240	9210	10950	3260	9320	22550	72470	71530	18160	3570
MEAN ‡	89.9	90.1	141	144	300	412	855	1162	652	169	54.2	27.6
AC-FT ‡	5530	5360	8650	8830	16640	25330	50900	71430	38800	10350	3330	1640
CAL YR 1980 TOTAL	434804.1			MEAN 1188	MAX 4490	MIN 9.1	AC-FT 862400	MEAN ‡ 1214	AC-FT ‡ 881100			
WTR YR 1981 TOTAL	118319.1			MEAN 324	MAX 1710	MIN 9.1	AC-FT 234700	MEAN ‡ 341	AC-FT ‡ 246800			

‡ Adjusted for change in contents and evaporation in Lake Kaweah and for diversions to Lemoncove and Foothill ditches.

TULARE LAKE BASIN

11210950 KANEAH RIVER BELOW TERMINUS DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

CHEMICAL ANALYSES: Water years 1962-79.

WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 29.5°C Sept. 1, 2, 4, 1976; minimum recorded, 5.0°C Jan. 9, 10, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 28.0°C Aug. 13, 16; minimum recorded 7.5°C Dec. 11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.0	20.0	18.5	12.5	13.0	9.0	10.0	9.0	9.5	8.5	11.0	10.0
2	22.5	19.0	18.0	14.0	12.0	10.0	10.0	8.0	9.5	8.5	14.5	10.0
3	23.0	19.5	18.0	13.0	12.0	10.0	10.0	8.5	9.5	8.5	14.0	10.0
4	23.0	19.5	18.5	13.0	12.0	10.5	9.5	8.5	9.5	8.5	12.5	9.5
5	23.0	19.5	18.0	14.0	13.0	9.5	10.0	9.0	10.0	8.0	10.5	10.0
6	23.0	19.0	17.5	14.0	12.5	10.0	10.5	8.5	10.0	8.0	12.5	9.5
7	22.5	20.0	18.0	13.0	11.0	9.5	10.0	8.5	10.0	8.5	14.0	10.0
8	22.5	20.0	17.5	13.5	11.0	9.0	10.0	8.5	9.5	8.5	15.0	10.5
9	23.0	19.5	17.5	14.0	11.5	8.0	10.0	8.5	9.5	9.0	15.5	10.0
10	22.5	19.5	17.5	14.0	11.0	8.0	10.0	8.0	11.0	9.0	15.5	10.0
11	22.5	19.5	15.5	14.0	11.0	7.5	9.5	8.0	12.0	8.5	15.0	10.0
12	22.5	19.5	16.0	14.0	10.5	9.0	10.0	8.0	13.0	8.5	14.5	10.5
13	22.5	19.0	16.5	12.5	10.5	9.0	10.0	8.0	11.5	9.0	12.5	10.0
14	21.5	19.0	16.5	12.5	10.5	8.5	10.5	8.0	13.5	9.0	13.5	10.0
15	20.5	18.5	16.0	12.5	10.5	8.5	10.5	8.0	12.5	9.5	14.0	9.5
16	20.0	17.5	16.0	11.0	10.5	8.5	10.5	8.0	14.0	9.5	14.0	10.0
17	20.5	17.0	15.5	11.5	10.0	8.5	10.0	8.5	12.0	9.0	14.0	11.0
18	20.0	14.5	15.5	10.0	10.0	9.0	10.5	8.0	13.0	10.0	---	---
19	20.0	14.0	15.0	10.0	10.0	8.5	11.0	8.0	13.0	10.0	---	---
20	20.0	14.5	15.0	10.0	10.0	8.5	11.0	8.0	12.0	10.0	---	---
21	19.5	15.0	14.0	9.5	10.0	9.0	10.5	8.5	13.5	8.0	14.0	11.0
22	19.5	14.5	14.5	11.0	10.0	9.0	10.0	8.5	13.5	9.0	17.0	10.5
23	20.0	15.0	13.5	9.5	10.0	9.0	10.5	9.0	13.5	8.5	15.5	11.0
24	20.0	15.0	12.5	11.0	10.0	8.5	11.5	8.5	12.0	9.5	13.5	10.5
25	18.0	15.0	14.0	9.5	10.0	9.5	10.0	8.5	12.5	9.0	13.5	10.5
26	18.5	15.0	14.0	9.5	10.0	9.0	10.5	8.5	12.0	9.0	13.0	10.5
27	19.0	14.5	13.5	9.0	10.0	9.0	10.5	9.0	13.5	8.5	12.0	10.0
28	19.0	14.0	14.0	9.5	10.0	9.0	10.0	9.5	11.5	9.5	14.0	10.0
29	19.0	14.0	13.0	9.5	9.5	9.5	10.0	9.0	---	---	13.5	10.5
30	18.5	13.5	13.0	10.0	10.0	9.0	10.0	9.5	---	---	14.5	10.0
31	19.0	14.0	---	---	10.0	8.5	9.5	8.5	---	---	13.5	10.0
MONTH	23.0	13.5	18.5	9.0	13.0	7.5	11.5	8.0	14.0	8.0	17.0	9.5

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	10.5	14.0	12.0	---	---	17.0	16.0	27.5	25.5		
2	11.5	10.5	14.0	12.0	---	---	17.5	16.0	27.0	26.0		
3	14.0	10.0	14.0	12.0	---	---	18.0	17.0	27.0	26.0		
4	14.0	10.5	14.0	12.0	---	---	18.0	17.5	27.5	26.0		
5	13.5	10.5	14.5	12.0	---	---	18.5	17.0	---	---		
6	14.5	10.5	15.0	12.0	---	---	18.0	17.5	27.5	26.0		
7	14.0	11.0	14.5	12.0	---	---	20.5	17.0	27.0	26.0		
8	13.5	11.0	15.0	12.0	14.5	13.5	20.5	17.5	27.5	26.5		
9	13.0	10.5	14.5	12.5	---	---	19.0	18.0	27.0	26.0		
10	13.0	11.0	15.0	12.5	14.5	13.5	19.5	18.5	27.0	26.0		
11	13.5	11.0	14.0	12.5	14.5	13.5	20.0	19.0	26.5	26.0		
12	13.5	11.0	14.0	12.0	14.5	13.5	20.0	19.0	27.0	26.0		
13	13.5	11.0	---	---	14.5	14.0	21.0	19.0	28.0	26.0		
14	14.0	11.0	---	---	15.0	13.5	21.0	19.5	27.5	26.5		
15	13.5	11.5	---	---	15.0	14.5	21.5	20.5	27.5	26.5		
16	13.5	10.5	---	---	15.0	13.5	22.0	21.0	28.0	26.5		
17	13.5	10.5	13.5	12.5	15.0	14.0	22.5	22.0	27.0	26.5		
18	12.0	11.5	---	---	15.0	14.0	23.0	22.5	27.0	26.0		
19	12.5	11.5	14.0	13.0	15.0	14.0	24.0	23.0	26.5	26.0		
20	14.5	11.0	14.0	13.0	15.5	14.5	25.5	23.0	---	---		
21	14.0	11.5	14.5	13.0	15.5	14.5	25.5	23.5	---	---		
22	---	---	---	---	15.5	15.0	25.5	24.0	---	---		
23	14.0	11.0	---	---	16.0	15.0	26.0	24.0	---	---		
24	14.0	10.5	---	---	16.0	15.0	26.0	24.0	---	---		
25	14.5	11.0	---	---	16.0	15.5	26.5	24.0	---	---		
26	14.0	12.0	---	---	16.0	15.5	26.0	24.5	---	---		
27	14.0	11.0	---	---	16.5	15.5	27.0	24.5	---	---		
28	14.0	11.5	---	---	16.5	15.5	26.5	25.0	---	---		
29	14.0	12.0	---	---	16.5	15.5	27.0	25.5	---	---		
30	---	---	---	---	17.0	15.5	27.0	25.0	---	---		
31	---	---	---	---	---	---	27.0	25.0	---	---		
MONTH	14.5	10.0	---	---	---	---	27.0	16.0	---	---		

TULARE LAKE BASIN

11211300 DRY CREEK NEAR LEMONCOVE, CA

LOCATION.--Lat 36°26'51", long 119°01'38", in NE4SE4 sec.15, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on right bank 0.5 mi (0.8 km) downstream from Bequette Canyon, 2.9 mi (4.7 km) upstream from mouth, and 4.4 mi (7.1 km) north of Lemoncove.

DRAINAGE AREA.--75.6 mi² (195.8 km²).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 570 ft (174 m), from topographic map. Prior to Mar. 8, 1969, 1.6 mi (2.6 km) downstream at different datum.

REMARKS.--Records good. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--22 years, 21.0 ft³/s (0.595 m³/s), 15,210 acre-ft/yr (18.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) Dec. 6, 1966, gage height, 7.30 ft (2.225 m) in gage well, 8.94 ft (2.725 m) from floodmarks, site and datum then in use; no flow for several months in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a discharge of 6,070 ft³/s (172 m³/s) from slope-area measurement. Flood of 1867 is believed to have exceeded that of December 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 29	1215	164 4.64	3.08 0.939	Apr. 19	1515	56 1.59	2.33 .710
Mar. 20	0545	*307 8.69	3.73 1.137	May 27	0400	57 1.61	2.34 .713
Mar. 27	0015	79 2.24	2.52 .768				

Minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.73	2.2	3.4	22	14	27	9.0	3.8			
2	0	.73	2.5	3.4	19	38	26	8.5	3.2			
3	0	.82	3.5	3.4	16	27	27	8.3	2.7			
4	0	.82	10	3.4	14	19	24	8.1	2.4			
5	0	.82	16	3.4	12	16	21	7.8	2.0			
6	0	.82	6.9	3.4	11	15	20	7.7	1.1			
7	0	.92	3.9	3.4	10	13	19	7.3	.70			
8	0	.92	2.9	3.4	10	12	18	7.2	.69			
9	0	1.0	2.6	3.4	34	11	17	6.9	.68			
10	0	1.1	2.3	3.4	27	11	15	6.9	.64			
11	0	1.3	2.2	3.1	18	10	15	6.7	.61			
12	0	1.4	2.4	3.1	15	10	14	6.3	.60			
13	0	1.6	2.5	3.1	14	16	13	6.0	.60			
14	0	2.0	2.5	3.1	15	21	12	6.1	.61			
15	0	2.2	2.5	3.3	19	15	12	6.0	.61			
16	0	2.2	2.5	3.4	15	13	11	6.0	.60			
17	.13	2.2	2.5	3.4	14	12	10	6.0	.57			
18	.30	2.5	2.5	3.4	13	12	12	5.8	.49			
19	.39	2.2	2.5	3.4	12	18	45	5.5	.42			
20	.39	2.2	2.5	3.4	12	178	40	5.8	.37			
21	.39	2.5	2.5	3.1	11	82	27	5.8	.30			
22	.39	2.5	2.8	3.1	10	121	23	5.3	.23			
23	.39	2.5	3.0	13	9.5	66	19	5.2	.16			
24	.33	2.5	3.1	15	9.2	48	16	4.9	.11			
25	.33	2.7	3.1	6.7	9.0	39	13	4.7	.08			
26	.44	2.8	3.1	3.9	14	54	13	4.8	.05			
27	.65	2.8	3.3	5.9	14	61	12	30	.03			
28	.82	2.8	3.4	41	11	44	12	11	0			
29	.82	2.5	3.4	108	---	37	11	6.6	0			
30	.82	2.4	3.4	66	---	33	9.8	4.9	0			
31	.82	---	3.4	35	---	30	---	4.5	---			---
TOTAL	7.41	54.48	111.9	367.4	409.7	1096	553.8	225.6	24.35	0	0	0
MEAN	.24	1.82	3.61	11.9	14.6	35.4	18.5	7.28	.81	0	0	0
MAX	.82	2.8	16	108	34	178	45	30	3.8	0	0	0
MIN	0	.73	2.2	3.1	9.0	10	9.8	4.5	0	0	0	0
AC-FT	15	108	222	729	813	2170	1100	447	48	0	0	0
CAL YR 1980	TOTAL	19241.30	MEAN	52.6	MAX	1290	MIN	0	AC-FT	38170		
WTR YR 1981	TOTAL	2650.64	MEAN	7.81	MAX	178	MIN	0	AC-FT	5650		

11211790 COTTONWOOD CREEK NEAR ELDERWOOD, CA

LOCATION.--Lat 36°31'47", long 119°07'33", in SE4SE4 sec.15, T.16 S., R.26 E., Tulare County, Hydrologic Unit 18030012, on left bank 25 ft (8 m) upstream from State Highway 65 bridge, 4.0 mi (6.4 km) north of Elderwood, and 8.0 mi (12.9 km) north of Woodlake.

DRAINAGE AREA.--60.4 mi² (156.4 km²).

PERIOD OF RECORD.--February 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 575 ft (175.3 m), from topographic map.

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

AVERAGE DISCHARGE.--10 years, 12.0 ft³/s (0.340 m³/s), 8,690 acre-ft/yr (10.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) Apr. 1, 1974, gage height, 5.56 ft (1.695 m), maximum gage height, 7.65 ft (2.332 m) Feb. 20, 1980 (backwater from debris); no flow for several months in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 24, 1969, reached a stage of 10.4 ft (3.17 m) from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 30	0015	107 3.03	3.02 0.920	Mar. 13	1730	69 1.95	2.75 .838
Mar. 2	0845	54 1.53	2.62 .799	Mar. 20	0145	*548 15.5	4.53 1.381

Minimum, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.6	4.3	5.6	39	12	18	4.0	.62			
2	1.0	1.5	4.5	5.4	32	38	17	3.8	.59			
3	.87	1.5	4.8	5.4	28	25	15	3.6	.57			
4	.78	1.5	10	5.6	25	20	12	3.7	.55			
5	.78	1.6	14	5.4	24	18	10	3.7	.45			
6	.81	1.8	9.4	5.4	21	16	9.6	3.6	.41			
7	.60	1.8	6.4	5.5	20	14	8.7	3.5	.30			
8	.29	2.0	4.5	5.4	21	12	7.8	3.2	.23			
9	.24	2.1	3.9	5.4	54	11	7.2	3.2	.19			
10	.34	2.2	4.1	5.2	34	9.9	6.3	3.1	.17			
11	.47	2.2	4.3	5.1	21	9.4	5.8	3.1	.12			
12	.82	2.2	4.6	5.1	16	9.1	5.4	3.1	.06			
13	1.0	2.4	4.3	4.8	14	38	4.9	3.0	.04			
14	1.6	2.8	3.9	4.5	15	33	4.6	3.1	.03			
15	2.8	3.5	4.0	4.8	15	18	4.3	3.1	.01			
16	3.2	4.3	4.5	4.5	13	15	3.9	3.1	0			
17	3.4	3.8	4.5	4.5	12	14	3.7	3.1	0			
18	4.1	3.7	4.6	4.4	10	14	3.9	2.9	0			
19	2.2	4.0	4.7	4.3	9.8	24	23	3.5	0			
20	1.6	4.3	4.8	4.3	9.8	294	18	3.9	0			
21	1.5	4.3	4.9	4.1	8.9	69	11	3.5	0			
22	1.5	4.4	5.0	4.0	8.1	194	9.1	3.0	0			
23	1.5	4.6	5.3	17	7.8	55	7.8	2.7	0			
24	1.5	5.1	5.4	20	7.1	41	7.2	2.2	0			
25	1.5	5.1	5.1	11	6.6	34	6.9	1.6	0			
26	1.5	5.1	5.5	9.3	15	39	6.7	1.9	0			
27	1.5	5.1	6.1	13	9.5	35	6.0	3.0	0			
28	1.6	5.1	5.2	51	7.3	28	5.6	2.3	0			
29	1.9	4.8	5.0	126	---	25	5.1	1.2	0			
30	2.8	4.7	5.3	107	---	21	4.4	.80	0			
31	1.8	---	5.6	69	---	19	---	.66	---			---
TOTAL	46.70	99.1	168.5	532.0	503.9	1204.4	258.9	90.16	4.34	0	0	0
MEAN	1.51	3.30	5.44	17.2	18.0	38.9	8.63	2.91	.14	0	0	0
MAX	4.1	5.1	14	126	54	294	23	4.0	.62	0	0	0
MIN	.24	1.5	3.9	4.0	6.6	9.1	3.7	.66	0	0	0	0
AC-FT	93	197	334	1060	999	2390	514	179	8.6	0	0	0
CAL YR 1980 TOTAL	7704.09			MEAN 21.0	MAX 522	MIN 0	AC-FT 15280					
WTR YR 1981 TOTAL	2908.00			MEAN 7.97	MAX 294	MIN 0	AC-FT 5770					

TULARE LAKE BASIN

11212000 SAND CREEK NEAR ORANGE COVE, CA

LOCATION.--Lat 36°37'36", long 119°14'48", in SW¼NW¼ sec.15, T.15 S., R.25 E., Tulare County, Hydrologic Unit 18030012, on right bank 3.8 mi (6.1 km) east of Orange Cove.

DRAINAGE AREA.--31.6 mi² (81.8 km²).

PERIOD OF RECORD.--October 1944 to September 1954, annual maximum, water years 1956, 1967, 1969, February 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 490 ft (149 m), from topographic map.

REMARKS.--Records fair. Flood control dam 2.9 mi (4.7 km) upstream was completed in October 1980. Capacity, 1,200 acre-feet (1.48 hm³) at maximum design release of 700 ft³/s (19.8 m³/s).

AVERAGE DISCHARGE.--20 years (water years 1945-54, 1972-81), 3.15 ft³/s (0.089 m³/s), 2,280 acre-ft/yr (2.81 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Feb. 10, 1978, gage height, 5.78 ft (1.762 m), in gage well, 6.38 ft (1.945 m) from floodmarks, from rating curve extended above 160 ft³/s (4.53 m³/s) on basis of slope-area measurement of peak flow; no flow for several months in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, reached a stage of 8.35 ft (2.545 m) from floodmarks, discharge, 2,900 ft³/s (82.1 m³/s). Maximum discharge since 1944, 3,520 ft³/s (99.7 m³/s) Jan. 25, 1969, gage height, 8.75 ft (2.667 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49 ft³/s (1.39 m³/s) Mar. 20, gage height, 2.96 ft (0.902 m); minimum, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.3	1.7	2.0	6.3	4.6	1.8	1.7				
2	.22	1.3	1.8	2.0	4.9	7.5	2.0	1.5				
3	.08	1.3	1.8	2.0	4.2	4.8	1.9	1.4				
4	.05	1.4	2.5	2.0	3.7	4.1	1.7	1.6				
5	.03	1.4	2.4	2.0	3.3	3.9	1.5	1.3				
6	.03	1.3	1.9	2.0	3.1	3.6	1.6	1.2				
7	.07	1.4	1.8	2.0	2.9	3.1	1.6	1.1				
8	.29	1.4	1.8	2.0	3.1	3.0	1.6	.99				
9	.48	1.5	1.7	2.0	11	2.9	1.6	.85				
10	.41	1.5	1.8	2.0	6.5	2.9	1.6	.67				
11	.41	1.6	1.8	2.0	4.7	2.9	1.6	.59				
12	.50	1.6	1.8	2.0	4.1	2.8	1.6	.45				
13	.68	1.7	1.8	2.0	3.6	8.9	1.6	.32				
14	.94	1.6	1.8	2.0	3.9	6.9	1.5	.26				
15	1.2	1.6	1.8	2.0	4.0	4.5	1.6	.24				
16	1.4	1.7	1.8	2.0	3.5	3.7	1.5	.33				
17	1.5	1.6	1.9	2.0	3.3	3.4	1.6	.39				
18	1.4	1.6	1.8	2.0	3.1	3.9	2.1	.32				
19	1.4	1.6	1.9	2.0	3.0	6.5	14	.44				
20	1.4	1.6	1.9	2.0	3.0	28	9.0	.89				
21	1.4	1.6	2.0	1.8	3.0	9.0	4.3	.98				
22	1.3	1.6	2.0	1.8	2.8	15	3.5	.66				
23	1.3	1.6	2.0	4.2	2.9	6.5	3.1	.44				
24	1.2	1.6	2.0	3.2	2.9	3.8	2.8	.29				
25	1.3	1.6	2.0	2.1	3.0	2.8	2.7	.20				
26	1.5	1.6	2.1	1.9	5.3	6.0	2.6	.18				
27	1.6	1.7	2.2	3.2	3.8	4.0	2.6	.16				
28	1.5	1.7	2.0	9.1	3.4	2.7	2.4	.19				
29	1.4	1.8	2.0	17	---	2.3	2.2	.13				
30	1.4	1.8	2.0	23	---	2.0	1.9	.04				
31	1.4	---	2.0	11	---	1.9	---	0	---			---
TOTAL	29.19	46.6	59.8	118.3	112.3	167.9	81.1	19.81	0	0	0	0
MEAN	.94	1.55	1.93	3.82	4.01	5.42	2.70	.64	0	0	0	0
MAX	1.6	1.8	2.5	23	11	28	14	1.7	0	0	0	0
MIN	.03	1.3	1.7	1.8	2.8	1.9	1.5	0	0	0	0	0
AC-FT	58	92	119	235	223	333	161	39	0	0	0	0

CAL YR 1980 TOTAL 2974.95 MEAN 8.13 MAX 235 MIN 0 AC-FT 5900
WTR YR 1981 TOTAL 635.00 MEAN 1.74 MAX 28 MIN 0 AC-FT 1260

11212423 SOUTH FORK KINGS RIVER AT CEDAR GROVE, CA

LOCATION.--Lat 36°47'25", long 118°40'08", unsurveyed, Fresno County, Hydrologic Unit 18030010, at bridge at Cedar Grove, 500 ft (152 m) upstream from Hotel Creek.

DRAINAGE AREA.--355 mi² (919 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1973-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO ₃)	CALCIUM CA,DISS (MG/L)	MANGANESE MG,DISS (MG/L)	SODIUM NA,DISS (MG/L)
80/11/25	11 15	43	7.2	2.0	11.9						
81/04/22	10 45	30	7.3	7.0	11.2	4.0	0.6	8	3	0	2
81/05/27	10 50	23	7.2	7.0	10.0						
81/06/24	09 30	24	7.4	16.0	8.8			5	2	0	1

DATE	TIME	POTASSIUM K,DISS (MG/L)	ALKALI- LINEITY (MG/L)	SULFATE SO ₄ -DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO ₂ +NO ₃ N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/11/25	11 15							0.02	0.00	0.20	0.00
81/04/22	10 45	0.5	6	0	1	25	3	0.02	0.00	0.10	0.01
81/05/27	10 50							0.03	0.00	0.10	0.01
81/06/24	09 30	0.3	4	1	1	15		0.02	0.00	0.00	0.01

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)
80/11/25	11 15	0.00	
81/04/22	10 45	0.00	2.1
81/05/27	10 50	0.00	
81/06/24	09 30	0.00	

DATE	TIME	ARSENIC AS,DISS (UG/L)	BARIUM BA,DISS (UG/L)	BORON B,DISS (UG/L)	CADMIUM CD,DISS (UG/L)	CHROMIUM CR,DISS (UG/L)	COPPER CU,DISS (UG/L)	IRON FE,DISS (UG/L)	LEAD PB,DISS (UG/L)	MANGANESE MN,DISS (UG/L)	MERCURY HG,TOTAL (UG/L)
81/04/22	10 45	0	0	0	0	0	0	20	0	0	0.0
81/06/24	09 30	0	0	0	0	0	0	20	0	0	0.0

DATE	TIME	SELENIUM SE,DISS (UG/L)
81/04/22	10 45	10
81/06/24	09 30	10

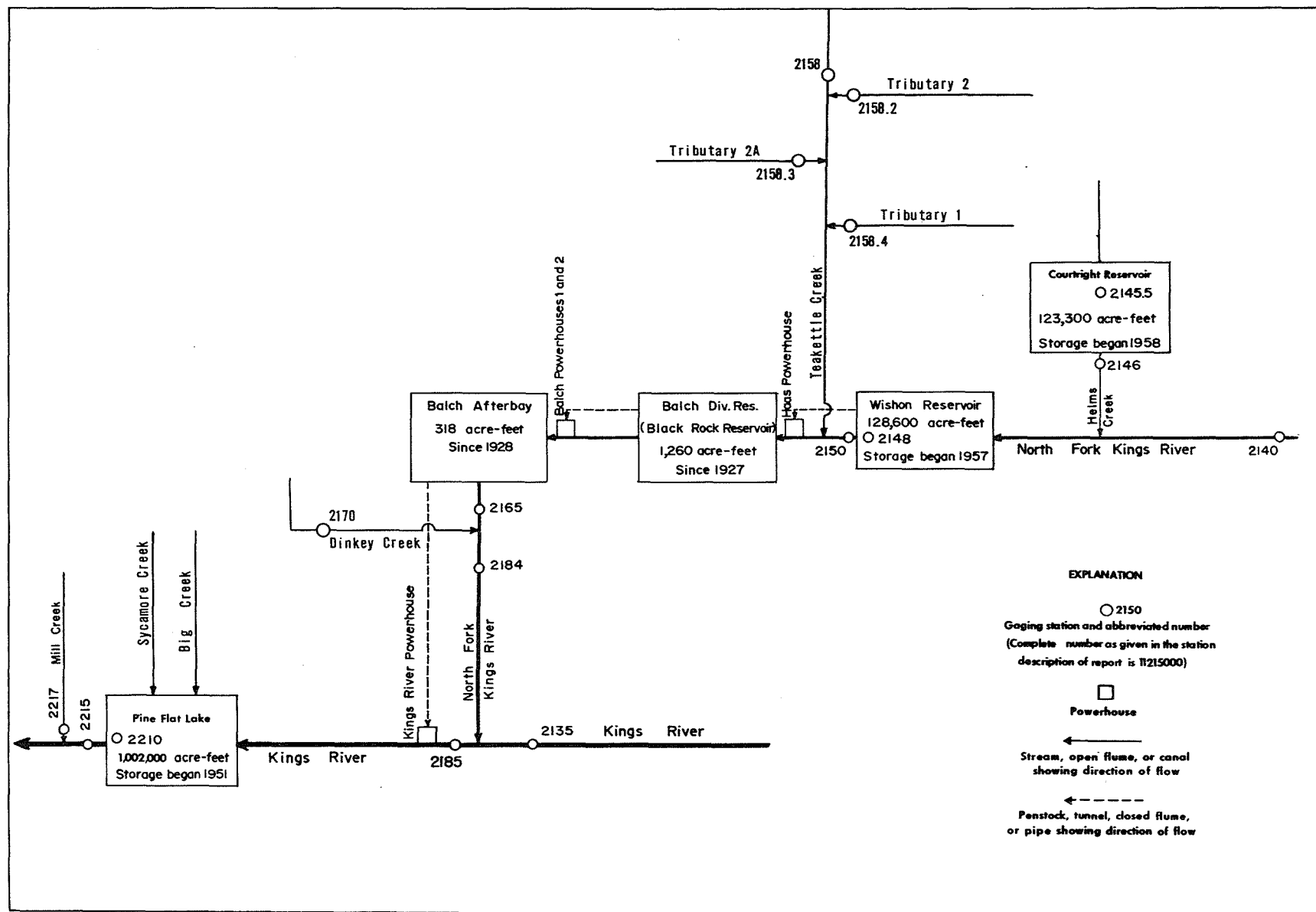


FIGURE 7--Schematic diagram showing diversions and storage in Kings River basin.

11213500 KINGS RIVER ABOVE NORTH FORK, NEAR TRIMMER, CA

LOCATION.--Lat 36°51'48", long 119°07'24", in NW¼NE¼ sec.27, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, on right bank at Rogers Crossing, 0.9 mi (1.4 km) upstream from North Fork, 2.9 mi (4.7 km) south of Balch Camp, and 9.6 mi (15.4 km) southeast of Trimmer.

DRAINAGE AREA.--952 mi² (2,466 km²).

PERIOD OF RECORD.--October 1926 to December 1928, October 1931 to current year. Monthly figures only for some periods, published in WSP 1315-A. Prior to September 1965, published as Kings River above North Fork.

REVISED RECORDS.--WSP 1395: 1938(M), 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,001.5 ft (305.26 m) National Geodetic Vertical Datum of 1929 (river-profile survey). March 1927 to December 1928, at site 0.5 mi (0.8 km) downstream at different datum. October 1931 to September 1965, on left bank at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. No diversion or regulation above station. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE.--52 years, 1,435 ft³/s (40.64 m³/s), 1,040,000 acre-ft/yr (1.28 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,100 ft³/s (1,670 m³/s) Dec. 23, 1955, gage height, 18.26 ft (5.566 m) present datum, from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 70 ft³/s (1.98 m³/s) Jan. 14, 1963, Oct. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,580 ft³/s (186 m³/s) May 2 (0115 hrs), gage height, 7.43 ft (2.265 m), no other peak above base of 6,300 ft³/s (178 m³/s); minimum daily, 158 ft³/s (4.47 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	245	200	232	438	442	847	5080	4490	1070	363	210
2	313	244	192	222	474	457	840	5550	4680	1040	351	202
3	309	243	208	223	444	441	814	4770	3900	949	340	195
4	306	239	574	226	419	424	772	3910	4180	902	327	190
5	301	235	403	214	402	413	818	3660	4870	874	311	183
6	295	232	297	207	386	403	940	3210	5170	909	299	180
7	290	229	277	206	364	397	1050	2910	4590	922	290	175
8	285	227	256	200	363	393	1080	2910	4270	891	284	173
9	281	226	255	201	557	393	1190	3460	4350	828	280	181
10	277	220	266	204	508	396	1350	3950	4000	763	277	205
11	274	220	266	194	450	410	1300	4210	3430	697	275	205
12	272	297	264	197	443	416	1260	4440	3210	645	277	205
13	273	284	262	199	432	513	1310	4810	2500	590	279	205
14	276	261	259	199	523	463	1420	4900	1980	553	304	204
15	287	253	254	199	588	468	1610	3630	1790	531	316	196
16	308	240	266	199	517	457	1840	2670	1780	533	324	195
17	307	234	272	198	544	461	2000	2360	1870	556	305	190
18	309	238	271	193	549	458	2090	2620	1900	561	303	187
19	308	231	265	191	571	617	1960	2370	1950	536	298	184
20	300	229	257	190	585	1060	1660	2090	2040	512	295	182
21	288	221	253	185	568	904	1600	1890	2080	494	280	179
22	280	222	245	187	544	986	1820	1960	2000	479	262	176
23	273	224	248	222	535	941	2620	2260	2010	465	247	174
24	265	219	245	236	526	856	3570	2200	1850	457	234	171
25	259	210	239	206	507	882	3840	3140	1700	449	225	168
26	279	209	238	190	494	1140	3410	3550	1490	429	217	168
27	281	209	243	286	454	980	2800	3490	1390	412	211	166
28	277	205	247	568	444	900	2870	3590	1320	396	216	163
29	262	206	245	636	---	927	3490	3940	1210	389	230	160
30	256	205	237	411	---	919	4420	4330	1130	387	223	158
31	249	---	233	385	---	866	---	4530	---	377	216	---
TOTAL	8859	6957	8237	7606	13629	19783	56591	108390	83130	19596	8659	5530
MEAN	286	232	266	245	487	638	1886	3496	2771	632	279	184
MAX	319	297	574	636	588	1140	4420	5550	5170	1070	363	210
MIN	249	205	192	185	363	393	772	1890	1130	377	211	158
AC-FT	17570	13800	16340	15090	27030	39240	112200	215000	164900	38870	17180	10970
CAL YR 1980 TOTAL	911499			2490	MAX 15500	MIN 192	AC-FT 1808000					
WTR YR 1981 TOTAL	346967			951	MAX 5550	MIN 158	AC-FT 688200					

TULARE LAKE BASIN

11214000 NORTH FORK KINGS RIVER BELOW MEADOW BROOK, CA

LOCATION.--Lat 37°04'53", long 118°51'43", in NE¼NE¼ sec.12, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 800 ft (244 m) downstream from Nichols Canyon, 0.6 mi (1.0 km) downstream from Meadow Brook, 3.9 mi (6.3 km) west of Blackcap Mountain, 5.9 mi (9.5 km) east of Courtright Dam, and 23 mi (37 km) southeast of town of Huntington Lake.

DRAINAGE AREA.--37.7 mi² (97.6 km²).

PERIOD OF RECORD.--October 1921 to September 1935, October 1956 to September 1981 (discontinued). Monthly discharge only for some periods and yearly estimates for some incomplete years, published in WSP 1315-A. Records for Jan. 1-23, and Dec. 1-21, 1934, published in WSP 551 and 766, respectively, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1315-A: 1922(M). WSP 1515: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 8,144.66 ft (2,482.492 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--No regulation or diversion above station. See schematic diagram of Kings River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--39 years, 73.6 ft³/s (2.084 m³/s), 58,320 acre-ft/yr (65.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) Sept. 5, 1978, gage height, 6.50 ft (1.981 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s); minimum recorded, 0.28 ft³/s (0.008 m³/s) Dec. 30, 1976, to Jan. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 5.85 ft (1.783 m), from floodmarks, discharge, 2,000 ft³/s (56.6 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
May 1	1845	*606	17.2	4.32	1.317	May 30	2045	542	15.3	4.22	1.286
May 13	1945	542	15.3	4.22	1.286	June 5	1945	599	17.0	4.31	1.314

Minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.6	3.6	6.8	12	14	19	427	396	50	4.7	2.2
2	2.3	3.3	2.7	6.3	12	13	17	438	344	50	4.3	1.9
3	2.2	3.3	3.4	5.7	13	12	16	345	328	39	4.0	1.8
4	2.1	3.2	3.5	5.2	14	11	19	285	399	33	3.7	1.6
5	2.1	3.1	2.6	5.1	14	11	31	255	455	29	3.4	1.5
6	2.1	3.0	3.3	4.7	15	10	45	231	418	28	3.2	1.4
7	2.0	2.9	5.4	4.5	14	10	49	219	358	27	2.9	1.4
8	2.0	2.8	6.7	4.4	15	10	56	252	353	25	2.6	1.7
9	2.0	2.7	9.5	4.1	14	11	72	320	329	22	2.5	1.9
10	2.0	2.6	13	3.9	13	12	71	358	276	22	2.3	1.8
11	2.0	2.6	14	3.8	13	12	62	385	236	19	2.3	2.1
12	2.2	4.8	18	3.8	12	12	64	401	205	17	2.4	2.5
13	2.8	6.4	13	3.7	11	12	76	408	147	15	2.6	3.1
14	2.7	7.3	11	3.8	11	12	93	355	117	14	3.2	3.2
15	3.1	7.5	9.7	3.8	11	12	107	240	107	13	4.6	3.2
16	3.4	5.5	9.2	3.8	12	12	117	180	112	12	5.4	3.1
17	3.6	4.9	10	3.8	15	12	121	191	110	13	4.6	3.4
18	4.9	5.0	12	3.5	16	12	105	194	103	13	3.9	4.2
19	5.0	4.1	12	3.5	19	14	81	158	99	12	3.4	3.8
20	4.3	4.2	10	3.5	18	15	74	146	94	11	3.0	3.3
21	3.9	3.5	8.1	3.5	18	17	88	133	88	10	2.6	3.1
22	3.6	3.5	6.9	3.5	19	17	144	142	81	9.6	2.3	2.8
23	3.4	4.1	6.1	3.6	20	17	213	149	74	8.9	2.1	2.5
24	3.3	3.9	6.0	3.8	18	16	265	194	64	8.2	1.9	2.4
25	3.2	3.3	5.6	4.6	15	18	262	265	56	7.7	1.8	2.2
26	3.4	3.0	5.3	5.1	14	17	207	303	48	7.3	1.7	2.0
27	5.0	3.3	5.3	5.8	13	17	175	300	43	6.6	1.6	1.8
28	4.5	3.2	6.4	8.0	14	16	213	351	40	5.9	3.4	1.7
29	4.3	3.6	7.9	8.9	---	19	297	389	38	5.5	2.9	1.7
30	4.0	3.7	7.1	10	---	20	305	410	42	5.2	2.7	1.7
31	3.7	---	7.2	11	---	19	---	395	---	5.1	2.5	---
TOTAL	97.5	117.9	244.5	155.5	405	432	3544	8819	5560	544.0	94.5	71.0
MEAN	3.15	3.93	7.89	5.02	14.5	13.9	113	284	185	17.5	3.05	2.37
MAX	5.0	7.5	18	11	20	20	385	438	455	50	5.4	4.2
MIN	2.0	2.6	2.6	3.5	11	10	16	133	38	5.1	1.6	1.4
AC-FT	193	234	485	308	803	857	7030	17490	11030	1040	187	141
CAL YR 1980	TOTAL	45114.9	MEAN	123	MAX	735	MIN	2.0	AC-FT	89490		
WTR YR 1981	TOTAL	20084.9	MEAN	55.0	MAX	455	MIN	1.4	AC-FT	39440		

RESERVOIRS IN TULARE LAKE BASIN, CA

11214550 COURTRIGHT RESERVOIR.--Lat 37°04'40", long 118°58'05", in NW¼ sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, at left end of dam on Helms Creek 2.5 mi (4.0 km) upstream from mouth, 4.6 mi (7.4 km) east of Nelson Mountain, and 9.7 mi (15.6 km) west of Blackcap Mountain. DRAINAGE AREA, 39.7 mi² (102.8 km²). PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

Reservoir is formed by rockfill dam completed in 1958. Usable capacity, 123,300 acre-ft (152 hm³) between elevations 7,902 ft (2,408.5 m), invert of tunnel and 8,184 ft (2,494.5 m), elevation of spillway. Dead storage negligible. See schematic diagram of Kings River basin. Records furnished by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,200 acre-ft (153 hm³) July 13, 1967, elevation, 8,184.55 ft (2,494.651 m); no contents in 1961-62, 1968, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 33,130 acre-ft (40.8 hm³) July 9, elevation, 8,102.64 ft (2,469.685 m); minimum, 689 acre-ft (849,500 m³) Jan. 27, elevation, 7,968.46 ft (2,428.787 m).

11214800 WISHON RESERVOIR.--Lat 37°00'20", long 118°58'00", in NW¼ sec.6, T.11 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right end of dam on North Fork Kings River 1.2 mi (1.9 km) north of Cliff Camp, 1.3 mi (2.1 km) upstream from Cliff Camp gaging station, and 20 mi (32 km) southeast of town of Big Creek. DRAINAGE AREA, 177 mi² (458 km²). PERIOD OF RECORD, December 1957 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

Reservoir is formed by rockfill dam completed in 1957. Capacity, 128,600 acre-ft (159 hm³) between elevations 6,317 ft (1,925.4 m), bottom of slide gates and 6,550 ft (1,996.4 m), operating crest of spillway gates. Dead storage negligible. Water is diverted to Haas powerhouse for power. See schematic diagram of Kings River basin. Records furnished by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 129,700 acre-ft (160 hm³) July 29, 1958, elevation, 6,551.1 ft (1,996.78 m); no contents in 1960.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 109,100 acre-ft (135 hm³) Oct. 1, elevation, 6,530.12 ft (1,990.381 m); minimum, 10,380 acre-ft (12.8 hm³) Jan. 28, elevation, 6,382.08 ft (1,945.258 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	11214550 COURTRIGHT RESERVOIR			11214800 WISHON RESERVOIR		
Sept. 30.....	7,978.2	1,030	--	6,530.4	109,400	--
Oct. 31.....	7,977.9	1,020	-10	6,467.6	57,100	-52,300
Nov. 30.....	7,978.1	1,030	+10	6,411.6	24,000	-33,100
Dec. 31.....	7,969.7	727	-303	6,393.7	15,400	-8,600
CAL YR 1980.....	--	--	-40	--	--	-2,700
Jan. 31.....	7,968.6	692	-35	6,382.5	10,600	-4,800
Feb. 28.....	7,973.1	840	+148	6,387.5	12,700	+2,100
Mar. 31.....	7,971.6	788	-52	6,386.7	12,400	-300
Apr. 30.....	8,054.1	10,600	+9,810	6,421.7	29,200	+16,800
May 31.....	8,097.6	29,800	+19,200	6,507.4	88,700	+59,500
June 30.....	8,102.5	33,000	+3,200	6,522.6	102,100	+13,400
July 31.....	8,102.3	32,900	-100	6,506.1	87,600	-14,500
Aug. 31.....	8,101.7	32,500	-400	6,478.2	64,900	-22,700
Sept. 30.....	8,101.3	32,200	-300	6,415.2	25,900	-39,000
WTR YR 1981.....	--	--	+31,200	--	--	-83,500

TULARE LAKE BASIN

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA

LOCATION.--Lat 37°04'35", long 118°58'04", in SW¼NW¼ sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 500 ft (152 m) downstream from Courtright Dam, 2.5 mi (4.0 km) upstream from North Fork Kings River, and 17 mi (27 km) southeast of town of Huntington Lake.

DRAINAGE AREA.--39.7 mi² (102.8 km²).

PERIOD OF RECORD.--October 1958 to current year.

REVISED RECORDS.--WSP 1715: 1959. WSP 2130: 1959.

GAGE.--Water-stage recorder and broad-crested weir with trapezoidal-notch. Altitude of gage is 7,836 ft (2,388.4 m), from photogrammetry survey.

REMARKS.--Flow regulated since October 1958 by Courtright Reservoir (station 11214550) 500 ft (152 m) upstream. No diversion above station. See schematic diagram of Kings River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for storage).--23 years, 75.7 ft³/s (2.144 m³/s), 54,840 acre-ft/yr (67.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Aug. 29, 1969, gage height, 5.81 ft (1.771 m); maximum gage height, 7.70 ft (2.347 m) Aug. 23, 1978; no flow on several days in 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 350 ft³/s (9.91 m³/s) Mar. 26; gage height, 5.23 ft (1.594 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Apr. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	8.3	8.3	5.7	4.9	5.2	5.5	4.1	3.4	4.9	4.3	4.1
2	7.9	8.3	6.4	5.7	4.9	5.2	5.5	4.1	3.3	4.9	4.3	4.1
3	8.7	8.3	6.4	5.7	5.1	5.2	5.5	4.3	3.3	4.9	4.1	4.1
4	8.7	8.3	6.4	5.7	5.1	5.2	5.5	4.3	3.6	4.9	4.1	4.1
5	8.7	8.3	6.4	5.7	5.1	5.2	5.5	4.3	3.6	4.9	4.1	4.1
6	8.7	8.3	6.4	5.7	5.1	5.4	4.3	4.4	3.6	4.9	4.1	4.1
7	8.7	8.3	6.4	5.7	5.1	5.4	2.9	4.4	3.6	4.9	4.1	4.1
8	8.3	8.3	6.4	5.7	5.1	5.4	1.5	4.4	5.2	4.9	4.1	4.1
9	8.5	8.3	6.2	5.7	5.1	5.4	1.5	4.4	5.2	4.9	4.1	4.1
10	8.5	8.3	5.9	5.7	5.1	5.4	1.5	4.4	5.2	4.9	4.1	4.1
11	8.5	8.3	5.9	5.7	5.1	5.4	1.5	4.4	5.2	4.9	4.1	4.1
12	8.5	8.3	5.9	5.7	5.1	5.4	1.5	4.4	5.2	4.9	4.1	4.1
13	8.5	8.3	5.9	5.7	5.1	5.4	2.0	4.4	5.1	4.9	4.1	4.1
14	8.5	8.3	5.9	5.7	5.1	5.4	2.6	4.4	5.1	4.9	4.1	4.1
15	8.5	8.3	5.9	5.7	5.1	5.4	2.8	4.4	5.1	4.9	4.1	4.1
16	8.5	8.3	5.9	5.7	5.1	5.4	2.9	4.4	5.1	4.9	4.1	4.1
17	8.5	8.3	5.9	5.7	5.1	5.4	3.0	4.4	4.9	4.9	4.1	4.1
18	8.5	8.3	5.9	5.7	5.1	5.4	3.3	4.4	4.9	4.9	4.1	4.1
19	8.5	8.3	5.9	5.7	5.1	5.4	3.4	4.4	4.9	4.7	4.1	4.1
20	8.5	7.1	5.7	5.7	5.1	5.4	3.6	4.4	4.9	4.7	4.1	4.1
21	8.5	6.0	5.7	5.7	5.1	5.4	3.7	4.4	4.9	4.7	4.1	4.1
22	8.5	6.0	5.7	5.7	5.1	5.4	3.7	4.4	4.9	4.6	4.1	4.1
23	8.3	6.0	5.7	5.7	5.1	5.4	3.7	4.4	4.9	4.6	4.1	4.1
24	8.3	6.0	5.7	5.7	5.1	10	3.8	4.3	4.9	4.6	4.1	4.1
25	8.3	6.0	5.7	5.7	5.2	18	3.8	4.3	4.9	4.6	4.1	4.1
26	8.3	6.0	5.7	5.7	5.2	94	3.8	4.1	4.9	4.4	4.1	4.1
27	8.3	6.0	5.7	5.7	5.2	17	4.0	4.0	4.9	4.4	4.1	4.1
28	8.3	6.0	5.7	5.7	5.2	92	4.0	4.0	4.9	4.4	4.1	4.1
29	8.3	6.0	5.7	5.9	---	18	4.0	3.8	4.9	4.4	4.1	4.1
30	8.3	6.0	5.7	5.5	---	5.5	4.1	3.7	4.9	4.3	4.1	4.1
31	8.3	---	5.7	5.1	---	5.5	---	3.6	---	4.3	4.1	---
TOTAL	260.4	224.8	261.4	176.1	142.8	383.2	104.4	132.1	139.4	146.9	127.5	123.0
MEAN	8.40	7.49	8.43	5.68	5.10	12.4	3.48	4.26	4.65	4.74	4.11	4.10
MAX	8.7	8.3	8.3	5.9	5.2	94	5.5	4.4	5.2	4.9	4.3	4.1
MIN	7.0	6.0	5.7	5.1	4.9	5.2	1.5	3.6	3.3	4.3	4.1	4.1
AC-FT	517	446	518	349	283	760	207	262	276	291	253	244
CAL YR 1980 TOTAL	46054.2			MEAN 126	MAX 841	MIN 1.1	AC-FT 91350					
WTR YR 1981 TOTAL	2222.0			MEAN 6.09	MAX 94	MIN 1.5	AC-FT 4410					

LOCATION.--Lat 36°59'38", long 118°58'49", in NE¼NW¼ sec.12, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank at Cliff Camp bridge, 1 mi (2 km) northwest of Cliff Camp, 1.2 mi (1.9 km) downstream from Wishon Dam, and 2 mi (3 km) downstream from Woodchuck Creek.

PERIOD OF RECORD.--August 1921 to current year. Monthly discharge only for some periods, published in NSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 6,143.95 ft (1,872.676 m) National Geodetic Vertical Datum of 1929 (levels by San Joaquin Light and Power Corp.). Prior to Nov. 24, 1922, at site 1 mi (2 km) upstream at different datum.

REMARKS.--Flow regulated since Dec. 5, 1957, by Wishon Reservoir (station 11214800), 1.2 mi (1.9 km) upstream, and since Oct. 17, 1958, by Courtright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas powerhouse since Dec. 10, 1958. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE (adjusted for storage and diversion).--60 years, 364 ft³/s (10.31 m³/s), 263,700 acre-ft/yr (325 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (prior to regulation by Wishon Reservoir).--Maximum discharge, 14,000 ft³/s (396 m³/s) Dec. 11, 1937, gage height, 18.0 ft (5.49 m), from floodmarks, from rating curve extended above 4,200 ft³/s (119 m³/s) on basis of velocity-area studies; minimum, 0.6 ft³/s (0.017 m³/s) Dec. 30, 1930. 1957 to current year.--Maximum discharge, 5,110 ft³/s (145 m³/s) Sept. 5, 1978, gage height, 11.96 ft (3.645 m); minimum daily, 0.8 ft³/s (0.023 m³/s) Dec. 14, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 116 ft³/s (3.29 m³/s) Dec. 4, gage height, 3.97 ft (1.210 m); minimum daily, 8.7 ft³/s (0.25 m³/s) Jan. 17-22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	18	15	10	11	14	23	21	25	26	23	20
2	24	18	12	10	11	13	22	21	25	26	23	20
3	24	18	13	10	11	13	19	20	25	26	23	20
4	23	18	51	10	11	13	21	20	25	26	23	20
5	23	17	16	10	11	13	26	20	25	26	23	20
6	23	17	13	9.8	11	13	29	20	25	26	23	19
7	23	17	13	9.6	11	13	29	20	25	26	22	19
8	23	17	12	9.5	12	15	29	20	25	26	22	19
9	23	16	12	9.5	13	17	31	20	26	26	22	19
10	23	16	12	9.3	13	18	29	20	26	26	22	19
11	23	17	12	9.3	13	18	27	20	26	26	22	19
12	23	16	12	9.3	14	17	26	20	26	26	22	18
13	23	17	11	9.2	13	17	26	21	26	25	22	18
14	23	17	11	9.1	22	16	25	21	26	24	22	18
15	23	17	12	9.0	19	15	28	21	26	24	22	18
16	22	16	12	9.0	21	17	28	22	27	24	22	17
17	22	16	12	8.7	22	17	27	21	27	24	22	17
18	22	16	12	8.7	22	16	28	21	27	24	22	17
19	21	16	11	8.7	21	20	31	25	27	24	22	17
20	21	17	11	8.7	20	18	28	24	27	24	21	17
21	21	17	11	8.7	19	18	26	23	27	24	21	16
22	21	17	11	8.7	19	25	26	23	27	24	21	16
23	21	17	11	9.9	19	25	28	23	27	24	21	16
24	20	17	11	9.3	17	25	27	23	27	24	21	15
25	20	16	11	9.1	15	35	25	24	27	24	21	15
26	20	16	11	8.9	15	34	24	27	27	24	21	15
27	20	16	11	10	14	21	22	28	27	24	21	15
28	20	16	11	11	14	21	21	25	26	23	21	14
29	19	16	11	12	---	25	21	25	26	23	21	15
30	19	16	11	12	---	23	21	25	26	23	20	17
31	19	---	10	11	---	23	---	25	---	23	20	---
TOTAL	676	501	405	298.0	434	588	773	689	784	765	674	525
MEAN	21.8	16.7	13.1	9.61	15.5	19.0	25.8	22.2	26.1	24.7	21.7	17.5
MAX	24	18	51	12	22	35	31	28	27	26	23	20
MIN	19	16	10	8.7	11	13	19	20	25	23	20	14
AC-FT	1340	994	803	591	861	1170	1530	1370	1560	1520	1340	1040
CAL YR 1980	TOTAL	12921.0	MEAN	35.3	MAX	965	MIN	10	AC-FT	25630		
WTH YR 1981	TOTAL	7112.0	MEAN	19.5	MAX	51	MIN	8.7	AC-FT	14110		

TULARE LAKE BASIN

11215800 TEAKETTLE CREEK AT SITE NO. 3, NEAR DINKEY CREEK, CA

LOCATION.--Lat 36°57'40", long 119°01'37", in SE¼NE¼ sec.21, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 1.8 mi (2.9 km) upstream from mouth, 2.9 mi (4.7 km) northwest of Black Rock Reservoir, and 10.6 mi (17.1 km) southeast of town of Dinkey Creek.

DRAINAGE AREA.--0.86 mi² (2.23 km²).

PERIOD OF RECORD.--October 1957 to September 1969, May 1977 to current year. Published as "near Patterson Mountain", October 1957 to September 1969.

GAGE.--Water-stage recorder, 90° sharp-crested V-notch weir, and sharp-crested Cipolletti weir. Datum of gage is 6,705.4 ft (2,043.81 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Forest Service). Prior to Oct. 1, 1961, at datum 4.00 ft (1.219 m) lower.

REMARKS.--Records good. No diversion or regulation above station. This station is operated in connection with studies to develop and test methods of managing forest and other lands for improved water yield. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE.--16 years (water years 1958-69, 1978-81), 1.66 ft³/s (0.047 m³/s), 1,200 acre-ft/yr (1.48 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 99.0 ft³/s (2.80 m³/s) Feb. 1, 1963, gage height, 3.81 ft (1.161 m); minimum daily, 0.03 ft³/s (<0.001 m³/s) Sept. 25-28, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5.9 ft³/s (0.17 m³/s) Dec. 4, gage height, 1.42 ft (0.433 m); minimum daily 0.20 ft³/s (0.006 m³/s) on several days during September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	.63	.51	.57	.47	.70	1.1	3.8	1.3	.62	.34	.24
2	.63	.63	.52	.56	.49	.67	1.1	3.7	1.2	.60	.34	.24
3	.62	.62	.71	.57	.52	.67	.99	3.3	1.2	.57	.34	.23
4	.61	.60	2.5	.55	.51	.67	1.1	3.1	1.2	.55	.33	.22
5	.60	.60	.97	.58	.51	.67	1.4	2.9	1.1	.54	.32	.22
6	.59	.59	.78	.56	.51	.64	1.6	2.7	1.1	.54	.31	.22
7	.58	.58	.69	.55	.52	.64	1.6	2.6	1.0	.53	.30	.22
8	.58	.58	.63	.54	.53	.67	1.8	2.4	1.0	.52	.29	.22
9	.58	.57	.61	.53	.54	.76	2.0	2.4	.96	.50	.29	.22
10	.57	.57	.61	.52	.56	.79	2.0	2.4	.94	.50	.29	.22
11	.57	.87	.63	.52	.56	.79	2.0	2.3	.91	.49	.29	.22
12	.57	.80	.64	.53	.61	.79	2.0	2.2	.92	.48	.30	.22
13	.57	.69	.62	.53	.61	.76	2.2	2.2	.91	.47	.30	.22
14	.65	.66	.62	.52	.85	.73	2.4	2.0	.87	.45	.29	.22
15	.73	.65	.67	.52	.82	.70	2.6	1.9	.83	.45	.29	.21
16	.74	.64	.75	.52	.85	.73	2.7	1.8	.78	.44	.29	.20
17	.80	.64	.74	.52	.89	.76	2.8	1.7	.76	.44	.29	.21
18	.79	.63	.71	.51	.89	.78	2.5	1.7	.76	.43	.28	.21
19	.79	.62	.67	.51	.89	.80	2.2	2.0	.76	.42	.28	.20
20	.75	.60	.65	.50	.89	.76	2.2	1.7	.75	.41	.27	.20
21	.71	.57	.64	.50	.89	.76	2.3	1.6	.74	.40	.26	.20
22	.70	.58	.71	.52	.89	1.0	2.7	1.6	.72	.39	.26	.21
23	.68	.58	.65	.53	.92	1.0	3.3	1.5	.71	.38	.26	.20
24	.67	.57	.61	.46	.85	1.0	3.6	1.5	.69	.38	.26	.20
25	.69	.55	.66	.46	.79	1.3	3.6	1.7	.68	.37	.25	.20
26	.81	.54	.75	.53	.76	1.5	3.2	2.4	.65	.37	.25	.20
27	.75	.53	.71	.52	.73	1.1	3.2	1.8	.63	.36	.25	.20
28	.72	.53	.68	.55	.70	1.1	3.3	1.6	.61	.35	.24	.21
29	.68	.52	.65	.52	---	1.2	3.6	1.5	.60	.35	.24	.22
30	.66	.52	.63	.40	---	1.2	3.8	1.4	.64	.35	.24	.22
31	.64	---	.60	.40	---	1.2	---	1.4	---	.34	.24	---
TOTAL	20.67	18.26	22.52	16.10	19.55	26.84	70.89	66.8	25.92	13.99	8.78	6.42
MEAN	.67	.61	.73	.52	.70	.87	2.36	2.15	.86	.45	.28	.21
MAX	.81	.87	2.5	.58	.92	1.5	3.8	3.8	1.3	.62	.34	.24
MIN	.57	.52	.51	.40	.47	.64	.99	1.4	.60	.34	.24	.20
AC-FT	41	36	45	32	39	53	141	132	51	28	17	13

CAL YR 1980 TOTAL 1212.38 MEAN 3.31 MAX 25 MIN .51 AC-FT 2400
WTR YR 1981 TOTAL 316.74 MEAN .87 MAX 3.8 MIN .20 AC-FT 628

11215820 TEAKETTLE CREEK TRIBUTARY NO. 2 NEAR DINKEY CREEK, CA

LOCATION.--Lat 36°57'32", long 119°02'00", in SE4NW4 sec.21, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank 0.8 mi (1.3 km) upstream from junction with Teakettle Creek, 2.8 mi (4.5 km) north of Black Rock Reservoir, and 10.5 mi (16.9 km) southeast of town of Dinkey Creek.

DRAINAGE AREA.--0.85 mi² (2.20 km²).

PERIOD OF RECORD.--October 1957 to September 1969, May 1977 to current year. Published as "near Patterson Mountain" October 1957 to September 1969.

GAGE.--Water-stage recorder, sharp-crested 90° V-notch weir, and sharp-crested Cipolletti weir. Datum of gage is 6,905.4 ft (2,104.77 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Forest Service). Prior to Oct. 1, 1961, at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good except those for Dec. 3, 4, which are fair. No regulation or diversion above station. This station is operated in connection with studies to develop and test methods of managing forest and other lands for improved water yields. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE.--16 years (water years 1958-69, 1978-81), 1.40 ft³/s (0.040 m³/s), 1,010 acre-ft/yr (1.25 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70.2 ft³/s (1.99 m³/s) Dec. 6, 1966, gage height, 3.62 ft (1.103 m); minimum daily, 0.04 ft³/s (0.001 m³/s) Sept. 6-13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6 ft³/s (0.17 m³/s) Dec. 4, estimated on basis of hydrograph comparison with nearby stations, gage height, unknown; minimum daily, 0.16 ft³/s (0.005 m³/s) Sept. 16, 18-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.44	.34	.39	.31	.42	.68	4.2	1.6	.60	.29	.18
2	.44	.44	.35	.38	.33	.42	.68	4.0	1.5	.58	.28	.18
3	.43	.43	.35	.38	.37	.42	.60	3.7	1.4	.55	.28	.18
4	.42	.41	.25	.38	.36	.42	.66	3.5	1.3	.53	.27	.18
5	.42	.41	.40	.36	.36	.40	.47	3.2	1.2	.52	.26	.18
6	.41	.40	.55	.35	.36	.41	1.3	3.0	1.2	.51	.26	.18
7	.41	.40	.45	.34	.36	.41	1.3	2.9	1.2	.50	.25	.18
8	.41	.40	.47	.34	.38	.42	1.7	2.7	1.1	.49	.24	.18
9	.40	.39	.42	.34	.38	.46	1.7	2.7	1.1	.47	.24	.18
10	.40	.39	.39	.34	.39	.50	1.8	2.6	1.0	.46	.24	.18
11	.39	.40	.40	.34	.40	.51	1.8	2.6	1.0	.46	.24	.17
12	.39	.56	.40	.34	.40	.50	2.1	2.5	.99	.45	.24	.17
13	.39	.40	.40	.34	.40	.48	2.3	2.5	.96	.44	.24	.17
14	.44	.46	.40	.34	.55	.45	2.6	2.3	.94	.42	.23	.17
15	.50	.45	.41	.34	.52	.45	2.9	2.1	.90	.41	.23	.17
16	.51	.44	.44	.34	.52	.45	3.1	2.0	.87	.41	.23	.16
17	.55	.43	.45	.34	.55	.47	3.2	1.9	.84	.40	.23	.17
18	.55	.42	.45	.34	.56	.46	2.9	1.9	.81	.39	.22	.16
19	.55	.40	.42	.34	.55	.48	2.6	2.0	.76	.38	.22	.16
20	.52	.34	.41	.33	.55	.46	2.5	1.8	.74	.37	.21	.16
21	.50	.37	.40	.34	.54	.46	2.6	1.7	.73	.35	.21	.16
22	.49	.36	.44	.34	.55	.45	3.1	1.6	.71	.34	.20	.16
23	.47	.38	.43	.31	.55	.61	3.7	1.8	.69	.34	.20	.16
24	.46	.37	.39	.29	.53	.62	4.1	1.8	.67	.33	.20	.16
25	.48	.36	.40	.29	.48	.63	4.1	2.0	.65	.32	.20	.16
26	.56	.36	.47	.35	.46	.94	3.6	2.8	.63	.32	.19	.16
27	.53	.34	.47	.35	.47	.70	3.7	2.2	.61	.31	.19	.16
28	.50	.34	.45	.37	.43	.68	3.9	2.0	.59	.31	.18	.17
29	.49	.34	.46	.35	---	.73	4.1	1.9	.59	.30	.18	.18
30	.46	.34	.42	.27	---	.74	4.3	1.8	.61	.30	.18	.17
31	.44	---	.41	.27	---	.75	---	1.7	---	.29	.18	---
TOTAL	14.33	12.31	15.42	11.52	12.57	16.67	74.39	75.6	27.89	12.45	7.01	5.10
MEAN	.46	.41	.51	.34	.40	.54	2.44	2.44	.93	.41	.23	.17
MAX	.56	.50	.55	.37	.55	.94	4.3	4.2	1.6	.60	.29	.18
MIN	.39	.34	.34	.27	.31	.46	.60	1.7	.59	.29	.18	.16
AC-FT	28	24	31	21	25	33	145	150	55	25	14	10

CAL YR 1980 TOTAL 494.41 MEAN 2.72 MAX 4.3 MIN .24 AC-FT 1470
 YR 1981 TOTAL 285.08 MEAN 1.75 MAX 4.3 MIN .16 AC-FT 555

TULARE LAKE BASIN

11215830 TEAKETTLE CREEK TRIBUTARY NO. 2A NEAR DINKEY CREEK, CA

LOCATION.--Lat 36°57'22", long 119°01'57", in NE¼SW¼ sec.21, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 0.1 mi (0.2 km) upstream from confluence with Teakettle Creek Tributary No. 2, 2.6 mi (4.2 km) northwest of Black Rock Reservoir, and 10.7 mi (17.2 km) southeast of town of Dinkey Creek.

DRAINAGE AREA.--0.27 mi² (0.70 km²).

PERIOD OF RECORD.--October 1957 to September 1969, May 1977 to current year. Published as "near Patterson Mountain" October 1957 to September 1969.

GAGE.--Water-stage recorder and 90° sharp-crested V-notched weir. Datum of gage is 6,924 ft (2,110.4 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Forest Service). Prior to Oct. 1, 1961, at datum 4.00 ft (1.219 m) lower.

REMARKS.--Records good. No regulation or diversion above station. This station is operated in connection with studies to develop and test methods of managing forest and other lands for improved water yield. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE.--16 years (water years 1958-69, 1978-81), 0.49 ft³/s (0.014 m³/s), 355 acre-ft/yr (438,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60.3 ft³/s (1.71 m³/s) Dec. 6, 1966, gage height, 3.61 ft (1.100 m); no flow on several days during September 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.9 ft³/s (0.082 m³/s) Dec. 4, gage height, 1.06 ft (0.323 m); minimum daily, 0.03 ft³/s (0.001 m³/s) on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.16	.07	.10	.10	.16	.31	1.0	.31	.15	.06	.04
2	.17	.15	.08	.10	.10	.15	.27	1.0	.30	.14	.06	.04
3	.17	.15	.16	.10	.11	.15	.23	.89	.29	.13	.06	.04
4	.17	.15	.93	.10	.11	.15	.26	.82	.27	.13	.06	.04
5	.17	.14	.26	.09	.11	.15	.36	.76	.26	.12	.05	.04
6	.17	.14	.16	.09	.11	.15	.45	.70	.25	.11	.05	.03
7	.17	.14	.13	.08	.11	.15	.47	.65	.25	.12	.05	.03
8	.17	.14	.12	.08	.11	.16	.52	.62	.24	.11	.05	.03
9	.17	.13	.11	.09	.12	.19	.54	.62	.23	.11	.05	.04
10	.17	.14	.11	.09	.12	.20	.56	.62	.23	.10	.05	.04
11	.17	.26	.11	.09	.12	.21	.54	.59	.22	.10	.04	.04
12	.18	.23	.11	.10	.13	.21	.54	.56	.22	.10	.04	.03
13	.18	.18	.11	.10	.13	.20	.59	.52	.22	.10	.04	.03
14	.21	.17	.11	.09	.24	.18	.64	.52	.21	.09	.04	.04
15	.23	.17	.12	.09	.21	.18	.64	.49	.21	.09	.04	.04
16	.23	.16	.14	.10	.21	.19	.76	.47	.20	.09	.04	.04
17	.24	.16	.14	.10	.23	.21	.67	.44	.19	.08	.04	.04
18	.23	.16	.13	.09	.23	.21	.56	.42	.19	.08	.04	.04
19	.21	.14	.12	.09	.23	.20	.49	.57	.18	.08	.04	.04
20	.20	.09	.12	.09	.23	.19	.52	.48	.17	.07	.04	.04
21	.19	.09	.12	.09	.23	.20	.59	.43	.17	.07	.04	.04
22	.18	.09	.15	.10	.22	.26	.73	.41	.17	.07	.04	.04
23	.17	.09	.13	.10	.23	.26	.99	.40	.16	.07	.04	.04
24	.17	.09	.11	.09	.21	.26	1.0	.38	.16	.07	.04	.04
25	.17	.08	.12	.09	.19	.38	.99	.47	.15	.07	.04	.04
26	.23	.08	.16	.10	.18	.45	.86	.73	.15	.07	.04	.04
27	.20	.08	.15	.11	.17	.29	.82	.52	.14	.07	.04	.04
28	.19	.08	.13	.11	.16	.27	.89	.43	.14	.07	.03	.04
29	.18	.08	.12	.11	---	.31	.99	.37	.14	.07	.03	.04
30	.17	.08	.12	.09	---	.31	1.1	.35	.14	.06	.03	.04
31	.16	---	.11	.09	---	.31	---	.33	---	.06	.04	---
TOTAL	5.80	4.00	4.76	2.94	4.65	6.89	18.88	17.56	6.16	2.85	1.35	1.15
MEAN	.19	.13	.15	.095	.17	.22	.63	.57	.21	.092	.044	.038
MAX	.24	.26	.93	.11	.24	.45	1.1	1.0	.31	.15	.06	.04
MIN	.16	.08	.07	.08	.10	.15	.23	.33	.14	.06	.03	.03
AC-FT	12	7.9	9.4	5.8	9.2	14	37	35	12	5.7	2.7	2.3

CAL YR 1980 TOTAL 361.74 MEAN .99 MAX 9.1 MIN .07 AC-FT 718
WTR YR 1981 TOTAL 76.99 MEAN .21 MAX 1.1 MIN .03 AC-FT 153

LOCATION.--Lat 36°56'59", long 119°01'07", in NW¼NW¼ sec.27, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 2.1 mi (3.4 km) northeast of Black Rock Reservoir, and 11.5 mi (18.5 km) southeast of town of Dinkey Creek.

PERIOD OF RECORD.--October 1957 to September 1969, May 1977 to current year. Published as "near Patterson Mountain", October 1957 to September 1969.

REMARKS.--Records good. No regulation or diversion above station. This station is operated in connection with studies to develop and test methods of managing forest and other lands for improved water yield. See schematic diagram of Kings River basin.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7.0 ft³/s (0.20 m³/s), Dec. 4, gage height, 1.52 ft (0.463 m); minimum daily, 0.20 ft³/s (0.006 m³/s) on several days during September.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.51	.43	.49	.49	.67	1.0	3.4	1.2	.65	.33	.23
2	.56	.51	.44	.47	.54	.65	.99	3.4	1.2	.63	.33	.23
3	.54	.49	.69	.47	.57	.64	.93	3.0	1.2	.60	.33	.23
4	.54	.49	3.1	.48	.62	.64	.95	2.8	1.1	.58	.32	.22
5	.54	.49	1.0	.47	.65	.64	1.2	2.6	1.1	.56	.31	.22
6	.54	.47	.74	.47	.66	.63	1.3	2.5	1.1	.54	.30	.22
7	.54	.47	.67	.45	.63	.61	1.5	2.3	1.0	.53	.29	.22
8	.51	.47	.63	.45	.63	1.6	2.2	2.1	1.0	.53	.28	.22
9	.51	.47	.58	.44	.65	.65	1.7	2.2	1.0	.51	.28	.22
10	.51	.45	.54	.42	.63	.67	1.7	2.2	.98	.49	.28	.22
11	.54	.67	.54	.42	.61	.70	1.7	2.1	.96	.49	.28	.21
12	.56	.64	.54	.43	.61	.72	1.8	2.0	.96	.48	.28	.21
13	.59	.56	.53	.43	.60	.73	1.8	2.0	.94	.47	.28	.21
14	.61	.54	.51	.42	.86	.67	2.0	1.9	.92	.46	.28	.21
15	.64	.51	.51	.43	.77	.67	2.2	1.8	.88	.45	.27	.21
16	.64	.51	.54	.45	.73	.67	2.3	1.8	.85	.44	.27	.20
17	.64	.51	.59	.45	.78	.67	2.3	1.7	.83	.43	.27	.21
18	.67	.49	.61	.42	.79	.67	2.1	1.6	.82	.43	.26	.20
19	.64	.49	.57	.40	.81	.70	2.0	1.9	.80	.41	.26	.20
20	.62	.49	.54	.40	.81	.68	1.9	1.7	.77	.41	.26	.20
21	.59	.47	.54	.43	.76	.70	2.0	1.6	.76	.39	.25	.20
22	.59	.47	.60	.55	.75	.85	2.3	1.6	.74	.38	.25	.21
23	.56	.47	.59	.49	.75	.83	2.9	1.5	.73	.38	.25	.20
24	.54	.47	.52	.46	.75	.84	3.1	1.5	.71	.37	.24	.20
25	.54	.46	.53	.45	.71	1.1	3.1	1.7	.70	.36	.24	.20
26	.61	.45	.62	.52	.68	1.4	2.9	2.3	.68	.36	.24	.20
27	.61	.45	.64	.52	.67	1.0	2.8	1.8	.67	.35	.23	.20
28	.59	.45	.55	.52	.67	.98	2.9	1.6	.65	.34	.23	.21
29	.56	.45	.51	.47	---	1.0	3.2	1.4	.65	.34	.23	.22
30	.54	.44	.50	.43	---	1.0	3.4	1.3	.67	.34	.23	.21
31	.54	---	.49	.45	---	1.0	---	1.3	---	.34	.23	---
TOTAL	17.77	14.81	20.39	14.15	19.16	24.01	61.57	62.7	26.57	14.04	8.38	6.34
MEAN	.57	.49	.66	.46	.68	.77	2.05	2.02	.89	.45	.27	.21
MAX	.67	.67	3.1	.55	.86	1.4	3.4	3.4	1.2	.65	.33	.23
MIN	.51	.44	.43	.40	.49	.61	.93	1.3	.65	.34	.23	.20
AC-FT	35	29	40	28	38	48	122	124	53	28	17	13
CAL YR 1980	TOTAL	1095.44		MEAN	2.99	MAX	28	MIN	.43	AC-FT	2170	
WTR YR 1981	TOTAL	289.89		MEAN	.79	MAX	3.4	MIN	.20	AC-FT	575	

TULARE LAKE BASIN

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA

LOCATION.--Lat 36°54'12", long 119°07'14", in SE¼NE¼ sec.10, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 12 ft (4 m) downstream from bridge at Balch Camp, 300 ft (91 m) upstream from Dinkey Creek, and 9.3 mi (15.0 km) east of Trimmer.

DRAINAGE AREA.--250 mi² (648 km²).

PERIOD OF RECORD.--October 1919 to September 1930 (published as "above Dinkey Creek"), March 1960 to current year. Records for water year 1920 incomplete, yearly estimate and monthly discharge only for some months, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Apr. 15, 1966. Altitude of gage is 1,240 ft (378 m), from river-profile map. October 1919 to Sept. 30, 1930, and Mar. 24, 1960, to Apr. 14, 1966, at site 100 ft (30 m) downstream at different datum.

REMARKS.--Flow regulated by Courtright Reservoir (station 11214550) and Wishon Reservoir (station 11214800), Black Rock Reservoir, capacity, 1,260 acre-ft (1.55 hm³), Balch Afterbay, capacity, 318 acre-ft (392,000 m³), and Haas and Balch powerplants. Diversion from Balch Afterbay to Kings River powerhouse began Mar. 1, 1962. See schematic diagram of Kings River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (prior to storage and diversion).--11 years (water years 1920-30), 387 ft³/s (10.96 m³/s), 280,200 acre-ft/yr (345 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (prior to regulation by Wishon and Courtright Reservoirs): Maximum discharge, 6,080 ft³/s (172 m³/s) June 4, 1922, gage height, 12.18 ft (3.712 m) site and datum then in use; minimum, 4 ft³/s (0.11 m³/s) Aug. 29 to Sept. 1, 1924.

1960 to current year: Maximum discharge, 14,000 ft³/s (396 m³/s) Feb. 1, 1963, gage height, 13.24 ft (4.036 m) site and datum then in use, backwater from Dinkey Creek, from rating curve extended above 890 ft³/s (25.2 m³/s); minimum daily, 0.30 ft³/s (0.008 m³/s) Nov. 3, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 538 ft³/s (15.2 m³/s) Apr. 24, gage height, 2.75 ft (0.838 m); minimum daily, 9.6 ft³/s (0.27 m³/s) Dec. 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	16	12	15	14	11	13	16	16	16	16
2	17	17	12	12	15	14	13	13	16	16	17	16
3	17	17	12	12	14	14	13	27	16	16	16	16
4	17	17	14	12	14	14	12	13	16	17	16	16
5	17	17	11	12	14	14	11	13	16	17	16	16
6	17	17	10	12	14	14	11	12	16	17	16	16
7	17	17	10	13	14	14	11	11	16	17	16	16
8	17	17	10	13	14	14	11	11	16	16	16	16
9	17	17	10	12	14	14	10	11	15	16	16	16
10	17	17	10	13	14	14	10	11	15	16	16	16
11	17	17	10	13	14	14	10	10	15	16	16	16
12	17	17	10	12	14	14	10	10	15	16	16	16
13	17	17	10	12	14	15	10	10	16	16	16	16
14	17	17	10	13	14	14	10	10	16	16	16	16
15	17	17	10	13	14	14	10	10	16	16	16	16
16	17	17	10	13	14	14	12	10	15	16	16	16
17	17	17	10	13	14	14	13	10	15	16	16	16
18	17	17	10	12	14	14	14	10	16	16	16	16
19	16	17	10	12	13	16	15	11	16	16	16	16
20	16	17	10	12	14	23	14	11	16	16	16	16
21	16	17	10	12	14	18	14	10	16	16	16	16
22	16	17	9.8	12	14	17	14	10	16	16	16	16
23	16	17	9.6	23	14	14	14	10	16	16	16	16
24	16	17	9.6	14	14	12	78	10	16	16	16	16
25	16	17	9.6	13	14	13	14	10	16	16	16	16
26	17	17	9.6	13	14	14	14	12	16	16	16	16
27	17	17	11	16	14	14	14	11	15	16	16	16
28	17	17	13	19	14	13	14	12	15	16	16	16
29	17	17	12	43	---	13	13	13	15	16	16	16
30	17	16	12	21	---	13	13	14	15	16	16	16
31	17	---	12	16	---	11	---	15	---	16	16	---
TOTAL	520	509	333.2	450	393	444	433	364	470	500	497	480
MEAN	16.8	17.0	10.7	14.5	14.0	14.3	14.4	11.7	15.7	16.1	16.0	16.0
MAX	17	17	16	43	15	23	78	27	16	17	17	16
MIN	16	16	9.6	12	13	11	10	10	15	16	16	16
AC-FT	1030	1010	661	893	780	881	859	722	932	992	986	952
CAL YR 1980	TOTAL	52853.1	MEAN 144	MAX 4060	MIN 6.2	AC-FT 104800						
WTR YR 1981	TOTAL	5393.2	MEAN 14.8	MAX 78	MIN 9.6	AC-FT 10700						

LOCATION.--Lat 37°02'50", long 119°08'52", in SW¼NW¼ sec.21, T.10 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 0.5 mi (0.8 km) downstream from Dinkey Meadow, 2.0 mi (3.2 km) south of Dinkey Creek Post Office, and 14.4 mi (23.2 km) southeast of town of Shaver Lake.

PERIOD OF RECORD.--September 1910 to September 1915 (fragmentary records), published as "near Ockenden"; October 1921 to September 1935, published as "at Dinkey Meadow"; July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,440 ft (1,658 m), from topographic map. September 1910 to September 1915, at site 1 mi (1.6 km) upstream at different datum. October 1921 to September 1935, at present site at same datum.

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

AVERAGE DISCHARGE, --18 years (water years 1922-35, 1978-81), 104 ft³/s (2,945 m³/s), 75,350 acre-ft/yr (92.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,020 ft³/s (199 m³/s) Jan. 13, 1980, gage height, 10.44 ft (3.182 m), from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of slope area measurement of peak flow; minimum recorded, 0.2 ft³/s (0.006 m³/s) Aug. 24-30, 1931, Sept. 7-9, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Apr. 16	2015	506	14.3	4.58	1.396	May 9	2045	509	14.4	4.59	1.399
Apr. 30	1945	*896	25.4	5.50	1.676	May 26	1945	575	16.3	4.79	1.460

Minimum daily, 1.6 ft³/s (0.045 m³/s) Aug. 30, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	5.1	4.8	9.9	59	39	101	601	217	19	3.6	1.7
2	4.5	5.0	4.8	9.2	51	38	91	574	197	17	3.5	1.7
3	4.3	4.9	10	9.5	42	37	80	454	173	15	3.4	1.6
4	4.3	4.8	167	8.9	41	35	93	386	178	14	3.4	1.7
5	4.3	4.7	30	8.2	35	35	137	340	181	13	3.3	1.7
6	4.2	4.6	17	8.0	32	38	179	295	158	12	3.1	1.7
7	4.1	4.6	12	7.7	28	38	188	278	133	11	2.9	1.7
8	4.0	4.5	9.7	7.7	28	43	198	295	115	11	2.7	1.8
9	4.0	4.5	9.8	7.6	30	51	237	353	104	10	2.6	1.8
10	4.0	4.5	11	7.4	29	63	225	379	93	9.3	2.6	1.9
11	4.0	8.4	11	7.5	30	66	216	375	81	8.7	2.6	2.0
12	4.1	13	11	7.8	34	59	222	370	73	8.0	2.6	2.1
13	4.3	7.5	11	7.8	33	59	257	376	64	7.6	2.6	2.1
14	5.2	6.5	11	7.8	63	54	293	330	57	7.2	2.6	2.1
15	6.6	6.0	13	7.8	66	51	338	241	50	6.8	2.6	2.1
16	7.1	5.3	16	7.8	70	56	358	183	46	6.5	2.6	1.9
17	6.6	5.7	16	7.6	78	62	359	170	43	6.3	2.6	1.8
18	6.5	5.5	15	7.6	79	60	312	179	40	6.1	2.5	1.8
19	6.4	5.4	14	7.4	80	71	234	195	38	5.8	2.4	2.3
20	6.0	5.2	13	7.2	77	67	202	156	35	5.5	2.3	2.9
21	5.7	5.1	12	7.6	78	64	243	141	32	5.2	2.2	2.8
22	5.5	5.6	13	7.8	80	83	369	152	30	4.9	2.1	2.8
23	5.3	5.4	14	12	82	94	502	164	28	4.7	2.1	2.8
24	5.1	5.3	11	12	71	100	533	181	26	4.5	2.0	2.8
25	5.1	4.6	11	11	54	139	482	211	23	4.4	1.9	2.8
26	6.3	5.1	14	11	49	161	378	297	21	4.4	1.9	2.9
27	6.2	5.0	17	25	43	93	345	286	20	4.2	1.9	2.9
28	6.0	5.1	14	23	43	88	445	250	18	4.0	1.8	2.9
29	5.7	4.8	13	47	---	107	535	253	17	3.9	1.7	3.0
30	5.5	5.0	12	78	---	103	610	257	18	3.7	1.6	3.2
31	5.2	---	11	71	---	101	---	233	---	3.7	1.7	---
TOTAL	160.7	166.7	549.1	465.8	1485	2155	8762	8955	2309	247.4	77.4	67.3
MEAN	5.18	5.56	17.7	15.0	53.0	69.5	292	289	77.0	7.98	2.50	2.24
MAX	7.1	13	167	78	82	161	610	601	217	19	3.6	3.2
MIN	4.0	4.5	4.8	7.2	28	35	80	141	17	3.7	1.6	1.6
AC-FT	319	331	1090	924	2950	4270	17380	17760	4580	491	154	133
CAL YR 1980 TOTAL	76479.6			MEAN 209	MAX 3700	MIN 4.0	AC-FT 151700					
WTR YR 1981 TOTAL	25400.4			MEAN 69.6	MAX 610	MIN 1.6	AC-FT 50380					

TULARE LAKE BASIN

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA

LOCATION.--Lat 36°52'47", long 119°07'40", in NW¼ sec.22, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank 1.1 mi (1.8 km) upstream from mouth, 1.7 mi (2.7 km) south of Balch Camp, 2.1 mi (3.4 km) downstream from Dinkey Creek, and 9 mi (14 km) east of Trimmer.

DRAINAGE AREA. - - 387 mi² (1,002 km²).

PERIOD OF RECORD.--March 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,035 ft (315.5 m), from river-profile map.

REMARKS.--Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), Black Rock Reservoir, capacity, 1,260 acre-ft (1.55 hm³), Balch Afterbay, capacity, 318 acre-ft (392,000 m³), and Haas and Balch powerplants. Diversion from Balch Afterbay to Kings River powerhouse began Mar. 1, 1962. See schematic diagram of Kings River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s (776 m³/s) Feb. 1, 1963, gage height, 19.20 ft (5.852 m), from rating curve extended above 4,900 ft³/s (139 m³/s); minimum daily, 6.4 ft³/s (0.18 m³/s) Oct. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,170 ft³/s (33.1 m³/s) May 1, 2; minimum daily, 29 ft³/s (0.82 m³/s) on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	40	38	49	97	123	243	1170	407	67	36	29
2	38	40	35	48	99	123	237	1170	386	69	35	29
3	37	40	96	48	92	113	216	960	352	72	35	30
4	37	39	391	48	88	111	200	750	327	72	34	30
5	37	39	105	45	88	107	252	670	326	66	34	30
6	36	39	70	44	85	109	370	570	316	64	33	30
7	36	38	59	44	82	111	430	540	285	61	33	30
8	36	38	49	40	86	109	430	550	251	59	32	29
9	36	39	49	38	129	125	480	640	226	57	32	30
10	36	39	48	35	120	139	510	710	209	56	32	30
11	36	41	49	40	105	153	460	740	191	55	32	30
12	36	63	49	41	110	146	480	760	173	53	33	30
13	37	51	48	39	112	164	510	770	160	50	32	31
14	40	46	49	38	132	137	570	720	151	48	32	31
15	47	45	51	38	180	143	620	460	140	47	32	30
16	50	43	57	38	160	135	660	390	130	46	32	30
17	47	43	60	38	183	153	660	380	121	45	32	30
18	46	42	56	35	185	152	650	390	113	45	32	30
19	46	42	55	38	195	211	550	420	109	44	31	30
20	44	42	52	39	181	261	460	390	104	43	31	30
21	43	41	50	43	183	209	500	350	99	42	30	30
22	42	42	52	44	182	238	660	324	94	41	30	30
23	41	42	54	76	186	237	830	343	90	41	30	30
24	40	42	49	66	186	225	1020	332	86	40	30	30
25	40	41	47	56	151	259	910	394	82	39	30	30
26	46	42	53	55	140	467	760	446	79	39	30	30
27	46	41	63	116	122	272	620	724	79	38	29	31
28	44	41	58	174	120	224	750	509	76	36	29	31
29	43	40	55	190	---	248	910	466	73	36	29	31
30	42	40	54	113	---	254	1120	469	70	36	29	31
31	41	---	52	101	---	229	---	444	---	35	29	---
TOTAL	1265	1261	2053	1857	3779	5687	17068	17971	5305	1542	980	903
MEAN	40.8	42.0	66.2	59.9	135	183	569	580	177	49.7	31.6	30.1
MAX	50	63	391	190	195	467	1120	1170	407	72	36	31
MIN	36	38	35	35	82	107	200	324	70	35	29	29
AC-FT	2510	2500	4070	3680	7500	11280	33850	35650	10520	3060	1940	1790
CAL YR 1980	TOTAL	227240	MEAN 621	MAX 8720	MIN 35	AC-FT 450700						
WTR YR 1981	TOTAL	59671	MEAN 163	MAX 1170	MIN 29	AC-FT 118400						

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°52'29", long 119°08'27", in SW¼NE¼ sec.21, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, on right bank 0.8 mi (1.3 km) downstream from North Fork, 2.4 mi (3.9 km) southwest of Balch Camp, and 8.5 mi (13.7 km) southeast of Trimmer.

DRAINAGE AREA.--1,342 mi² (3,476 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year. Prior to January 1952 monthly discharge only, published in WSP 1735. Published as Kings River below North Fork, October 1951 to September 1965.

REVISED RECORDS.--WSP 1930: Drainage area. WDR CA-72-2: Adjusted data for 1971.

GAGE.--Water-stage recorder. Datum of gage is 942.42 ft (287.250 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow regulated by Courtright and Wishon Reservoirs (stations 11214550, 11214800). Records include flow diverted to Kings River powerplant since Mar. 1, 1962. This station measures inflow to Pine Flat Lake. See schematic diagram of Kings River basin.

COOPERATION.--Records of diversion to Kings River powerplant and contents for Courtright and Wishon Reservoirs furnished by Pacific Gas and Electric Co.

AVERAGE DISCHARGE (adjusted for change in contents in Wishon and Courtright Reservoirs).--30 years, 2,185 ft³/s (61.88 m³/s), 1,583,000 acre-ft/yr (1,952 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,200 ft³/s (2,410 m³/s) Dec. 23, 1955, gage height, 23.08 ft (7.035 m), from rating curve extended above 22,000 ft³/s (623 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 86 ft³/s (2.44 m³/s) Oct. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1950, reached a stage of 21.6 ft (6.58 m) from floodmarks, discharge, 74,200 ft³/s (2,100 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,490 ft³/s (240 m³/s) May 2; minimum daily, 226 ft³/s (6.40 m³/s) Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	1180	617	271	547	744	1120	6710	5350	1210	627	821
2	1230	1160	561	556	600	645	1140	7080	5410	1290	678	901
3	1220	1170	696	260	595	632	1400	5970	4530	1220	789	872
4	1220	1150	1520	281	568	718	1200	4950	5010	1200	670	887
5	1210	1160	728	570	534	770	1260	4570	5900	1090	651	803
6	1210	1150	389	459	478	720	1740	4060	5910	1120	691	813
7	1210	1140	436	465	445	578	1720	3660	5060	1070	746	849
8	1200	1150	686	385	437	564	1840	3590	4860	1350	569	888
9	1200	1140	652	316	662	552	1870	4430	4760	1080	507	925
10	1190	1140	665	246	727	654	2230	4870	4330	921	528	911
11	1190	1140	473	234	599	698	2160	5250	3710	922	574	949
12	1190	1220	426	346	562	643	2230	5450	3470	703	585	944
13	1190	1220	298	284	581	947	2330	5780	2790	922	707	920
14	1180	1190	318	488	766	626	2260	5940	2230	955	754	929
15	1220	1180	562	588	872	738	2610	4270	2380	880	723	993
16	1280	1170	427	391	736	749	2980	3250	2340	841	620	896
17	1210	1160	436	244	830	661	3140	2870	2460	586	717	958
18	1230	952	528	229	843	851	3500	3210	2620	621	470	918
19	1240	579	476	620	830	1080	3370	3220	2680	586	320	925
20	1220	552	299	301	815	1520	2770	2810	2570	781	604	745
21	1210	552	291	226	805	1270	2650	2360	2540	898	742	894
22	1210	346	515	228	797	1320	3030	2590	2580	779	616	844
23	1190	332	516	295	843	1430	4000	2750	2480	754	320	900
24	1190	551	576	298	877	1600	5130	2830	2330	804	650	869
25	1180	499	360	324	807	1520	5650	3810	2190	877	827	837
26	1240	478	278	677	729	2030	5030	4430	2060	802	936	833
27	1210	248	331	628	679	1550	4320	4540	1590	923	889	880
28	1200	270	298	963	681	1250	4300	4540	1530	764	832	696
29	1200	245	571	922	---	1400	5070	4820	1570	867	840	635
30	1120	245	519	575	---	1490	6060	5260	1180	831	832	688
31	1170	---	473	541	---	1530	---	5350	---	752	901	---
TOTAL	37390	25669	15921	13211	19245	31480	88110	135220	98420	28399	20915	25923
MEAN	1206	856	514	426	687	1015	2937	4362	3281	916	675	864
MAX	1280	1220	1520	963	877	2030	6060	7080	5910	1350	936	993
MIN	1120	245	278	226	437	552	1120	2360	1180	586	320	635
AC-FT	74160	50910	31580	26200	38170	62440	174800	268200	195200	56330	41480	51420
MEAN ‡	355	301	369	346	728	1009	3386	5642	3561	676	300	204
AC-FT ‡	21800	17890	22700	21300	40440	62060	201500	346900	211900	41590	18440	12110
CAL YR 1980 TOTAL	1438358			3930	MAX 25700	MIN 245	AC-FT 2853000	MEAN ‡ 3926	AC-FT ‡ 2850000			
WTR YR 1981 TOTAL	539903			1479	MAX 7080	MIN 226	AC-FT 1071000	MEAN ‡ 1407	AC-FT ‡ 1019000			

‡ Adjusted for change in contents in Courtright and Wishon Reservoirs.

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.

CHEMICAL ANALYSES: Water years 1956-66, 1968-70, 1973 to current year.

BIOLOGICAL DATA: Water years 1978 to current year.

WATER TEMPERATURES: Water years 1967 to current year.

SEDIMENT RECORDS: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1966 to current year.

INSTRUMENTATION.--Temperature recorder since October 1966.

REMARKS.--Quality of water samples are obtained at the gaging station upstream from the powerplant. Temperature recorder located 1 mi (2 km) downstream from gaging station. Temperature subject to fluctuation because of powerplant operation upstream. Temperature sensor inundated by Pine Flat Lake from Nov. 16 to June 29.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 26.5°C Sept. 2, 1977; minimum recorded, 0.0°C on several days in 1966 and 1967.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 22.0°C July 6, 7; minimum recorded, 10.5°C Nov. 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 06...	1400	266	49	7.4	13.0	.40	10.4	K3	K2	16	0	5.6
JAN 29...	1115	1210	74	6.6	7.0	25	11.7	>600	390	--	--	--
MAR 26...	1345	1600	47	7.9	9.0	5.1	--	31	22	15	0	4.8
MAY 13...	1130	5330	18	6.7	12.0	.90	10.4	13	K5	5	0	1.8
JUL 23...	1430	476	36	6.5	20.5	.90	8.6	K4	K2	14	2	5.1
SEP 23...	1300	201	50	6.6	17.0	1.0	8.6	K3	K1	16	0	5.4

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV 06...	.5	3.4	30	.4	.9	20	3.9	1.8	.2	12	38	40
JAN 29...	1.4	4.5	--	--	1.5	24	2.4	2.0	.1	15	57	--
MAR 26...	.7	3.2	30	.4	.9	16	--	.9	.1	12	40	--
MAY 13...	.1	1.1	31	.2	.3	6	.7	.5	.0	4.8	20	16
JUL 23...	.4	2.0	22	.2	.6	12	2.0	1.0	.1	6.8	27	26
SEP 23...	.6	3.0	27	.3	1.0	18	<5.0	2.0	.1	9.3	38	--

See footnotes at end of table.

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 06...	.00	.00	.030	.040	--	1.4	--	1.4	.020	.020	--
JAN 29...	.56	.49	.110	.040	.60	.61	.71	.65	.100	.050	--
MAR 26...	.11	.05	.040	.000	.53	.34	.57	.34	.040	.030	3.3
MAY 13...	.08	.04	.080	.030	.47	.43	.55	.46	.150	.020	--
JUL 23...	.09	.09	.060	.020	.17	.23	.23	.25	.020	<.010	.2
SEP 23...	<.10	<.10	.030	.050	.30	.33	.33	.38	.030	.030	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
NOV 06...	1400	1	1	100	10	4	<1	0	0	1	<3
JAN 29...	1115	1	0	100	30	1	1	0	0	2	<3
MAY 13...	1130	4	0	100	6	0	<1	10	0	0	<3
SEP 23...	1300	2	1	100	10	2	<1	0	0	1	<3

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 06...	6	2	80	20	5	0	10	2	.1	.0
JAN 29...	17	5	3100	120	11	10	100	7	.2	.1
MAY 13...	7	2	460	20	1	3	20	3	--	--
SEP 23...	5	0	60	10	4	1	20	4	.2	.0

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
NOV 06...	3	1	0	0	0	0	30	6	.9	.1
JAN 29...	3	0	0	0	0	0	30	9	8.6	1.8
MAY 13...	2	0	0	0	0	0	70	10	26	.1
SEP 23...	2	0	0	0	0	1	20	5	4.2	.2

> Actual value is known to be greater than the value shown.

K Results based on colony count outside the acceptable range (non-ideal colony count).

< Actual value is known to be less than the value shown.

TULARE LAKE BASIN

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE TIME	JAN 29,81 1115	MAR 26,81 1345	MAY 13,81 1130	JUL 23,81 1430	SEP 23,81 1300					
TOTAL CELLS/ML	6100	130	380	230	260					
DIVERSITY: DIVISION	1.0	0.5	1.1	0.9	0.7					
..CLASS	1.0	0.5	1.1	0.9	0.7					
..ORDER	2.1	2.0	2.0	1.5	2.1					
...FAMILY	2.3	2.4	2.0	1.7	2.8					
....GENUS	2.7	2.4	2.1	1.7	2.8					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	260	4	26#	20	70#	19	13	6	41#	16
....COCCONEIS	150	3	--	--	--	--	--	--	--	--
..BACILLARIALES										
...NITZSCHIA	87	1	13	10	14	4	--	--	14	5
...EPITHEMIALES										
....EPITHEMIA	240	4	--	--	--	--	--	--	14	5
....RHOPALODIA	*	0	--	--	--	--	--	--	--	--
..EUNOTIALES										
...EUNOTIACEAE										
....EUNOTIA	*	0	--	--	--	--	--	--	--	--
..FRAGILARIALES										
...FRAGILARIA										
....DIATOMA	--	--	--	--	14	4	--	--	--	--
....HANNAEA	*	0	--	--	--	--	--	--	--	--
....SYNEDRA	150	3	13	10	14	4	13	6	14	5
..NAVICULALES										
...CYMBELLACEAE										
.....CYMBELLA	87	1	26#	20	--	--	26	11	41#	16
...GOMPHONEMACEAE										
.....GOMPHONEMA	370	6	39#	30	--	--	13	6	28	11
..NAVICULACEAE										
...CALONEIS	*	0	--	--	--	--	--	--	--	--
...NAVICULA	500	8	--	--	14	4	--	--	55#	21
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	--	--	--	14	4	--	--	--	--
....SCENEDESMACEAE										
.....SCENEDESMUS	87	1	--	--	--	--	--	--	55#	21
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
.....CHLAMYDOMONAS	--	--	13	10	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
.....ANACYSTIS	260	4	--	--	28	7	13	6	--	--
..NOSTOCALES										
...HAMMATOIDEACEAE										
.....RAPHIDIOPSIS	280	5	--	--	--	--	--	--	--	--
...NOSTOCACEAE										
.....ANABAENA	--	--	--	--	--	--	160#	67	--	--
..OSCILLATORIALES										
...OSCILLATORIA										
.....LYNGBYA	220	4	--	--	--	--	--	--	--	--
.....OSCILLATORIA	3300#	54	--	--	210#	56	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....TRACHELOMONAS	*	0	--	--	--	--	--	--	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	13.5	13.5	12.5								
2	14.5	14.0	13.0	12.5								
3	14.5	14.0	13.0	12.5								
4	14.5	14.0	13.5	12.5								
5	14.5	13.5	13.5	13.0								
6	14.5	13.5	13.5	12.5								
7	14.5	13.5	13.0	12.0								
8	14.5	14.0	13.0	11.5								
9	15.0	14.0	12.5	11.5								
10	15.0	14.0	12.5	11.5								
11	14.5	14.0	12.5	11.5								
12	14.5	14.0	12.5	11.5								
13	14.5	13.5	12.5	11.0								
14	14.0	13.5	11.5	11.0								
15	13.5	12.5	11.5	10.5								
16	13.0	12.5	---	---								
17	13.5	12.0	---	---								
18	13.5	12.5	---	---								
19	14.0	12.5	---	---								
20	14.0	13.0	---	---								
21	14.5	13.5	---	---								
22	14.5	13.5	---	---								
23	14.5	13.5	---	---								
24	14.5	13.5	---	---								
25	14.0	13.5	---	---								
26	14.5	13.5	---	---								
27	14.0	13.5	---	---								
28	14.0	13.0	---	---								
29	13.5	13.0	---	---								
30	13.5	12.5	---	---								
31	13.5	13.0	---	---								
MONTH	15.0	12.0	---	---								

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1					---	---	19.0	14.5			---	---
2					---	---	20.0	14.0			---	---
3					---	---	21.0	14.5			17.5	11.5
4					---	---	21.5	14.0			14.5	11.5
5					---	---	21.0	14.5			15.0	11.5
6					---	---	22.0	14.5			16.0	12.0
7					---	---	22.0	15.0			14.5	11.5
8					---	---	20.0	18.5			14.5	11.5
9					---	---	---	---			14.5	12.0
10					---	---	---	---			15.0	12.5
11					---	---	---	---			15.5	12.5
12					---	---	---	---			15.0	12.5
13					---	---	---	---			14.5	12.5
14					---	---	---	---			15.5	12.5
15					---	---	---	---			14.5	13.0
16					---	---	---	---			15.5	13.5
17					---	---	---	---			16.0	13.5
18					---	---	---	---			15.5	13.5
19					---	---	---	---			16.5	14.5
20					---	---	---	---			17.5	15.0
21					---	---	---	---			17.0	15.5
22					---	---	---	---			17.5	16.0
23					---	---	---	---			17.0	16.0
24					---	---	---	---			17.5	16.5
25					---	---	---	---			18.0	17.0
26					---	---	---	---			18.0	17.0
27					---	---	---	---			18.5	17.5
28					---	---	---	---			19.5	17.5
29					---	---	---	---			19.5	17.5
30					18.5	14.5	---	---			18.0	17.0
31					---	---	---	---			---	---
MONTH					---	---	---	---			19.5	11.5

TULARE LAKE BASIN

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 06...	1400	266	13.0	1	.72
JAN 29...	1115	1210	7.0	88	287
MAR 26...	1345	1600	9.0	14	60

11221000 PINE FLAT LAKE NEAR PIEDRA, CA

LOCATION.--Lat 36°49'58", long 119°19'29", in SE4NE4 sec.2, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030010, near center of Pine Flat Dam on Kings River, 1.9 mi (3.1 km) upstream from Mill Creek, 3.5 mi (5.6 km) northeast of Piedra, and 16 mi (26 km) northeast of Sanger.

DRAINAGE AREA.--1,545 mi² (4,002 km²).

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1970, published as "Pine Flat Reservoir."

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 8, 1952, nonrecording mercury gage on dam at same datum.

REMARKS.--Reservoir is formed by gravity-type concrete dam; regulation of discharge from reservoir began Dec. 4, 1951. Total capacity, 1,001,055 acre-ft (1.25 km³) between elevations 565.5 ft (172.36 m), bottom of lower tier of river outlets, and 951.5 ft (290.02 m), gross pool elevation. No dead storage. Reservoir is used for flood control and conservation storage. Water is released down Kings River for diversion by the Kings River Water Association. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Kings River basin.

COOPERATION.--Records furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,009,000 acre-ft (1.24 km³) July 15, 1967, June 8, 9, 1974, elevation, 952.76 ft (290.401 m); minimum since gross pool elevation first obtained, 66,339 acre-ft (81.8 hm³) Sept. 12, 1977, elevation, 691.29 ft (210.705 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 948,712 acre-ft (1.17 km³) May 15, elevation, 942.57 ft (287.295 m); minimum, 307,128 acre-ft (379 hm³) Aug. 30, elevation, 797.30 ft (243.017 m).

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

690	64,528	820	383,196
700	74,248	840	457,481
710	95,542	860	538,559
720	113,424	880	623,065
740	154,021	920	823,775
760	201,186	950	992,146
780	255,055	960	1,052,445
800	315,716		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	683265	691137	723660	737107	746515	768030	782545	892133	937735	703962	455309	308456
2	682882	693210	724648	737157	747772	767367	783473	902344	938194	693402	448093	309058
3	682356	695334	726280	737157	749029	766501	784557	910595	936361	683121	411623	309374
4	681782	697461	729796	737007	750037	765634	785178	916177	935103	673302	435239	309914
5	681257	699543	731186	737457	750741	765176	785747	920817	934874	663466	428641	310517
6	680827	701581	731533	737655	751396	764718	786884	924276	934245	653425	421795	311088
7	680492	703767	731582	737855	751900	763955	788022	926833	931504	643234	414823	311756
8	680349	705908	732030	737955	752557	762684	789317	927630	928200	633083	407435	312425
9	680301	707907	732328	738255	754373	761160	790405	929679	924219	622378	400115	312999
10	680396	709957	732675	737905	755991	759840	792221	932760	918778	611137	393115	313605
11	680492	712109	732576	737407	757205	758319	793727	936361	911777	600094	385894	314148
12	680683	714263	732428	737107	758319	756345	795235	940027	904081	588845	378603	314692
13	681066	716374	731881	736658	759383	755586	796954	943934	895027	579724	371662	315171
14	681782	718437	731483	736508	761007	754171	798413	947963	884866	571984	364788	315684
15	682930	720454	731781	736061	762733	752757	800396	948712	874993	563996	359419	316261
16	684414	722427	731881	735711	764055	751497	803009	947213	864310	555849	353752	316774
17	685708	724351	732129	734965	765176	750287	805733	944681	853271	547296	348671	317319
18	686427	725883	732428	734168	766042	749180	809249	942439	842529	538896	343561	317802
19	687244	726675	732874	734018	767555	750993	815359	940487	832294	530354	338093	318316
20	688011	727219	733024	733123	767622	755131	819693	938194	821599	523004	333758	318799
21	688396	727021	733123	732129	768336	758269	823138	935332	810774	516948	330239	319669
22	688108	726329	734118	731433	768898	761261	827070	933274	799822	510598	326510	320540
23	687627	725488	735063	731980	769306	763751	832668	931561	788798	504289	322060	321574
24	687340	725191	736011	732179	769919	765889	840111	929965	778632	498427	318574	322481
25	687051	724895	736658	732378	770226	767876	848674	930193	768387	493205	315331	323421
26	687099	725290	737107	733272	769868	771862	856254	931390	758116	487730	312744	324297
27	687292	725240	737257	734716	769204	774474	862184	932874	747320	482926	310803	325338
28	687483	724796	737107	737755	768592	776372	867918	933560	736558	478225	308931	326152
29	687819	723512	737457	742204	---	778375	874883	934474	726032	473508	307318	326739
30	688252	722575	737507	744007	---	780382	882765	935731	714950	468304	307128	327914
31	689069	---	737555	745260	---	782081	---	936990	---	462115	307886	---
MAX	689069	727219	737555	745260	770226	782081	882765	948712	938194	703962	455309	327914
MIN	680301	691137	723660	731433	746515	749180	782545	892133	714950	462115	307128	308456
†	893.35	900.23	903.25	904.79	909.40	912.03	930.89	940.53	898.68	841.19	797.54	803.77
‡	+5517	+33506	+14980	+7705	+23332	+13489	+100684	+54225	-222040	-252835	-154229	+20028
††	2120	1073	519	485	540	774	1561	2808	3852	3486	2748	2029

CAL YR 1980 † +174640

WTR YR 1981 † -355638

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

TULARE LAKE BASIN

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA

LOCATION.--Lat 36°49'50", long 119°20'07", in SW¼NW¼ sec.2, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030012, on right bank 0.6 mi (1.0 km) downstream from Pine Flat Dam, and 2.9 mi (4.7 km) northeast of Piedra.

DRAINAGE AREA.--1,545 mi² (4,002 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Monthly and yearly discharges only and adjusted flow for some periods published in WSP 1735.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control since Sept. 1, 1956. Datum of gage is 556.97 ft (169.764 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1956, at site 0.2 mi (0.3 km) downstream at datum 3.48 ft (1.061 m) lower.

REMARKS.--Records excellent. Flow regulated by Pine Flat Lake (station 11221000) 0.6 mi (1.0 km) upstream and Wishon and Courtright Reservoirs (stations 11214550 and 11214800). See schematic diagram of Kings River basin.

AVERAGE DISCHARGE (adjusted for change in contents and evaporation).--28 years, 2,254 ft³/s (63.83 m³/s), 1,633,000 acre-ft/yr (2.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 (484 m³/s) June 3, 4, 8, 9, 1969, gage height, 10.73 ft (3.271 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Feb. 26, 27, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,390 ft³/s (238 m³/s) June 18, gage height, 8.07 ft (2.460 m); minimum daily, 27 ft³/s (0.76 m³/s) Jan. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	105	60	468	37	1090	924	1670	4820	6700	3990	483
2	1320	74	46	469	34	1050	862	1650	5040	6570	4100	557
3	1390	77	46	343	64	1050	849	1680	5350	6350	3940	632
4	1390	79	44	357	150	1140	907	1970	5550	6030	3870	558
5	1370	79	124	380	233	985	973	2090	5800	6010	3870	457
6	1330	79	242	380	223	920	1120	2180	6050	6060	4030	463
7	1250	79	442	380	241	994	1160	2260	6290	6150	4120	446
8	1200	70	449	379	225	1190	1170	3120	6430	6390	4230	487
9	1110	70	486	428	77	1300	1290	3160	6650	6410	4090	570
10	1040	84	480	451	57	1330	1270	3150	7060	6510	3940	570
11	1010	71	494	461	75	1440	1340	3290	7240	6410	4080	586
12	994	123	550	513	138	1620	1360	3340	7380	6300	4160	599
13	894	133	551	538	134	1540	1380	3580	7350	5500	4090	636
14	788	135	504	538	88	1390	1420	3700	7370	4780	4130	622
15	627	136	436	616	95	1410	1520	3880	7430	4830	3310	578
16	405	134	439	586	149	1370	1570	4030	7700	4880	3350	587
17	501	134	437	618	344	1280	1660	4080	8010	4820	3170	611
18	788	170	389	633	457	1340	1670	4160	8000	4770	2900	633
19	734	235	299	648	481	724	606	4180	7850	4850	2960	604
20	741	269	242	784	466	39	630	3960	7930	4440	2680	535
21	976	637	244	696	498	44	946	3750	8000	3840	2380	429
22	1270	676	82	505	535	53	1010	3610	8060	3860	2370	384
23	1310	702	78	363	610	301	1110	3540	8020	3820	2480	351
24	1250	683	74	247	645	615	1160	3520	7410	3660	2330	372
25	1210	624	71	240	674	719	1140	3530	7270	3420	2270	368
26	1100	293	70	247	1010	497	1120	3780	7190	3420	2060	354
27	1040	291	285	244	999	437	1230	3870	6990	3220	1780	364
28	1010	468	373	68	1030	457	1320	4130	6920	3060	1630	344
29	923	827	419	39	---	500	1430	4270	6840	3090	1520	280
30	828	675	500	28	---	562	1570	4460	6830	3310	808	115
31	720	---	437	27	---	756	---	4620	---	3700	486	---
TOTAL	31809	8212	9393	12674	9769	28143	35717	104210	208830	153160	95124	14575
MEAN	1026	274	303	409	349	908	1191	3362	6961	4941	3069	486
MAX	1390	827	551	784	1030	1620	1670	4620	8060	6700	4230	636
MIN	405	70	44	27	34	39	606	1650	4820	3060	486	115
AC-FT	63090	16290	18630	25140	19380	55820	70840	206700	414200	303800	188700	28910
MEAN ‡	299	300	411	462	820	1134	3357	5568	3575	646	231	196
AC-FT ‡	18380	17850	25270	28410	45540	69730	199800	342400	212700	39720	14200	11660
CAL YR 1980 TOTAL	1393869			MEAN 3808	MAX 8990	MIN 25	AC-FT 2765000	MEAN ‡ 4077	AC-FT ‡ 2960000			
WTR YR 1981 TOTAL	711616			MEAN 1950	MAX 8060	MIN 27	AC-FT 1411000	MEAN ‡ 1416	AC-FT ‡ 1025000			

‡ Adjusted for change in contents in Wishon and Courtright Reservoirs, Pine Flat Lake, and evaporation from Pine Flat Lake.

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-66, 1970 to current year.

CHEMICAL ANALYSES: Water years 1956-66.

WATER TEMPERATURES: Water years 1970 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1969 to current year.

INSTRUMENTATION.--Temperature recorder since October 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C Sept. 21, 1976; minimum recorded, 7.0°C Dec. 23, 24, 26, 1970, Jan. 4, 1971, Feb. 6-9, 1979, Apr. 1, 1980, Jan. 31, Feb. 3, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 20.5°C Apr. 30, Aug. 31; minimum recorded, 7.0°C Jan. 31, Feb. 3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	12.0	14.5	10.5	13.0	10.0	11.0	10.0	12.5	8.0	9.5	9.5
2	12.5	12.0	14.5	10.0	12.5	10.0	11.5	10.0	13.0	8.0	10.0	9.5
3	13.0	12.0	14.5	10.0	12.0	10.0	11.5	10.5	12.5	7.0	10.0	9.5
4	13.0	12.0	14.5	10.0	12.5	10.0	11.0	10.5	12.5	7.5	10.0	9.5
5	12.5	12.0	14.5	10.5	12.5	10.0	11.5	10.5	11.5	9.5	9.5	9.5
6	13.0	12.0	14.5	10.5	12.0	10.5	11.5	10.0	11.5	9.5	10.5	9.5
7	13.0	12.0	14.5	10.5	11.5	10.5	11.0	10.0	11.0	9.5	10.5	9.5
8	13.0	12.0	14.5	10.5	11.5	10.5	10.5	9.5	9.5	9.5	10.5	9.5
9	13.0	12.0	14.5	10.0	11.5	10.5	10.5	10.0	11.5	9.5	10.5	9.5
10	13.0	12.0	14.0	10.0	11.5	10.5	10.5	9.5	12.5	9.5	10.5	9.5
11	12.5	12.0	12.5	11.5	11.5	10.5	10.5	9.5	13.5	9.5	10.5	9.5
12	12.5	12.0	12.0	10.5	11.5	10.5	11.0	11.0	12.0	9.5	10.5	9.5
13	12.5	12.0	13.5	10.0	11.5	10.5	11.0	10.0	11.0	9.5	10.0	9.5
14	12.5	12.0	13.0	10.0	11.5	10.5	11.0	10.0	13.5	9.5	10.0	9.5
15	12.5	12.0	13.0	10.0	11.5	10.5	11.0	10.0	13.0	9.0	10.0	9.5
16	12.5	12.0	12.5	10.0	12.0	10.5	11.0	10.0	13.0	10.0	10.5	10.0
17	12.5	12.0	13.0	10.0	11.5	10.5	10.5	10.0	11.5	10.0	10.5	10.0
18	12.0	11.0	12.5	10.0	12.0	11.0	10.5	10.0	11.0	9.5	10.5	10.0
19	12.0	11.5	12.5	10.0	11.5	10.5	11.0	10.0	11.0	9.5	10.5	10.0
20	12.5	12.0	12.0	10.0	11.5	10.5	10.5	10.0	10.0	9.5	15.5	9.5
21	12.5	12.0	11.5	10.5	12.0	10.0	10.5	10.0	10.5	9.0	12.5	10.0
22	12.5	11.5	11.5	11.0	12.5	10.0	10.5	10.0	11.0	9.0	14.5	10.0
23	12.0	11.5	11.5	10.5	12.5	10.0	11.0	10.0	11.0	9.5	12.5	10.0
24	12.0	11.5	11.5	11.0	12.5	10.0	11.5	9.5	10.0	9.5	11.5	9.5
25	11.5	11.5	11.5	10.5	12.0	10.0	11.0	9.5	10.5	9.5	10.5	10.0
26	12.0	11.5	12.0	10.0	12.5	9.5	11.0	9.5	10.0	9.0	11.0	10.0
27	12.0	11.5	12.0	10.5	11.5	10.0	11.0	10.0	10.0	9.0	10.5	10.0
28	12.0	11.0	12.5	10.5	11.0	10.5	11.5	9.5	9.5	9.5	11.5	10.0
29	12.0	11.0	11.5	11.0	11.0	10.5	9.5	7.5	---	---	11.5	9.5
30	12.0	11.0	11.5	11.0	11.5	10.5	11.0	8.0	---	---	11.5	9.5
31	12.0	11.0	---	---	11.5	10.5	12.5	7.0	---	---	11.0	10.0
MONTH	13.0	11.0	14.5	10.0	13.0	9.5	12.5	7.0	13.5	7.0	15.5	9.5

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1												
2	10.5	10.0	20.0	18.0	18.0	16.0	12.0	11.5	14.0	18.0	18.0	18.5
3	10.0	9.5	18.5	16.5	16.5	15.0	12.0	11.5	14.0	16.5	16.5	18.5
4	11.0	10.0	17.5	16.0	16.5	14.5	12.0	11.5	14.5	16.0	16.5	18.5
5	11.0	10.0	19.0	16.5	17.5	16.0	12.0	11.5	14.5	16.5	17.5	18.5
6	11.5	10.0	17.5	16.5	17.5	16.5	12.0	11.5	14.5	16.5	17.5	18.0
7												
8	11.0	10.0	18.0	16.0	17.5	16.0	12.0	11.5	15.0	16.0	17.5	18.5
9	11.0	10.0	17.5	16.5	17.5	16.0	12.0	11.5	15.5	16.5	17.5	18.5
10	11.0	10.0	17.5	16.0	17.5	15.5	12.0	11.5	16.0	16.5	16.5	18.5
11												
12	11.0	10.0	17.5	16.5	17.0	15.5	12.0	11.5	16.5	16.5	17.0	18.5
13	11.0	10.0	18.0	16.5	16.0	14.5	12.0	11.5	16.5	16.5	16.0	18.0
14	11.0	10.0	17.5	16.0	16.5	15.0	12.0	11.5	17.0	16.0	16.5	18.0
15	11.0	10.5	16.5	15.0	16.5	15.0	12.5	11.5	17.0	15.0	16.5	18.0
16	11.5	10.5	16.5	14.0	17.5	17.0	12.5	12.0	17.5	14.0	17.5	18.5
17												
18	11.0	10.5	16.5	14.0	18.0	16.5	12.5	12.0	17.5	14.0	18.0	18.0
19	11.0	10.5	17.0	15.5	17.5	16.0	12.5	12.0	17.5	16.0	17.5	18.5
20	12.0	10.5	17.0	15.5	17.5	11.5	12.5	12.0	17.5	15.5	17.5	18.0
21	12.5	10.5	15.5	14.5	12.0	11.0	13.0	11.0	18.0	14.5	12.0	18.0
22												
23	11.5	10.5	16.5	15.0	11.5	11.5	13.0	12.0	18.0	15.0	11.5	18.0
24	12.0	10.5	16.5	15.5	11.5	11.5	13.0	12.0	18.0	15.5	11.5	17.5
25	12.5	11.0	16.5	15.5	11.5	11.5	13.0	12.5	18.5	15.5	11.5	17.5
26	13.5	11.0	16.0	15.5	11.5	11.5	13.0	12.5	18.5	15.5	11.5	17.5
27	18.0	11.0	16.5	15.5	12.0	11.5	13.5	12.5	18.5	15.5	12.0	17.5
28												
29	17.0	16.0	19.0	15.5	12.0	11.5	13.5	12.5	19.0	15.5	12.0	17.5
30	17.5	16.5	18.0	16.0	12.0	11.5	13.5	13.0	19.0	16.0	12.0	17.5
31	19.0	17.5	18.0	16.0	12.0	11.5	13.5	13.0	19.0	16.0	12.0	17.5
32	20.0	18.5	17.0	15.5	12.0	11.5	14.0	12.5	19.0	15.5	12.0	17.5
33	20.5	19.0	16.5	15.0	12.0	11.5	14.0	13.0	20.0	15.0	12.0	16.5
34	---	---	17.0	15.5	---	---	14.0	13.0	20.5	15.5	---	---
35												
MONTH	20.5	9.5	20.0	14.0	18.0	11.0	14.0	11.0	20.5	14.0	18.0	16.5

11221700 MILL CREEK NEAR PIEDRA, CA

LOCATION.--Lat 36°49'07", long 119°20'27", in NE¼NE¼ sec.10, T.15 S., R.24 E., Fresno County, Hydrologic Unit 18030008, on left bank 150 ft (46 m) upstream from road bridge, 0.7 mi (1.1 km) upstream from mouth, and 2.3 mi (3.7 km) east of Piedra.

DRAINAGE AREA.--127 mi² (329 km²).

PERIOD OF RECORD.--October 1957 to current year. November 1938 to September 1957 in reports of Kings River Water Association.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 550 ft (168 m), from topographic map. Prior to July 14, 1958, at site 150 ft (46 m) upstream at same datum.

REMARKS.--Records good. Some small diversions above station for irrigation. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE.--24 years (water year 1958-81), 41.1 ft³/s (1.164 m³/s), 29,780 acre-ft/yr (36.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (311 m³/s) Dec. 6, 1966, gage height, 9.53 ft (2.905 m) in gage well, 10.2 ft (3.11 m) from floodmarks; maximum gage height, 9.65 ft (2.941 m) in gage well, Jan. 19, 1969 (backwater from debris); no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 29	1030	*586 16.6	3.85 1.173
Mar. 20	0615	504 14.3	3.72 1.134

Minimum, no flow for many days.

REVISIONS.--Revised figures of discharge for the water year 1980, superseding those published in the report for 1980 are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	4.8	35	52	167	87	55	29	9.0	.16	
2		0	4.8	21	50	163	87	49	27	8.8	.08	
3		0	4.8	16	46	553	84	49	26	8.6	0	
4		.05	4.5	14	44	363	80	47	25	8.8	0	
5		3.3	4.3	13	43	480	184	44	24	8.5	0	
6		2.2	4.7	11	41	774	172	42	24	8.1	0	
7		.46	4.8	11	41	547	106	42	23	7.9	0	
8		3.0	4.8	11	39	420	98	42	22	7.5	0	
9		2.9	4.8	12	38	354	87	40	20	7.0	0	
10		2.3	4.8	277	36	311	84	72	19	6.8	0	
11		2.5	5.0	393	36	278	84	58	18	6.3	0	
12		2.5	5.4	815	31	244	80	47	18	5.6	0	
13		2.5	5.4	2680	31	224	72	44	18	4.8	0	
14		2.6	5.4	1370	36	205	68	58	18	4.3	0	
15		2.3	5.4	590	98	188	68	52	17	3.9	0	
16		2.5	5.4	276	259	172	68	44	16	3.9	0	
17		7.0	5.4	212	960	160	65	42	15	3.5	0	
18		13	5.4	429	829	160	61	35	14	3.5	0	
19		7.6	5.4	241	1650	151	65	33	13	3.3	0	
20		5.7	5.4	170	2000	135	65	31	13	3.1	0	
21		4.8	6.3	138	1520	131	72	31	12	2.8	0	
22		4.3	8.9	117	739	128	80	30	12	2.8	0	
23		4.3	8.2	100	466	124	68	33	11	2.2	0	
24		4.3	8.2	89	349	115	65	34	11	2.0	0	
25		4.3	14	82	287	111	61	37	11	1.8	0	
26		4.7	17	76	243	111	58	37	11	1.3	0	
27		6.2	12	70	213	102	55	33	10	1.2	0	
28		6.2	10	65	208	98	55	34	10	.80	0	
29		5.4	9.4	63	191	98	55	34	9.1	.74	0	
30		5.3	10	60	---	91	58	30	8.8	.55	0	
31		---	24	56	---	91	---	29	---	.33	0	---
TOTAL	0	112.21	228.7	8513	10576	7249	2392	1288	504.9	139.72	.24	0
MEAN	0	3.74	7.38	275	365	234	79.7	41.5	16.8	4.51	.008	0
MAX	0	13	24	2680	2000	774	184	72	29	9.0	.16	0
MIN	0	0	4.3	11	31	91	55	29	8.8	.33	0	0
AC-FT	0	223	454	16890	20980	14380	4740	2550	1000	277	.5	0
CAL YR 1979	TOTAL	12821.35	MEAN	35.1	MAX	836	MIN	0	AC-FT	25430		
WTR YR 1980	TOTAL	31003.77	MEAN	84.7	MAX	2680	MIN	0	AC-FT	61500		

TULARE LAKE BASIN

11221700 MILL CREEK NEAR PIEDRA, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	2.4	6.7	7.5	51	25	48	17	6.1			
2	0	2.4	7.0	7.5	42	47	49	15	5.4			
3	0	2.5	8.4	7.5	37	43	50	15	4.8			
4	0	2.5	16	7.5	33	35	44	14	4.3			
5	0	2.7	31	7.5	29	31	41	14	3.5			
6	0	2.8	22	7.5	27	29	37	13	2.9			
7	0	2.9	17	7.5	25	26	36	13	2.2			
8	0	3.1	12	7.5	23	23	34	12	1.2			
9	0	3.5	7.5	7.5	63	21	33	11	.96			
10	0	4.1	7.2	7.5	58	20	31	11	.89			
11	0	4.7	7.0	7.5	41	20	31	10	.83			
12	0	5.1	7.0	7.5	33	20	29	9.5	1.0			
13	0	5.9	7.0	7.5	30	42	27	8.9	.70			
14	0	6.4	7.0	7.5	29	47	26	8.4	.98			
15	0	6.5	7.0	7.5	31	34	25	8.5	1.0			
16	0	6.5	7.0	7.5	28	30	24	8.8	1.4			
17	0	6.1	7.0	7.5	26	28	24	9.0	1.3			
18	0	5.5	7.0	7.5	24	27	25	8.5	.99			
19	0	5.5	7.0	7.5	23	38	51	8.9	.63			
20	0	5.5	7.0	7.5	21	280	54	10	.31			
21	0	5.8	7.0	7.5	20	142	40	10	.09			
22	0	6.4	7.0	7.5	20	190	35	9.1	.02			
23	.41	6.7	7.0	14	19	108	31	8.2	.01			
24	.89	7.8	7.0	21	18	79	28	7.6	0			
25	1.0	8.6	7.0	14	19	66	26	7.2	0			
26	1.3	8.7	7.0	11	26	114	24	7.2	0			
27	1.8	9.3	7.0	14	24	105	24	29	0			
28	2.2	8.0	7.2	62	21	77	22	18	0			
29	2.5	6.0	7.1	288	---	66	21	11	0			
30	2.5	6.0	7.1	198	---	59	18	8.6	0			
31	2.5	---	7.5	87	---	53	---	7.3	---			---
TOTAL	15.10	159.9	282.7	874.0	841	1925	988	348.7	41.51	0	0	0
MEAN	.49	5.33	9.12	28.2	30.0	62.1	32.9	11.2	1.38	0	0	0
MAX	2.5	9.3	31	288	63	280	54	29	6.1	0	0	0
MIN	0	2.4	6.7	7.5	18	20	18	7.2	0	0	0	0
AC-FT	30	317	561	1730	1670	3820	1960	692	82	0	0	0
CAL YR 1980 TOTAL	31120.56			MEAN 85.0	MAX 2680	MIN 0	AC-FT 61730					
WTR YR 1981 TOTAL	5475.91			MEAN 15.0	MAX 288	MIN 0	AC-FT 10860					

11221900 KINGS RIVER AT PIEDRA BRIDGE, AT PIEDRA, CA

LOCATION.--Lat 36°49'13", long 119°22'56", in NW¼NE¼ sec.8, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030012, at Piedra Bridge on Piedra Road, 0.6 mi (1.0 km) north of Piedra, and 1.0 mi (1.6 km) west of Piedra Post Office.

DRAINAGE AREA.--1,693 mi² (4,385 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1973-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM CA,DISS (MG/L)	MAGNESIUM MG,DISS (MG/L)	SODIUM NA,DISS (MG/L)
80/11/25	09 10	24	7.2	11.0	9.5	5.0	0.6	12	3	1	2
81/04/21	09 45	42	7.5	10.0	11.5	3.0	1.4	14	4	1	3
81/05/27	08 30	30	7.3	16.0	8.9	4.0	0.8	12	3	1	2
81/06/24	12 00	36	7.3	16.0	11.0			14	4	1	2
81/09/22	12 30	44	7.3	14.0	10.4			14	4	1	2

DATE	TIME	PTSSSIUM K,DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/11/25	09 10	0.6	8	1	1	22	4	0.05	0.00	0.10	0.02
81/04/21	09 45	0.7	14	1	2	38	3	0.05	0.00	0.10	0.01
81/05/27	08 30	0.6	10	0	1	32	1	0.01	0.00	0.10	0.01
81/06/24	12 00	0.7	12	1	1	33		0.10	0.00	0.10	0.02
81/09/22	12 30	0.7	12	0	1	30		0.11	0.01	0.20	0.02

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B,DISS (UG/L)
80/11/25	09 10	0.00	2.2	0
81/04/21	09 45	0.00	2.0	100
81/05/27	08 30	0.00	3.0	100
81/06/24	12 00	0.00		0
81/09/22	12 30	0.00		200

DATE	TIME	ARSENIC AS,DISS (UG/L)	BARIUM BA,DISS (UG/L)	CADMIUM CD,DISS (UG/L)	CHROMIUM CR,DISS (UG/L)	COPPER CU,DISS (UG/L)	IRON FE,DISS (UG/L)	LEAD PB,DISS (UG/L)	MANGNESE MN,DISS (UG/L)	MERCURY HG,TOTAL (UG/L)	SELENIUM SE,DISS (UG/L)
81/04/21	09 45	0	0	0	0	0	10	0	0	0.0	10
81/05/27	08 30	0	0	0	0	0	10	0	0	0.0	0
81/06/24	12 00	0	0	0	0	0	20	10	0	0.0	0

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA

LOCATION.--Lat 36°12'53", long 120°28'11", in NW4SE4 sec.5, T.20 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on right bank 50 ft (15 m) downstream from highway bridge, 1.1 mi (1.8 km) upstream from Nunez Canyon, 3.0 mi (4.8 km) downstream from White Creek, and 8.1 mi (13.0 km) northwest of Coalinga.

DRAINAGE AREA.--95.8 mi² (248.1 km²).

PERIOD OF RECORD.--May 1945 to current year. Prior to October 1949 monthly discharge only, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1950. WSP 1735: 1952(M), 1956(M). WSP 1930: Drainage area. WDR CA-72-2: 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 1,067.2 ft (325.28 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1959, at site 100 ft (30 m) downstream at same datum.

REMARKS.--Records good. Minor diversion for irrigation and stock ponds.

AVERAGE DISCHARGE.--36 years, 4.97 ft³/s (0.141 m³/s), 3,600 acre-ft/yr (4.44 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1950).--Maximum discharge, 4,360 ft³/s (123 m³/s) Feb. 24, 1969, gage height, 10.34 ft (3.152 m) in gage well, 11.30 ft (3.444 m) from floodmarks, from rating curve extended above 800 ft³/s (22 m³/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m), maximum gage height, 10.65 ft (3.246 m) in gage well, 11.95 ft (3.642 m) from floodmarks, Jan. 16, 1978; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 28	0230	57 1.61	2.22 0.677	Mar. 19	1230	*175 4.96	2.82 0.860
Mar. 5	0400	57 1.61	2.22 0.677	Mar. 21	1945	108 3.06	2.52 0.768

Minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.17	.15	.54	3.6	7.9	.43	.15	.07			
2	0	.17	.15	.52	2.3	6.8	.90	.17	.06			
3	0	.18	.23	.77	2.0	2.7	.60	.20	.06			
4	0	.17	2.2	.67	1.7	2.7	.40	.23	.06			
5	0	.15	2.4	.63	1.5	34	.30	.23	.05			
6	0	.16	1.2	.58	1.3	12	.27	.20	.05			
7	0	.17	.96	.58	1.2	5.7	.27	.17	.05			
8	0	.18	.80	.58	1.3	3.5	.31	.15	.05			
9	0	.20	.68	.58	3.2	2.4	.27	.15	.05			
10	0	.21	.63	.58	2.2	1.8	.23	.13	.04			
11	0	.27	.60	.55	1.4	1.5	.20	.13	.03			
12	0	.29	.59	.49	1.1	1.3	.20	.11	.03			
13	0	.30	.58	.49	.97	1.5	.17	.10	.03			
14	0	.30	.58	.49	.88	2.0	.17	.11	.02			
15	0	.29	.58	.49	.78	1.5	.15	.13	.01			
16	0	.30	.58	.49	.74	1.3	.15	.15	0			
17	0	.29	.58	.49	.67	1.1	.13	.13	0			
18	0	.34	.58	.47	.63	1.1	.15	.11	0			
19	0	.34	.58	.42	.58	63	.16	.15	0			
20	0	.20	.58	.44	.55	14	.25	.19	0			
21	0	.16	.58	.42	.52	31	.19	.19	0			
22	0	.14	.58	.46	.48	32	.14	.17	0			
23	0	.13	.58	.73	.46	10	.13	.13	0			
24	.01	.12	.58	.72	.48	5.1	.11	.11	0			
25	.09	.11	.58	.63	.62	2.5	.10	.10	0			
26	.13	.10	.55	.59	.61	2.0	.11	.11	0			
27	.14	.10	.54	1.9	.55	1.4	.13	.11	0			
28	.15	.10	.53	21	.87	.88	.13	.10	0			
29	.16	.10	.53	28	---	.64	.11	.09	0			
30	.17	.13	.58	12	---	.49	.13	.08	0			
31	.16	---	.58	6.2	---	.42	---	.08	---			---
TOTAL	1.01	5.87	21.44	83.50	33.19	254.23	6.99	4.36	.66	0	0	0
MEAN	.033	.20	.69	2.69	1.19	8.20	.23	.14	.022	0	0	0
MAX	.17	.34	2.4	28	3.6	63	.90	.23	.07	0	0	0
MIN	0	.10	.15	.42	.46	.42	.10	.08	0	0	0	0
AC-FT	2.0	12	43	166	66	504	14	8.6	1.3	0	0	0

CAL YR 1980 TOTAL 3433.27 MEAN 9.38 MAX 287 MIN 0 AC-FT 6810
WTR YR 1981 TOTAL 411.25 MEAN 1.13 MAX 63 MIN 0 AC-FT 816

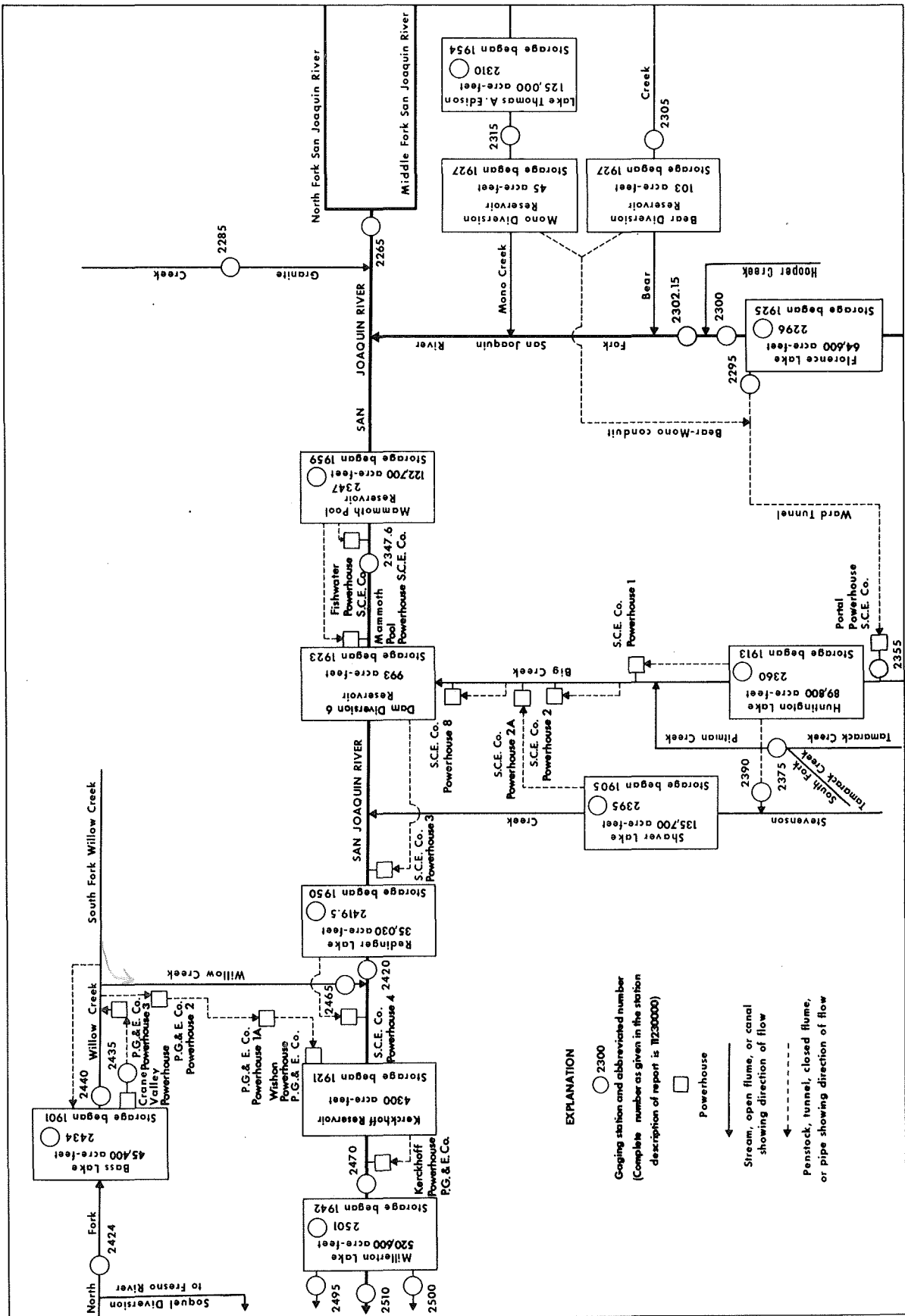


FIGURE 8.-- Schematic diagram showing diversions and storage in San Joaquin River basin.

SAN JOAQUIN RIVER BASIN

11226500 SAN JOAQUIN RIVER AT MILLER CROSSING, CA

LOCATION.--Lat 37°30'38", long 119°11'47", in SE4NE4 sec.11, T.5 S., R.25 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank at Miller Crossing, 2.4 mi (3.9 km) downstream from North Fork San Joaquin River, 4.6 mi (7.4 km) east of Clover Meadow Ranger Station, and 23 mi (37 km) northeast of town of Bass Lake.

DRAINAGE AREA.--249 mi² (645 km²).

PERIOD OF RECORD.--October 1921 to September 1928, October 1951 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as Middle Fork San Joaquin River at Miller Bridge.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,570 ft (1,393 m), from topographic map. Prior to Mar. 24, 1922, nonrecording gage at same site and datum.

REMARKS.--Records good. No regulation or diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and three discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--37 years, 594 ft³/s (16.82 m³/s), 430,400 acre-ft/yr (531 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft³/s (470 m³/s) Dec. 23, 1955, gage height, 21.28 ft (6.486 m), from rating curve extended above 5,200 ft³/s (147 m³/s) on basis of contracted-opening measurement of maximum flow; minimum, 19 ft³/s (0.54 m³/s) Nov. 17, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 24	2045	2,440 69.1	14.62 4.456	May 30	2145	2,500 70.8	14.68 4.474
May 1	2130	*3,460 98.0	15.51 4.727	June 5	2245	2,650 75.0	14.82 4.517
May 13	2145	2,620 74.2	14.79 4.508				

Minimum daily, 55 ft³/s (1.56 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	95	76	93	211	158	310	2490	1980	649	134	85
2	121	93	87	92	202	159	282	2560	1950	634	133	83
3	120	92	91	97	164	163	263	1930	1770	497	129	82
4	120	90	186	91	159	166	288	1620	1870	446	126	79
5	119	89	114	82	155	156	386	1500	2080	411	126	76
6	117	88	124	82	146	153	512	1320	2140	423	120	73
7	115	86	113	80	138	160	528	1240	1920	439	118	70
8	113	85	106	78	140	167	524	1330	1780	398	120	70
9	111	85	112	82	159	179	632	1570	1770	335	121	70
10	110	81	106	77	153	202	691	1800	1570	292	121	71
11	109	108	106	74	154	217	599	1890	1380	266	123	73
12	121	121	104	79	158	196	595	1940	1210	243	124	72
13	130	118	103	75	161	215	683	2060	933	221	123	78
14	119	108	99	74	312	209	785	1920	734	208	125	80
15	118	113	104	76	267	213	958	1400	610	206	118	76
16	118	96	126	75	241	216	1060	1080	655	223	123	73
17	118	107	124	73	270	214	1080	973	721	234	125	75
18	121	97	117	72	264	209	995	1090	749	227	120	82
19	118	96	111	72	288	302	828	930	785	210	115	77
20	114	93	107	68	255	281	692	810	843	199	111	72
21	111	91	102	72	221	304	848	757	838	191	106	70
22	107	95	103	72	225	341	1300	894	801	184	98	68
23	104	90	105	84	240	324	1670	1060	778	179	92	66
24	101	84	99	83	228	327	1890	1190	695	176	89	64
25	100	79	97	74	196	416	1760	1440	623	172	86	62
26	113	87	98	86	182	433	1430	1600	557	165	85	61
27	116	82	110	114	163	305	1120	1810	531	159	88	59
28	103	90	104	128	158	297	1310	1940	508	158	92	57
29	103	91	100	124	---	361	1880	1920	483	159	92	56
30	103	86	99	187	---	338	2340	2060	521	152	91	55
31	98	---	97	208	---	316	---	2000	---	141	89	---
TOTAL	3513	2816	3330	2824	5610	7697	28239	48124	33785	8597	3463	2135
MEAN	113	93.9	107	91.1	200	248	941	1552	1126	277	112	71.2
MAX	130	121	186	208	312	433	2340	2560	2140	649	134	85
MIN	98	79	76	68	138	153	263	757	483	141	85	55
AC-FT	6970	5590	6610	5600	11130	15270	56010	95450	67010	17050	6870	4230
CAL YR 1980 TOTAL	344362				6000	76	AC-FT	683000				
WTR YR 1981 TOTAL	150133				2560	55	AC-FT	297800				

11228500 GRANITE CREEK NEAR CATTLE MOUNTAIN, CA

LOCATION.--Lat 37°31'36", long 119°15'28", in NE¼ sec.5, T.5 S., R.25 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.7 mi (1.1 km) downstream from confluence of East and West Forks of Granite Creek, 1.6 mi (2.6 km) northwest of Cattle Mountain, and 21 mi (34 km) northeast of town of Bass Lake.

DRAINAGE AREA.--47.8 mi² (123.8 km²).

PERIOD OF RECORD.--October 1921 to September 1928, May 1952 to current year (no winter records). Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1445: Drainage area. WDR CA-80-3: 1975.

GAGE.--Water-stage recorder. Altitude of gage is 6,800 ft (2,073 m), from topographic map. Prior to May 14, 1922, nonrecording gage at same site at different datum.

REMARKS.--Records fair. Some regulation by manipulation of stoplogs in controls for fishwater purposes; no diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and eight discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--7 years (water years 1922-28), 110 ft³/s (3.115 m³/s) 79,640 acre-ft/yr (98.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 3,530 ft³/s (100 m³/s) Jan. 13, 1980, gage height, 9.73 ft (2.966 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s); no flow at times in 1924, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 1,410 ft³/s (39.9 m³/s) Apr. 30, gage height, 8.25 ft (2.515 m); minimum daily, 0.02 ft³/s (0.001 m³/s) Aug. 29 to Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	3.3	3.6				---	845	418	80	2.3	.02
2	.91	3.0	3.6				---	757	365	52	2.3	.02
3	.77	2.7	3.6				---	539	332	24	2.1	.02
4	.65	2.3	3.6				51	470	376	18	2.1	.07
5	.65	2.3	---				89	432	407	14	1.9	.63
6	.54	1.8	---				120	361	314	12	1.9	.63
7	.54	1.6	---				133	339	254	12	1.7	.63
8	.44	1.4	---				147	418	216	11	1.7	.53
9	.44	1.4	---				181	532	202	8.7	1.6	.53
10	.44	1.2	---				195	576	166	7.3	1.4	.53
11	.44	3.6	---				175	578	134	5.6	1.4	.99
12	.91	6.4	---				175	563	113	4.5	1.4	.86
13	1.8	6.9	---				212	605	82	3.9	1.4	.53
14	2.3	7.8	---				252	466	57	3.3	1.7	.42
15	2.0	5.6	---				301	285	49	3.0	1.9	.33
16	3.0	5.2	---				323	204	51	2.5	1.6	.53
17	3.0	7.8	---				317	255	52	2.3	1.7	.53
18	3.0	4.9	---				250	289	49	2.0	1.6	.42
19	3.0	5.2	---				179	221	47	1.8	.86	.33
20	3.0	5.2	---				154	179	47	1.4	.63	.24
21	2.7	5.2	---				252	171	42	1.2	.42	.24
22	2.3	3.9	---				427	256	38	1.1	.33	.18
23	2.3	3.6	---				575	338	32	.77	.18	.12
24	2.0	3.3	---				631	362	26	.65	.12	.12
25	2.0	3.6	---				543	387	22	.54	.10	.10
26	3.3	5.6	---				385	440	19	.44	.10	.10
27	4.2	6.9	---				280	496	16	.44	.07	.10
28	3.9	10	---				434	490	14	1.8	.05	.10
29	3.9	5.6	---				681	526	14	2.3	.02	.10
30	3.6	3.9	---				890	548	30	2.0	.02	.10
31	3.6	---	---				---	438	---	2.0	.02	---
TOTAL	62.54	131.2	---				---	13366	3984	282.54	34.62	10.05
MEAN	2.02	4.37	---				---	431	133	9.11	1.12	.34
MAX	4.2	10	---				---	845	418	80	2.3	.99
MIN	.44	1.2	---				---	171	14	.44	.02	.02
AC-FT	124	260	---				---	26510	7900	560	69	20

SAN JOAQUIN RIVER BASIN

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA

LOCATION.--Lat 37°16'27", long 118°58'23", in NW¼ sec.1, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse at entrance to tunnel.

PERIOD OF RECORD.--April 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as Florence Lake tunnel at intake 1925-36 and as Ward tunnel at intake 1937-60.

REVISED RECORDS.--WSP 1515: 1931.

GAGE.--Water-stage recorder, concrete control, and Venturi meter. Datum of gage is 7,213.89 ft (2,198.794 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Records good. Ward tunnel diverts from Florence Lake, a reservoir on South Fork San Joaquin River, to Huntington Lake via Portal powerhouse and further used in Big Creek powerplants. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record (no discharge measurements) and rating table for Venturi meter furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--56 years, 279 ft³/s (7.901 m³/s), 202,100 acre-ft/yr (249 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,990 ft³/s (56.4 m³/s) Apr. 30, 1926; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	625	15	19	61	48	111	271	759	442	554	93
2	475	611	17	19	69	48	107	221	1250	527	550	7.0
3	725	515	20	21	74	47	98	267	1270	357	545	7.0
4	456	599	31	18	73	45	95	397	1270	524	541	26
5	296	603	24	16	68	44	113	431	1260	525	560	37
6	480	440	28	16	64	43	153	436	1280	413	565	37
7	574	123	36	16	59	43	175	475	1280	339	561	37
8	567	52	36	15	57	43	177	460	1300	356	555	37
9	561	36	38	15	56	44	208	430	1310	422	551	37
10	557	30	37	14	55	46	235	290	1340	569	547	37
11	515	35	35	14	54	49	208	240	1350	627	542	37
12	482	44	35	15	54	50	188	101	1350	604	468	37
13	481	43	34	14	55	54	200	8.0	844	531	351	38
14	506	39	32	14	61	56	230	8.2	605	499	351	38
15	525	36	34	14	72	58	267	8.3	515	536	352	48
16	521	29	40	14	74	57	310	8.6	516	567	350	57
17	514	31	39	12	82	55	332	8.8	517	509	349	57
18	508	22	35	12	86	54	328	8.9	613	471	241	57
19	502	23	31	12	96	58	301	8.9	774	469	370	57
20	525	21	29	12	91	64	254	8.9	877	499	439	57
21	534	19	26	12	81	89	251	8.9	821	522	400	57
22	544	23	26	13	79	99	347	8.8	803	368	396	57
23	597	21	26	14	80	106	375	8.6	798	510	394	57
24	619	18	24	14	75	108	230	8.6	669	507	391	57
25	616	17	24	12	65	121	256	8.6	594	545	351	57
26	614	19	25	14	60	118	267	8.6	612	602	311	57
27	609	18	26	23	52	107	331	8.7	506	618	274	57
28	561	19	26	25	49	98	455	9.1	494	612	272	57
29	511	19	24	28	---	115	427	9.2	473	607	245	57
30	498	19	22	28	---	122	204	199	422	602	225	57
31	587	---	21	48	---	113	---	5.8	---	571	225	---
TOTAL	16081	4149	896	533	1902	2202	7233	4371.5	26472	15850	12826	1408.0
MEAN	519	138	28.9	17.2	67.9	71.0	241	141	882	511	414	46.9
MAX	725	625	40	48	96	122	455	475	1350	627	565	93
MIN	21	17	15	12	49	43	95	5.8	422	339	225	7.0
AC-FT	31900	8230	1780	1060	3770	4370	14350	8670	52510	31440	25440	2790
CAL YR 1980	TOTAL	124005.5	MEAN 339	MAX 1640	MIN 5.0	AC-FT 246000						
WTR YR 1981	TOTAL	93923.5	MEAN 257	MAX 1350	MIN 5.8	AC-FT 186300						

11229600 FLORENCE LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°16'26", long 118°58'23", in NW¼ sec.1, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of Ward tunnel intake near dam on South Fork San Joaquin River, 16 mi (26 km) northeast of town of Big Creek.

DRAINAGE AREA.--171 mi² (443 km²).

PERIOD OF RECORD.--November 1925 to current year. Prior to October 1931, published in WSP 721.

REVISED RECORDS.--WDR CA-78-3: 1977.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by multiple-arch concrete dam; storage began in April 1925. Usable capacity, 64,400 acre-ft (79.4 hm³) between elevations 7,220.94 ft (2,200.943 m), throat of Venturi tube in Ward Tunnel intake and 7,327.50 ft (2,233.422 m), top of spillway drum gates, NGVD. Additional storage of 168 acre-ft (207,000 m³) is not available for diversion. Water is diverted through Ward tunnel to Huntington Lake via Portal powerhouse and used for further power development in Big Creek powerplants. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records furnished by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 66,000 acre-ft (81.4 hm³) July 3, 1932, elevation, 7,329.14 ft (2,233.922 m); minimum occurred during period of no record, Oct. 2-4, 1926, or Nov. 30 to Dec. 2, 1927.

NOTE.--Prior to 1960, maximum and minimum daily contents were published. Maximum and minimum daily contents (water years 1926-39) summarized in WSP 881.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 64,400 acre-ft (79.4 hm³) July 1, elevation, 7,327.46 ft (2,233.410 m); minimum, 852 acre-ft (1.05 hm³) Dec. 2, elevation, 7,229.75 ft (2,203.628 m).

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

7,220.94	0	7,235	1,770	7,260	11,600	7,290	32,000
7,222	63	7,240	2,980	7,265	14,600	7,300	39,900
7,224	201	7,245	4,670	7,270	17,800	7,310	48,300
7,227	495	7,250	6,650	7,275	21,100	7,320	57,300
7,230	887	7,255	8,950	7,280	24,600	7,330	66,800

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36970	6442	865	872	929	906	986	8367	54867	64368	45804	24781
2	36138	5439	859	872	938	906	982	10343	55501	64252	44807	24816
3	34810	4357	877	870	937	906	971	11694	55667	64301	43819	24874
4	33953	3096	903	868	934	904	980	12466	56377	64012	42763	24916
5	33495	1932	907	866	927	901	1020	13040	57712	63829	42023	24902
6	32563	1117	892	865	921	899	1045	13422	59067	63484	41047	24888
7	31502	930	895	863	921	899	1051	13663	60045	63484	40080	24866
8	30435	898	898	862	913	901	1066	14007	61018	63417	39128	24866
9	29394	883	901	862	913	903	1103	14816	61976	63168	38176	24845
10	28428	879	890	859	909	912	1095	16185	62510	62681	37240	24838
11	27383	901	887	859	910	913	1069	17879	62643	61957	36312	24824
12	26494	901	887	859	913	913	1068	20114	62557	61188	35500	24866
13	25598	898	887	858	913	921	1100	22785	62643	60583	34974	24895
14	24659	890	887	858	937	926	1117	25281	62862	59847	34474	24902
15	23675	884	906	856	938	926	1159	26938	63101	59104	33961	24874
16	22701	881	904	858	947	926	1183	28154	63456	58337	33418	24838
17	21743	877	899	856	954	926	1185	29267	63820	57852	32863	24809
18	20805	870	893	855	963	916	1170	30510	64146	57164	32541	24781
19	19864	872	893	855	966	932	1144	31571	64224	56553	31951	24738
20	18868	868	881	854	955	947	1117	32426	64118	55777	31183	24688
21	17860	869	879	854	946	972	1154	33272	64108	55042	30495	24631
22	16831	870	881	854	946	985	1309	34271	64127	54601	29789	24560
23	15747	868	879	861	947	986	1853	34607	64098	53861	29088	24482
24	14648	863	877	854	938	999	2776	36422	64108	53115	28376	24404
25	13579	868	879	854	927	1000	3678	38232	64262	52284	27728	24319
26	12507	868	880	859	920	989	4368	40219	64224	51396	27150	24234
27	11436	868	880	877	913	977	4587	42263	64262	50442	26618	24141
28	10439	868	879	874	910	986	4729	44494	64301	49478	26168	24042
29	9511	868	876	879	---	1005	5354	47250	64252	48521	25713	23964
30	8550	865	874	907	---	997	6769	50051	64291	47553	25309	23844
31	7474	---	874	915	---	988	---	53169	---	46714	24909	---
MAX	36970	6442	907	915	966	1005	6769	53169	64301	64368	45804	24916
MIN	7474	863	859	854	909	899	971	8367	54867	46714	24909	23844
†	7251.88	7229.84	7229.91	7230.18	7230.15	7230.65	7250.28	7315.49	7327.38	7308.19	7280.45	7278.95
‡	-29400	-6610	+9	+41	-5	+78	+5780	+46400	+11100	+17600	+21800	+1060

CAL YR 1980 † -321

WTR YR 1981 † -13100

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

SAN JOAQUIN RIVER BASIN

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA

LOCATION.--Lat 37°18'30", long 118°57'40", unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 0.2 mi (0.3 km) downstream from Hooper Creek, 3.2 mi (5.1 km) downstream from spillway of Florence Lake Dam, and 17 mi (27 km) northeast of town of Big Creek.

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--October 1978 to current year. October 1946 to September 1978, operated as a low-flow station only, in files of the Geological Survey.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 6,949.41 ft (2,118.180 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Records good. Flow regulated by Florence Lake (station 11229600), 3.2 mi (5.1 km) upstream, and Hooper Creek diversion dam (capacity less than 2 acre-ft), 0.7 mi (1.1 km) upstream. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and 12 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft³/s (5.13 m³/s) Nov. 17, gage height, 5.16 ft (1.573 m); minimum daily, 13 ft³/s (0.37 m³/s) Oct. 21, 22, Nov. 2, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	17	15	16	16	17	25	20	19	24	25	21
2	17	13	16	16	16	17	25	22	20	25	24	20
3	17	14	16	16	16	17	23	20	21	23	24	20
4	17	15	20	15	16	17	23	19	21	23	20	20
5	17	15	16	15	16	17	27	21	21	22	20	21
6	17	16	16	15	16	17	29	21	21	22	20	21
7	18	17	16	15	16	17	30	21	21	21	20	21
8	18	14	17	15	16	17	30	21	21	21	19	20
9	18	14	16	15	16	18	32	21	21	21	20	20
10	18	14	16	16	16	18	31	21	21	20	21	21
11	18	15	16	16	16	18	28	21	21	20	21	21
12	18	15	16	16	16	19	27	21	20	20	20	22
13	18	14	16	15	16	19	27	20	20	21	20	21
14	18	14	16	15	17	19	27	20	20	19	21	21
15	18	14	16	15	17	19	26	20	20	20	21	21
16	17	13	16	15	17	19	26	20	21	21	21	21
17	17	18	16	15	17	19	25	20	21	21	21	21
18	18	38	16	15	18	19	25	20	21	21	21	21
19	19	18	16	15	19	20	29	21	20	21	20	21
20	19	18	16	15	19	21	29	21	20	21	20	21
21	13	17	16	15	19	20	28	21	19	21	20	22
22	13	16	16	15	19	21	24	21	19	21	20	21
23	21	16	16	16	19	23	16	21	19	21	20	20
24	23	16	16	16	19	24	24	21	20	21	20	20
25	24	16	16	15	18	26	20	21	21	21	20	20
26	23	16	16	16	18	26	19	23	21	21	20	20
27	17	16	16	17	18	23	19	23	21	21	20	20
28	17	16	16	17	17	22	19	22	21	21	21	20
29	18	16	16	18	---	26	19	22	21	21	21	20
30	18	15	16	17	---	26	19	22	23	22	21	20
31	18	---	16	16	---	24	---	21	---	26	21	---
TOTAL	567	486	500	484	479	625	751	649	616	664	643	619
MEAN	18.3	16.2	16.1	15.6	17.1	20.2	25.0	20.9	20.5	21.4	20.7	20.6
MAX	25	38	20	18	19	26	32	23	23	26	25	22
MIN	13	13	15	15	16	17	16	19	19	19	19	20
AC-FT	1120	964	992	960	950	1240	1490	1290	1220	1320	1280	1230

CAL YR 1980 TOTAL 76521 MEAN 209 MAX 2670 MIN 13 AC-FT 151800
WTR YR 1981 TOTAL 7083 MEAN 19.4 MAX 38 MIN 13 AC-FT 14050

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA

LOCATION.--Lat 37°20'18", long 118°58'23", in SW¼ sec.12, T.7 S., R.27 E., unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.2 mi (0.3 km) upstream from diversion dam, 1.7 mi (2.7 km) upstream from mouth, 2.1 mi (3.4 km) south of Lake Thomas A. Edison, and 2.4 mi (3.9 km) northeast of Mono Hot Springs.

DRAINAGE AREA.--52.5 mi² (136.0 km²).

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.--WSP 611: 1922(M). WSP 1345: 1931-35. WSP 1515: 1922-30. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,366.94 ft (2,245.443 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Records good. No storage or diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and five discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--60 years, 90.5 ft³/s (2.563 m³/s), 65,570 acre-ft/yr (80.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft³/s (99.7 m³/s) Sept. 5, 1978, gage height, 7.90 ft (2.408 m), from rating curve extended above 570 ft³/s (16.1 m³/s); minimum daily recorded, 1.2 ft³/s (0.034 m³/s) Sept. 29 to Oct. 5, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 440 ft³/s (12 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 1	2100	490 13.9	5.16 1.573	June 1	2230	576 16.3	5.33 1.625
May 12	2200	442 12.5	5.07 1.545	June 5	2130	821 23.3	5.73 1.747
May 29	2230	*904 25.6	5.85 1.783				

Minimum daily discharge, 4.5 ft³/s (0.13 m³/s) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	15	12	15	210	20	33	339	442	145	27	16
2	21	15	13	15	200	20	31	348	438	147	26	16
3	22	15	13	14	119	20	29	285	384	112	24	15
4	22	14	13	14	91	20	31	234	466	100	23	14
5	22	14	14	14	76	20	41	210	576	95	22	14
6	22	14	18	13	70	19	54	178	593	100	21	13
7	22	13	20	11	51	19	55	162	522	96	20	13
8	22	13	55	10	41	19	55	172	520	88	20	13
9	21	12	83	10	33	19	69	231	522	78	20	13
10	21	13	57	10	34	21	70	280	466	66	21	13
11	21	15	45	10	31	21	57	305	410	58	21	13
12	21	18	43	11	32	21	58	331	355	53	21	13
13	23	20	34	11	33	20	68	355	244	47	22	14
14	22	19	36	12	37	22	76	316	181	45	23	12
15	21	18	32	12	37	24	89	210	159	44	22	11
16	22	18	33	11	33	23	102	152	186	44	23	11
17	22	18	29	10	31	22	107	131	210	47	21	10
18	23	16	24	10	31	22	97	138	225	46	21	13
19	22	16	20	10	36	21	86	116	240	44	20	12
20	21	15	18	9.9	31	29	78	100	250	41	19	11
21	20	16	17	10	29	35	94	91	244	40	17	10
22	19	15	15	10	31	34	145	104	234	38	16	9.7
23	19	15	15	10	33	33	205	124	231	36	15	9.3
24	18	14	15	12	30	32	229	135	201	35	14	8.9
25	17	15	15	14	24	34	203	219	181	34	14	8.5
26	18	14	15	19	22	31	161	250	159	33	13	5.0
27	19	13	16	17	23	32	131	244	152	31	14	4.7
28	17	14	15	61	23	32	161	270	142	30	27	4.7
29	17	14	15	87	---	37	230	394	133	30	21	4.5
30	16	13	15	157	---	36	303	527	138	29	19	4.5
31	16	---	15	190	---	33	---	471	---	28	17	---
TOTAL	630	454	780	819.9	1472	791	3148	7422	9204	1860	624	329.8
MEAN	20.3	15.1	25.2	26.4	52.6	25.5	105	239	307	60.0	20.1	11.0
MAX	23	20	83	190	210	37	303	527	593	147	27	16
MIN	16	12	12	9.9	22	19	29	91	133	28	13	4.5
AC-FT	1250	901	1550	1630	2920	1570	6240	14720	18260	3690	1240	654
CAL YR 1980 TOTAL	53615.0		MEAN 146		MAX 904	MIN 12	AC-FT 106300					
WTR YR 1981 TOTAL	27534.7		MEAN 75.4		MAX 593	MIN 4.5	AC-FT 54620					

SAN JOAQUIN RIVER BASIN

11231000 LAKE THOMAS A. EDISON NEAR BIG CREEK, CA

LOCATION.--Lat 37°22'13", long 118°59'13", in sec.26, T.6 S., R.27 E., unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in outlet works of dam on Mono Creek at lower end of Vermilion Valley, 18.1 mi (29.1 km) northeast of town of Big Creek.

DRAINAGE AREA.--90.0 mi² (233.1 km²).

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by earthfill dam; dam completed and storage began on Oct. 12, 1954. Usable capacity, 125,000 acre-ft (154 hm³) between elevations 7,508.9 ft (2,288.71 m), invert of outlet works and 7,642.50 ft (2,329.434 m), top of gates in service spillway, NGVD. Dead storage negligible. Water is released for diversion to Ward tunnel via Mono Creek diversion works. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records furnished by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 125,900 acre-ft (155 hm³) Aug. 18, 1958, elevation, 7,642.95 ft (2,329.571 m); minimum since appreciable storage was attained, 5,080 acre-ft (6.26 hm³) Mar. 27, 1969, elevation, 7,553.09 ft (2,302.182 m).

NOTE.--Prior to 1960, maximum and minimum daily contents were published.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 125,040 acre-ft (154 hm³) Oct. 3, elevation, 7,642.50 ft (2,329.434 m); minimum, 37,900 acre-ft (46.7 hm³) Apr. 1, elevation, 7,588.00 ft (2,312.822 m).

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

7,508.9	0	7,535	513	7,560	9,520	7,610	68,600
7,515	18	7,540	928	7,570	18,100	7,620	85,000
7,520	64	7,545	1,830	7,580	28,500	7,630	102,400
7,525	156	7,550	3,570	7,590	40,500	7,640	120,400
7,530	297	7,555	6,150	7,600	53,800	7,643	126,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124979	124350	101925	76211	53967	51036	37961	48511	72271	94219	98395	98501
2	124998	124350	101110	75541	53169	51078	38049	49618	73462	94619	98413	97869
3	125035	124387	100385	74953	52765	51160	38136	50504	74515	94915	98430	96957
4	124979	124350	99610	74451	52695	51202	38223	51271	75655	95193	98448	96171
5	124905	124350	98676	73981	52611	51229	38335	52002	77031	95437	98448	95472
6	124813	124109	97781	73510	52514	51271	38472	52625	78498	95716	98553	94776
7	124720	123278	96904	73059	52430	51354	38609	53155	79859	95943	98623	94028
8	124628	122466	96048	72673	52402	51395	38759	53797	81129	96171	98659	93281
9	124553	121675	95280	72271	52388	51409	38933	54559	82372	96345	98676	92485
10	124442	120829	94376	71486	52277	51464	39108	55423	83466	96502	98659	91688
11	124331	120057	93420	70721	52195	51436	39283	56322	84465	96642	98694	90929
12	124220	119178	92554	69942	52098	51105	39472	57314	85261	96765	98746	90170
13	124091	118262	91688	69121	52043	50736	39699	58355	85891	96852	98764	89379
14	123998	117366	90825	68366	52015	50340	39976	59361	86384	96957	98764	88623
15	123961	116435	89980	67522	51947	49917	40253	60097	86810	97079	98764	87921
16	123980	115542	89121	66682	51891	49307	40556	60627	87306	97202	98834	87169
17	123980	114614	88246	65802	51809	48511	40886	61115	87801	97360	98869	86537
18	124035	113742	87425	64958	51740	47746	41217	61622	88297	97465	98887	85686
19	124109	112854	87066	64118	51602	47171	41573	62144	88864	97570	98905	84718
20	124239	111967	86146	63272	51422	46467	41829	62563	89465	97658	98905	83906
21	124257	111046	85244	62383	51271	45779	42124	62910	90015	97728	98887	83078
22	124239	110145	84380	61533	51133	45030	42536	63362	90549	97816	98887	82287
23	124220	109209	83585	60775	51009	44296	43050	63906	91067	97886	98887	81397
24	124220	108329	82742	59802	50872	43582	43699	64424	91516	97974	98869	80945
25	124202	107432	81968	59070	50831	42883	44375	65126	91948	98027	98852	80628
26	124202	106501	81146	58239	50872	42176	44820	65987	92311	98079	98852	80059
27	124202	105625	80277	57573	50927	41446	45397	66883	92658	98132	98852	79428
28	124183	104751	79494	56881	50981	40696	45911	67756	92987	98220	98887	78664
29	124331	103842	78648	56293	---	40001	46626	68727	93333	98272	98887	77772
30	124350	102900	77838	55508	---	39258	47479	69942	93697	98308	98887	76784
31	124331	---	76998	54728	---	38522	---	71135	---	98360	98887	---
MAX	125035	124387	101925	76211	53967	51464	47479	71135	93697	98360	98905	98501
MIN	123961	102900	76998	54728	50831	38522	37961	48511	72271	94219	98395	76784
†	7642.12	7630.30	7615.21	7600.68	7597.99	7588.46	7595.40	7611.59	7625.06	7627.73	7628.03	7615.08
‡	-611	-21400	-25900	-22300	-3750	-12500	+8960	+23700	+22600	+4660	+527	-22100

CAL YR 1980 ‡ +5930

WTR YR 1981 ‡ -48200

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA

LOCATION.--Lat 37°21'40", long 118°59'26", in SW¼ sec.35, T.6 S., R.27 E., unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 0.6 mi (1.0 km) upstream from diversion dam, 1 mi (2 km) downstream from Lake Thomas A. Edison Dam, and 1.9 mi (3.1 km) northeast of Mono Hot Springs.

DRAINAGE AREA.--92.5 mi² (239.6 km²).

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.--WSP 1011: 1943. WSP 1515: 1956.

GAGE.--Water-stage recorder. Altitude of gage is 7,400 ft (2,256 m), from topographic map.

REMARKS.--Records good. Beginning Oct. 12, 1954, flow regulated by Lake Thomas A. Edison (station 11231000) 1 mi (2 km) upstream. No diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and six discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for storage).--60 years, 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft³/s (53.2 m³/s) Sept. 5, 1978, gage height, 8.73 ft (2.661 m); minimum daily, 0.3 ft³/s (0.008 m³/s) Nov. 11, 12, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 452 ft³/s (12.8 m³/s) Dec. 20, gage height, 6.58 ft (2.006 m); minimum daily, 12 ft³/s (0.34 m³/s) several days during August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	18	436	418	420	16	316	19	17	15	14	169
2	13	18	433	350	419	16	16	19	17	14	13	357
3	13	18	432	313	230	16	16	19	17	14	13	395
4	69	18	431	263	84	16	16	18	17	13	13	376
5	71	18	431	237	84	15	15	18	18	13	12	343
6	71	136	431	235	84	15	15	18	17	13	12	342
7	71	401	431	235	84	15	15	18	17	13	12	342
8	71	391	434	214	84	15	15	18	14	13	12	372
9	71	391	436	229	84	15	15	18	13	13	12	399
10	71	401	436	391	84	19	15	18	13	13	12	398
11	71	411	441	391	84	84	15	18	13	13	12	398
12	71	420	444	397	84	237	15	18	13	13	13	398
13	71	427	444	403	84	241	15	18	13	13	12	398
14	44	440	442	408	85	241	15	18	13	13	12	374
15	19	435	440	420	86	241	15	18	13	14	12	358
16	19	431	443	425	86	340	15	18	13	14	12	380
17	19	430	448	431	86	407	16	18	13	13	12	396
18	19	427	448	434	108	404	16	18	13	13	12	397
19	19	427	201	436	122	411	16	18	13	13	12	411
20	18	427	438	436	124	411	16	18	13	13	12	412
21	18	435	440	438	124	411	17	18	13	13	12	412
22	18	440	444	439	124	411	18	18	13	13	12	411
23	18	440	389	438	124	409	19	18	13	13	12	397
24	18	440	426	440	124	405	20	18	13	13	12	211
25	18	440	423	438	55	403	19	18	13	13	12	182
26	18	440	423	441	16	403	19	18	13	13	12	302
27	18	437	422	440	16	403	18	18	13	13	12	340
28	18	436	419	427	16	400	18	18	13	13	12	383
29	18	436	419	427	---	399	19	18	13	13	12	423
30	18	436	419	425	---	395	19	17	13	13	12	424
31	18	---	419	423	---	395	---	17	---	13	12	---
TOTAL	1102	10465	13163	11842	3205	7609	794	559	420	409	378	10900
MEAN	35.5	349	425	382	114	245	26.5	18.0	14.0	13.2	12.2	363
MAX	71	440	448	441	420	411	316	19	18	15	14	424
MIN	13	18	201	214	16	15	15	17	13	13	12	169
AC-FT	2190	20760	26110	23490	6360	15090	1570	1110	833	811	750	21620
CAL YR 1980 TOTAL	88101		MEAN 241	MAX 793	MIN 13	AC-FT 174700						
WTR YR 1981 TOTAL	60846		MEAN 167	MAX 448	MIN 12	AC-FT 120700						

SAN JOAQUIN RIVER BASIN

11234700 MAMMOTH POOL RESERVOIR NEAR BIG CREEK, CA

LOCATION.--Lat 37°19'45", long 119°19'40", in SW¼ sec.10, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of power tunnel intake near dam on San Joaquin River, 10 mi (16 km) northwest of town of Big Creek.

DRAINAGE AREA.--995 mi² (2,577 km²).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed by an earthfill dam; storage began Oct. 8, 1959. Usable capacity, 119,900 acre-ft (148 hm³) between elevations 3,100.00 ft (944.880 m), invert of power tunnel and 3,330.00 ft (1,014.984 m), crest of spillway, NGVD. Additional storage of 2,780 acre-ft (3.43 hm³) is not available for release. Water is diverted through tunnel for power development; water is returned to river 8.5 mi (13.7 km) downstream from dam. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records furnished by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 126,500 acre-ft (156 hm³) June 2, 3, 1969; maximum elevation, 3,335.86 ft (1,016.770 m) June 3, 1969; minimum contents since appreciable storage was attained, 4,570 acre-ft (5.63 hm³) Apr. 10, 1981, elevation, 3,139.80 ft (957.011 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 110,800 acre-ft (137 hm³) June 28, elevation, 3,321.43 ft (1,012.372 m); minimum, 4,570 acre-ft (5.63 hm³) Apr. 10, elevation, 3,139.80 ft (957.011 m).

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

3,100	0	3,130	3,110	3,180	14,100	3,260	56,400
3,105	417	3,140	4,600	3,190	17,400	3,280	72,100
3,110	861	3,150	6,400	3,200	21,400	3,300	89,800
3,115	1,360	3,160	8,620	3,220	31,100	3,320	109,300
3,120	1,900	3,170	11,200	3,240	42,800	3,335	125,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48755	35595	34516	32412	28032	7861	4993	32093	88993	109471	88375	61222
2	47718	35905	34477	32483	26874	7915	5054	37237	91997	109140	87097	60478
3	46928	35589	34617	32841	25122	8092	5032	40481	93013	108410	85927	59782
4	47091	35242	35887	32841	24071	8161	4844	42322	94243	108072	85209	59044
5	46960	34829	35928	32648	22549	8122	4938	43997	96345	108461	84150	58347
6	46470	34493	34925	32335	20922	8064	4847	44627	100364	107816	83067	57616
7	45825	34186	35009	32131	19291	8071	4758	44866	103440	107530	82152	56898
8	45376	33829	35037	32033	18331	8236	4777	45292	104302	107325	80938	56374
9	45001	34164	34953	31891	17422	8083	4702	46646	105096	106928	80045	55929
10	44898	33935	34768	32230	16818	8069	4658	48701	105378	106308	79265	55291
11	44749	33751	34757	32571	15847	8092	5087	50958	105570	106075	78464	54420
12	44350	33723	34824	32588	14982	7698	5272	53281	105813	105802	77711	53828
13	44145	33623	34841	32505	14183	7148	4727	55812	106470	105036	76920	53147
14	43908	33450	34835	32346	13841	6559	4836	58130	106481	104282	76157	52372
15	43633	33456	34841	32115	13673	6327	5092	58721	106156	103560	75420	51670
16	43117	33857	34510	31864	12846	6162	5691	58197	106430	102789	74670	50958
17	42687	33874	34108	31897	12412	5752	6236	57512	106959	102180	73880	50231
18	42203	33913	33718	31940	11798	5645	6559	57156	107009	101683	73136	49460
19	41716	33963	33256	31678	11203	6835	6287	56447	107081	100760	72387	48473
20	41238	33985	32764	31255	10616	6861	5400	55392	107816	99694	71375	47665
21	40726	34063	32307	30653	9941	6871	5013	54441	108523	98550	70528	46980
22	40230	34125	31940	30069	9827	6848	6259	55609	108770	97447	69587	46262
23	39724	34493	31488	29663	9698	6642	9017	57260	109243	96307	68661	45571
24	39239	34471	31071	29154	9303	5667	12559	59171	109616	95429	67870	44859
25	38767	34482	31488	29008	8443	5373	15669	61687	109834	94385	66993	44157
26	38214	34382	31919	28500	8285	5521	17367	64814	110010	93419	65896	43371
27	37486	34404	32390	29652	7861	5613	17799	68833	110228	92533	65014	42454
28	37243	34465	32852	30084	7922	5200	19089	73271	110332	91790	64360	41853
29	36840	34505	32423	30302	---	5219	22191	77289	109689	91087	63726	41226
30	36448	34544	31984	30058	---	5174	27081	81803	109213	90312	62914	40959
31	36123	---	32017	29254	---	5156	---	85964	---	89318	62133	---
MAX	48755	35905	35928	32841	28032	8236	27081	85964	110332	109471	88375	61222
MIN	36123	33450	31071	28500	7861	5156	4658	32093	88993	89318	62133	40959
†	3229.01	3226.23	3221.67	3216.50	3157.02	3143.27	3212.27	3295.85	3319.88	3299.50	3267.65	3237.07
‡	-13700	-1580	-2530	-2760	-21300	-2770	+21900	+58900	+23200	-19900	-27200	-21200

CAL YR 1980 † -4510

WTR YR 1981 † -8880

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

LOCATION.--Lat 37°19'00", long 119°19'37", in NW¼SW¼ sec.14, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,500 ft (457 m) upstream from Shakeflat Creek, 4,900 ft (1,494 m) downstream from Mammoth Pool Dam, and 10 mi (16 km) northwest of town of Big Creek.

PERIOD OF RECORD.--October 1959 to current year.

REMARKS.--Records good. Flow regulated by Mammoth Pool Reservoir (station 11234700) 4,900 ft (1,494 m) upstream. Flow partly regulated by Florence Lake (station 11229600), Lake Thomas A. Edison (station 11231000) and diversions through Ward tunnel (station 11229500), and through Mono-Bear conduit to Ward tunnel. See schematic diagram of San Joaquin River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) June 3, 1969, gage height, 18.38 ft (5.602 m); minimum daily, 0.3 ft³/s (0.008 m³/s) Oct. 14, Dec. 5, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47 ft³/s (1.33 m³/s) Dec. 4, gage height, 3.10 ft (0.945 m); minimum daily, 7.5 ft³/s (0.21 m³/s) Jan. 31, Feb. 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	14	8.4	11	7.5	14	11	24	27	22	32	20
2	30	14	8.4	11	11	14	11	24	27	22	32	20
3	30	14	8.4	11	14	14	11	24	25	22	32	22
4	30	14	8.4	11	11	14	11	24	24	22	32	24
5	30	14	8.4	11	12	14	11	25	24	22	32	24
6	30	14	8.4	11	12	14	11	26	25	22	32	24
7	30	14	8.4	12	12	14	11	29	26	22	31	24
8	30	13	8.8	12	12	14	10	29	26	22	31	24
9	29	13	8.8	12	12	14	10	29	26	23	31	25
10	29	14	9.1	12	12	13	9.8	29	25	24	31	25
11	29	14	9.1	12	12	13	10	31	24	25	31	25
12	29	14	9.1	12	12	13	10	32	24	26	31	25
13	29	14	9.1	12	12	13	10	33	24	27	31	25
14	29	14	9.1	12	11	13	15	33	24	28	24	26
15	29	14	9.1	12	11	12	22	33	24	29	21	26
16	29	14	9.1	12	11	12	17	37	24	31	31	26
17	29	14	9.8	12	11	12	22	38	24	31	31	26
18	29	14	10	12	11	12	29	38	23	31	30	26
19	29	14	10	12	11	14	29	38	23	31	30	26
20	29	11	10	12	12	17	29	38	24	31	30	26
21	29	8.4	9.8	12	13	17	28	38	24	31	30	26
22	28	8.4	9.5	12	13	12	29	38	24	31	30	26
23	28	8.4	9.5	11	13	11	30	38	24	32	30	24
24	28	8.4	9.5	11	13	11	26	38	23	32	25	26
25	28	8.4	9.5	11	13	11	24	39	23	32	19	26
26	28	8.4	9.5	11	13	11	24	26	23	32	19	26
27	28	8.4	9.5	11	13	11	24	24	23	32	19	26
28	28	8.4	9.5	11	13	11	24	26	23	32	20	26
29	28	8.4	9.5	11	---	11	24	26	23	32	21	25
30	28	8.4	11	7.8	---	11	26	26	22	32	21	19
31	28	---	11	7.5	---	11	---	26	---	32	22	---
TOTAL	897	359.0	287.7	350.3	333.5	398	558.8	959	725	863	862	739
MEAN	28.9	12.0	9.28	11.3	11.9	12.8	18.6	30.9	24.2	27.8	27.8	24.6
MAX	30	14	11	12	14	17	30	39	27	32	32	26
MIN	28	8.4	8.4	7.5	7.5	11	9.8	24	22	22	19	19
AC-FT	1780	712	571	695	661	789	1110	1900	1440	1710	1710	1470
CAL YR 1980	TOTAL	458240.7	MEAN	1252	MAX	8320	MIN	8.4	AC-FT	908900		
WTR YR 1981	TOTAL	7332.3	MEAN	20	MAX	39	MIN	7.5	AC-FT	14540		

SAN JOAQUIN RIVER BASIN

11235500 WARD TUNNEL OUTLET AT HUNTINGTON LAKE, CA

LOCATION.--Lat 37°15'25", long 119°09'38", in SE¼SW¼ sec.5, T.8 S., R.26 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, at tunnel outlet at east end of Huntington Lake, 0.9 mi (1.4 km) east of Lakeshore Post Office, and 6 mi (10 km) northeast of Big Creek.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1960, published as Ward tunnel at outlet.

GAGE.--Pressure-differential recorder to record discharge through penstock. November 1927 to May 23, 1956, water-stage recorder at datum 6,999.00 ft (2,133.295 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). May 24, 1956, to Sept. 30, 1968, no recorder, see REMARKS below.

REMARKS.--Daily discharge for the period May 24, 1956, to Sept. 30, 1968, computed as the sum of Ward tunnel at intake, Mono-Bear conduit, Camp Creek conduit, and corrected for change in contents of Portal Forebay. Tunnel diverts from Florence Lake to Huntington Lake via Portal powerhouse, receives diversions from Bear and Mono Creeks and at times from several other small tributaries of South Fork San Joaquin River. See record for station 11229500 Ward tunnel intake at Florence Lake.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--54 years, 485 ft³/s (13.74 m³/s), 351,400 acre-ft/yr (433 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,080 ft³/s (58.9 m³/s) June 21, 1935; no flow at times many years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	578	506	458	539	135	546	718	1130	522	561	271
2	230	562	505	492	557	38	209	737	1690	638	534	364
3	712	548	506	421	450	146	316	733	1690	563	537	428
4	586	628	520	339	217	72	288	730	1700	581	539	325
5	365	634	514	268	157	42	289	733	1670	564	530	448
6	553	592	521	252	176	70	290	738	1700	516	334	408
7	625	589	542	280	182	78	310	737	1700	429	500	387
8	643	517	551	111	157	79	244	738	1700	446	351	337
9	662	476	554	160	146	71	273	740	1710	492	588	444
10	610	473	539	350	149	81	365	748	1710	601	571	483
11	620	494	540	439	158	109	291	673	1720	651	577	485
12	575	518	532	445	150	381	475	525	1720	623	508	486
13	568	528	542	451	157	335	347	590	1160	551	242	482
14	586	533	534	454	179	353	357	480	793	533	309	461
15	554	527	516	467	176	343	362	292	704	545	363	461
16	547	490	583	476	172	332	470	228	730	546	310	478
17	559	508	502	488	196	529	504	179	731	531	312	507
18	550	500	582	495	220	527	448	184	886	513	163	512
19	550	495	273	507	281	532	451	207	1050	508	343	523
20	566	501	398	500	250	542	298	159	1130	523	432	512
21	570	529	504	492	254	577	478	159	1060	548	413	521
22	579	492	546	487	229	537	495	200	1060	396	522	516
23	597	517	540	492	254	380	664	179	1100	276	424	492
24	601	505	454	490	238	488	605	198	929	528	417	382
25	602	514	477	485	142	617	564	293	712	552	382	228
26	586	516	500	495	98	593	498	304	763	579	321	393
27	586	524	509	498	76	584	489	382	666	613	294	359
28	566	527	509	497	0	562	665	399	582	603	328	476
29	535	503	507	528	---	570	710	332	591	599	255	477
30	539	513	457	469	---	595	708	783	530	594	276	506
31	548	---	459	477	---	554	---	456	---	573	253	---
TOTAL	16970	15831	15722	13263	5960	10852	13009	14554	35017	16737	12489	13152
MEAN	547	528	507	428	213	350	434	469	1167	540	403	438
MAX	712	634	583	528	557	617	710	783	1720	651	588	523
MIN	0	473	273	111	0	38	209	159	530	276	163	228
AC-FT	33660	31400	31180	26310	11820	21520	25800	28870	69460	33200	24770	26090
CAL YR 1980	TOTAL	237141	MEAN 648	MAX 1690	MIN 0	AC-FT 470400						
WTR YR 1981	TOTAL	183556	MEAN 503	MAX 1720	MIN 0	AC-FT 364100						

11236000 HUNTINGTON LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°14'03", long 119°12'41", in SW¼ sec.14, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gate tower of dam 1 on Big Creek, 2 mi (3 km) northeast of town of Big Creek.

DRAINAGE AREA.--80.5 mi² (208.5 km²).

PERIOD OF RECORD.--April 1913 to current year. Prior to October 1926, monthly contents only, published in WSP 1315-A; 1926-31, published in WSP 721.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). Prior to June 19, 1920, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by four dams; storage began Apr. 11, 1913. Dams were raised in 1914 and again in 1917. Usable capacity, 89,200 acre-ft (110 hm³) between elevations 6,819.90 ft (2,078.706 m), invert of outlet tunnel No. 1 and 6,950.00 ft (2,118.360 m), spillway crest at dam 1, NGVD. Additional storage of 600 acre-ft (740,000 m³) is not available for release. Huntington-Shaver conduit (station 11239000) has diverted water from Huntington Lake to Shaver Lake since Apr. 21, 1928. Water is used for power development in Big Creek powerplants. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records furnished by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 90,500 acre-ft (112 hm³) May 31, 1926, elevation, 6,950.92 ft (2,118.640 m); minimum, 2,100 acre-ft (2.59 hm³) Nov. 6, 1937, elevation, 6,838.53 ft (2,084.384 m).

NOTE.--Prior to 1960, maximum and minimum daily contents were published. Maximum and minimum daily contents (water years 1913-39) were summarized in WSP 881.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 89,100 acre-ft (110 hm³) July 2, elevation, 6,949.96 ft (2,118.348 m); minimum, 52,900 acre-ft (65.2 hm³) Mar. 12, elevation, 6,921.89 ft (2,109.792 m).

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

6,819.90	0	6,835	1,550	6,870	11,300	6,920	50,800
6,820	8	6,840	2,350	6,880	16,400	6,930	62,600
6,822	142	6,845	3,320	6,890	22,900	6,940	75,300
6,825	382	6,850	4,480	6,900	30,900	6,950	89,200
6,830	899	6,860	7,430	6,910	40,200	6,951	90,610

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87324	87965	84434	85374	81160	62090	59903	64061	85120	89009	88666	88394
2	86700	87908	84266	85458	81105	61077	59266	65845	85261	89095	88637	88422
3	86941	87836	84308	85486	80885	60289	58560	67370	85303	89052	88594	88351
4	88079	87865	84518	85360	80132	59278	57726	68745	85331	89052	88551	88322
5	88322	87936	84420	85106	79531	58322	57101	70054	85331	89080	88537	88308
6	88408	87936	84462	84825	78974	57325	56570	71270	85754	89052	88565	88208
7	88380	87922	85078	84573	78161	56382	56078	72443	86374	88837	88494	88051
8	88408	87736	85162	84322	77392	55459	55587	73703	87097	88623	88651	87836
9	88551	87495	85050	84182	76706	54520	55203	75145	87580	88523	88666	87936
10	88580	87254	85205	84028	75918	53623	54983	76666	88136	88694	88637	87979
11	88580	87168	85360	83777	75079	53027	54682	78133	88465	88766	88608	88065
12	88523	87097	85500	83539	74350	53233	54288	79463	88565	88880	88508	88122
13	88494	86998	85683	83289	73519	53210	54047	80816	88494	88880	88351	88279
14	88451	86913	85824	83067	72875	53187	53863	81738	88422	88851	88265	88265
15	88408	86927	85951	82859	72117	53129	53783	81959	88537	88851	88394	88194
16	88351	86785	86233	82623	71373	53072	53955	82041	88923	88894	88351	88194
17	88308	86643	86388	82443	70674	53324	54254	82000	88980	88866	88422	88251
18	88237	86501	86686	82290	70028	53588	54370	81959	88837	88866	88022	88337
19	88151	86345	86416	82096	69463	54093	54497	81931	88966	88751	87979	88508
20	88108	86162	86416	81917	68872	54474	54265	81711	89052	88680	88265	88651
21	88065	86049	86572	81711	68286	54937	54427	81436	89023	88637	88422	88708
22	88036	85866	86700	81532	67662	55377	54786	81243	89080	88294	88666	88780
23	88051	85712	86842	81477	67029	55810	55587	81160	89066	88251	88623	88823
24	88065	85557	86743	81367	66511	56289	56312	81091	89023	88165	88666	88694
25	88051	85416	86601	81188	65770	56829	57089	81270	88980	88237	88708	88108
26	88251	85261	86416	81022	64919	57313	57643	81670	89066	88308	88723	87979
27	88251	85092	86233	81215	63974	57620	58238	82290	88994	88422	88723	87836
28	88208	84937	86134	81256	62900	58095	59302	82748	88909	88508	88780	87865
29	88136	84755	85951	81518	---	58631	60665	83039	88994	88594	88723	87922
30	88022	84601	85768	81353	---	59097	62323	84490	89009	88666	88594	88036
31	87993	---	85585	81215	---	59542	---	84867	---	88680	88508	---
MAX	88580	87965	86842	85486	81160	62090	62323	84867	89080	89095	88780	88823
MIN	86700	84601	84266	81022	62900	53027	53783	64061	85120	88165	87979	87836
†	6949.18	6946.78	6947.48	6944.34	6930.28	6927.52	6929.81	6946.97	6949.89	6949.66	6949.54	6949.21
‡	-458	-3390	+984	-4370	-18300	-3360	+2780	+22500	+4140	-329	-172	-472

CAL YR 1980 † +4110

WTR YR 1981 † -415

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

SAN JOAQUIN RIVER BASIN

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA

LOCATION.--Lat 37°11'54", long 119°12'48", in NW¼NW¼ sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 250 ft (76 m) upstream from Huntington-Shaver conduit tunnel, 0.8 mi (1.3 km) downstream from confluence of Tamarack Creek and South Fork Tamarack Creek, 1.4 mi (2.3 km) upstream from mouth, and 1.9 mi (3.1 km) east of town of Big Creek.

DRAINAGE AREA.--22.9 mi² (59.3 km²).

PERIOD OF RECORD.--October 1927 to current year. Records for water year 1928 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS.--WSP 931: 1940. WSP 1315-A: 1944. WSP 1395: 1928-29, 1938. WSP 1515: 1929.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Altitude of gage is 7,005 ft (2,135 m), from Southern California Edison Co. contour map. Prior to Sept. 29, 1940, at site 10 ft (3 m) downstream at same datum.

REMARKS.--Records good. No diversion above station; practically all flow diverted below station to Huntington-Shaver conduit. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and six discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--54 years, 40.2 ft³/s (1.138 m³/s), 29,120 acre-ft/yr (35.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s (104 m³/s) Dec. 23, 1955, gage height, 11.20 ft (3.414 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurement at gage height 10.77 ft (3.283 m); no flow Oct. 15-18, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 24	1830	253 7.16	5.56 1.695	May 9	1745	231 6.54	5.38 1.640
Apr. 30	1730	*362 10.3	6.04 1.841	May 26	2015	280 7.93	5.63 1.716

Minimum daily discharge, 0.17 ft³/s (0.005 m³/s) Sept. 2-5, 10

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.3	1.3	2.0	3.1	6.9	15	252	85	9.1	.82	.18
2	.97	1.2	1.5	1.9	3.5	6.8	14	240	77	8.2	.80	.17
3	.92	1.2	1.4	2.0	3.9	6.8	13	192	68	7.0	.71	.17
4	.92	1.2	2.7	1.9	3.9	6.8	14	173	65	6.6	.66	.17
5	.90	1.1	2.8	1.7	3.3	6.6	18	161	64	6.2	.61	.17
6	.81	1.1	2.4	1.6	3.2	6.6	24	149	58	5.7	.54	.18
7	.78	1.0	2.0	1.4	3.1	6.6	28	144	51	5.3	.48	.18
8	.77	1.0	1.5	1.4	3.0	6.7	32	153	44	4.7	.45	.18
9	.77	1.0	1.3	1.4	3.0	6.9	42	176	38	4.2	.43	.18
10	.77	1.0	1.2	1.5	3.1	7.4	49	183	36	3.8	.39	.17
11	.81	2.8	1.0	1.6	3.2	8.0	51	180	32	3.5	.36	.18
12	.89	4.1	1.0	1.8	3.4	7.9	55	184	30	3.3	.34	.24
13	.91	2.3	1.3	2.0	3.4	8.0	60	176	28	3.0	.36	.39
14	1.0	1.9	1.5	1.9	4.3	7.9	70	157	26	2.8	.39	.30
15	1.3	1.6	1.7	1.9	7.1	7.8	85	127	24	2.6	.40	.27
16	1.6	1.5	2.3	1.9	7.4	7.7	98	103	22	2.4	.44	.26
17	1.6	1.6	2.6	1.9	9.0	8.4	104	97	20	2.3	.52	.25
18	1.7	1.3	2.6	1.9	9.3	8.4	93	102	18	2.2	.45	.28
19	1.7	1.4	2.4	2.0	9.8	8.8	66	111	17	2.0	.39	.23
20	1.5	1.3	2.2	2.0	9.7	9.4	60	94	15	1.8	.31	.22
21	1.4	1.3	2.1	2.0	9.3	9.4	78	85	14	1.7	.27	.23
22	1.3	1.5	2.3	2.2	9.7	9.4	124	90	13	1.5	.27	.21
23	1.2	1.5	2.4	2.2	9.8	11	168	94	12	1.4	.29	.20
24	1.2	1.2	2.2	2.3	9.3	11	185	98	11	1.3	.25	.20
25	1.2	1.4	2.2	2.1	8.1	12	172	107	10	1.3	.22	.20
26	1.7	1.3	2.6	2.0	7.6	14	146	147	9.4	1.2	.20	.19
27	1.7	1.3	2.9	2.1	7.3	12	146	148	9.1	1.1	.18	.21
28	1.6	1.4	2.8	2.2	7.1	12	184	128	8.2	.99	.18	.22
29	1.5	1.4	2.6	2.3	---	13	221	114	7.9	.90	.18	.23
30	1.4	1.4	2.4	2.6	---	14	251	106	8.8	.85	.18	.26
31	1.3	---	2.2	2.7	---	14	---	95	---	.80	.18	---
TOTAL	37.12	44.6	63.4	60.4	167.9	282.2	2666	4366	921.4	99.74	12.25	6.52
MEAN	1.20	1.49	2.05	1.95	6.00	9.10	88.9	141	30.7	3.22	.40	.22
MAX	1.7	4.1	2.9	2.7	9.8	14	251	252	85	9.1	.82	.39
MIN	.77	1.0	1.0	1.4	3.0	6.6	13	85	7.9	.80	.18	.17
AC-FT	74	88	126	120	333	560	5290	8660	1830	198	24	13
CAL YR 1980 TOTAL	27400.32			MEAN 74.9	MAX 610	MIN .77	AC-FT 54350					
WTR YR 1981 TOTAL	8727.53			MEAN 23.9	MAX 252	MIN .17	AC-FT 17310					

11239000 HUNTINGTON-SHAVER CONDUIT OUTLET NEAR SHAVER LAKE, CA

LOCATION.--Lat 37°09'18", long 119°13'53", in NW¼NW¼ sec.15, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank at tunnel outlet, 2.3 mi (3.7 km) northeast of Shaver Lake, and 3.5 mi (5.6 km) south of town of Big Creek.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October 1928, published in WSP 1315-A. Prior to October 1960, published as Huntington-Shaver conduit at outlet.

REVISED RECORDS.--WSP 931: 1940.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,680 ft (2,036 m), from topographic map.

REMARKS.--Records fair. Conduit diverts from Huntington Lake to Shaver Lake with additions from Pitman Creek and seepage en route. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and 11 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--53 years, 221 ft³/s (6.259 m³/s), 160,100 acre-ft/yr (197 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,780 ft³/s (50.4 m³/s) June 3, 4, 1938; no flow Oct. 19, 1978, July 1, 1981.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.94	1.1	1.6	2.0	4.1	9.9	264	797	0	1.7	1.8
2	1.8	.94	1.1	1.6	2.1	4.1	9.6	255	1410	44	1.7	1.8
3	1.7	.94	1.1	1.6	2.3	4.1	8.8	202	1410	42	1.7	1.8
4	1.8	.94	1.3	1.6	2.4	4.1	8.6	175	1410	44	1.7	1.7
5	1.8	.94	1.5	1.5	2.3	4.0	11	162	1390	4.3	1.7	1.7
6	2.0	1.0	1.5	1.5	2.1	3.9	17	148	1160	4.2	1.7	1.7
7	2.0	1.0	1.3	1.5	2.1	3.9	22	142	1030	4.0	1.7	1.7
8	2.0	1.0	1.2	1.5	2.1	3.9	28	149	1030	3.9	1.7	1.7
9	1.8	1.0	1.3	1.5	2.1	4.1	36	173	1030	3.6	1.7	1.7
10	1.8	1.0	1.2	1.5	2.1	4.4	43	184	1030	3.4	1.7	1.7
11	1.8	1.3	1.2	1.5	2.1	4.8	47	179	1110	3.3	1.7	1.7
12	1.7	2.3	1.2	1.4	2.2	4.9	51	175	1220	3.1	1.7	1.7
13	1.7	1.5	1.2	1.5	2.2	4.8	57	173	789	2.9	1.7	1.7
14	1.6	1.3	1.2	1.5	2.4	4.8	70	168	383	2.9	1.7	1.8
15	1.6	1.2	1.2	1.5	3.2	4.8	87	145	163	2.7	1.7	1.8
16	1.7	1.2	1.2	1.5	3.3	4.7	100	124	48	2.6	1.7	1.8
17	1.2	1.1	1.5	1.5	3.7	4.9	107	117	190	2.4	1.7	1.8
18	1.2	1.0	1.5	1.5	4.1	5.0	99	122	435	2.4	1.7	1.8
19	1.2	1.1	1.6	1.6	4.5	5.0	68	130	478	2.3	1.7	1.8
20	1.1	1.1	1.6	1.6	4.6	5.2	58	114	636	2.2	1.7	1.8
21	.99	1.1	1.5	1.6	4.8	5.6	76	106	596	2.1	1.8	1.8
22	.94	1.0	1.5	1.6	5.1	5.5	124	109	538	2.0	1.8	1.8
23	.94	1.1	1.6	1.7	5.4	6.2	172	114	623	2.0	1.8	1.8
24	.94	1.1	1.6	1.7	5.5	6.5	194	118	404	2.0	1.8	1.8
25	.94	1.1	1.6	1.7	4.9	7.4	181	128	239	2.0	1.8	1.8
26	1.0	1.1	1.7	1.7	4.6	8.9	152	164	217	2.0	1.8	1.8
27	1.2	1.1	2.0	1.7	4.4	7.9	146	166	190	2.0	1.8	1.8
28	1.1	1.1	2.0	1.7	4.2	7.4	187	145	111	2.0	1.8	1.8
29	1.0	1.1	1.9	1.7	---	8.7	228	132	23	1.8	1.8	1.8
30	1.0	1.1	1.8	1.8	---	9.4	262	127	2.5	1.7	1.8	1.8
31	.94	---	1.8	1.8	---	9.5	---	117	---	1.7	1.8	---
TOTAL	44.29	33.70	45.0	49.2	92.8	172.5	2659.9	4727	20092.5	201.5	53.8	53.0
MEAN	1.43	1.12	1.45	1.59	3.31	5.56	88.7	152	670	6.50	1.74	1.77
MAX	2.0	2.3	2.0	1.8	5.5	9.5	262	264	1410	44	1.8	1.8
MIN	.94	.94	1.1	1.4	2.0	3.9	8.6	106	2.5	0	1.7	1.7
AC-FT	88	67	89	98	184	342	5280	9380	39850	400	107	105
CAL YR 1980	TOTAL	140332.59	MEAN	383	MAX	1590	MIN	.94	AC-FT	278300		
WTR YR 1981	TOTAL	28225.19	MEAN	77.3	MAX	1410	MIN	0	AC-FT	55980		

SAN JOAQUIN RIVER BASIN

11239500 SHAVER LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°08'40", long 119°18'08", in SE¼ sec.13, T.9 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, near center of dam on Stevenson Creek, 6 mi (10 km) southwest of town of Big Creek.

DRAINAGE AREA.--29.1 mi² (75.4 km²).

PERIOD OF RECORD.--November 1909 to current year. Prior to January 1927, monthly contents only, published in WSP 1315-A, January 1927 to September 1931, published in WSP 721.

REVISED RECORDS.--WSP 1565: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). Prior to Jan. 11, 1927, gage on rockfilled dam a short distance upstream at different datum.

REMARKS.--Storage began prior to 1905. Original lake formed by rockfilled dam, usable capacity, 5,500 acre-ft (6.78 hm³). Water diverted by Fresno flume and Lumber Co.'s flumes Nos. 1 and 2 beginning prior to 1907 and discontinued July 7, 1920. Present lake formed by concrete-arch dam; dam completed Nov. 18, 1927. Usable capacity of present lake, 135,600 acre-ft (167 hm³) between elevations 5,225 ft (1,592.6 m), trash-rack foundation and 5,370.13 ft (1,636.816 m), crest of spillway, NGVD. Additional storage of 92 acre-ft (113,000 m³) is not available for release. Water is received from Pitman Creek (since Feb. 22, 1928) and Huntington Lake (since Apr. 21, 1928) through Huntington-Shaver conduit and released for power development in Big Creek plants. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records furnished by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 135,900 acre-ft (168 hm³) July 5, 1946, Aug. 4, 1978; maximum elevation, 5,370.28 ft (1,636.861 m) Aug. 4, 1978; minimum contents, 652 acre-ft (804,000 m³) Mar. 7, 1942, elevation, 5,249.38 ft (1,600.011 m).

NOTE.--Prior to 1960, maximum and minimum daily contents were published. Maximum and minimum daily contents (water years 1928-39) were summarized in WSP 881.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 123,300 acre-ft (152 hm³) June 28, elevation, 5,364.40 ft (1,635.069 m); minimum, 58,600 acre-ft (72.3 hm³) Dec. 23, elevation, 5,328.41 ft (1,624.099 m).

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

5,225	0	5,250	700	5,280	9,190	5,330	60,900
5,230	42	5,255	1,250	5,290	15,600	5,340	70,700
5,235	97	5,260	2,070	5,300	24,000	5,350	94,600
5,240	191	5,265	3,210	5,310	34,500	5,360	114,200
5,245	379	5,270	4,750	5,320	46,800	5,371	137,500

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86858	73787	64676	58669	60242	62158	65976	75790	88107	121872	109371	87544
2	86177	73787	64110	58669	60257	62188	66193	76424	90947	121580	108770	86858
3	85424	73424	64064	58683	60286	62233	66301	76910	93794	121226	108049	86195
4	85442	72951	64613	58683	60301	62278	66409	77348	96206	121309	107273	85496
5	85122	72609	64659	58683	60331	62203	66548	77752	98599	121309	106577	84839
6	84468	72233	64674	58713	60361	62248	66749	78089	100932	120872	105824	84167
7	83813	71875	64689	58713	60376	62278	66919	78426	102935	120455	105114	83531
8	83165	71503	64323	58713	60465	62323	67105	78784	104956	120061	104620	82885
9	82553	71503	63881	58713	60584	62368	67325	79193	106994	119626	103854	82257
10	82204	71133	63563	58728	60644	62443	67560	79620	109030	119191	103092	81631
11	81683	70811	63245	58728	60689	62519	67763	80012	111222	119149	102329	80959
12	81165	70473	62912	58728	60719	62640	68014	80407	113570	119129	101553	80321
13	80614	70119	62549	58728	60778	62837	68265	80803	115180	118694	100855	79671
14	80080	69754	62158	58728	60897	62897	68547	81165	115895	118259	100100	78989
15	79620	69373	61768	58728	60972	62973	68864	81493	116222	117848	99311	78375
16	79193	69341	61377	58728	61047	63049	69230	81752	116038	117436	98560	77718
17	78818	68959	60972	58728	61152	63124	69595	82012	116263	117024	97832	77078
18	78426	68547	60584	58728	61227	63245	69992	82274	116757	116983	97066	76457
19	78426	68171	60227	58728	61302	63836	70392	82623	117415	116963	96397	76591
20	77971	67811	59780	58728	61407	64003	70650	82885	118652	116572	95635	76357
21	77584	67419	59363	58728	61452	64186	70940	83112	119791	116120	94854	75690
22	77213	67043	58949	58728	61542	64354	71310	83357	120684	115691	94115	75024
23	76842	66965	58580	58905	61617	64506	71826	83601	121852	115242	93492	74380
24	76474	66610	58580	58905	61843	64643	72348	83866	122624	114588	92756	73737
25	76090	66270	58595	58905	61873	64964	72886	84149	122876	113895	92121	73098
26	76107	65899	58610	58905	61948	65223	73310	84450	123023	113611	91413	72788
27	75673	65559	58624	59408	62038	65360	73704	85352	123191	113002	90725	72315
28	75290	65208	58639	59795	62083	65467	74216	85693	123170	112271	90008	71616
29	74908	64857	58639	60197	---	65606	74776	86015	122792	111524	89347	70843
30	74545	64842	58654	60391	---	65714	75156	86356	122373	110778	88688	70135
31	74166	---	58654	60391	---	65837	---	86697	---	110053	88180	---
MAX	86858	73787	64689	60391	62083	65837	75156	86697	123191	121872	109371	87544
MIN	74166	64842	58580	58669	60242	62158	65976	75790	88107	110053	88180	70135
†	5338.45	5332.58	5328.46	5329.63	5330.76	5333.23	5339.05	5345.74	5363.95	5357.94	5346.56	5335.97
‡	-13100	-9320	-6190	+1740	+1690	+3750	+9320	+11500	+35700	-12300	-21900	-18000

CAL YR 1980 † -5320

WTR YR 1981 † -17200

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

11241950 REDINGER LAKE NEAR AUBERRY, CA

LOCATION.--Lat 37°08'42", long 119°26'58", in SW¼ sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on upstream face of dam No. 7 on San Joaquin River, 4.2 mi (6.8 km) north-east of Auberry.

DRAINAGE AREA.--1,295 mi² (3,354 km²).

PERIOD OF RECORD.--November 1950 to current year. Prior to October 1965, monthend contents only, published in WSP 1930.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by a concrete dam; storage began Nov. 19, 1950. Usable capacity, 26,120 acre-ft (32.2 hm³) between elevations 1,320.00 ft (402.336 m), invert of tunnel and 1,403.00 ft (427.634 m), top of radial gates, NGVD. Additional storage of 8,914 acre-ft (11.0 hm³) is not available for release. Water is used for power development in Big Creek powerhouse No. 4. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records furnished by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 26,590 acre-ft (32.8 hm³) Aug. 5, 1978, elevation, 1,404.00 ft (427.939 m); minimum since appreciable storage was attained, 6,280 acre-ft (7.74 hm³) Mar. 3, 1956, elevation, 1,347.98 ft (410.864 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,000 acre-ft (32.1 hm³) Mar. 22, elevation, 1,402.80 ft (427.573 m); minimum, 11,400 acre-ft (14.1 hm³) Dec. 13, elevation, 1,365.69 ft (416.262 m).

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

1,320	0	1,330	2,010	1,355	8,200	1,380	16,500
1,322	384	1,335	3,120	1,360	9,650	1,385	18,400
1,324	778	1,340	4,280	1,365	11,200	1,390	20,400
1,326	1,180	1,345	5,520	1,370	12,900	1,400	24,700
1,328	1,590	1,350	6,810	1,375	14,600	1,405	27,060

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14812	25287	19438	25123	24287	24920	23958	25456	25205	24376	24721	25137
2	17075	24479	18592	25119	23971	25301	24051	25401	25488	24757	24825	25042
3	19535	24506	18199	25073	24502	25305	24047	25415	25429	25060	24942	25060
4	18952	24578	17864	25110	24502	24852	24385	25429	25246	24699	25123	25105
5	18305	25182	17044	25028	24614	24748	24870	25429	25310	24676	25273	25101
6	20117	24434	16410	25182	24744	24748	24802	25342	25424	25383	25369	25119
7	22048	24479	14346	25146	25141	24856	25037	25246	25470	25323	25360	25078
8	23570	24645	13320	25182	24920	24856	25037	25218	25456	25241	25296	25033
9	24911	24600	12685	25119	25232	24947	25378	25195	25419	25186	25323	25155
10	25078	24238	12244	24861	24974	24997	25223	25255	25456	25195	25173	25164
11	24721	24327	12105	24834	25092	25105	25214	25337	25078	24739	25273	25378
12	25232	24730	11932	24884	25028	24951	24443	25319	25273	24614	25110	25046
13	24969	24816	12028	24861	24870	24911	24533	25401	25073	24703	25119	24969
14	24988	24582	12158	24979	24717	24856	24672	25520	25028	24690	25064	25028
15	25073	24875	12258	24974	24560	25060	25073	25502	24965	24542	24997	24969
16	25155	24902	13763	24866	24820	24811	25556	25465	25246	24721	24997	24969
17	25092	25182	15029	24861	24861	24866	25552	25191	24906	24618	25051	25055
18	24969	25278	16327	24875	24762	24591	25588	25296	25497	24546	25141	25114
19	25028	25429	17746	25064	24924	24884	25566	25552	25708	24385	25078	24870
20	25064	25232	19113	25006	24965	25451	25524	25791	25073	24875	25105	24784
21	25105	25218	20328	24888	24875	25671	25552	25433	24591	24979	25078	24884
22	25114	25662	21570	25046	24974	25796	25575	25232	24672	25078	25282	25006
23	24983	25006	22715	25346	24730	25323	25607	25101	24834	25155	25460	25087
24	24920	25141	23750	25442	24345	25451	25506	24960	25024	25060	25406	25055
25	24654	25132	24140	25132	24493	25073	25543	24974	25232	25223	25150	25006
26	24911	25415	24448	25264	24136	25105	25588	25110	25209	24983	25064	24933
27	25415	25305	24780	24229	24158	24884	25383	25424	24614	25069	24766	25177
28	25259	23517	24942	24475	24735	24591	25438	24897	23676	24911	24627	25342
29	25223	22142	25146	24614	---	24340	25337	24587	23940	24775	24735	25159
30	25205	20844	25064	24309	---	24448	25442	24470	24189	24829	24640	25055
31	25259	---	25155	24202	---	24180	---	24260	---	25015	24789	---
MAX	25415	25662	25155	25442	25232	25796	25607	25791	25708	25383	25460	25378
MIN	14812	20844	11932	24020	23971	24180	23958	24260	23676	24376	24627	24784
†	1401.13	1391.00	1400.90	1398.37	1399.97	1398.73	1401.53	1398.91	1398.75	1400.59	1400.09	1400.68
‡	+12600	-4420	+4310	-1140	+715	-555	+1260	-1180	-71	+826	-226	+266

CAL YR 1980 ‡ +303

WTR YR 1981 ‡ +12400

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA

LOCATION.--Lat 37°08'40", long 119°27'13", in SW¼SW¼ sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,000 ft (305 m) downstream from Redinger Lake Dam, 0.4 mi (0.6 km) upstream from Willow Creek, and 4.2 mi (6.8 km) northeast of Auberry.

DRAINAGE AREA.--1,295 mi² (3,354 km²).

PERIOD OF RECORD.--March 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,175.54 ft (358.305 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Records good. Flow regulated by nine powerplants and six reservoirs with combined capacity of about 559,900 acre-ft (690 hm³). Conduit to powerhouse No. 4 diverts 1,000 ft (305 m) above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and 19 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--30 years, 430 ft³/s (12.18 m³/s), 311,500 acre-ft/yr (384 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,200 ft³/s (2,070 m³/s) Dec. 23, 1955, gage height, 54.2 ft (16.52 m) from floodmarks, from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of computed flow over dam; no flow Sept. 25, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 54 ft³/s (1.53 m³/s) Mar. 20, gage height, 4.56 ft (1.390 m); minimum daily, 0.76 ft³/s (0.022 m³/s) July 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	18	18	3.5	6.5	3.8	5.9	12	17	22	23
2	17	16	18	18	5.2	6.3	3.9	5.9	12	.86	22	23
3	17	19	18	18	6.4	6.5	3.8	5.9	13	1.6	22	23
4	17	21	9.4	18	9.5	8.0	3.8	5.9	15	.76	22	23
5	17	20	3.0	18	10	13	4.2	5.9	15	15	22	23
6	17	21	3.0	18	10	11	8.2	5.9	15	19	22	23
7	17	21	3.0	18	11	12	4.4	5.9	16	19	22	23
8	17	21	12	18	11	12	4.2	5.9	16	19	22	23
9	17	21	17	18	10	12	4.1	7.9	17	19	22	23
10	17	21	17	18	3.2	12	4.1	9.3	17	19	22	23
11	17	21	17	18	5.4	12	4.1	9.3	17	20	22	23
12	17	21	17	18	7.8	10	4.1	9.2	17	20	22	23
13	17	21	16	18	7.2	6.1	4.1	9.6	17	20	22	23
14	14	21	17	18	7.1	7.9	4.1	9.8	17	20	24	23
15	13	21	17	18	7.0	9.3	4.0	10	17	20	22	22
16	17	19	17	18	7.0	9.0	4.0	10	17	21	27	22
17	17	19	17	18	7.0	8.5	4.0	10	18	21	27	21
18	17	19	17	18	7.0	8.5	4.1	10	18	21	26	24
19	17	19	17	18	7.0	6.1	4.3	11	18	21	24	23
20	17	19	17	18	7.0	5.9	4.1	11	18	21	24	23
21	17	19	17	18	7.0	3.8	4.1	11	18	21	24	23
22	17	19	18	18	7.0	4.0	6.5	11	18	22	24	23
23	17	19	18	16	7.0	4.0	5.6	11	19	22	24	23
24	16	19	18	12	7.0	3.9	4.5	11	19	22	24	23
25	16	19	18	15	7.0	4.2	4.0	11	19	22	24	23
26	16	19	18	16	7.0	4.1	6.0	13	19	22	24	23
27	16	19	18	11	6.9	3.9	5.4	6.1	19	22	24	23
28	16	19	18	2.5	6.8	3.9	6.1	10	19	22	23	23
29	16	19	18	2.8	---	3.8	6.1	11	19	22	23	23
30	16	19	18	2.5	---	3.8	6.0	12	19	22	23	23
31	16	---	18	2.4	---	3.8	---	12	---	22	23	---
TOTAL	511	587	484.4	476.2	205.0	225.8	139.7	283.4	510	576.22	720	687
MEAN	16.5	19.6	15.6	15.4	7.32	7.28	4.66	9.14	17.0	18.6	23.2	22.9
MAX	17	21	18	18	11	13	8.2	13	19	22	27	24
MIN	13	16	3.0	2.4	3.2	3.8	3.8	5.9	12	.76	22	21
AC-FT	1010	1160	961	945	407	448	277	562	1010	1140	1430	1360
CAL YR 1980	TOTAL	438279.50	MEAN	1197	MAX	8620	MIN	2.1	AC-FT	869300		
WTR YR 1981	TOTAL	5405.72	MEAN	14	MAX	27	MIN	.76	AC-FT	10720		

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA

LOCATION.--Lat 37°23'52", long 119°33'55", in SW¼NE¼ sec.21, T.6 S., R.22 E., Madera County, Hydrologic Unit 18040006, on right bank at road bridge 0.6 mi (1.0 km) downstream from Soquel Campground, 3.0 mi (4.8 km) upstream from Chilkoot Creek, and 4.7 mi (7.6 km) southeast of Sugar Pine.

DRAINAGE AREA.--16.9 mi² (43.8 km²).

PERIOD OF RECORD.--August 1965 to current year.

REVISED RECORDS.--WDR CA-72-2: 1970-71.

GAGE.--Water-stage recorder. Altitude of gage is 5,200 ft (1,580 m), from topographic map.

REMARKS.--Records good. No storage above station.

AVERAGE DISCHARGE.--16 years, 21.9 ft³/s (0.620 m³/s), 15,870 acre-ft/yr (19.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft³/s (77.9 m³/s) Jan. 13, 1980, gage height, 7.41 ft (2.259 m), from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of a step-backwater survey; minimum daily, 0.29 ft³/s (0.008 m³/s) Sept. 11, Oct. 3-5, 12-17, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 97 ft³/s (2.75 m³/s) Apr. 30, gage height, 3.44 ft (1.049 m), no peak above base of 100 ft³/s (2.83 m³/s); minimum daily, 1.1 ft³/s (0.031 m³/s) on several days during September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.4	5.0	5.1	11	10	18	75	24	4.9	2.8	1.4
2	4.1	4.3	5.1	5.1	10	10	18	70	23	4.3	2.5	1.4
3	4.0	4.2	7.6	5.6	9.1	9.6	17	59	21	4.0	2.4	1.4
4	3.9	4.0	35	5.4	8.4	9.5	17	52	20	3.8	2.3	1.3
5	3.9	4.0	10	5.2	8.1	9.4	19	48	19	3.6	2.2	1.3
6	3.9	4.0	7.5	5.1	7.8	9.2	22	44	17	3.4	2.1	1.2
7	3.8	4.0	6.4	4.8	7.5	9.4	22	42	17	3.3	2.0	1.5
8	3.8	4.0	6.1	4.5	8.1	9.9	22	43	15	3.2	2.0	1.2
9	3.8	4.0	6.0	4.5	13	11	23	46	15	2.9	1.9	1.2
10	3.9	4.0	5.9	4.4	12	11	25	48	14	2.9	1.8	1.2
11	3.9	10	5.9	4.4	11	12	24	48	13	2.8	1.8	1.2
12	4.0	6.9	5.8	4.4	10	12	24	45	13	2.6	1.8	1.2
13	4.2	5.6	5.7	4.4	10	13	25	44	12	2.6	1.7	1.2
14	4.7	5.4	5.6	4.4	21	11	28	41	12	2.4	1.7	1.2
15	5.7	5.2	5.8	4.4	17	11	30	35	11	2.2	1.9	1.1
16	5.7	5.2	5.9	4.5	15	14	32	30	11	2.4	1.8	1.1
17	5.5	5.2	5.9	4.6	17	13	33	28	10	4.1	1.7	1.8
18	5.3	5.3	6.0	4.4	16	13	34	28	9.7	2.2	1.7	1.6
19	4.9	5.4	5.8	4.5	16	37	35	33	9.3	2.8	1.7	1.2
20	4.8	5.4	5.7	4.4	15	23	29	28	7.9	3.1	1.7	1.1
21	4.6	5.4	5.7	4.4	14	21	29	27	6.5	4.0	1.7	1.1
22	4.5	5.6	5.9	4.4	13	23	37	26	6.2	4.5	1.7	1.1
23	4.4	5.6	5.7	6.7	13	21	50	26	5.9	4.4	1.7	1.1
24	4.3	5.6	5.5	5.7	13	20	55	27	5.7	4.5	1.7	1.1
25	4.4	5.4	5.5	5.2	12	34	52	28	5.6	4.9	1.9	1.1
26	5.6	5.2	5.6	5.2	11	37	45	42	5.4	4.2	1.8	1.2
27	5.3	5.1	5.6	45	10	23	42	45	5.2	3.6	1.7	1.2
28	4.9	5.1	5.5	19	9.7	20	50	39	5.0	3.3	1.7	1.2
29	4.7	5.1	5.4	43	---	21	59	33	4.8	3.2	1.6	1.2
30	4.6	5.0	5.2	43	---	19	72	29	4.8	3.1	1.4	1.3
31	4.5	---	5.2	16	---	18	---	27	---	3.0	1.4	---
TOTAL	139.8	153.6	213.5	291.7	338.7	515.0	988	1236	349.0	106.2	57.8	37.4
MEAN	4.51	5.12	6.89	9.41	12.1	16.6	32.9	39.9	11.6	3.43	1.86	1.25
MAX	5.7	10	35	45	21	37	72	75	24	4.9	2.8	1.8
MIN	3.8	4.0	5.0	4.4	7.5	9.2	17	26	4.8	2.2	1.4	1.1
AC-FT	277	305	423	579	672	1020	1960	2450	692	211	115	74
CAL YR 1980 TOTAL	20242.5			MEAN 55.3	MAX 1360	MIN 3.8	AC-FT 40150					
WTR YR 1981 TOTAL	4426.7			MEAN 12.1	MAX 75	MIN 1.1	AC-FT 8780					

SAN JOAQUIN RIVER BASIN

11243400 BASS LAKE NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'36", long 119°31'40", in NE¼ sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, at outlet tower at dam on North Fork Willow Creek, 2.2 mi (3.5 km) south-east of town of Bass Lake, and 5 mi (8 km) north of town of North Fork.

DRAINAGE AREA.--50.4 mi² (130.5 km²).

PERIOD OF RECORD.--January 1911 to current year. Bass Lake was formerly called Crane Valley Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Reservoir formed by earthfill and rockfill dam; completed in 1901 and raised in 1910. Since 1910 usable contents 45,100 acre-ft (55.6 hm³) between elevations, 3,280.22 ft (999.811 m), invert of outlet conduit No. 3 and 3,376.40 ft (1,029.127 m), top of spillway gates, NGVD. Additional storage of 300 acre-ft (370,000 m³) not available for release. Water is released through Crane Valley powerhouse below dam for use in three small powerhouses before being discharged into Kerckhoff Reservoir at Wishon powerhouse. Water diverted from South Fork Willow Creek via Browns Creek ditch into Bass Lake near left end of dam. Madera Irrigation District has water rights to divert up to 50 ft³/s (1.42 m³/s) from North Fork Willow Creek through Soquel ditch into Nelder Creek (Fresno River basin) during October and March to July each year. Chilkoot ditch can divert up to 7 ft³/s (0.20 m³/s) from Chilkoot Creek into North Fork Willow Creek just upstream from diversion dam from Oct. 1 to Aug. 1 each water year if available. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,960 acre-ft (56.7 hm³) June 17, 1923, elevation, 3,376.8 ft (1,029.25 m); minimum, 35 acre-ft (43,200 m³) Nov. 19, 1953, elevation, 3,270.2 ft (996.76 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,000 acre-ft (55.5 hm³) June 15, elevation, 3,376.04 ft (1,029.017 m); minimum, 17,610 acre-ft (21.7 hm³) Nov. 2, elevation, 3,347.07 ft (1,020.187 m).

MONTHEND CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Contents
Sept. 30.....	23,040
Oct. 31.....	17,930
Nov. 30.....	18,620
Dec. 31.....	19,530
Jan. 31.....	22,550
Feb. 28.....	26,160
Mar. 31.....	32,360
Apr. 30.....	39,210
May 31.....	44,490
June 30.....	42,240
July 31.....	37,430
Aug. 31.....	30,810
Sept. 30.....	26,730

11243500 PACIFIC GAS AND ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'21", long 119°31'44", in SE¼ sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 1,000 ft (305 m) downstream from Crane Valley powerhouse and dam, and 2.5 mi (4.0 km) southeast of town of Bass Lake.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1954, published as "near Crane Valley Reservoir."

GAGE.--Water-stage recorder and concrete flume. Altitude of gage is 3,300 ft (1,006 m), from topographic map.

REMARKS.--Conduit diverts from Bass Lake in sec.26, T.7 S., R.22 E. Water passes through Crane Valley powerhouse, then to powerhouse No. 3, and is stored temporarily at Manzanita Lake on North Fork Willow Creek; flow then diverts to powerhouses No. 2 and 1A before it enters San Joaquin River at Kerckhoff Reservoir through Wishon powerhouse No. 1. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--41 years, 69.2 ft³/s (1.960 m³/s), 50,140 acre-ft/yr (61.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 167 ft³/s (4.73 m³/s) June 23, 24, 1965; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	116	0	.03	.03	.09	2.7	52	.14	.49	.07	120
2	154	60	0	.03	.03	.09	4.2	.09	.15	.48	.06	120
3	153	.03	0	.03	.03	.09	2.2	.09	.15	.48	71	120
4	152	.05	0	.02	.03	2.8	.09	79	72	.48	120	120
5	152	.11	0	0	.03	6.1	.07	121	120	.48	120	121
6	151	.18	0	0	.03	2.7	.09	48	52	77	120	121
7	151	.25	0	0	.03	.09	.09	.09	1.3	121	120	100
8	150	.24	0	0	.04	.09	.09	.09	.03	120	119	116
9	139	.23	0	0	.05	.09	.09	.09	.03	119	119	137
10	130	.40	0	.02	.05	.09	4.7	.09	.03	56	119	150
11	126	.57	0	.04	.09	.09	.09	.09	.03	.09	119	150
12	120	.26	15	.09	6.2	4.3	.09	.09	.03	.09	119	150
13	120	.03	.03	.09	1.0	2.7	.09	42	.03	71	118	150
14	121	.03	.03	4.7	.04	3.9	.09	44	.03	119	73	150
15	120	.03	.04	.03	.03	2.8	.09	.09	77	120	.07	62
16	121	.03	15	.03	.09	.09	3.5	.09	120	120	.06	5.4
17	122	.01	.03	.03	.09	.09	.07	.09	120	63	73	4.0
18	123	0	.03	.03	5.1	1.0	.09	.09	120	.06	120	.03
19	123	0	.03	.03	.09	2.2	.09	.09	120	.06	120	.44
20	123	0	.03	.03	.09	3.7	.07	.09	120	70	120	3.0
21	123	0	.03	.03	.09	1.3	75	2.1	120	120	118	.06
22	50	0	.03	.03	.09	.15	121	.39	120	114	120	.03
23	.03	0	.01	.05	.09	.15	55	.39	120	102	120	.03
24	.06	0	0	.03	.99	.12	.07	.39	120	113	119	.03
25	.09	0	0	.03	72	.10	.09	.39	120	120	119	.02
26	.09	0	0	.03	91	1.4	.09	.40	120	119	119	0
27	.09	0	0	.08	47	1.6	77	.39	56	119	119	0
28	.09	0	0	.08	.05	.11	120	4.3	.57	120	119	0
29	.09	0	7.0	1.9	---	.09	120	.09	79	121	119	0
30	.09	0	.03	4.7	---	.09	120	.13	46	121	120	0
31	69	---	.03	2.8	---	.18	---	.13	---	52	120	---
TOTAL	2947.63	178.45	37.35	14.99	224.48	37.49	706.84	396.36	1824.52	2279.71	3082.26	1900.04
MEAN	95.1	5.95	1.20	.48	8.02	1.21	23.6	12.8	60.8	73.5	99.4	63.3
MAX	154	116	15	4.7	91	6.1	121	121	120	121	120	150
MIN	.03	0	0	0	.03	.09	.07	.09	.03	.06	.06	0
AC-FT	5850	354	74	30	445	74	1400	786	3620	4520	6110	3770
CAL YR 1980 TOTAL	42271.13			MEAN 115	MAX 157	MIN 0	AC-FT 83840					
WTR YR 1981 TOTAL	13630.12			MEAN 37.3	MAX 154	MIN 0	AC-FT 27040					

SAN JOAQUIN RIVER BASIN

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'20", long 119°31'45", in SE4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,500 ft (457 m) downstream from Bass Lake spillway, and 2.5 mi (4.0 km) southeast of town of Bass Lake.

DRAINAGE AREA.--50.8 mi² (131.6 km²).

PERIOD OF RECORD.--May 1940 to current year. Prior to October 1944, published as Willow Creek below Crane Valley Reservoir. October 1944 to September 1954, published as "below Crane Valley Reservoir."

GAGE.--Water-stage recorder. Broad-crested weir with V-notch Dec. 21, 1961, to Jan. 16, 1969, and since Mar. 26, 1971. Altitude of gage is 3,200 ft (975 m), from topographic map.

REMARKS.--Flow regulated by Bass Lake (station 11243400) 1,500 ft (457 m) upstream and by diversion into Pacific Gas and Electric Co. conduit No. 3 near Bass Lake (station 11243500). Soquel ditch diverts up to 50 ft³/s (1.42 m³/s), from North Fork Willow Creek into Nelder Creek in Fresno River basin. Brown's Creek ditch diverted 14,200 acre-ft (17.5 hm³) from South Fork Willow Creek into Bass Lake during the current year. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--41 years, 12.3 ft³/s (0.348 m³/s), 8,910 acre-ft/yr (11.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Jan. 26, 1969, gage height, unknown; minimum daily, 0.1 ft³/s (0.003 m³/s) Nov. 13-16, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 138 ft³/s (3.91 m³/s) Dec. 5; minimum daily, 0.27 ft³/s (0.008 m³/s) on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.29	.49	.27	.61	1.4	.57	1.4	1.7	1.1	.59	.38
2	.39	.29	.51	.27	.57	1.4	.70	1.4	1.7	1.0	.58	.37
3	.39	.29	.53	.28	.54	1.4	.67	1.5	1.6	1.0	.58	.36
4	.39	.29	.41	.27	.50	1.3	.64	1.5	1.6	1.0	.60	.35
5	.39	.29	138	.27	.49	1.0	.62	1.4	1.6	1.0	.59	.34
6	.39	.29	138	.27	.47	.43	.62	1.4	1.6	1.0	.57	.34
7	.39	.30	50	.27	.45	.42	.62	1.3	1.6	1.0	.55	.32
8	.39	.32	.49	.27	.47	.41	.65	1.3	1.5	1.0	.54	.31
9	.38	.33	.47	.27	.90	.40	.69	1.3	1.5	.97	.53	.31
10	.38	.35	.45	.27	.58	.40	.69	1.4	1.5	.94	.53	.29
11	.38	.36	.45	.27	.49	.90	.72	1.5	1.5	.92	.52	.29
12	.38	.37	.40	.29	.46	.80	.80	1.5	1.5	.91	.51	.29
13	.38	.38	.33	.27	.43	1.2	.88	1.5	1.5	.92	.50	.28
14	.38	.38	.36	.27	.46	1.1	1.0	1.5	1.5	.93	.49	.28
15	.38	.40	.36	.27	.43	1.0	1.2	1.5	1.5	.90	.46	.28
16	.36	.40	.37	.27	.43	1.0	1.3	1.5	1.5	.87	.46	.28
17	.36	.42	.38	.27	.42	.90	1.3	1.5	1.4	.83	.47	.28
18	.36	.43	.42	.27	.41	.80	1.3	1.5	1.3	.80	.48	.28
19	.36	.44	.38	.27	.39	1.5	1.6	1.5	1.3	.79	.47	.28
20	.35	.45	.29	.27	.40	1.5	1.7	1.6	1.3	.80	.46	.28
21	.35	.45	.29	.27	.40	1.2	1.6	1.6	1.3	.82	.45	.28
22	.35	.45	.29	.27	.39	.92	1.6	1.6	1.3	.79	.45	.28
23	.34	.45	.29	.52	.38	1.0	1.6	1.6	1.3	.77	.43	.28
24	.33	.47	.29	.38	.45	.99	1.6	1.6	1.2	.77	.43	.28
25	.32	.47	.29	.33	.76	1.2	1.6	1.6	1.2	.76	.43	.28
26	.31	.47	.29	.32	.88	1.3	1.6	1.6	1.1	.73	.42	.28
27	.30	.49	.28	1.2	1.3	1.1	1.6	1.7	1.1	.72	.42	.28
28	.29	.49	.28	1.8	1.3	.97	1.6	1.7	1.1	.70	.41	.28
29	.28	.49	.28	1.9	---	.87	1.5	1.7	1.1	.68	.41	.28
30	.28	.49	.28	1.0	---	.83	1.5	1.7	1.1	.66	.40	.28
31	.28	---	.27	.65	---	.74	---	1.7	---	.62	.39	---
TOTAL	10.99	11.79	376.81	14.07	15.76	30.38	34.07	47.0	42.0	26.70	15.12	8.99
MEAN	.35	.39	12.2	.45	.56	.98	1.14	1.52	1.40	.86	.49	.30
MAX	.39	.49	138	1.9	1.3	1.5	1.7	1.7	1.7	1.1	.60	.38
MIN	.28	.29	.27	.27	.38	.40	.57	1.3	1.1	.62	.39	.28
AC-FT	22	23	747	28	31	60	68	93	83	53	30	18
CAL YR 1980	TOTAL	10169.24	MEAN	27.8	MAX	938	MIN	.27	AC-FT	20170		
WTR YR 1981	TOTAL	633.68	MEAN	1.74	MAX	138	MIN	.27	AC-FT	1260		

LOCATION.--Lat 37°09'03", long 119°27'34", in SE&NE& sec.16, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 40 ft (12 m) upstream from bridge, 0.4 mi (0.6 km) upstream from mouth, 1.3 mi (2.1 km) downstream from Whiskey Creek, and 4.3 mi (6.9 km) northeast of Auberry.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 248 ft³/s (7.02 m³/s) Dec. 4, gage height, 7.25 ft (2.210 m); minimum daily, no flow many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	6.4	3.1	3.3	14	13	25	21	7.5	1.8	.06	0
2	2.4	2.9	3.2	3.2	14	16	27	19	7.2	1.7	.03	0
3	2.2	3.1	3.3	3.1	12	14	24	18	6.9	1.5	.03	0
4	2.0	3.2	80	3.4	10	13	22	17	6.4	1.3	.03	0
5	2.1	2.9	72	3.4	9.5	12	25	16	6.4	1.3	.03	0
6	2.1	2.5	39	3.2	8.9	12	28	15	5.8	1.3	.03	0
7	2.0	2.5	29	3.2	8.5	12	30	14	5.4	1.3	.03	1.9
8	2.1	2.4	6.9	3.2	8.6	11	28	13	5.1	1.2	.03	1.0
9	2.2	3.2	5.3	3.2	21	12	30	12	5.0	1.2	0	.53
10	2.2	2.8	4.6	3.2	20	13	32	12	4.9	1.1	0	.19
11	2.3	2.9	5.2	3.2	15	14	31	11	4.7	1.0	0	.06
12	2.5	4.4	4.4	3.2	13	15	30	10	4.1	.97	0	0
13	2.8	4.1	4.2	3.2	12	22	28	9.7	4.1	.94	0	0
14	3.2	3.3	4.2	3.3	14	18	31	9.4	4.0	.91	0	0
15	4.4	3.2	4.1	3.3	17	17	31	9.5	3.8	.85	0	0
16	5.6	3.2	4.2	3.3	14	16	32	9.9	3.6	.79	0	0
17	4.8	3.0	4.1	3.3	15	17	35	9.5	3.4	.47	0	.36
18	4.6	2.9	4.1	3.3	16	17	34	9.1	3.3	.41	0	.47
19	4.5	2.8	4.0	3.2	16	63	46	9.9	3.2	.38	0	.66
20	4.4	2.9	4.0	3.1	15	108	55	12	3.0	.35	0	.91
21	4.0	3.1	4.2	3.0	15	48	35	11	2.9	.22	0	.79
22	3.8	3.1	4.1	3.0	16	45	35	9.2	2.6	.16	0	.66
23	3.6	3.1	4.1	7.0	16	36	40	8.9	2.3	.06	0	.63
24	3.4	3.2	4.1	7.2	17	30	52	8.9	2.3	.06	0	.53
25	3.5	3.2	3.8	4.9	16	42	34	8.5	2.1	.06	0	.53
26	4.8	3.2	3.7	4.2	33	106	31	10	2.0	.06	0	.53
27	5.8	3.2	3.7	26	14	43	27	17	2.0	.03	0	.63
28	4.8	3.2	3.7	43	12	32	26	12	1.8	.03	0	.82
29	4.3	3.2	3.7	59	---	30	26	9.7	1.8	.06	0	.88
30	4.2	3.1	3.4	30	---	28	23	8.8	1.8	.06	0	.91
31	7.8	---	3.3	18	---	25	---	8.0	---	.03	0	---
TOTAL	110.9	96.2	330.7	270.1	412.5	900	953	369.0	119.4	21.60	.27	12.99
MEAN	3.58	3.21	10.7	8.71	14.7	29.0	31.8	11.9	3.98	.70	.009	.43
MAX	7.8	6.4	80	59	33	108	55	21	7.5	1.8	.06	1.9
MIN	2.0	2.4	3.1	3.0	8.5	11	22	8.0	1.8	.03	0	0
AC-FT	220	191	656	536	818	1790	1890	732	237	43	.5	26
CAL YR 1980	TOTAL	55165.70	MEAN	151	MAX	3930	MIN	1.7	AC-FT	109400		
WTR YR 1981	TOTAL	3596.66	MEAN	9.85	MAX	108	MIN	0	AC-FT	7130		

SAN JOAQUIN RIVER BASIN

11247000 SAN JOAQUIN RIVER BELOW KERCKHOFF POWERHOUSE, NEAR PRATHER, CA

LOCATION.--Lat 37°04'45", long 119°33'36", in NE&NW¼ sec.10, T.10 S., R.22 E., Fresno County, Hydrologic Unit 18040006, on left bank 1.1 mi (1.8 km) downstream from Kerckhoff powerhouse, 1.4 mi (2.3 km) upstream from Big Sandy Creek, and 3.8 mi (6.1 km) southeast of Prather.

DRAINAGE AREA.--1,480 mi² (3,833 km²).

PERIOD OF RECORD.--April 1910 to September 1914, December 1936 to December 1937, December 1942 to September 1981 (discontinued). Published as "near North Fork" 1910-14 and as "below Kerckhoff powerhouse" 1915-60.

GAGE.--Water-stage recorder. Datum of gage is 563.4 ft (171.72 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Oct. 1, 1914, at site 11 mi (18 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by 12 powerplants and eight reservoirs with total usable capacity of 609,300 acre-ft (751 hm³). Earliest storage began in 1901 at Bass Lake (station 11243400). See records for Florence Lake, Lake Thomas A. Edison, Mammoth Pool Reservoir, Huntington, Shaver, and Redinger Lakes given elsewhere in this report. Backwater from Millerton Lake has affected record at times since November 1947, when spillway gates were installed at Friant Dam. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record, telemark readings, and nine discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--42 years (water years 1911-14, 1944-81), 2,353 ft³/s (66.64 m³/s), 1,705,000 acre-ft/yr (2.10 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft³/s (2,610 m³/s) Dec. 23, 1955, gage height, 51.0 ft (15.54 m), from floodmarks, from rating curve extended above 20,000 ft³/s (566 m³/s) on basis of records for San Joaquin River above Willow Creek, near Auberry and Willow Creek at mouth, near Auberry; minimum daily, 14 ft³/s (0.40 m³/s) Mar. 4, 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,260 ft³/s (121 m³/s) May 7, gage height, 16.07 ft (4.898 m); minimum daily, 359 ft³/s (10.2 m³/s) Dec. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	1520	1680	844	1720	870	1700	2920	1680	1380	1690	1230
2	570	1310	1210	522	1740	679	1700	2840	1680	1670	1690	1150
3	624	824	1330	420	1720	1280	1780	2800	2550	1560	1690	1370
4	603	1100	1300	577	1700	1030	1380	2860	3000	1700	1690	1320
5	700	1200	1710	715	1690	1360	1540	2970	2920	1010	1690	1350
6	642	1190	1700	835	1700	1220	2000	2980	1990	1040	1670	1430
7	537	1370	1700	759	1700	1120	2010	2900	1690	1630	1690	1410
8	877	1110	1440	842	1690	992	2150	2860	2410	1530	1690	1260
9	636	690	1390	403	1700	1050	2140	2830	2790	1580	1680	1270
10	990	843	1290	372	1700	1150	2610	2770	2680	1680	1690	1230
11	1310	1180	1090	816	1700	1080	2120	2760	2620	1350	1620	1360
12	1370	1170	988	657	1690	1100	2570	2740	2090	1060	1690	1360
13	1320	1180	940	756	1690	1330	2560	2750	1750	1270	1470	1470
14	1310	1180	834	929	1580	1370	2480	2790	1680	1690	1440	1560
15	1280	786	746	981	1690	1380	2480	2800	1680	1570	1430	1420
16	1500	611	613	971	1690	956	2560	2820	1600	1560	1270	1270
17	1450	915	461	878	1690	1380	2830	2780	1690	1530	1330	1290
18	1360	747	359	885	1710	1170	2870	2710	1290	1220	1370	1240
19	1280	1050	552	572	1700	1380	2990	2600	1700	1140	1400	1140
20	1340	1020	458	994	1690	1750	2970	2620	1710	1370	1430	1120
21	1430	998	466	1190	1690	2090	2860	2750	1550	1700	1550	1180
22	1400	892	645	1190	1490	1730	2940	1930	1720	1690	1360	1200
23	1280	899	475	1160	1280	2010	2960	1700	1340	1690	1340	964
24	1310	1060	524	1150	1680	1940	2880	1690	1180	1730	1400	1390
25	1220	983	378	1220	1680	2270	2880	1690	1190	1680	1430	1240
26	1060	786	410	957	1690	2580	2860	1690	1460	1700	1480	1240
27	1020	1120	552	1200	1440	2130	2980	1690	1660	1680	1450	1170
28	1190	1680	513	1710	980	2150	2980	1690	1640	1680	1510	992
29	1200	1690	664	1730	---	1740	2970	1690	1660	1690	1200	1260
30	1200	1680	1050	1730	---	1700	2970	1690	1650	1690	1190	1310
31	1350	---	963	1720	---	1700	---	1690	---	1630	1250	---
TOTAL	34859	32784	28431	29685	45820	45687	74720	76000	56250	47100	46480	38196
MEAN	1124	1093	917	958	1636	1474	2491	2452	1875	1519	1499	1273
MAX	1500	1690	1710	1730	1740	2580	2990	2980	3000	1730	1690	1560
MIN	537	611	359	372	980	679	1380	1690	1180	1010	1190	964
AC-FT	69140	65030	56390	58880	90880	90620	148200	150700	111600	93420	92190	75760
CAL YR 1980 TOTAL	1427232		MEAN 3900	MAX 14500	MIN 359	AC-FT 2831000						
WTR YR 1981 TOTAL	556012		MEAN 1523	MAX 3000	MIN 359	AC-FT 1103000						

11249500 MADERA CANAL AT FRIANT, CA

LOCATION.--Lat 37°00'10", long 119°42'21", in NW¼SW¼ sec.5, T.11 S., R.21 E., Madera County, Hydrologic Unit 18040006, at Friant Dam 0.9 mi (1.4 km) northeast of Friant.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for October 1943 to September 1950 published in WSP 1315-A. October 1954 to September 1966 published as Friant-Madera Canal at Friant.

REVISED RECORDS.--WSP 1151: 1944-48.

GAGE.--Discharge computed on basis of valve openings in dam and head on valves. Prior to Oct. 1, 1948, water-stage recorder at several sites at various datums. Oct. 1, 1948, to Sept. 30, 1949, water-stage recorder at site 8.8 mi (14.2 km) downstream.

REMARKS.--Canal diverts from Millerton Lake (station 11250100) at right end of Friant Dam for irrigation between San Joaquin and Chowchilla Rivers.

COOPERATION.--Records furnished by Bureau of Reclamation and reviewed by the Geological Survey, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--38 years, 311 ft³/s (8.808 m³/s), 225,300 acre-ft/yr (278 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,330 ft³/s (37.7 m³/s) July 2, 1973; no flow many days in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	679					0	0	762	256	334	381	394
2	674					0	125	819	266	323	345	397
3	667					0	201	893	266	289	325	395
4	660					0	202	969	266	253	323	394
5	654					0	202	1030	393	240	321	480
6	647					0	203	1060	575	252	333	623
7	640					0	234	1010	656	259	322	789
8	632					0	290	970	700	257	310	848
9	625					0	322	961	709	268	308	842
10	665					0	411	962	714	273	304	736
11	684					0	469	894	714	272	300	548
12	678					0	470	813	713	270	296	370
13	673					0	439	796	712	303	292	312
14	710					0	421	818	674	338	253	313
15	728					0	472	816	653	377	212	313
16	722					0	501	773	668	391	202	313
17	716					157	481	735	705	388	201	313
18	711					252	471	726	720	384	229	312
19	682					220	433	682	716	381	275	312
20	664					67	403	657	714	410	291	312
21	643					0	385	658	712	451	290	312
22	588					0	350	659	709	488	289	388
23	535					0	336	659	643	498	289	474
24	438					0	337	572	616	493	288	509
25	300					0	302	459	536	452	315	535
26	268					0	304	341	410	416	349	584
27	227					0	354	291	334	407	360	605
28	56					125	407	274	299	402	380	573
29	0				---	201	427	248	289	396	391	439
30	0				---	201	456	239	307	390	389	40
31	0	---			---	76	---	239	---	384	387	---
TOTAL	16566	0	0	0	0	1299	10408	21785	16645	11039	9550	13775
MEAN	534	0	0	0	0	41.9	347	703	555	356	308	459
MAX	728	0	0	0	0	252	501	1060	720	498	391	848
MIN	0	0	0	0	0	0	0	239	256	240	201	40
AC-FT	32860	0	0	0	0	2580	20640	43210	33020	21900	18940	27320
CAL YR 1980 TOTAL	259858.00			MEAN 710	MAX 1310	MIN 0	AC-FT 515400					
WTR YR 1981 TOTAL	101067.00			MEAN 277	MAX 1060	MIN 0	AC-FT 200500					

SAN JOAQUIN RIVER BASIN

11250000 FRIANT-KERN CANAL AT FRIANT, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°59'53", long 119°42'11", in SE¼SW¼ sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, at Friant Dam 0.9 mi (1.4 km) northeast of Friant.

PERIOD OF RECORD.--March 1949 to current year.

WATER-DISCHARGE RECORDS

GAGE.--Discharge computed on basis of valve openings in dam and head on valves. Prior to July 8, 1949, nonrecording gages at various sites and datums. July 8 to Sept. 30, 1949, water-stage recorder at site 0.2 mi (0.3 km) downstream.

REMARKS.--Canal diverts from Millerton Lake (station 11250100) at left end of Friant Dam for irrigation in upper San Joaquin Valley.

COOPERATION.--Records of discharge furnished by Bureau of Reclamation and reviewed by Geological Survey, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--32 years, 1,382 ft³/s (39.14 m³/s), 1,001,000 acre-ft/yr (1.23 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,260 ft³/s (149 m³/s) June 19, 1980; no flow for several months in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2410	760	524	333	708	890	279	1110	1750	3010	2340	1340
2	2500	908	551	315	1070	923	293	1130	1890	2940	2080	1370
3	2470	1000	514	300	1150	923	294	1170	2000	2960	2180	1270
4	2340	1020	446	318	1110	924	320	1190	1970	2800	2260	1130
5	2310	998	376	69	1190	925	363	1210	1660	2810	2300	979
6	2430	935	351	0	1120	878	468	1210	1450	2890	2280	919
7	2550	845	372	0	1240	873	608	1260	1560	2950	2310	960
8	2660	756	355	0	1310	953	680	1300	1650	3000	2420	1020
9	2670	788	303	0	1350	1050	749	1270	1670	3050	2760	1110
10	2480	830	262	0	1300	1200	786	1380	1740	3100	3090	1120
11	2260	807	264	144	1160	1290	788	1600	1770	2870	3240	1010
12	2260	792	265	417	1240	1320	823	1810	1730	2930	3300	912
13	2020	774	290	514	1430	1290	897	1960	1940	3120	3020	936
14	1900	696	344	636	1450	1170	936	1980	2200	3390	2140	934
15	2040	640	387	652	1600	885	994	1760	2470	3640	1280	950
16	2160	682	420	580	1830	655	1020	1310	2630	3560	1350	949
17	1990	703	437	531	1970	678	939	1230	3000	3440	1450	947
18	1680	704	437	519	1980	623	925	1250	3080	3180	1530	892
19	1630	726	405	575	2030	629	1100	1270	2910	2780	1580	775
20	1690	729	352	706	1950	547	1220	1330	2270	3270	1530	800
21	1640	694	360	776	1790	451	1280	1280	2220	3880	1380	846
22	1460	670	402	777	1840	434	1320	1040	2410	3880	1200	884
23	1390	671	387	742	1900	420	1340	901	2500	3360	1250	935
24	1310	687	329	700	1940	423	1360	989	2510	3300	1360	933
25	1270	637	299	470	2010	426	1290	1010	2480	3500	1350	869
26	1320	532	299	443	1910	379	1040	1070	2490	3850	1310	780
27	1340	512	299	421	1540	303	888	1180	2570	4110	1410	794
28	1310	496	300	403	1120	283	929	1200	2750	4210	1360	817
29	1290	474	317	338	---	305	982	1300	2860	4300	1210	834
30	1290	502	330	385	---	286	1060	1440	2970	4050	1280	813
31	900	---	332	453	---	262	---	1600	---	3340	1300	---
TOTAL	58970	21968	11309	12517	42238	22598	25971	40740	67100	103470	58850	28828
MEAN	1902	732	365	404	1509	729	866	1314	2237	3338	1898	961
MAX	2670	1020	551	777	2030	1320	1360	1980	3080	4300	3300	1370
MIN	900	474	262	0	708	262	279	901	1450	2780	1200	775
AC-FT	117000	43570	22430	24830	83780	44820	51510	80810	133100	205200	116700	57180
CAL YR 1980	TOTAL	745093.00	MEAN	2036	MAX	5260	MIN	0	AC-FT	1478000		
WTR YR 1981	TOTAL	494559.00	MEAN	1355	MAX	4300	MIN	0	AC-FT	981000		

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1981 (discontinued).
 CHEMICAL ANALYSES: Water years 1975 to September 1981 (discontinued).
 BIOLOGICAL DATA: Water years 1975 to September 1981 (discontinued).
 SEDIMENT RECORDS: Water years 1975 to September 1981 (discontinued).

WATER QUALITY DATA: WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CURIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
06...	1530	2430	23	6.7	19.0	1.4	9.2	K4	K3	6	0	2.1
NOV												
07...	1000	845	21	6.9	17.5	.90	9.5	K8	K5	7	0	2.3
DEC												
02...	1400	551	27	6.6	13.5	1.4	10.2	K2	<1	8	0	2.4
JAN												
26...	1230	443	32	6.7	10.5	.90	11.2	K1	<1	9	0	2.7
FEB												
11...	0915	1160	34	6.9	11.0	1.0	11.5	K2	K1	10	0	2.9
MAR												
24...	1030	423	41	6.8	11.0	1.6	--	K6	<1	12	0	3.8
APR												
22...	1130	1320	47	6.7	11.0	1.8	11.2	<1	<1	13	0	3.9
MAY												
11...	1130	1600	43	6.8	12.5	.70	11.1	10	K8	12	0	3.7
JUN												
24...	1330	2510	35	6.6	16.5	.70	10.1	K3	K2	8	0	2.5
JUL												
20...	1115	3270	29	6.3	18.0	.00	9.8	<1	<1	9	0	2.5
SEP												
03...	1200	1270	30	6.4	21.5	1.4	8.6	--	K1	8	0	2.6
21...	1415	846	30	6.1	22.0	1.2	8.7	K3	K2	8	0	2.5

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT												
06...	.2	2.1	40	.4	.6	9	.4	1.3	.0	7.4	19	20
NOV												
07...	.4	2.7	42	.4	.6	10	.6	1.9	.2	7.7	23	22
DEC												
02...	.5	2.5	38	.4	.6	11	.4	1.7	.1	7.9	20	23
JAN												
26...	.6	3.1	40	.4	.7	12	.6	1.9	.1	7.6	19	25
FEB												
11...	.7	3.7	43	.5	.6	12	.7	2.4	.1	7.7	24	26
MAR												
24...	.7	4.5	42	.6	.7	14	1.3	3.5	.1	8.7	33	32
APR												
22...	.8	4.8	43	.6	.8	16	.6	3.6	.1	11	--	35
MAY												
11...	.6	4.6	44	.6	.7	15	.8	3.1	.0	11	39	35
JUN												
24...	.4	3.5	48	.5	.3	13	1.9	1.8	.1	9.0	--	29
JUL												
20...	.6	2.9	40	.4	.7	9	.4	1.6	.0	7.9	23	22
SEP												
03...	.4	2.7	39	.4	.7	12	<5.0	1.7	.1	7.3	22	--
21...	.5	2.3	35	.4	.8	11	<5.0	1.9	.1	7.3	17	--

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 06...	.00	.00	.000	.000	.46	.48	.46	.48	--	.020	--
NOV 07...	.00	.00	.070	.050	.33	.26	.40	.31	.040	.040	2.0
DEC 02...	.00	.00	.020	.010	.52	.37	.54	.38	.030	.020	--
JAN 26...	.09	.10	.030	.020	.24	.21	.27	.23	--	.040	--
FEB 11...	.06	.00	.000	.000	.43	--	.43	--	.040	.030	1.1
MAR 24...	.04	.04	.040	.000	.46	.22	.50	.22	.020	.020	--
APR 22...	--	.03	.020	.020	.37	.26	.39	.28	.020	.020	1.6
MAY 11...	.03	.02	--	.030	--	.33	.59	.36	--	.030	2.7
JUN 24...	--	.05	.010	.040	.53	--	.54	--	.020	.020	--
JUL 20...	.01	.03	.000	.030	.45	.34	.45	.37	.010	.000	1.7
SEP 03...	.02	.00	--	.030	--	.56	.76	.59	.040	.010	1.6
21...	.04	.00	.020	.020	.41	.25	.43	.27	<.010	.010	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 06...	1530	1	1	0	20	1	<1	0	0	0	<3
DEC 02...	1400	1	1	0	10	0	<1	20	0	0	<3
MAR 24...	1030	1	1	0	20	0	2	10	20	0	<3
JUN 24...	1330	1	1	0	0	1	<1	0	0	3	<1
SEP 21...	1415	1	1	0	13	1	1	0	0	2	0

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 06...	17	8	40	20	3	3	0	2	.1	.0
DEC 02...	8	2	120	<10	4	2	20	2	.0	.0
MAR 24...	2	2	70	30	0	0	10	2	.1	.0
JUN 24...	3	2	40	30	3	0	0	2	--	.1
SEP 21...	15	3	140	20	7	2	10	3	.1	.0

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
OCT 06...	5	2	0	0	0	0	20	7	--	.1
DEC 02...	4	0	0	0	0	0	20	10	4.2	.2
MAR 24...	1	1	0	0	0	0	10	20	2.4	--
JUN 24...	3	1	0	0	0	0	10	4	5.5	.9
SEP 21...	2	3	0	0	0	0	20	5	2.5	.2

K Results based on colony count outside the acceptable range (non-ideal colony count).
 < Actual value is known to be less than the value shown.

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF
BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE TIME	MAR 24,81 1030	MAY 11,81 1130	JUN 24,81 1330	JUL 20,81 1115	SEP 3,81 1200	SEP 21,81 1415				
TOTAL CELLS/ML	52	1200	130	26	340	760				
DIVERSITY: DIVISION	0.0	1.0	0.5	0.0	1.1	0.0				
..CLASS	0.0	1.0	0.5	0.0	1.1	0.0				
...ORDER	0.8	1.2	0.9	0.0	1.7	1.7				
...FAMILY	0.8	1.2	0.9	0.0	1.7	1.7				
....GENUS	0.8	1.4	0.9	0.0	1.7	1.7				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
.....ACHNANTHES	--	-	28	2	--	-	--	-	68	9
...BACILLARIALES										
....NITZSCHIAEAE										
.....NITZSCHIA	--	-	--	-	--	-	26#100	14	4	--
...EUPODISCALES										
....COSCINODISCAEAE										
.....CYCLOTELLA	--	-	14	1	13	10	--	-	14	4
....MELOSIRA	39#	75	--	-	--	-	--	-	370#	48
...FRAGILARIALES										
....FRAGILARIAEAE										
.....ASTERIONELLA	--	-	420#	35	100#	80	--	-	240#	71
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-
...SYNEDRA	13#	25	--	-	--	-	--	-	250#	32
...NAVICULALES										
....GOMPHONEMACEAE										
.....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE									82	11
....NAVICULA	--	-	14	1	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....OOCYSTACEAE										
.....ANKISTRODESMUS	--	-	--	-	--	-	--	-	14	4
....OOCYSTIS	--	-	--	-	13	10	--	-	--	-
...VOLVOCALES										
....CHLAMYDOMONADACEAE										
.....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	14	4
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
.....ANACYSTIS	--	-	28	2	--	-	--	-	14	4
...GOMPHOSPHAERIA	--	-	700#	58	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....TRACHELOMONAS	--	-	--	-	--	-	--	-	14	4
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...DINOKONTAE										
....PERIDINIACEAE										
.....PERIDINIUM	--	-	--	-	--	-	--	-	14	4

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JOAQUIN RIVER BASIN

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
06...	1530	2430	19.0	2	13	73
NOV						
07...	1000	845	17.5	1	2.3	61
DEC						
02...	1400	551	13.5	1	1.5	97
JAN						
26...	1230	443	10.5	5	6.0	82
FEB						
11...	0915	116	11.0	3	.94	64
MAR						
24...	1030	423	11.0	1	1.1	65
APR						
22...	1130	1320	11.0	1	3.6	100
MAY						
11...	1130	1600	12.5	4	17	48
JUN						
24...	1330	2510	16.5	4	27	17

11250100 MILLERTON LAKE AT FRIANT, CA

LOCATION.--Lat 37°00'00", long 119°42'13", in SW¼SW¼ sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, near center of Friant Dam on San Joaquin River just upstream from Cottonwood Creek, 0.9 mi (1.4 km) northeast of Friant.

DRAINAGE AREA.--1,638 mi² (4,242 km²).

PERIOD OF RECORD.--October 1941 to current year. Monthend contents only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to May 29, 1944, nonrecording gage on left bank at same datum.

REMARKS.--Reservoir is formed by gravity-type concrete dam with spillway near center, completed in December 1942. Control valves installed in February 1944 and spillway gates installed in November 1947. Usable capacity, 503,200 acre-ft (620 hm³) between elevations 375.4 ft (114.42 m) invert of river outlet, and 578.0 ft (176.17 m) top of drum-type spillway gates. Not available for release, 17,400 acre-ft (21.5 hm³). Millerton Lake is one of the storage units in Central Valley Project. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 528,700 acre-ft (652 hm³) June 12, 1973, elevation, 579.66 ft (176.680 m); minimum since lake first filled, 133,600 acre-ft (165 hm³) Apr. 11, 1969, elevation, 467.81 ft (142.588 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 432,500 acre-ft (533 hm³) May 28, elevation, 559.09 ft (170.411 m); minimum, 163,600 acre-ft (202 hm³) Sept. 29, elevation, 480.78 ft (146.542 m).

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

400	36,400	500	215,600
420	57,000	520	279,400
440	83,300	540	353,000
460	117,500	560	436,500
480	161,700	580	530,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284400	207000	225200	256900	291600	296600	345100	414900	430300	364100	225400	177300
2	279400	207700	226500	257200	292900	296100	347500	416300	428900	360600	223700	175900
3	274300	207400	228100	257500	294000	296800	349600	417400	429000	357000	221900	175200
4	269500	207700	230000	257800	295100	297200	351000	418500	430200	353900	219900	174600
5	264900	208000	232500	259100	296100	298000	353000	419600	431500	349600	217900	174300
6	260000	208200	235100	260700	297200	298600	355700	420700	431100	345100	215800	174000
7	254700	209100	237700	262000	298100	299100	358000	421600	429700	341600	213800	173300
8	249800	209600	239800	263700	299000	299300	360100	422500	429400	337900	211600	171900
9	244500	209300	241900	264400	299900	299300	362100	423600	429900	334200	208700	170500
10	240100	209200	243800	265100	300700	299200	364800	424200	429900	330500	205200	169100
11	236800	209800	245600	266300	301800	298900	366300	424500	429900	326700	201300	168500
12	233600	210400	246900	266700	302700	298500	368800	424500	428700	322300	197400	168400
13	230800	210900	248100	267200	303200	298700	371100	424200	426500	317800	193500	168700
14	228100	211700	249000	267800	303500	299100	373100	423900	423900	313600	191400	168900
15	225100	211800	249600	268000	303700	300200	375000	424000	420800	308500	191000	169000
16	222300	211500	250100	268700	303500	300900	376900	425200	417000	303600	190400	168700
17	219800	211700	250200	269400	302900	302000	379500	426600	412800	298800	189500	168600
18	217700	211600	249900	270100	302400	302700	382100	427800	407700	294000	188500	168400
19	215700	212200	250100	270100	301700	304500	385200	428900	403700	290000	187400	168400
20	213800	212500	250300	270600	301200	307200	387800	429900	401000	285200	186400	168200
21	212200	213000	250400	271300	300900	310800	390200	431400	398200	279800	185800	168000
22	210800	213100	251000	272100	300200	313600	392500	431700	395200	274400	185400	167600
23	209500	213300	251100	273100	298900	316700	394900	431600	391600	269900	184900	166600
24	208600	213900	251400	273900	298500	319700	397100	431700	387700	265400	184200	166200
25	207900	214500	251700	275300	297800	323600	399400	431800	383800	260700	183500	165700
26	206800	215000	251700	276300	297300	328000	402100	432200	380800	255500	182900	165300
27	205800	216200	252200	278100	297000	331700	405300	432400	378000	249700	182100	164800
28	205400	218400	252600	280700	296600	335000	408200	432500	374900	243700	181400	163800
29	205100	220700	253200	284200	---	337500	410800	432400	371700	237600	180500	163600
30	204800	223000	254600	287100	---	339700	413300	432000	368200	231900	179400	164300
31	205600	---	255700	289600	---	342400	---	431400	---	227700	178500	---
MAX	284400	223000	255700	289600	303700	342400	413300	432500	431500	364100	225400	177300
MIN	204800	207000	225200	256900	291600	296100	345100	414900	368200	227700	178500	163600
†	496.54	502.47	512.94	522.94	524.94	537.29	554.68	558.84	543.85	504.02	486.61	481.06
‡	-82000	+17400	+32700	+33900	+7000	+45800	+70900	+181000	-63200	-140500	-49200	-14200
††	1110	510	220	450	430	730	1180	2420	5410	3020	2020	1380

CAL YR 1980 † +8900
WTR YR 1981 ‡ -123300

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA

LOCATION.--Lat 36°59'04", long 119°43'24", in SW¼SW¼ sec.7, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040001, on left bank 0.5 mi (0.8 km) west of Friant, 1.5 mi (2.4 km) downstream from Cottonwood Creek, 2 mi (3.2 km) downstream from Friant Dam, and at mile 268.1 (431.4 km).

DRAINAGE AREA.--1,676 mi² (4,341 km²).

PERIOD OF RECORD.--October 1907 to current year. Published as "near Pollasky" October 1907 to December 1908, and as "near Friant" January 1909 to September 1938. Monthly discharge only for October 1907 to November 1908, published in WSP 1315-A.

REVISED RECORDS.--WSP 843: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 294.00 ft (89.611 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Oct. 18, 1907, to Nov. 9, 1913, nonrecording gage at site 4.5 mi (7.2 km) upstream at different datum. Nov. 10, 1913, to Sept. 30, 1968, water-stage recorder at site 2.5 mi (4.0 km) upstream at different datum.

REMARKS.--Records excellent except those for April through July, which are fair. Flow regulated by Millerton Lake (station 11250100) beginning in 1941, and by reservoirs described in REMARKS for San Joaquin River below Kerckhoff powerhouse. Diversion for irrigation through Madera and Friant-Kern Canals (stations 11249500, 11250000) began in 1944 and 1949, respectively. See schematic diagram of San Joaquin River basin.

AVERAGE DISCHARGE (adjusted for change in contents in and evaporation from Millerton Lake and for diversions to Madera and Friant-Kern Canals)--74 years, 2,364 ft³/s (66.95 m³/s), 1,713,000 acre-ft/yr (2.11 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,200 ft³/s (2,190 m³/s) Dec. 11, 1937, gage height, 23.8 ft (7.25 m) site and datum then in use; minimum, 38 ft³/s (1.08 m³/s) regulated, July 29, 1940. Maximum discharge since construction of Friant Dam in 1941, 12,400 ft³/s (351 m³/s) June 6, 1969; minimum, 5.5 ft³/s (0.16 m³/s) Oct. 20, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 232 ft³/s (6.57 m³/s) June 29, gage height 2.72 ft (0.829 m); minimum daily, 32 ft³/s (0.91 m³/s) Nov. 2-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	33	35	55	40	85	61	159	157	214	155	119
2	105	32	34	54	39	68	60	158	157	214	153	102
3	105	32	35	54	38	40	62	136	157	214	149	98
4	105	32	36	54	38	38	63	126	157	214	146	97
5	104	32	35	55	38	37	63	117	149	214	147	97
6	102	32	35	56	36	37	63	109	137	214	146	97
7	101	64	34	56	36	37	63	108	136	208	144	109
8	101	106	34	56	36	37	63	109	135	197	144	126
9	101	107	35	56	37	37	65	110	135	194	144	132
10	101	106	36	55	38	37	66	111	135	194	144	130
11	101	107	35	54	38	38	66	111	134	194	144	132
12	100	106	35	54	35	39	66	111	132	194	144	132
13	99	107	35	53	36	40	67	112	132	194	146	132
14	93	107	35	55	36	39	82	112	132	193	145	132
15	80	107	34	56	36	39	97	111	132	175	146	132
16	79	107	34	56	36	46	114	104	131	164	143	132
17	74	107	34	56	36	44	141	99	129	164	139	133
18	63	107	35	56	41	43	159	99	127	164	139	130
19	63	107	34	55	61	52	118	99	124	164	138	130
20	63	107	34	53	63	73	55	94	114	161	135	130
21	63	107	34	53	72	51	79	88	105	156	135	131
22	62	107	34	53	82	52	104	86	105	156	137	132
23	62	107	34	58	82	48	108	86	103	157	137	133
24	62	107	39	60	83	46	109	86	118	156	137	124
25	62	71	54	60	84	45	109	86	154	156	137	115
26	62	33	54	60	83	55	111	97	179	156	137	115
27	63	34	55	60	82	49	157	115	215	156	137	115
28	63	34	56	60	83	49	161	141	217	156	135	115
29	63	35	56	59	---	47	154	156	216	156	135	110
30	63	35	56	47	---	60	156	156	214	156	135	100
31	57	---	56	40	---	62	---	156	---	156	135	---
TOTAL	2527	2315	1222	1709	1445	1470	2842	3548	4368	5561	4388	3612
MEAN	81.5	77.2	39.4	55.1	51.6	47.4	94.7	114	146	179	142	120
MAX	105	107	56	60	84	85	161	159	217	214	155	133
MIN	57	32	34	40	35	37	55	86	103	156	135	97
AC-FT	5010	4590	2420	3390	2870	2920	5640	7040	8660	11030	8700	7160
MEAN ‡	1203	1110	940	1018	1694	1575	2519	2645	1932	1637	1580	1325
AC-FT ‡	73970	66050	57800	62590	94080	96840	149900	151600	115000	100700	97150	78840

CAL YR 1980 TOTAL 491587 MEAN 1343 MAX 7980 MIN 32 AC-FT 975100 MEAN ‡ 4126 AC-FT ‡ 2995000
WTR YR 1981 TOTAL 35007 MEAN 95 MAX 217 MIN 32 AC-FT 69440 MEAN ‡ 1581 AC-FT ‡ 1145000

‡ Adjusted for change in contents and evaporation from Millerton Lake and for diversions to Madera and Friant-Kern Canals.

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA

LOCATION.--Lat 36°24'08", long 120°25'57", in SE&SE& sec.34, T.17 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on left bank 9.2 mi (14.8 km) southwest of town of Cantua Creek, and 19 mi (31 km) north of Coalinga.

DRAINAGE AREA.--46.4 mi² (120.2 km²).

PERIOD OF RECORD.--Water years 1958-65 (annual maximum), October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 680 ft (207 m), from topographic map. Prior to October 1966, crest-stage gage at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good. Some small dams for stock use above station.

AVERAGE DISCHARGE.--15 years, 2.81 ft³/s (0.080 m³/s), 2,040 acre-ft/yr (2.52 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft³/s (54.3 m³/s) Feb. 24, 1969, gage height, 6.60 ft (2.012 m), from rating curve extended above 170 ft³/s (4.81 m³/s) on basis of slope-area measurements at gage heights 4.57 ft (1.393 m), 6.04 ft (1.841 m), and 6.60 ft (2.012 m); no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 70 ft³/s (1.98 m³/s) Mar. 19 (1145 hrs), gage height, 2.60 ft (0.792 m), no other peak above base of 50 ft³/s (1.42 m³/s); minimum, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.04	.34	.69	1.9	8.4	2.5	.59	.28			
2	0	.04	.35	.69	1.6	6.3	3.4	.53	.39			
3	0	.04	.37	.76	1.5	2.8	2.5	.53	.22			
4	0	.04	.58	.74	1.2	2.8	2.1	.59	.13			
5	0	.05	1.0	.69	1.2	15	2.0	.63	.18			
6	0	.05	.70	.73	1.2	8.8	1.8	.60	.07			
7	0	.05	.62	.75	1.2	7.7	1.8	.60	.08			
8	0	.06	.60	.78	1.2	4.9	1.7	.58	.09			
9	0	.06	.60	.78	1.6	3.5	1.7	.56	.05			
10	0	.07	.60	.78	1.4	2.8	1.6	.52	.06			
11	0	.13	.63	.78	1.2	2.3	1.6	.46	.05			
12	0	.13	.69	.78	1.1	2.1	1.6	.40	.02			
13	0	.15	.68	.69	1.1	2.1	1.5	.40	.02			
14	0	.16	.60	.69	1.1	2.4	1.4	.60	.01			
15	0	.16	.65	.69	1.1	2.1	1.4	.90	0			
16	0	.16	.67	.69	1.0	2.1	1.3	1.0	0			
17	0	.19	.65	.69	.96	1.7	1.3	.79	0			
18	0	.19	.62	.61	.94	1.6	5.6	.72	0			
19	0	.23	.60	.59	.88	24	5.1	.84	0			
20	0	.24	.61	.58	.84	10	2.1	.97	0			
21	0	.27	.68	.60	.85	8.7	.78	.86	0			
22	0	.29	.66	.54	.86	11	.65	.78	0			
23	0	.29	.61	.65	.81	5.7	.60	.68	0			
24	.01	.29	.61	.78	.81	4.5	.63	.56	0			
25	.03	.34	.68	.78	.98	4.0	.60	.51	0			
26	.03	.29	.67	.78	1.1	3.7	.60	.84	0			
27	.04	.29	.68	1.2	1.0	3.4	.60	5.5	0			
28	.04	.34	.60	6.7	1.0	3.1	.63	.75	0			
29	.04	.35	.66	12	---	2.8	.66	.21	0			
30	.04	.35	.68	5.0	---	2.5	.66	.23	0			
31	.04	---	.69	2.6	---	2.4	---	.50	---			---
TOTAL	.27	5.34	19.38	45.81	31.63	165.2	50.41	24.23	1.65	0	0	0
MEAN	.009	.18	.63	1.48	1.13	5.33	1.68	.78	.055	0	0	0
MAX	.04	.35	1.0	12	1.9	24	5.6	5.5	.39	0	0	0
MIN	0	.04	.34	.54	.81	1.6	.60	.21	0	0	0	0
AC-FT	.5	11	38	91	63	328	100	48	3.3	0	0	0

CAL YR 1980 TOTAL 1531.40 MEAN 4.18 MAX 110 MIN 0 AC-FT 3040
WTR YR 1981 TOTAL 343.92 MEAN .94 MAX 24 MIN 0 AC-FT 682

SAN JOAQUIN RIVER BASIN

11253500 JAMES BYPASS NEAR SAN JOAQUIN, CA

LOCATION.--Lat 36°39'09", long 120°10'49", in NE¼SW¼ sec.1, T.15 S., R.16 E., Fresno County, Hydrologic Unit 18030012, on right bank 3.2 mi (5.1 km) north of San Joaquin.

PERIOD OF RECORD.--October 1947 to current year. Published as "Fresno Slough bypass" in WSP 1315-A and 1735. Daily discharge for period October 1954 to September 1972 are in files of Water and Power Resources Service. Monthly totals published in WDR CA-72-2.

GAGE.--Water-stage recorder. Altitude of gage is 160 ft (49 m), from topographic map.

REMARKS.--Diversion above station for irrigation. James Bypass carries overflow from Kings River to San Joaquin River. No flow during the 1981 water year.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--34 years, 169 ft³/s (4.786 m³/s), 122,400 acre-ft/yr (151 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,570 ft³/s (158 m³/s) June 7, 1969; no flow for all or most of each year.

11254000 SAN JOAQUIN RIVER NEAR MENDOTA, CA

LOCATION.--Lat 36°48'38", long 120°22'38", in SE4SW4 sec.7, T.13 S., R.20 E., Fresno County, Hydrologic Unit 18040001, on left bank 2.4 mi (3.9 km) downstream from Mendota Dam, 3.9 mi (6.3 km) north of Mendota, and 5.3 mi (8.5 km) southeast of Firebaugh.

DRAINAGE AREA.--3,940 mi² (10,205 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1951-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM CA+DISS (MG/L)	MAGNESIUM MG+DISS (MG/L)	SODIUM NA+DISS (MG/L)
80/11/12	13 15	366	8.1	16.0	12.0			94	21	10	44
81/04/07	14 00	637	8.1	21.0	9.2	16	2.1				
81/05/13	13 45	752	8.1	22.0	9.5	16	1.3	160	36	18	78
81/06/09	09 30	464	7.8	21.0	8.3	14	1.5				
81/07/07	10 40	714	7.9	24.0	7.0			160	35	18	75

DATE	TIME	PTSIUM K+DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N (MG/L)	PHOS-TOT AS P (MG/L)
80/11/12	13 15	2.3	67	52	49	234		0.75	0.02	0.40	0.11
81/04/07	14 00						28	1.90	0.02	0.70	0.26
81/05/13	13 45	3.0	97	95	100	409	56	0.92	0.00	0.60	0.22
81/06/09	09 30						73	0.46	0.01	0.50	0.17
81/07/07	10 40	3.0	97	83	99	420					

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B+DISS (UG/L)
80/11/12	13 15	0.07		200
81/04/07	14 00	0.20	7.6	
81/05/13	13 45	0.12	5.4	400
81/06/09	09 30	0.09	5.4	
81/07/07	10 40			400

DATE	TIME	ARSENIC AS+DISS (UG/L)	BARIUM BA+DISS (UG/L)	CADMIUM CD+DISS (UG/L)	CHROMIUM CR+DISS (UG/L)	COPPER CU+DISS (UG/L)	IRON FE+DISS (UG/L)	LEAD PB+DISS (UG/L)	MANGNESE MN+DISS (UG/L)	MERCURY HG+TOTAL (UG/L)	SELENIUM SE+DISS (UG/L)
80/11/12	13 15	0	0	0	0	0	30	0	50	0.0	10
81/04/07	14 00	0	0	0	0	0	20	0	30	0.0	10

SAN JOAQUIN RIVER BASIN

11257500 FRESNO RIVER NEAR KNOWLES, CA

LOCATION.--Lat 37°14'14", long 119°46'26", in SE¼NW¼ sec.15, T.8 S., R.20 E., Madera County, Hydrologic Unit 18040007, on left bank at Fresno Crossing, 0.1 mi (0.2 km) downstream from Bean Gulch, and 6 mi (10 km) northeast of Knowles.

DRAINAGE AREA.--133 mi² (344 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to August 1913, November 1915 to current year.

REVISED RECORDS.--WSP 1515: 1916-19, 1920(M), 1921-23, 1925-26(M), 1932(M), 1935-36(M).

GAGE.--Water-stage recorder. Datum of gage is 1,086.4 ft (331.13 m) National Geodetic Vertical Datum of 1929. Prior to June 13, 1930, nonrecording gage 10 ft (3 m) upstream and June 13, 1930, to Jan. 13, 1931, water-stage recorder at site 40 ft (12 m) upstream at datum 0.34 ft (0.104 m) lower.

REMARKS.--Records good except those for periods Oct. 1 to Dec. 2 and June 22 to Sept. 30, which are fair. Diversions for irrigation of 160 acres (648,000 m²) above station. Diversions into Fresno River basin above station of up to 60 ft³/s (1.70 m³/s) at times since 1888 from the Merced River basin. Diversions are for irrigation downstream from station.

AVERAGE DISCHARGE.--66 years (water years 1912, 1917-81), 80.2 ft³/s (2.271 m³/s), 58,100 acre-ft/yr (71.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s (377 m³/s) Dec. 23, 1955, gage height, 11.52 ft (3.511 m), from rating curve extended above 3,900 ft³/s (110 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 447 ft³/s (12.7 m³/s) Mar. 20, gage height, 2.72 ft (0.829 m), no peak above base of 590 ft³/s (16.7 m³/s); minimum, no flow many days during July to September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.5	14	16	70	45	96	68	28	3.5		0
2	4.8	4.5	14	16	61	56	95	65	26	3.4		0
3	4.9	4.5	20	16	55	58	100	63	24	3.2		0
4	5.2	4.5	60	17	50	47	88	61	23	2.9		0
5	5.4	4.5	51	17	45	43	84	57	22	2.5		0
6	5.6	4.6	33	17	41	41	85	54	20	2.3		0
7	5.9	4.5	25	16	38	39	80	54	19	2.0		0
8	6.2	4.7	22	16	36	38	85	52	18	1.8		0
9	6.6	4.6	20	16	50	39	83	50	16	1.6		0
10	6.6	5.0	19	16	57	40	84	50	15	1.4		0
11	6.9	9.0	18	16	41	41	81	49	14	1.2		0
12	7.0	15	17	16	38	42	80	47	13	1.0		0
13	7.2	17	17	16	36	55	79	45	13	.90		0
14	7.6	14	17	16	47	57	79	44	13	.78		0
15	8.2	13	16	15	78	47	75	42	13	.65		0
16	8.7	12	16	15	56	50	77	41	12	.56		0
17	8.4	11	16	15	52	52	79	40	11	.48		0
18	7.3	11	17	15	53	48	80	38	10	.42		0
19	6.7	11	17	15	51	184	146	42	9.3	.35		2.0
20	6.2	10	16	15	51	325	115	49	8.0	.31		6.6
21	5.8	10	16	14	50	205	93	44	7.3	.32		11
22	5.5	10	16	15	48	198	89	39	6.2	.59		9.8
23	5.3	11	17	100	47	152	85	37	5.8	.78		7.7
24	5.1	12	18	90	50	127	82	36	4.7	.48		6.7
25	4.9	16	17	50	55	120	80	35	4.5	.24		8.3
26	4.8	15	16	28	51	247	77	40	4.3	.20		8.3
27	4.7	15	16	79	45	191	75	69	4.1	.15		8.3
28	4.6	15	16	229	41	146	73	48	3.8	.09		8.5
29	4.5	14	16	277	---	128	71	39	3.6	.04		8.0
30	4.4	14	16	106	---	122	70	34	3.4	0		7.4
31	4.4	---	16	82	---	105	---	31	---	0		---
TOTAL	184.5	300.9	625	1387	1393	3088	2574	1463	375.0	34.14	0	92.6
MEAN	5.95	10.0	20.2	44.7	49.8	99.6	85.8	47.2	12.5	1.10	0	3.09
MAX	8.7	17	60	277	78	325	146	69	28	3.5	0	11
MIN	4.4	4.5	14	14	36	38	70	31	3.4	0	0	0
AC-FT	366	597	1240	2750	2760	6130	5110	2900	744	68	0	184

CAL YR 1980 TOTAL 51049.10 MEAN 139 MAX 2280 MIN 4.4 AC-FT 101300
WTR YR 1981 TOTAL 11517.14 MEAN 31.6 MAX 325 MIN 0 AC-FT 22840

NOTE.--Backwater from beaver dam Oct. 1 to Dec. 2 and June 22 to Sept. 30.

11257500 FRESNO RIVER NEAR KNOWLES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1971 to current year.

INSTRUMENTATION.--Temperature recorder since July 1971.

REMARKS.--No flow July 30 to Sept. 19.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 33.0°C Aug. 11, 1971, Aug. 8, 9, 1978; minimum recorded, 0.0°C Jan. 5, 7, 1973, Dec. 8, 9, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 32.5°C July 20; minimum recorded, 1.5°C Dec. 10-12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.0	17.5	14.0	9.0	10.5	5.5	7.5	4.0	8.0	5.5	8.0	5.5
2	24.0	18.0	14.0	9.0	9.5	8.0	7.0	3.5	8.5	5.5	9.5	7.5
3	24.0	18.0	14.0	9.5	10.0	7.5	8.5	5.5	8.5	5.5	9.0	5.5
4	24.0	18.0	14.5	9.0	11.0	9.0	9.5	5.5	8.5	5.0	10.0	7.5
5	24.0	18.0	15.0	9.5	9.0	5.5	9.5	7.5	9.0	5.0	9.5	7.5
6	23.5	18.0	14.5	10.0	8.0	4.5	9.0	5.5	9.0	5.5	11.5	7.5
7	23.5	17.5	14.5	10.0	6.5	3.5	7.0	4.0	9.0	5.0	12.5	9.0
8	23.5	17.5	15.0	10.5	6.0	2.5	6.0	3.0	7.5	5.5	13.5	9.0
9	22.5	17.0	14.0	10.0	5.5	2.0	6.5	4.0	9.0	7.0	14.5	9.5
10	21.5	15.5	13.5	9.5	5.0	1.5	6.5	3.5	9.5	7.5	15.0	10.5
11	20.0	15.0	12.5	10.5	5.0	1.5	6.0	2.5	11.5	7.5	15.0	10.5
12	20.5	15.5	13.5	10.0	5.0	1.5	8.0	4.5	11.5	8.5	15.5	11.0
13	19.0	14.0	12.5	9.0	5.5	2.0	9.0	5.5	10.0	9.0	13.0	9.0
14	18.0	13.5	11.5	8.0	6.0	2.0	9.0	4.5	12.5	8.5	10.0	8.0
15	15.5	10.5	11.0	7.0	6.5	2.0	9.5	5.5	11.0	9.5	10.5	7.0
16	14.0	10.5	9.5	5.5	7.5	3.5	9.5	7.0	11.5	9.0	14.5	9.5
17	15.0	9.0	9.5	6.0	8.0	4.5	10.0	7.0	12.5	9.5	14.0	10.0
18	15.5	9.0	9.5	6.0	9.0	5.5	10.5	7.0	14.0	10.5	12.0	10.0
19	16.0	10.0	8.5	5.5	8.5	5.5	10.5	7.0	13.0	10.5	10.5	10.0
20	16.0	10.0	8.5	5.0	8.0	5.0	10.5	6.0	11.0	9.0	10.5	8.5
21	16.0	10.5	8.0	5.0	8.5	5.5	10.0	7.0	11.0	7.5	10.0	8.5
22	16.5	10.5	9.5	6.0	9.5	5.5	9.5	8.0	12.0	7.5	11.5	9.5
23	16.5	11.0	9.5	7.0	10.5	8.5	10.5	8.5	12.0	7.5	12.0	9.0
24	16.5	11.0	9.0	5.5	9.5	5.5	10.0	7.5	9.5	7.5	13.0	9.0
25	14.0	12.0	9.0	5.5	9.0	5.5	9.0	6.0	8.5	5.5	12.5	11.0
26	15.5	10.5	8.5	4.5	9.5	6.0	7.5	5.5	10.0	5.5	11.0	9.5
27	15.0	10.0	8.0	4.5	9.0	5.5	8.5	7.0	10.5	5.5	9.5	5.5
28	15.0	9.5	8.5	4.0	9.0	6.0	8.5	8.0	7.5	5.5	12.0	7.0
29	14.5	9.0	8.0	4.5	8.5	5.5	8.5	7.5	---	---	13.0	10.0
30	14.0	8.5	9.0	6.0	9.0	5.5	8.0	5.5	---	---	12.5	7.5
31	14.5	9.0	---	---	8.0	4.5	6.0	4.0	---	---	12.0	9.0
MONTH	24.0	8.5	15.0	4.0	11.0	1.5	10.5	2.5	14.0	5.0	15.5	5.5

11257500 FRESNO RIVER NEAR KNOWLES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	10.5	21.5	17.5	26.0	19.5	31.0	25.0			---	---
2	11.0	9.0	20.5	17.0	26.0	20.0	31.0	23.5			---	---
3	12.0	5.5	18.5	14.0	26.5	19.5	31.0	24.0			---	---
4	14.0	9.5	18.5	14.0	28.0	20.5	31.0	24.5			---	---
5	15.5	11.0	18.5	14.0	29.5	21.5	31.0	24.0			---	---
6	16.0	12.0	18.0	12.5	28.5	21.5	32.0	25.5			---	---
7	16.0	12.5	18.0	13.0	28.0	20.0	31.0	24.5			---	---
8	15.5	12.0	19.0	14.0	28.5	20.0	31.5	23.0			---	---
9	16.0	12.0	20.5	15.0	28.5	20.0	31.0	21.5			---	---
10	16.0	12.0	21.5	16.5	27.5	19.5	30.0	21.5			---	---
11	15.5	12.0	22.0	17.0	27.5	19.5	29.5	22.0			---	---
12	15.0	11.0	22.0	16.5	26.0	20.0	29.0	22.0			---	---
13	16.0	10.5	22.5	15.5	25.0	15.5	29.5	22.0			---	---
14	17.0	12.5	22.5	18.0	25.0	16.0	30.0	22.0			---	---
15	17.5	13.5	20.0	15.5	26.0	17.0	31.0	24.5			---	---
16	17.0	13.5	19.0	15.0	27.5	18.5	31.0	24.5			---	---
17	16.5	14.0	19.0	14.0	28.0	19.0	31.5	24.0			---	---
18	15.5	12.0	18.0	15.5	28.0	20.0	30.5	23.5			---	---
19	12.0	10.5	16.0	14.0	29.5	21.0	31.5	22.0			---	---
20	12.0	9.5	16.5	10.5	30.5	22.5	32.5	24.0			26.0	19.5
21	14.0	11.0	19.0	12.5	31.0	22.5	32.0	22.0			25.5	19.5
22	17.5	12.5	21.5	15.0	31.0	22.5	31.5	21.5			24.0	17.0
23	19.5	15.5	23.0	17.5	30.0	22.5	31.5	22.0			21.5	15.5
24	20.0	16.5	24.0	19.0	30.5	23.0	31.0	22.5			21.5	15.5
25	18.5	16.0	20.5	19.0	31.0	22.5	32.0	21.5			23.0	15.5
26	17.0	14.0	21.5	18.5	30.5	23.5	32.0	21.5			23.0	17.0
27	16.0	10.5	20.0	16.0	30.5	23.5	32.0	22.0			23.0	17.5
28	18.0	13.5	23.5	18.0	30.5	23.0	32.0	21.5			22.0	18.0
29	20.5	15.5	25.0	20.0	30.5	24.0	32.0	21.5			22.0	17.5
30	21.5	15.5	26.0	20.5	31.5	24.5	---	---			21.0	15.5
31	---	---	25.5	19.5	---	---	---	---			---	---
MONTH	21.5	5.5	26.0	10.5	31.5	15.5	32.5	21.5			---	---

11257950 HENSLEY LAKE NEAR DAULTON, CA

LOCATION.--Lat 37°06'34", long 119°53'05", in NE¼NW¼ sec.34, T.9 S., R.19 E., Madera County, Hydrologic Unit 18040007, in control tower at center of Hidden Dam on Fresno River, and 5.3 mi (8.5 km) southeast of Daulton.

DRAINAGE AREA.--236 mi² (611 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earthfill dam. Storage began Oct. 1, 1975, usable capacity, 85,289 acre-ft (105 hm³), between elevations 448.0 ft (136.55 m) lowest outlet, and 540.0 ft (164.59 m) crest of spillway. Dead storage, 4,970 acre-ft (6.13 hm³). Records, including extremes, represent total contents at 2400 hours. Reservoir is used for flood control, irrigation, recreation, and wildlife enhancement.

COOPERATION.--Records furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 89,509 acre-ft (110 hm³) June 6, 1979, elevation, 539.52 ft (164.446 m); minimum since reservoir first filled, 10,528 acre-ft (13.0 hm³) Sept. 30, 1981, elevation, 463.01 ft (141.125 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 44,545 acre-ft (54.9 hm³) May 10, elevation, 506.01 ft (154.232 m); minimum, 10,528 acre-ft (13.0 hm³) Sept. 30, elevation, 463.01 ft (141.125 m).

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

435	2,134	490	28,556
445	4,173	500	38,094
455	7,217	510	49,115
460	9,185	520	61,525
470	14,138	530	75,247
480	20,569	540	90,259

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31776	23318	24080	25393	28687	32047	39015	43789	39939	29031	16427	10754
2	31460	23349	24104	25426	28855	32197	39182	43900	39665	28626	16079	10749
3	31145	23365	24159	25451	28925	32300	39371	44011	39413	28258	15754	10740
4	30833	23380	24247	25492	29031	32451	39465	44111	39161	27885	15404	10730
5	30522	23396	24406	25533	29138	32611	39665	44211	38890	27514	15047	10721
6	30213	23419	24486	25566	29244	32668	39833	44300	38600	27155	14695	10711
7	29862	23435	24502	25598	29289	32753	39991	44389	38258	26808	14378	10702
8	29539	23458	24559	25623	29405	32896	40140	44478	37877	26462	14093	10697
9	29226	23474	24582	25673	29583	32943	40288	44534	37529	26103	13828	10692
10	28908	23490	24607	25681	29736	33077	40426	44545	37183	25763	13556	10688
11	28591	23544	24655	25739	29853	33172	40511	44478	36788	25401	13277	10678
12	28276	23591	24671	25772	30015	33229	40692	44266	36365	24994	12990	10669
13	27963	23630	24703	25805	30096	33373	40841	43966	35974	24574	12718	10659
14	27643	23638	24752	25813	30204	33536	40970	43700	35606	24167	12471	10655
15	27317	23677	24800	25887	30395	33651	41098	43457	35230	23756	12253	10650
16	26985	23709	24848	25887	30522	33747	41238	43237	34856	23334	12048	10641
17	26622	23717	24848	25920	30641	33853	41377	43017	34475	22931	11824	10636
18	26287	23748	24905	25995	30805	33979	41560	42787	34105	22533	11589	10627
19	25929	23756	24929	26028	30916	34426	41797	42580	33738	22094	11401	10622
20	25574	23795	24954	26037	31035	35358	42112	42416	33373	21652	11273	10613
21	25230	23811	24994	26053	31145	35865	42307	42253	32972	21194	11166	10603
22	24897	23843	25026	26111	31201	36275	42427	42047	32583	20735	11065	10599
23	24591	23843	25108	26278	31293	36596	42645	41819	32187	20297	10954	10580
24	24311	23898	25100	26370	31450	36838	42820	41582	31766	19878	10849	10566
25	24032	23906	25173	26462	31590	37092	42952	41377	31358	19458	10806	10561
26	23772	23945	25181	26504	31701	37540	43105	41205	30952	19002	10801	10556
27	23536	23953	25222	26597	31757	37939	43248	41044	30577	18532	10797	10552
28	23326	24001	25279	27036	31888	38176	43391	40852	30213	18077	10787	10542
29	23279	24001	25320	27825	---	38434	43535	40639	29853	17635	10778	10538
30	23302	24048	25320	28337	---	38620	43667	40415	29449	17207	10773	10528
31	23302	---	25352	28582	---	38797	---	40192	---	16811	10763	---
MAX	31776	24048	25352	28582	31888	38797	43667	44545	39939	29031	16427	10754
MIN	23279	23318	24080	25393	28687	32047	39015	40192	29449	16811	10763	10528
†	483.65	484.60	486.22	490.03	493.68	500.68	505.22	502.01	491.01	474.45	463.51	463.01
†	-8791	+746	+1304	+3230	+3306	+6909	+4870	-3475	-10743	-12638	-6048	-235
††	532	227	96	123	129	195	395	671	925	837	520	388
CAL YR 1980	†	-818										
WTR YR 1981	†	-21565										

† Elevation, in feet NGVD, at end of month.

† Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

11258000 FRESNO RIVER BELOW HIDDEN DAM, NEAR DAULTON, CA

LOCATION.--Lat 37°06'16", long 119°53'13", in NE¼SW¼ sec.34, T.9 S., R.19 E., Madera County, Hydrologic Unit 18040007, on left bank 350 ft (107 m) upstream from Willow Creek, 2,000 ft (610 m) downstream from Hidden Dam, and 5.2 mi (8.4 km) southeast of Daulton.

DRAINAGE AREA.--237 mi² (614 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1975, published as "near Daulton."

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 385 ft (117 m), from topographic map. See WDR CA-75-3 for history of changes prior to Oct. 1, 1975.

REMARKS.--Records good except those for periods of backwater from beaver dams, which are poor. Flow completely regulated by Hensley Lake (station 11257950) since October 1975.

AVERAGE DISCHARGE.--40 years, 107 ft³/s (3.030 m³/s), 77,520 acre-ft/yr (95.6 hm³/yr), adjusted for change in contents and evaporation from Hensley Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s (496 m³/s) Dec. 23, 1955, gage height, 17.64 ft (5.377 m) site and datum then in use, from rating curve extended above 6,400 ft³/s (181 m³/s) on basis of slope-area measurement at gage height 17.60 ft (5.364 m) site and datum then in use; maximum gage height, 17.69 ft (5.392 m) Feb. 24, 1969, site and datum then in use; no flow at times most years. Maximum discharge since construction of Hidden Dam in 1975, 3,720 ft³/s (105 m³/s) Feb. 21, 1980, gage height, 8.67 ft (2.643 m); no flow for many days in 1975-78, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 3, 1938, reached a discharge of 15,000 ft³/s (425 m³/s), furnished by Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) Oct. 7, gage height, 7.04 ft (2.146 m); minimum, no flow for several days during September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	.50	.10	.20	.40	1.5	.90	0	141	193	182	.10
2	162	.40	.10	.20	.90	.20	1.0	0	145	198	168	.10
3	162	.30	.10	.20	1.1	.20	1.3	0	147	177	156	.20
4	160	.30	.20	.20	1.2	.40	1.5	0	143	175	162	.20
5	158	.30	.20	.20	1.3	.90	1.7	0	142	176	168	.10
6	156	.20	.20	.20	1.7	1.0	1.8	0	150	176	168	.10
7	181	.20	.30	.20	1.1	1.0	2.0	.10	173	165	158	.10
8	160	.20	.20	.20	.40	.70	2.4	.10	191	163	141	.10
9	153	.20	.20	.20	1.4	.30	2.7	14	184	168	132	.10
10	151	.20	.20	.20	1.4	.70	2.8	45	177	168	131	.10
11	149	.30	.30	.20	1.4	1.0	3.0	72	190	172	131	.10
12	148	.20	.20	.20	1.4	2.1	2.0	132	196	190	132	0
13	147	.20	.20	.20	1.4	3.0	.40	180	191	199	130	0
14	147	.20	.20	.20	1.6	1.8	.70	174	184	199	119	0
15	156	.20	.30	.20	1.6	.10	1.0	154	186	203	107	0
16	162	.20	.20	.20	1.8	.10	1.4	143	186	206	101	.10
17	177	2.9	.20	.20	2.0	.30	1.6	138	186	198	106	.10
18	170	.60	.20	.10	2.0	.70	1.9	134	186	197	113	0
19	177	.30	.30	0	1.3	2.9	2.8	127	186	211	92	0
20	177	.20	.20	0	.10	3.3	1.9	121	185	216	68	0
21	176	.20	.20	.10	.10	2.0	0	120	193	225	57	0
22	166	.20	.20	.10	.10	.40	0	128	195	231	57	0
23	154	.20	.30	1.1	.10	.30	0	136	199	221	56	0
24	141	.20	.20	.20	.10	.30	0	138	204	211	56	0
25	131	.20	.20	.10	.10	.40	0	134	204	210	23	0
26	120	.20	.20	.20	.30	.80	0	126	204	225	.90	0
27	116	.20	.20	.50	.90	.80	0	119	191	244	.40	0
28	113	.20	.20	.60	1.5	.70	0	134	175	239	.30	0
29	49	.20	.20	3.2	---	.20	0	142	172	223	.20	0
30	1.1	.10	.20	1.9	---	.50	0	136	190	216	.10	0
31	.60	---	0	.60	---	.80	---	133	---	199	.10	---
TOTAL	4385.70	10.00	6.20	12.10	28.70	29.40	34.80	2880.20	5396	6194	2916.00	1.50
MEAN	141	.33	.20	.39	1.03	.95	1.16	92.9	180	200	94.1	.050
MAX	181	2.9	.30	3.2	2.0	3.3	3.0	180	204	244	182	.20
MIN	.60	.10	0	0	.10	.10	0	0	141	163	.10	0
AC-FT	8700	20	12	24	57	58	69	5710	10700	12290	5780	3.0

CAL YR 1980 TOTAL 63546.74 MEAN 174 MAX 3470 MIN 0 AC-FT 126000 MEAN ‡ 182 AC-FT ‡ 132000
WTR YR 1981 TOTAL 21894.60 MEAN 60.0 MAX 244 MIN 0 AC-FT 43430 MEAN ‡ 37.2 AC-FT ‡ 26900

‡ Adjusted for change in contents and evaporation from Hensley Lake.

NOTE.--Backwater from beaver dams Nov. 27 to May 1.

11258000 FRESNO RIVER BELOW HIDDEN DAM, NEAR DAULTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1975 to current year.

INSTRUMENTATION.--Temperature recorder since Oct. 29, 1975.

REMARKS.--Water temperatures are affected by regulation from Hidden Dam.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum recorded, 32.0°C June 15, 1976; minimum recorded, 3.5°C Jan. 1, 1976, Nov. 26, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 29.5°C Apr. 30; minimum recorded, 3.5°C Nov. 26.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	19.0	18.0	13.5	14.5	11.0					9.5	9.0
2	20.0	19.0	17.5	13.0	12.5	11.5					11.0	9.0
3	20.0	19.5	18.0	13.0	12.0	11.0					12.0	8.5
4	20.5	19.5	19.0	13.5	14.0	11.5					11.0	10.0
5	20.5	20.0	18.5	13.5	11.5	8.5					11.0	9.5
6	21.0	20.0	18.0	13.5							12.0	9.5
7	22.5	20.5	18.5	13.5							13.0	10.5
8	21.5	20.5	18.0	14.0							14.5	12.0
9	21.5	21.0	17.5	13.0							14.5	12.5
10	22.0	21.0	16.0	12.0							15.0	12.0
11	22.0	21.0	15.5	13.5							15.0	13.0
12	22.0	21.5	16.0	12.5							15.0	13.5
13	22.0	21.5	15.0	11.0							15.0	13.0
14	22.0	21.0	14.5	10.5							13.5	11.5
15	21.5	21.0	14.0	9.5							12.5	11.0
16	21.5	21.0	13.0	9.5							14.5	12.5
17	21.0	20.5	16.0	9.5							15.0	12.0
18	21.0	20.5	15.0	10.0							14.5	13.0
19	20.5	20.0	13.5	9.0							14.5	13.0
20	20.5	20.0	14.5	5.5							14.0	12.0
21	20.5	20.0	13.0	8.0							14.5	13.0
22	20.5	19.5	14.5	9.5							16.0	13.5
23	20.0	19.5	14.0	10.0							16.0	13.0
24	20.0	19.5	15.5	9.0							16.5	13.0
25	19.5	19.5	13.0	7.5					10.0	8.5	16.5	14.5
26	19.5	19.0	12.5	3.5					11.0	9.0	16.0	13.5
27	19.5	19.0	12.0	7.5					10.5	8.0	16.0	13.0
28	19.5	18.5	13.0	8.0					10.0	8.5	16.0	13.0
29	19.5	17.5	12.0	8.5							18.0	14.5
30	18.5	14.5	14.0	9.5							17.0	13.5
31	18.5	14.0									17.0	13.0
MONTH	22.5	14.0	19.0	3.5							18.0	8.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	15.5	29.0	20.5	12.5	12.0	15.5	14.5	25.0	24.0		
2	17.0	15.0	25.0	17.5	12.5	12.0	15.5	14.5	25.0	24.0		
3	17.0	13.5	24.5	15.0	12.5	12.0	15.5	15.0	25.5	24.0		
4	18.5	14.5	25.0	16.0	12.5	12.0	15.5	15.0	26.0	24.5		
5	20.0	16.0	24.0	15.0	12.5	12.0	16.0	15.0	26.5	25.0		
6	21.0	17.5	23.5	15.0	13.0	12.0	16.0	15.5	26.5	25.5		
7	20.5	17.0	24.5	14.5	12.5	12.0	16.0	15.5	27.0	26.0		
8	20.0	16.5	24.0	15.5	13.0	12.0	16.5	15.5	27.0	26.0		
9	20.5	17.0	21.5	11.5	13.0	12.0	17.0	16.0	27.0	26.0		
10	21.5	18.0	13.5	11.0	13.0	12.0	17.0	16.5	27.5	26.0		
11	20.5	17.0	12.5	11.0	13.0	12.0	17.5	16.5	27.5	26.5		
12	20.0	16.5	12.0	11.0	13.0	12.5	18.0	17.0	27.5	26.5		
13	21.5	16.5	12.0	11.0	13.0	12.5	18.5	17.5	27.5	27.0		
14	23.0	18.0	12.0	11.0	13.0	12.5	18.5	18.0	27.5	27.0		
15	23.5	19.0	12.0	11.0	13.0	12.5	19.0	18.5	27.5	26.5		
16	23.0	18.5	12.0	11.0	13.0	12.5	19.5	18.5	27.5	26.5		
17	23.5	20.0	12.0	11.0	13.5	12.5	19.5	19.0	28.0	26.5		
18	22.0	19.0	12.0	11.5	13.5	12.5	20.0	19.0	28.0	27.0		
19	18.5	17.5	12.0	11.5	13.5	12.5	20.5	19.5	27.5	26.5		
20	20.5	17.0	12.0	11.5	13.5	13.0	20.5	20.0	27.5	26.0		
21	21.0	15.0	12.5	11.5	14.0	13.0	21.0	20.0	27.5	25.5		
22	24.0	16.5	12.5	11.5	14.0	13.0	21.5	20.5				
23	26.0	19.0	12.5	11.5	14.0	13.0	21.5	21.0				
24	27.5	20.5	12.5	11.5	14.0	13.5	22.0	21.0				
25	26.0	19.0	12.0	11.5	14.0	13.5	22.5	21.5				
26	22.0	16.0	12.5	11.5	14.5	13.5	23.0	22.0				
27	22.5	15.5	12.5	11.5	14.5	13.5	23.0	22.5				
28	25.0	18.0	12.5	11.5	14.5	13.5	23.5	22.5				
29	27.5	20.0	12.5	11.5	14.5	14.0	24.0	23.0				
30	29.5	22.0	12.5	11.5	15.0	14.0	24.0	23.5				
31			12.5	11.5			24.5	23.5				
MONTH	29.5	13.5	29.0	11.0	15.0	12.0	24.5	14.5				

SAN JOAQUIN RIVER BASIN

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA

LOCATION.--Lat 37°16'23", long 119°52'49", in NE¼NW¼ sec.3, T.8 S., R.19 E., Madera County, Hydrologic Unit 18040007, on left bank 0.9 mi (1.4 km) upstream from Willow Creek and 4.7 mi (7.6 km) northeast of Raymond.

DRAINAGE AREA.--173 mi² (448 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1980 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 680 ft (207 m), from topographic map.

REMARKS.--Records good. No large storage or diversions above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s (56.1 m³/s) Jan. 29, 1981, gage height, 8.43 ft (2.569 m); no flow many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 660 ft³/s (18.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 29	1115	*1,980	56.1	8.43	2.569
Mar. 20	0545	970	27.5	7.07	2.155

Minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.8	5.5	7.3	81	35	67	25	9.6	.43		
2	1.1	2.7	5.7	7.2	63	47	64	24	8.7	.30		
3	1.1	2.7	6.1	7.2	54	51	67	23	7.9	.25		
4	1.1	2.8	22	7.5	47	42	56	22	7.0	.18		
5	1.1	2.8	43	7.7	42	38	50	20	6.4	.11		
6	1.0	2.8	18	7.8	38	35	48	19	5.8	.08		
7	.98	2.8	12	7.6	36	32	47	18	4.9	.04		
8	1.0	2.9	10	7.3	31	30	44	18	4.4	.01		
9	1.0	3.0	9.0	7.2	45	29	41	17	3.8	0		
10	1.0	3.1	8.5	7.2	49	27	40	17	3.6	0		
11	1.0	4.3	8.2	7.2	33	27	38	15	3.7	0		
12	1.1	7.2	7.9	7.2	28	26	36	14	3.4	0		
13	1.1	8.0	7.9	7.4	26	32	35	14	2.9	0		
14	1.3	6.5	7.7	7.3	35	41	34	13	2.8	0		
15	3.1	5.9	7.6	7.0	75	35	32	12	2.7	0		
16	3.6	5.5	7.5	6.8	54	38	30	12	2.8	0		
17	3.2	5.2	7.7	6.8	37	37	30	12	2.4	0		
18	2.6	5.2	7.8	6.8	38	32	30	12	2.3	0		
19	2.4	5.2	7.5	6.7	37	189	68	12	2.1	0		
20	2.4	5.2	7.5	6.6	37	559	97	14	1.9	0		
21	2.3	5.2	7.5	6.5	35	210	58	15	1.7	0		
22	2.1	5.2	7.6	6.7	34	191	47	14	1.6	0		
23	2.1	5.2	7.8	23	33	125	41	13	1.3	0		
24	2.0	5.2	7.6	78	37	95	36	12	1.3	0		
25	2.1	5.5	7.5	31	41	84	33	11	1.2	0		
26	2.3	5.5	7.5	21	38	238	31	12	1.1	0		
27	2.7	5.5	7.5	61	35	163	31	21	1.0	0		
28	3.3	5.5	7.5	350	31	114	30	18	.76	0		
29	3.3	5.5	7.5	971	---	92	28	15	.70	0		
30	3.2	5.5	7.5	350	---	84	26	13	.57	0		
31	3.0	---	7.5	151	---	74	---	10	---	0		---
TOTAL	60.78	140.4	300.1	2193.0	1170	2852	1315	487	100.33	1.40	0	0
MEAN	1.96	4.68	9.68	70.7	41.8	92.0	43.8	15.7	3.34	.045	0	0
MAX	3.6	8.0	43	971	81	559	97	25	9.6	.43	0	0
MIN	.98	2.7	5.5	6.5	26	26	26	10	.57	0	0	0
AC-FT	121	278	595	4350	2320	5660	2610	966	199	2.8	0	0
WTR YR 1981	TOTAL	8620.01	MEAN	23.6	MAX	971	MIN	0	AC-FT	17100		

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1980 to current year.

INSTRUMENTATION.--Temperature recorder since July 9, 1980.

REMARKS.--Stream dry July 9 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 36.0°C July 28, 1980; minimum recorded, 1.5°C Dec. 10-14, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 28.0°C Apr. 30, May 1; minimum recorded, 1.5°C Dec. 10-14.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	26.0	17.0			---	---	9.5	6.0	9.0	6.5	10.0	8.5
2	26.0	17.0			11.0	9.5	8.5	4.5	9.5	7.0	12.0	9.5
3	26.5	17.0			11.0	9.5	10.0	7.0	10.0	6.5	11.5	8.5
4	26.0	17.5			12.5	10.5	10.0	7.5	10.0	7.0	12.0	10.0
5	26.0	17.0			10.5	7.0	11.0	8.5	10.5	7.0	11.0	10.5
6	25.5	17.0			9.0	5.5	---	---	11.0	7.0	14.5	10.5
7	25.0	16.5			7.5	4.0	---	---	11.0	7.5	16.0	10.5
8	25.5	16.5			6.5	2.0	---	---	9.0	8.0	17.0	11.5
9	25.0	16.0			6.5	2.0	---	---	11.0	8.5	17.5	11.0
10	24.0	15.0			6.0	1.5	---	---	11.0	9.0	17.5	11.5
11	23.0	13.0			6.0	1.5	---	---	13.5	10.5	18.5	12.5
12	22.0	15.5			5.5	1.5	---	---	13.5	10.5	18.5	12.5
13	20.5	12.5			6.0	1.5	---	---	12.0	10.5	15.5	12.0
14	18.5	12.0			6.5	1.5	---	---	14.5	11.0	12.5	11.0
15	18.5	10.5			7.0	2.0	---	---	14.0	11.5	13.5	9.5
16	17.5	11.5			7.5	3.0	---	---	15.0	11.5	17.5	11.5
17	18.0	11.0			8.0	4.0	11.5	8.5	15.0	12.0	17.0	12.0
18	17.5	12.5			9.5	6.0	12.0	7.5	17.0	13.0	15.0	12.0
19	17.0	13.0			9.0	5.5	12.0	8.0	16.0	13.0	13.0	10.5
20	16.0	12.5			9.0	5.5	11.5	7.0	13.0	11.0	11.0	9.0
21	14.5	11.0			9.5	5.5	11.0	8.5	14.5	9.0	12.5	10.0
22	12.5	10.0			10.0	8.5	10.5	10.0	14.5	9.0	14.5	11.0
23	12.0	8.0			11.5	8.5	11.5	10.0	15.0	9.0	14.5	11.0
24	10.5	7.5			10.5	6.5	10.5	8.5	11.5	10.5	15.5	11.0
25	8.5	6.5			10.5	7.5	9.5	6.5	10.5	9.0	15.0	12.5
26	---	---			11.0	7.0	9.0	6.0	12.5	8.5	13.0	11.0
27	---	---			10.0	7.0	9.5	8.0	12.5	8.5	11.5	8.5
28	---	---			10.5	7.5	10.0	8.5	10.0	8.5	14.0	9.0
29	---	---			9.5	7.5	8.5	7.0	---	---	15.5	11.5
30	---	---			10.0	7.0	7.5	6.5	---	---	15.5	10.5
31	---	---			9.5	6.5	7.5	5.0	---	---	15.0	11.0
MONTH	26.5	6.5			12.5	1.5	---	---	17.0	6.5	18.5	8.5

SAN JOAQUIN RIVER BASIN

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	12.5	28.0	20.5								
2	13.0	11.5	25.5	19.5								
3	15.0	9.5	24.5	17.0								
4	17.0	11.0	24.0	17.0								
5	19.0	13.0	24.0	16.5								
6	20.5	14.5	---	---								
7	20.0	14.5	---	---								
8	20.0	14.0	---	---								
9	20.5	14.0	---	---								
10	21.0	14.5	---	---								
11	20.0	14.0	---	---								
12	20.5	13.5	---	---								
13	21.0	14.0	---	---								
14	22.5	15.0	---	---								
15	23.5	16.0	---	---								
16	23.0	15.5	---	---								
17	22.0	16.0	---	---								
18	18.5	15.0	---	---								
19	15.0	13.5	---	---								
20	15.0	12.0	---	---								
21	18.0	13.5	---	---								
22	22.5	16.0	---	---								
23	25.0	18.0	---	---								
24	26.0	19.0	---	---								
25	24.0	18.5	---	---								
26	22.0	17.5	---	---								
27	22.5	15.0	---	---								
28	24.5	16.5	---	---								
29	27.0	18.5	---	---								
30	28.0	20.0	---	---								
31	---	---	---	---								
MONTH	28.0	9.5	---	---								

11258990 H. V. EASTMAN LAKE NEAR RAYMOND, CA

LOCATION.--Lat 37°13'00", long 119°59'04", in SW¼Sec. 22, T.8 S., R.18 E., Madera County, Hydrologic Unit 18040007, in intake structure at center of dam on Chowchilla River, 4.4 mi (7.1 km) west of Raymond.

DRAINAGE AREA.--235 mi² (609 km²).

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earth and rockfill dam. Dam was completed in December 1975, capacity, 150,604 acre-ft (186 hm³), between elevations, 410.0 ft (124.96 m) invert elevation to outlet tunnel, and 587.0 ft (178.92 m) crest of ungated spillway. Inactive pool, 10,150 acre-ft (12.5 hm³). Reservoir is used for flood control, irrigation, recreation, and fish and wildlife enhancement. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 145,687 acre-ft (180 hm³) June 4, 5, 1979, elevation, 584.22 ft (178.070 m); minimum since initial season of normal operation, 1,978 acre-ft (2.44 hm³) Nov. 20, 1977, elevation, 440.81 ft (134.359 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 110,921 acre-ft (137 hm³) May 29, elevation, 562.95 ft (171.587 m); minimum, 10,976 acre-ft (13.5 hm³) Sept. 30; elevation, 467.67 ft (142.546 m).

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

438	1,519	480	18,213
442	2,197	490	25,520
446	3,043	500	34,039
450	4,069	520	54,354
455	5,620	540	78,560
460	7,485	560	106,476
465	9,673	580	138,394
470	12,190	600	174,809
475	15,038		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98779	98218	98175	98836	104146	105612	108048	110631	110829	95307	55003	17855
2	98779	98203	98189	98836	104293	105315	108198	110616	110768	94007	53663	16661
3	98779	98203	98218	98822	104411	105092	108334	110647	110753	92771	52337	15506
4	98779	98203	98318	98836	104515	104959	108439	110631	110753	91501	51047	14377
5	98750	98218	98433	98865	104604	104752	108529	110631	110814	90239	49782	13499
6	98721	98203	98520	98851	104692	104485	108650	110616	110784	88929	48508	12932
7	98692	98189	98548	98894	104752	104234	108740	110662	110738	87615	47238	12679
8	98678	98175	98563	98908	104811	103983	108815	110707	110692	86349	45962	12471
9	98664	98160	98563	98908	105003	103703	108906	110738	110556	85065	44701	12363
10	98606	98146	98592	98923	105137	103497	108966	110799	110389	83749	43455	12014
11	98548	98160	98577	98937	105241	103335	109042	110799	110085	82428	42215	11457
12	98491	98160	98577	98937	105315	103129	109117	110799	109570	81130	40971	11149
13	98405	98146	98577	98937	105404	103026	109192	110784	109192	79840	39723	11139
14	98347	98146	98606	98937	105493	102909	109283	110723	108936	78572	38474	11134
15	98419	98146	98592	98952	105597	102791	109344	110692	108710	77313	37252	11123
16	98376	98160	98606	98966	105686	102660	109404	110647	108393	76037	36122	11118
17	98362	98160	98620	98966	105775	102527	109449	110677	107987	74732	35027	11108
18	98362	98160	98635	98966	105865	102527	109540	110647	107583	73448	33929	11093
19	98376	98175	98649	98966	105909	103026	109691	110647	107223	72174	32812	11088
20	98376	98175	98664	98966	106014	104337	109888	110631	106834	70910	31721	11077
21	98376	98160	98678	98995	106044	104855	110040	110662	106431	69630	30612	11057
22	98376	98146	98692	99082	106088	105330	110207	110692	105775	68348	29480	11042
23	98376	98160	98707	99341	106133	105657	110313	110738	105211	67075	28335	11032
24	98376	98189	98721	99500	106237	105865	110389	110768	104456	65752	27105	11016
25	98362	98203	98707	99616	106237	106133	110404	110784	103453	64416	25974	11012
26	98318	98175	98707	99674	106401	106610	110404	110814	102191	63079	24835	11001
27	98290	98189	98721	99790	106327	106998	110449	110860	100834	61731	23653	10996
28	98290	98189	98736	100485	105999	107238	110541	110890	99385	60394	22484	10991
29	98275	98189	98750	102630	---	107448	110631	110921	98002	59070	21302	10981
30	98290	98189	98779	103512	---	107657	110707	110890	96657	57712	20139	10976
31	98275	---	98807	103909	---	107807	---	110905	---	56356	18989	---
MAX	98779	98218	98807	103909	106401	107807	110707	110921	110829	95307	55003	17855
MIN	98275	98146	98175	98822	104146	102527	108048	110616	96657	56356	18989	10976
†	554.40	554.34	554.77	558.27	559.68	560.89	562.81	562.94	553.27	521.78	481.15	467.67
†	-504	-86	+618	+5102	+2090	+1808	+2900	+198	-14248	-40301	-37367	-8013
††	651	292	148	162	161	270	488	820	1243	1169	782	378

CAL YR 1980 † -1722

WTR YR 1981 † -87803

† Elevation, in feet NGVD, at end of month.

† Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA

LOCATION.--Lat 37°12'56", long 119°59'25", in SE¼SW¼ sec.22, T.8 S., R.18 E., Madera County, Hydrologic Unit 18040007, on left bank 1,800 ft (550 m) downstream from Buchanan Dam, and 4.6 mi (7.4 km) west of Raymond.

DRAINAGE AREA.--236 mi² (611 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1923, October 1930 to September 1972, October 1975 to current year. Prior to Oct. 1, 1962, published as "at Buchanan damsite."

REMARKS.--Records good. Flow completely regulated by H. V. Eastman Lake (station 11258985) 1,800 ft (550 m) upstream beginning Jan. 1, 1976.

GAGE.--Water-stage recorder and concrete control since October 1975. Altitude of gage is 420 ft (128 m), from topographic map. October 1921 to September 1923, at site 2.4 mi (3.9 km) upstream at different datum. October 1930 to May 17, 1972, at site 0.3 mi (0.5 km) upstream at datum 407.32 ft (124.151 m) National Geodetic Vertical Datum of 1929. May 18, 1972, to Sept. 30, 1972, at site 500 ft (150 m) downstream at different datum.

AVERAGE DISCHARGE (adjusted for change in contents in and evaporation from H. V. Eastman Lake since 1976).--50 years (water years 1922-23, 1931-72, 1976-81), 97.8 ft³/s (2.770 m³/s), 70,860 acre-ft/yr (87.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Dec. 23, 1955, gage height, 16.50 ft (5.029 m) site and datum then in use, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement at gage height, 15.06 ft (4.590 m); no flow for part of each year except 1937-38, 1940-43. Maximum discharge since construction of Buchanan Dam in 1975, 3,230 ft³/s (91.5 m³/s) Apr. 25, 1978, gage height, 8.69 ft (2.649 m); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 784 ft³/s (22.2 m³/s) June 28, gage height, 5.77 ft (1.759 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	0	0	0	.20	264	.20		0	658	660	599
2	.10	0	0	0	.10	200	.10		0	622	660	608
3	.10	0	.10	0	.10	161	.10		0	610	647	592
4	.10	.10	.20	.10	.10	157	.10		0	608	637	576
5	.10	0	.10	0	.10	156	0		0	620	633	461
6	.10	0	.10	0	.10	154	0		0	624	635	288
7	0	0	0	.10	.10	151	0		0	623	634	126
8	0	.10	.10	0	.10	151	0		0	621	633	66
9	0	0	0	0	.20	152	0		31	631	628	51
10	0	0	0	.10	.10	122	0		54	640	614	212
11	.10	.10	.10	0	.10	104	0		123	636	610	268
12	0	.10	0	0	.10	133	0		193	631	610	161
13	.10	0	.10	0	.10	117	0		135	628	612	.40
14	0	.10	0	.10	.10	98	0		113	632	608	.70
15	.10	0	0	0	.10	97	0		113	631	599	.20
16	0	0	.10	0	.10	96	0		168	629	560	.40
17	.10	.10	0	.10	.10	97	0		197	631	542	.10
18	0	0	0	0	.10	42	0		190	633	542	.10
19	0	0	0	0	.10	1.1	0		186	631	545	0
20	.10	.10	.10	.10	.10	.80	0		191	629	536	0
21	0	0	0	0	.10	.50	0		189	631	542	0
22	0	0	0	0	.10	.40	0		234	636	562	0
23	.10	.10	.10	.40	.10	.50	0		265	637	569	0
24	0	0	0	.20	.10	.40	0		360	643	564	0
25	0	.10	0	.10	.10	.40	0		494	656	563	0
26	.10	0	0	.10	.10	.40	0		624	660	570	0
27	0	0	.10	.20	58	.40	0		698	660	585	0
28	.10	.10	0	.20	207	.40	0		708	660	592	0
29	.10	0	0	.60	---	.40	0		670	656	592	0
30	0	.10	0	.30	---	.30	0		662	658	590	0
31	.10	---	.10	.20	---	.40	---		---	661	584	---
TOTAL	1.60	1.10	1.30	2.90	267.80	2458.40	.50	0	6598	19726	18458	4009.90
MEAN	.052	.037	.042	.094	9.56	79.3	.017	0	220	636	595	134
MAX	.10	.10	.20	.60	207	264	.20	0	708	661	660	608
MIN	0	0	0	0	.10	.30	0	0	0	608	536	0
AC-FT	3.2	2.2	2.6	5.8	531	4880	1.0	0	13090	39130	36610	7950

CAL YR 1980 TOTAL 51358.30 MEAN 140 MAX 3000 MIN 0 AC-FT 101900 MEAN ‡ 148 AC-FT ‡ 107400
WTR YR 1981 TOTAL 51525.50 MEAN 141 MAX 708 MIN 0 AC-FT 102200 MEAN ‡ 29.0 AC-FT ‡ 21000

‡ Adjusted for change in contents and evaporation from H. V. Eastman Lake.

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-65, 1976 to current year.

CHEMICAL ANALYSES: Water years 1958-65. Published as "at Buchanan Damsite."

WATER TEMPERATURES: Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1975 to current year.

INSTRUMENTATION.--Temperature recorder since October 1975.

REMARKS.--No flow May 11-19, May 23 to June 8, Sept. 23-30.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum recorded, 33.5°C June 7, 1977; minimum recorded, 0.0°C Jan. 2, 4, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 28.5°C Sept. 18; minimum recorded, 0.5°C Dec. 8, 11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	26.0	17.5	18.5	10.5	---	---	9.5	6.5	13.0	7.0	11.0	11.0
2	26.5	18.0	17.0	9.5	---	---	9.0	5.5	12.5	6.5	11.0	10.5
3	26.5	18.5	18.0	10.0	---	---	11.0	6.0	14.0	7.0	11.0	10.5
4	27.5	19.0	18.5	10.5	---	---	10.5	7.5	14.0	7.0	11.0	11.0
5	27.0	19.0	18.5	10.5	---	---	10.5	8.5	14.5	7.5	11.0	10.5
6	27.0	18.5	17.5	10.5	---	---	11.0	7.0	11.5	8.0	11.0	10.5
7	27.0	18.5	---	---	8.0	2.0	8.5	5.5	14.5	8.5	11.0	10.5
8	27.5	18.5	---	---	8.0	0.5	8.5	5.5	10.0	8.5	11.0	10.5
9	27.0	18.0	---	---	8.0	1.0	8.5	5.5	13.0	8.5	11.0	10.5
10	25.0	16.5	---	---	8.0	1.0	7.5	5.0	14.5	8.5	11.5	10.5
11	24.0	14.5	---	---	8.0	0.5	7.5	5.0	17.5	11.0	11.0	10.5
12	22.5	16.5	---	---	7.5	1.0	11.5	5.5	18.5	10.5	11.0	10.5
13	21.5	14.0	---	---	9.0	1.5	11.5	5.5	15.0	11.5	11.0	10.5
14	19.5	13.0	---	---	8.5	1.0	11.5	5.5	17.0	12.0	11.5	10.5
15	19.5	12.0	---	---	8.5	2.0	12.0	6.5	18.5	12.5	11.5	10.5
16	18.5	12.0	---	---	10.0	2.0	12.0	8.0	19.5	12.0	13.0	10.5
17	19.5	11.0	---	---	9.5	3.5	12.5	8.0	19.5	13.5	14.0	11.5
18	20.5	11.0	---	---	10.5	5.5	13.5	8.0	21.5	14.5	13.5	11.0
19	20.0	11.5	---	---	9.5	4.5	14.5	8.0	19.5	14.0	16.0	12.5
20	20.5	11.5	---	---	9.5	4.5	14.0	8.0	16.0	11.5	16.0	13.0
21	21.0	11.5	---	---	10.0	5.0	13.0	9.5	19.5	10.5	18.5	13.0
22	20.5	11.5	---	---	10.5	8.0	11.5	10.0	20.5	11.0	18.5	13.0
23	21.0	12.0	---	---	11.5	8.0	12.5	9.0	20.5	11.5	20.5	14.5
24	20.5	12.5	---	---	10.5	6.5	13.0	6.5	17.5	12.0	17.0	13.0
25	16.5	13.0	---	---	10.0	8.0	12.0	6.0	13.5	11.0	17.0	12.0
26	19.0	11.5	---	---	11.5	7.5	10.5	6.0	15.5	10.5	17.5	12.0
27	18.0	10.5	---	---	10.5	6.0	10.5	8.5	15.0	9.5	19.5	12.5
28	18.0	11.0	---	---	9.0	7.5	11.5	9.0	11.0	11.0	20.0	13.5
29	18.5	10.5	---	---	9.0	7.5	10.0	8.5	---	---	19.0	13.0
30	18.0	10.0	---	---	9.5	6.5	12.0	6.0	---	---	19.5	13.0
31	19.0	10.5	---	---	9.5	6.5	13.0	6.5	---	---	19.5	14.5
MONTH	27.5	10.0	---	---	11.5	0.5	14.5	5.0	21.5	6.5	20.5	10.5

SAN JOAQUIN RIVER BASIN

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.5	14.0	26.0	18.0	---	---	11.5	11.0	13.0	12.5	26.0	25.5
2	20.0	12.5	21.0	15.5	---	---	11.5	11.0	13.0	13.0	26.0	25.5
3	22.0	13.0	21.0	14.5	---	---	11.5	11.0	13.5	13.0	26.0	25.5
4	24.5	14.0	20.0	15.0	---	---	11.5	11.5	13.5	13.5	25.5	25.5
5	24.0	14.5	18.5	14.5	---	---	11.5	11.5	13.5	13.5	25.5	25.5
6	23.5	13.5	19.0	13.5	---	---	11.5	11.5	14.0	13.5	25.5	25.0
7	23.0	13.0	20.0	13.5	---	---	---	---	14.5	14.0	25.5	25.0
8	23.5	13.0	21.0	14.0	---	---	---	---	15.0	14.5	25.5	24.5
9	23.5	13.5	22.0	15.5	11.0	10.5	---	---	15.0	15.0	25.5	24.5
10	22.0	13.0	24.0	16.5	11.0	10.5	---	---	15.5	15.0	25.5	24.5
11	22.5	11.5	---	---	11.0	10.5	---	---	16.0	15.5	25.5	25.0
12	23.5	13.0	---	---	11.5	10.5	---	---	16.5	16.0	27.0	25.0
13	25.0	14.5	---	---	11.0	10.5	---	---	17.5	16.5	26.5	22.5
14	24.5	15.0	---	---	11.0	10.5	---	---	18.0	17.5	26.5	21.0
15	23.5	14.0	---	---	11.0	10.5	---	---	18.5	18.0	27.5	21.5
16	23.5	15.5	---	---	11.0	11.0	---	---	19.5	18.5	27.0	21.0
17	23.0	15.5	---	---	11.0	11.0	---	---	20.0	19.5	28.0	21.5
18	16.5	14.0	---	---	11.0	11.0	---	---	20.5	20.0	28.5	21.0
19	22.0	12.5	---	---	11.0	11.0	---	---	21.0	20.5	28.0	20.5
20	22.0	15.0	21.0	18.5	11.0	11.0	---	---	22.0	21.5	27.5	20.0
21	24.0	16.5	24.0	18.0	11.0	11.0	---	---	23.0	22.0	25.5	19.0
22	25.5	18.0	26.5	19.5	11.0	11.0	---	---	23.5	23.0	23.5	17.0
23	26.5	19.0	---	---	11.0	11.0	---	---	24.0	23.5	---	---
24	26.0	17.5	---	---	11.0	11.0	12.0	12.0	24.5	24.0	---	---
25	24.0	15.0	---	---	11.0	11.0	12.5	12.0	24.5	24.5	---	---
26	20.0	14.0	---	---	11.0	11.0	12.5	12.0	25.0	24.5	---	---
27	---	---	---	---	11.5	11.0	12.5	12.0	25.0	25.0	---	---
28	24.0	15.5	---	---	11.5	11.0	12.5	12.5	25.5	25.0	---	---
29	25.5	18.0	---	---	11.5	11.0	12.5	12.5	25.5	25.5	---	---
30	26.5	19.0	---	---	11.5	11.0	12.5	12.5	25.5	25.5	---	---
31	---	---	---	---	---	---	13.0	12.5	25.5	25.5	---	---
MONTH	26.5	11.5	---	---	---	---	---	---	25.5	12.5	---	---

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, NEAR STEVINSON, CA

LOCATION.--Lat 37°18'36", long 120°55'48", in SW¼NE¼ sec.24, T.7 S., R.9 E., Merced County, Hydrologic Unit 18040001, at Fremont Ford Bridge, 2.1 mi (3.4 km) downstream from Salt Slough, 4.5 mi (7.2 km) west of Stevinson, and 6.7 mi (10.8 km) upstream from Merced River.

DRAINAGE AREA.--7,615 mi² (19,723 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1932-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM CA,DISS (MG/L)	MAGNESIUM MG,DISS (MG/L)	SODIUM NA,DISS (MG/L)
80/10/08	13 00	810	7.7	21.0	8.6	20					
80/11/13	10 40	1260	7.7	10.0	8.8	32		370	80	42	250
80/12/10	13 45	2280	7.6	8.0	8.6	32					
81/01/14	12 00	2860	7.8	10.0	9.4	36					
81/02/10	12 30	1960		11.0	9.4	31		440	100	45	280
81/03/11	13 00	1850	7.6	10.5	9.3	24					
81/04/08	11 15	2520	8.1	18.0	9.1	29	3.3	540	120	60	340
81/05/13	11 00	1440	8.1	20.0	8.5	24	3.6				
81/06/10	13 15	1370	8.1	26.0	7.7	31	2.6	280	63	30	160

DATE	TIME	POTASSIUM K,DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/10/08	13 00						45	0.50		1.00	0.30
80/11/13	10 40	4.1	180	270	350	1160	18	0.60	0.22	1.30	0.19
80/12/10	13 45						23	1.00		1.50	0.12
81/01/14	12 00						10	0.71	0.28	0.70	0.08
81/02/10	12 30	5.4	180	420	320	1410	91	3.40	0.25	1.50	0.43
81/03/11	13 00						73	3.20		1.50	0.38
81/04/08	11 15	5.1	200	420	440	1620	48	2.40	0.12	1.20	0.28
81/05/13	11 00						102	0.95	0.04	1.30	0.39
81/06/10	13 15	4.9	150	180	210	791	113	1.00	0.02	1.40	0.43

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B,DISS (UG/L)
80/10/08	13 00			
80/11/13	10 40	0.06		1000
80/12/10	13 45			
81/01/14	12 00	0.01		
81/02/10	12 30	0.21	12	2200
81/03/11	13 00			
81/04/08	11 15	0.10	8.7	1500
81/05/13	11 00	0.16	10	
81/06/10	13 15	0.14	11	700

DATE	TIME	ARSENIC AS,DISS (UG/L)	BARIIUM BA,DISS (UG/L)	CADMIUM CD,DISS (UG/L)	CHROMIUM CR,DISS (UG/L)	COPPER CU,DISS (UG/L)	IRON FE,DISS (UG/L)	LEAD PB,DISS (UG/L)	MANGNESE MN,DISS (UG/L)	MERCURY HG,TOTAL (UG/L)	SELENIUM SE,DISS (UG/L)
81/04/08	11 15	0	0	0	0	0	10	0	650	0.0	20

SAN JOAQUIN RIVER BASIN

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA
(Hydrologic bench-mark station)

LOCATION.--Lat 37°43'54", long 119°33'28", unsurveyed, Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on right bank 10 ft (3 m) downstream from footbridge at Happy Isles, 0.4 mi (0.6 km) downstream from Illilouette Creek, and 2.0 mi (3.2 km) southeast of Yosemite National Park Headquarters.

DRAINAGE AREA.--181 mi² (469 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1915 to current year.

REVISED RECORDS.--WSP 1215: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 4,016.58 ft (1,224.254 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1916, nonrecording gage at datum 0.55 ft (0.168 m) lower.

REMARKS.--Records good. Up to 5 ft³/s (0.142 m³/s) can be diverted above station for Yosemite Valley water supply.

AVERAGE DISCHARGE.--66 years, 343 ft³/s (9.714 m³/s), 248,500 acre-ft/yr (306 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft³/s (279 m³/s) Dec. 23, 1955, gage height, 12.73 ft (3.880 m), from rating curve extended above 4,000 ft³/s (113 m³/s) on basis of contracted-opening measurements at gage heights 10.4 ft (3.170 m) and 11.55 ft (3.520 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 30, 1926, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Apr. 30 (2215 hrs), gage height, 6.15 ft (1.875 m), no other peak above base of 1,900 ft³/s (53.8 m³/s); minimum daily, 9.0 ft³/s (0.255 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	21	17	25	49	80	143	1830	1350	440	37	14
2	24	21	17	24	51	78	141	1790	1310	308	35	14
3	22	20	21	24	52	76	102	1420	1160	229	33	12
4	22	20	55	25	54	75	112	1110	1240	189	31	12
5	23	18	33	23	55	72	171	1010	1460	170	29	12
6	23	18	24	22	51	69	233	848	1470	163	27	11
7	23	18	20	21	49	69	263	752	1240	165	26	11
8	37	18	20	20	49	71	267	792	1070	161	24	10
9	22	17	24	20	51	75	330	1070	1080	141	24	10
10	22	17	24	19	50	83	379	1290	972	121	24	10
11	21	32	25	19	51	90	347	1340	813	104	25	10
12	26	37	24	19	52	89	328	1360	677	94	26	10
13	27	31	25	19	59	92	382	1420	515	86	28	11
14	27	29	24	19	102	89	465	1390	373	80	39	14
15	27	29	25	18	105	90	565	949	305	76	30	14
16	26	26	29	17	99	91	638	643	322	75	31	13
17	23	26	30	17	113	89	668	569	370	76	29	13
18	23	25	32	16	116	87	616	676	386	77	35	13
19	23	24	31	17	131	101	556	600	407	76	29	13
20	23	23	28	16	126	106	440	517	452	72	26	13
21	21	23	27	16	112	114	523	442	418	68	23	13
22	20	23	29	17	114	118	801	498	380	61	21	13
23	20	22	31	22	119	122	1150	658	367	58	20	13
24	19	21	27	23	115	126	1380	756	331	55	18	12
25	20	20	26	20	103	154	1340	983	292	53	17	11
26	26	17	27	23	95	172	1050	1040	256	52	15	10
27	26	17	30	38	86	143	748	1180	228	48	14	10
28	24	17	30	39	82	134	869	1240	211	46	14	9.7
29	23	17	28	34	---	166	1310	1310	210	45	14	9.3
30	22	17	27	40	---	154	1700	1630	270	42	13	9.0
31	22	---	26	41	---	146	---	1460	---	40	14	---
TOTAL	731	664	836	713	2291	3221	18017	32573	19935	3471	771	350.0
MEAN	23.6	22.1	27.0	23.0	81.8	104	601	1051	665	112	24.9	11.7
MAX	37	37	55	41	131	172	1700	1830	1470	440	39	14
MIN	19	17	17	16	49	69	102	442	210	40	13	9.0
AC-FT	1450	1320	1660	1410	4540	6390	35740	64610	39540	6880	1530	694
CAL YR 1980	TOTAL	190846.0	MEAN 521	MAX 2600	MIN 17	AC-FT 378500						
WTR YR 1981	TOTAL	83573.0	MEAN 229	MAX 1830	MIN 9.0	AC-FT 165800						

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

CHEMICAL ANALYSES: Water years 1968 to current year.

BIOLOGICAL DATA: Water years 1973 to current year.

WATER TEMPERATURES: Water years 1966-77, 1979 to current year.

SEDIMENT RECORDS: Water years 1970-71, 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1965 to September 1977, October 1978 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to September 1977 and since October 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 20.0°C July 15, 1979; minimum recorded, 0.0°C on many days during winter period most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 18.5°C June 20; minimum recorded, 0.0°C Jan. 29, 31, Feb. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-HF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
31...	1400	22	29	6.6	5.5	10.7	K4	K7	8	0
NOV										
26...	1230	17	31	6.4	6.0	11.8	K1	K2	8	0
DEC										
12...	1315	24	--	6.4	1.0	12.2	K1	K2	9	0
JAN										
15...	1145	18	35	6.1	4.0	11.5	K20	<1	10	1
FEB										
12...	1100	52	38	6.2	1.5	12.0	<1	<1	12	4
MAR										
30...	1200	154	25	6.5	2.5	--	<1	<1	7	0
APR										
23...	1430	936	13	6.2	10.0	9.7	K1	K6	8	4
MAY										
15...	1615	856	11	6.0	7.5	10.3	K4	K1	3	0
JUN										
26...	1120	260	11	6.0	15.5	8.5	K8	K6	4	0
AUG										
06...	1530	27	23	6.0	16.0	8.3	--	--	6	0
24...	1645	18	22	6.1	14.0	8.6	K2	K6	7	1
SEP										
24...	1300	10	33	6.4	11.0	9.8	<1	K2	9	2

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT										
31...	2.7	.3	2.1	35	.3	.5	8	.2	4.0	.1
NOV										
26...	2.9	.3	2.3	35	.3	.6	9	3.7	4.6	.1
DEC										
12...	2.9	.4	2.6	37	.4	.5	9	.7	4.8	.1
JAN										
15...	3.5	.4	3.2	39	.4	.5	9	1.4	4.9	.1
FEB										
12...	3.8	.5	3.4	38	.4	.5	8	--	5.1	.1
MAR										
30...	2.2	.3	2.6	44	.4	.4	7	.7	3.1	.1
APR										
23...	1.9	.7	2.6	40	.4	.6	4	--	1.8	.1
MAY										
15...	1.1	.1	1.0	39	.2	.2	3	.6	.3	.0
JUN										
26...	1.1	.2	1.1	39	.3	.1	4	1.8	.5	.0
AUG										
06...	2.0	.3	1.8	36	.3	.5	5	<5.0	2.4	.1
24...	2.4	.2	1.9	35	.3	.5	6	<5.0	3.4	.0
SEP										
24...	3.2	.3	2.4	35	.4	.5	7	<5.0	4.7	.1

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 31...	21	23	.01	.02	.060	--	.070	.040	2.2
NOV 26...	25	29	.00	.00	.000	.42	.030	.020	1.2
DEC 12...	25	26	.00	.00	.050	--	.010	.010	3.2
JAN 15...	28	29	.00	.00	.030	.66	.120	.010	.8
FEB 12...	28	--	.01	.00	.000	1.50	.040	.030	.6
MAR 30...	29	21	.01	.01	.000	.36	.020	.030	.9
APR 23...	15	--	--	.05	.040	1.70	.020	.010	--
MAY 15...	--	9	.00	.00	.030	.47	.050	.060	2.5
JUN 26...	10	12	.05	.03	.000	1.40	--	.030	.7
AUG 06...	17	--	.01	.01	.030	.79	.020	.020	.3
SEP 24...	24	--	.16	.13	.160	.43	--	.020	1.5
SEP 24...	31	--	<.10	<.10	.010	--	.030	.020	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)
APR 23...	1430	1	1	0	10	<1	0	2	10	0	<3
SEP 24...	1300	1	0	0	5	<1	0	<1	0	0	<3

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
APR 23...	8	<10	110	43	5	15	10	5	.2	.1	<10
SEP 24...	4	<10	70	41	4	<10	10	3	.1	.0	<10

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)
APR 23...	0	0	0	0	29	<6.0	10	8	2.8	--	.04
SEP 24...	0	0	0	0	52	<6.0	30	10	--	.1	>.00

K Results based on colony count outside the acceptable range (non-ideal colony count).

< Actual value is known to be less than the value shown.

> Actual value is known to be greater than the value shown.

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	11.5	5.5	5.0	6.5	5.5	2.5	2.5	1.0	0.0	3.0	2.0
2	12.5	11.0	5.5	5.0	6.5	5.5	3.0	2.5	1.0	0.5	3.5	2.5
3	13.0	12.0	6.5	5.5	6.5	6.5	4.5	3.0	1.0	0.5	4.0	2.5
4	13.0	11.5	7.0	6.5	6.5	4.5	4.5	3.0	1.0	0.5	4.0	2.5
5	12.5	11.5	7.5	6.0	4.5	2.5	3.0	2.5	1.0	0.5	4.0	2.5
6	12.5	11.5	7.0	6.5	2.5	2.0	2.5	2.0	1.0	0.5	4.5	2.0
7	12.5	11.5	7.5	6.5	2.0	1.5	2.5	2.0	1.0	0.5	5.0	3.5
8	12.0	11.0	7.5	7.0	1.5	1.5	2.5	2.0	1.0	1.0	6.0	4.0
9	12.0	11.0	7.0	6.0	1.5	1.0	2.5	2.0	1.5	1.0	6.0	3.5
10	12.0	10.5	7.0	5.5	1.5	1.0	2.5	2.0	1.5	1.0	7.0	3.5
11	11.0	10.0	7.5	6.5	1.0	1.0	2.5	2.5	2.5	1.5	5.5	3.5
12	11.0	10.0	6.5	5.0	1.0	1.0	3.5	2.5	2.5	1.5	5.0	3.5
13	10.0	8.5	5.5	4.0	1.5	1.0	4.0	3.5	3.0	2.0	4.0	2.0
14	8.5	6.5	4.0	3.5	1.5	1.0	4.0	3.5	3.5	2.5	4.0	1.5
15	6.5	5.0	3.5	3.5	2.5	1.5	4.0	3.5	3.5	1.5	4.5	2.5
16	5.5	5.0	4.0	3.5	3.0	2.5	4.5	4.0	5.0	3.0	6.5	4.5
17	5.0	4.0	4.5	4.0	3.5	2.5	4.0	3.5	5.0	3.5	5.5	2.5
18	5.5	4.5	4.5	4.0	3.5	3.0	4.0	4.0	5.0	3.0	5.5	3.5
19	6.5	5.5	5.5	4.5	3.5	2.5	4.5	4.0	5.5	3.5	5.0	2.5
20	7.5	6.5	5.5	5.0	3.0	3.0	4.0	3.5	4.5	2.0	2.5	2.0
21	8.0	7.0	5.5	5.0	4.0	3.0	4.5	3.5	4.5	2.5	4.0	2.5
22	7.5	6.5	6.0	5.5	5.5	4.0	5.0	4.5	5.0	2.5	6.5	3.5
23	8.0	7.0	6.5	6.0	4.5	2.5	5.0	2.0	4.5	2.5	6.0	3.0
24	7.5	6.5	6.0	4.5	3.0	2.5	2.5	1.5	3.0	1.5	7.0	4.0
25	7.0	6.5	6.0	5.5	5.5	3.0	1.5	1.0	1.5	1.5	5.5	4.5
26	7.0	5.5	6.5	5.5	5.5	5.0	1.5	1.0	1.5	1.0	5.0	3.0
27	6.5	6.0	6.5	6.0	5.5	5.0	1.5	1.5	2.0	1.0	4.5	1.5
28	6.0	5.0	6.5	5.5	5.5	3.5	1.5	0.5	2.0	1.5	7.0	3.0
29	5.5	5.0	7.0	6.5	3.5	3.0	0.5	0.0	---	---	6.5	4.5
30	6.0	5.5	6.5	6.0	3.5	3.0	0.5	0.5	---	---	5.0	2.0
31	6.0	5.5	---	---	3.0	2.5	0.5	0.0	---	---	6.0	3.0
MONTH	13.0	4.0	7.5	3.5	6.5	1.0	5.0	0.0	5.5	0.0	7.0	1.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.5	5.0	11.5	6.5	13.5	9.5	---	---	---	---	16.5	13.5
2	5.5	4.0	10.0	6.5	12.0	10.5	---	---	---	---	16.0	13.5
3	6.5	3.0	9.0	4.5	13.5	9.0	---	---	---	---	16.0	13.0
4	7.5	3.5	9.0	5.0	15.5	10.5	---	---	---	---	15.5	13.0
5	7.0	3.5	9.0	5.0	16.0	12.5	---	---	---	---	15.5	12.5
6	7.0	3.0	8.5	4.0	15.0	12.0	---	---	---	---	15.0	12.5
7	6.5	2.5	9.5	4.5	15.0	12.0	---	---	17.0	14.0	15.0	12.5
8	7.5	2.5	11.0	5.0	16.0	12.0	---	---	17.0	15.0	14.5	13.5
9	8.0	3.5	11.5	7.0	16.0	12.5	---	---	17.0	15.0	16.0	13.5
10	7.0	3.5	11.5	7.0	15.5	12.5	---	---	17.5	15.5	15.0	13.5
11	7.5	3.5	11.5	7.0	15.0	12.5	---	---	17.5	15.5	14.5	13.0
12	8.0	3.0	12.0	7.0	13.5	11.5	---	---	17.0	15.0	14.5	13.5
13	9.0	4.5	12.0	8.0	12.5	9.5	---	---	18.0	16.0	15.0	13.5
14	9.0	8.5	10.0	8.0	14.0	9.0	---	---	17.0	15.0	14.5	13.0
15	10.0	5.0	8.5	6.5	15.0	9.5	---	---	16.5	14.5	15.0	13.5
16	10.0	5.0	9.5	5.5	15.5	12.0	---	---	17.0	15.0	15.0	13.5
17	10.0	5.5	10.5	5.5	16.5	11.5	---	---	16.5	15.0	14.5	13.5
18	8.0	6.5	9.0	8.5	17.0	13.0	---	---	16.5	15.0	15.0	13.0
19	6.5	5.0	8.5	6.5	18.0	14.5	---	---	16.5	14.5	15.5	13.0
20	9.0	5.0	8.5	5.0	18.5	15.0	---	---	15.0	12.5	15.0	13.0
21	11.0	6.0	10.5	6.0	---	---	---	---	14.5	12.0	14.5	12.5
22	11.5	6.5	12.0	7.5	---	---	---	---	15.0	12.5	14.0	12.0
23	10.0	6.5	11.0	9.0	---	---	---	---	15.0	12.5	13.0	11.0
24	10.0	5.5	12.5	9.0	---	---	---	---	15.0	12.5	12.5	10.5
25	8.5	5.0	11.0	9.5	---	---	---	---	16.0	13.0	13.0	10.5
26	6.5	6.0	10.5	9.5	---	---	---	---	17.0	14.0	12.5	10.5
27	10.0	4.5	12.5	8.5	---	---	---	---	17.0	14.5	13.0	10.5
28	11.0	5.0	13.5	8.5	---	---	---	---	17.5	14.5	12.5	11.0
29	11.5	6.0	14.0	9.0	---	---	---	---	17.0	14.0	13.5	11.5
30	11.5	7.0	13.0	9.5	---	---	---	---	16.5	14.0	13.0	10.5
31	---	---	13.0	8.5	---	---	---	---	16.5	14.0	---	---
MONTH	11.5	2.5	14.0	4.0	---	---	---	---	18.0	12.0	16.5	10.5

SAN JOAQUIN RIVER BASIN

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 31...	1400	22	5.5	<1	.00	57
NOV 26...	1230	17	6.0	3	.14	2
DEC 12...	1330	24	1.0	2	.13	59
JAN 15...	1145	18	4.0	1	.05	94
FEB 12...	1100	52	1.5	1	.14	50
MAR 30...	1200	154	2.5	1	.42	92
APR 23...	1430	936	10.0	7	18	89
MAY 19...	1615	856	7.5	1	2.3	88
JUN 26...	1120	260	15.5	2	1.4	47
AUG 06...	1530	27	16.0	2	.15	67

11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA

LOCATION.--Lat 37°43'01", long 119°39'55", Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on left bank 150 ft (46 m) upstream from Pohono bridge, 0.4 mi (0.6 km) upstream from Artist Creek, and 4.8 mi (7.7 km) southwest of Yosemite National Park headquarters.

DRAINAGE AREA.--321 mi² (831 km²).

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 3,861.66 ft (1,177.034 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 5, 1918, at datum 1.8 ft (0.549 m) higher. Sept. 5, 1918, to Sept. 30, 1955, at datum 1.0 ft (0.305 m) higher.

REMARKS.--Records good. No diversions between stations at Happy Isles bridge and Pohono bridge. One ft³/s (0.028 m³/s) sewage effluent returns between stations (see REMARKS for station 11264500).

AVERAGE DISCHARGE.--65 years, 601 ft³/s (17.02 m³/s), 435,400 acre-ft/yr (537 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft³/s (663 m³/s) Dec. 23, 1955, gage height, 21.52 ft (6.559 m) from floodmarks in well, from rating curve extended above 17,000 ft³/s (481 m³/s) on basis of computation of flow over diversion dam for Yosemite powerhouse, 1 mi (2 km) downstream at gage heights 20.1 ft (6.13 m) and 21.98 ft (6.700 m), present datum; minimum, 3.3 ft³/s (0.093 m³/s) Sept. 29, Oct. 1, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft³/s (82.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 24	Unknown	3,060 86.7	7.14 2.176
May 1	0115	*3,560 101	7.64 2.329

Minimum daily, 18 ft³/s (0.51 m³/s) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	39	34	53	110	158	305	3020	1780	486	58	23
2	45	38	34	51	118	154	293	2960	1730	386	55	23
3	44	37	40	51	115	148	267	2410	1530	297	52	23
4	44	36	100	50	114	147	273	1920	1500	250	49	22
5	42	35	76	47	113	141	361	1760	1700	226	47	21
6	43	35	59	45	111	133	490	1520	1780	215	44	22
7	42	35	52	44	103	135	554	1360	1550	213	43	21
8	42	34	47	43	106	140	544	1380	1330	211	40	20
9	41	32	49	42	115	155	641	1700	1290	190	38	20
10	41	32	51	41	111	178	743	1980	1210	167	39	19
11	40	54	51	39	112	199	694	2040	1060	148	38	19
12	41	60	51	40	115	187	666	2050	910	136	38	19
13	47	58	50	41	127	187	740	2110	720	125	40	20
14	46	56	49	41	219	175	889	2100	564	115	50	23
15	47	54	48	41	233	184	1050	1600	464	108	46	23
16	47	50	52	41	224	187	1190	1170	442	103	45	23
17	46	50	61	40	246	181	1230	1010	477	103	42	22
18	43	48	67	39	253	177	1170	1170	488	106	45	21
19	43	46	66	39	279	217	1020	1120	496	104	43	21
20	42	44	63	39	266	217	840	980	527	99	39	21
21	41	44	60	38	238	240	950	847	504	92	36	21
22	40	44	59	38	245	238	1420	875	462	86	35	21
23	39	42	66	51	254	250	1800	1040	441	92	33	20
24	38	40	62	53	241	251	2200	1220	409	78	30	20
25	38	39	59	48	210	320	2100	1420	368	74	29	20
26	46	37	57	49	191	350	1700	1610	331	70	28	19
27	47	35	60	96	170	289	1350	1730	300	68	26	19
28	45	34	63	115	163	276	1560	1790	277	66	25	19
29	43	34	60	103	---	336	2210	1770	266	63	24	18
30	41	34	57	97	---	315	2810	2080	320	62	24	18
31	40	---	55	100	---	301	---	1960	---	61	23	---
TOTAL	1331	1256	1758	1655	4902	6566	32060	51702	25226	4590	1204	621
MEAN	42.9	41.4	56.7	53.4	175	212	1069	1668	841	148	38.8	20.7
MAX	47	60	100	115	279	350	2810	3020	1780	486	58	23
MIN	38	32	34	38	103	133	267	847	266	61	23	18
AC-FT	2640	2490	3490	3280	9720	13020	63590	102600	50040	9100	2390	1230
CAL YR 1980 TOTAL	343951		MEAN 940	MAX 5500	MIN 32	AC-FT 682200						
WTR YR 1981 TOTAL	132871		MEAN 364	MAX 3020	MIN 18	AC-FT 263500						

SAN JOAQUIN RIVER BASIN

11269500 LAKE MCLURE AT EXCHEQUER, CA

LOCATION.--Lat 37°35'02", long 120°16'09", in NW¼SE¼ sec.13, T.4 S., R.15 E., Mariposa County, Hydrologic Unit 18040008, on left end of New Exchequer Dam on Merced River, 0.9 mi (1.4 km) east of Exchequer, and 5.5 mi (8.8 km) northeast of Merced Falls.

DRAINAGE AREA.--1,037 mi² (2,686 km²).

PERIOD OF RECORD.--April 1926 to September 1930 (daily gage heights; also summary of yearly contents in WSP 881), October 1930 to current year.

REVISED RECORDS.--WSP 881: 1926-32 (yearly summaries only). WSP 1345: 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Merced Irrigation District). Prior to Oct. 1, 1964, indicator in powerhouse at same datum. Oct. 1, 1964, to July 31, 1966, nonrecording gage at center of upstream face of dam at same datum.

REMARKS.--Reservoir is formed by a rockfill dam with a reinforced concrete face completed in March 1967. Dam is downstream from and connected to the original concrete arch and gravity-type dam which was completed in April 1926. Usable capacity, 1,024,000 acre-ft (1,260 hm³) between elevations 440.0 ft (134.11 m) invert entrance to outlet tunnel, and 867.0 ft (264.26 m) top of spillway gates. Dead storage, 300 acre-ft (370,000 m³). Water is released through a series of powerplants down the Merced River to a diversion dam for Merced Irrigation District's main canal. Records, including extremes, represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,026,000 acre-ft (1,270 hm³) July 14, 15, 1969, elevation, 867.2 ft (264.32 m); practically no storage at times in 1926, 1930-31, 1964-65 when reservoir was drained for inspection or construction. Minimum since construction of New Exchequer Dam in 1966, and since lake first filled, 72,200 acre-ft (89.0 hm³) Dec. 14, 1977, elevation, 593.6 ft (180.93 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 727,400 acre-ft (897 hm³) June 7, elevation, 819.6 ft (249.81 m); minimum, 346,400 acre-ft (427 hm³) Sept. 30, elevation, 729.4 ft (222.32 m).

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

590	67,900	720	317,800
600	79,900	750	415,900
610	92,800	780	534,500
620	106,700	820	729,600
640	137,800	840	845,800
660	173,500	860	975,700
680	215,200	870	1,046,000
700	263,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	682100	630700	595300	574100	579100	593400	633600	691500	724100	660000	536700	423100
2	677900	630700	594400	573600	580000	593900	635100	697300	724700	656500	532400	419500
3	673800	629200	593400	573600	580500	594400	636100	699900	725200	652500	528100	416300
4	669700	628300	593400	573600	580900	595300	637100	701500	725200	649000	524600	412700
5	665100	626800	593400	572700	581400	596200	638000	703100	726300	645000	520400	409800
6	661000	625800	593400	571800	581400	596700	639500	703700	726900	641500	516600	407300
7	657000	624400	592000	570400	581800	597700	641500	704200	727400	637100	512800	404100
8	653500	622900	591600	569500	582300	598100	642500	704200	726300	633100	509000	401000
9	649500	621900	590600	569100	582800	598600	644500	706300	725800	629200	505300	399600
10	645000	621000	589700	569100	583200	599100	646000	709000	724100	625300	501100	395400
11	640000	619500	589200	569100	583200	600000	648000	711100	723100	621900	497000	391900
12	635600	618100	588800	569100	583200	600000	649500	713800	720900	618100	493700	388800
13	634100	617600	588300	568600	583200	600900	651000	716000	718700	613800	489300	385700
14	633600	616200	587900	567200	584200	601400	652500	717100	716500	610000	485600	382700
15	633600	614200	586900	567200	585100	601900	653500	718000	713300	605700	481600	380300
16	633600	613300	586500	567200	586000	602400	655000	719200	710100	601900	478000	377600
17	633600	611900	586000	567200	586900	602800	656500	718200	706900	597700	474000	375600
18	633600	610900	583700	567700	587400	603300	657000	717100	703700	593400	470100	373300
19	633600	610000	583200	567200	588300	605200	658500	716500	701500	589700	466600	371000
20	633600	609000	583200	566800	589200	608000	659000	715500	698300	586000	463400	368600
21	633600	607600	583200	566800	589700	610900	659000	714400	695200	581400	459200	366300
22	633600	605700	582800	566800	590200	614200	660000	713300	692000	577300	456100	363700
23	633600	605200	581800	567200	590200	616200	663100	712800	688300	573100	452600	361400
24	633600	604300	579500	567700	590600	617600	666100	713300	685200	569100	449600	359200
25	633600	602800	579500	567700	591100	619500	671200	713800	681600	565000	446200	356600
26	633600	601400	579500	567700	592000	622900	674300	714400	677900	560900	442400	354000
27	633600	600500	577700	568600	592500	625300	675400	716000	674300	556500	439400	351800
28	633600	599100	577700	571800	593000	627800	676900	717600	670700	552900	436000	349200
29	633600	597700	576800	576300	---	629700	680000	719200	667100	548500	433100	347000
30	631700	596200	575000	577700	---	631200	686200	721400	663600	545000	429700	346400
31	630700	---	574500	578600	---	632200	---	723100	---	540600	426100	---
MAX	682100	630700	595300	578600	593000	632200	686200	723100	727400	660000	536700	423100
MIN	630700	596200	574500	566800	579100	593400	633600	691500	663600	540600	426100	346400
†	800.9	793.7	789.0	789.9	793.0	801.2	811.9	818.8	807.5	781.4	752.8	729.4
‡	-55500	-34500	-21700	+4100	+14400	+39200	+54000	+36900	-59500	-123000	-114500	-79700

CAL YR 1980 † -24600
WTR YR 1981 ‡ -339800

† Elevation, in feet NGVD, at end of month.
‡ Change in contents, in acre-feet.

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA

LOCATION.--Lat 37°31'18", long 120°19'53", in SE4SW4 sec.4, T.5 S., R.15 E., Merced County, Hydrologic Unit 18040008, on right bank 0.1 mi (0.2 km) south of Merced Falls, 0.2 mi (0.3 km) downstream from Merced Falls Dam, and 5.8 mi (9.3 km) east of Snelling.

DRAINAGE AREA.--1,061 mi² (2,748 km²).

PERIOD OF RECORD.--April 1901 to current year. Records for water years 1914-16 incomplete, yearly estimates published in WSP 1315-A. Published as "near Merced Falls" 1901-13; as "at Exchequer" 1916-64. Records at present site are about equivalent when adjusted for diversion to North Side Canal and change in contents in Lake McClure and McSwain Reservoir.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 310.55 ft (94.656 m) National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1964.

REMARKS.--Records excellent. Merced Falls Dam diverts water to North Side Canal to irrigate 4,100 acres (16.6 km²) below station. Flow regulated by Exchequer, McSwain, and Merced Falls powerplants, Lake McClure (station 11269500) since 1926, and McSwain Reservoir since 1966, capacity, 9,200 acre-ft (11.3 km³).

AVERAGE DISCHARGE (adjusted for diversion to North Side Canal and change in contents in Lake McClure since 1965 and change in contents in McSwain Reservoir since 1969).--80 years, 1,329 ft³/s (37.64 m³/s), 962,900 acre-ft/yr (1.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1901-13, 1916-81): Maximum discharge observed, 47,700 ft³/s (1,350 m³/s) Jan. 31, 1911, gage height, 23.3 ft (7.10 m) site and datum then in use; no flow for part of Nov. 21, 1901. Maximum discharge since construction of Exchequer Dam in 1926, 46,200 ft³/s (1,310 m³/s) Dec. 4, 1950, gage height, 22.6 ft (6.89 m) from floodmarks, site and datum then in use, from rating curve extended above 16,000 ft³/s (453 m³/s) on basis of computation of peak flow over dam; minimum daily, 3.4 ft³/s (0.096 m³/s) Mar. 5, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Sept. 10, gage height, 8.52 ft (2.597 m); minimum daily, 176 ft³/s (4.98 m³/s) Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2210	176	704	408	207	203	182	2010	1880	2130	2000	1610
2	2200	179	574	410	208	207	181	2030	1900	2140	2010	1580
3	2200	407	516	408	208	187	178	2050	1910	2140	2010	1580
4	2210	703	504	403	208	247	183	2040	1890	2150	2010	1570
5	2210	671	506	398	212	239	181	2030	1900	2150	2010	1580
6	2210	649	498	403	207	185	179	2040	1920	2140	2010	1570
7	2210	644	502	408	211	185	183	2040	1910	2090	1970	1570
8	2210	647	496	411	208	183	322	2040	1950	2100	1960	1450
9	2190	654	503	403	208	180	403	2020	1950	2090	1950	863
10	2200	651	499	422	210	178	402	2000	1950	2100	1920	1810
11	2210	670	504	402	209	181	402	2000	1990	2090	1930	1720
12	2230	685	502	298	212	179	402	1970	2040	2080	1940	1620
13	1120	695	494	181	214	184	647	1980	2060	2090	1930	1550
14	178	691	489	188	215	182	904	2000	2080	2100	1920	1440
15	182	691	491	189	214	179	1110	1960	2050	2110	1930	1260
16	190	695	492	180	211	181	1190	1970	2000	2110	1890	1190
17	189	692	489	182	211	183	1310	1970	2050	2100	1860	1190
18	187	697	509	178	211	180	1540	1970	2090	2110	1870	1180
19	186	693	509	178	211	244	1600	1960	2090	2100	1850	1190
20	184	692	502	178	205	197	1610	1960	2090	2100	1870	1180
21	194	695	485	181	208	199	1620	1930	2090	2100	1810	1170
22	182	699	482	182	207	241	1610	1920	2080	2100	1770	1170
23	181	700	483	202	210	187	1620	1890	2100	2100	1770	1170
24	179	693	498	183	214	182	1640	1880	2140	2070	1760	1170
25	181	698	494	185	218	196	1710	1880	2140	2060	1680	1180
26	182	702	485	182	214	192	1720	1870	2130	2060	1630	1180
27	181	702	488	194	211	183	1780	1850	2140	2070	1640	1180
28	179	701	489	213	207	186	1820	1860	2140	2070	1640	1180
29	181	704	483	257	---	181	1060	1860	2130	2070	1640	1170
30	192	707	490	216	---	183	1990	1860	2140	2060	1630	497
31	211	---	442	208	---	179	---	1850	---	2020	1640	---
TOTAL	30949	19283	15602	8431	5889	5993	29679	60690	60930	65000	57450	39770
MEAN	998	643	503	272	210	193	989	1958	2031	2097	1853	1326
MAX	2230	707	704	422	218	247	1990	2050	2140	2150	2010	1810
MIN	178	176	442	178	205	178	178	1850	1880	2020	1630	497
AC-FT	61390	38250	30950	16720	11680	11890	58870	120400	120900	128900	114000	78880
†	1090	262	0	0	0	0	1830	4560	4490	4840	4410	2920
CAL YR 1980 TOTAL	810491			2214	MAX 5350	MIN 176	AC-FT	1608000	MEAN ‡ 2220		AC-FT ‡ 1612000	
WTH YR 1981 TOTAL	399666			1095	MAX 2230	MIN 176	AC-FT	792700	MEAN ‡ 659		AC-FT ‡ 477100	

† Diversion, in acre-feet, to Northside Canal furnished by Merced Irrigation District.

‡ Adjusted for diversion to Northside Canal and change in contents in Lake McClure and McSwain Reservoir.

SAN JOAQUIN RIVER BASIN

11271290 MERCED RIVER AT SHAFFER BRIDGE, NEAR CRESSEY, CA

LOCATION.--Lat 37°27'15", long 120°36'28", in NW¼SW¼ sec.36, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, near center of span on downstream side of county road bridge, 0.6 mi (1.0 km) upstream from Dry Creek, and 4.0 mi (6.4 km) northeast of Cressey.

DRAINAGE AREA.--1,117 mi² (2,893 km²).

PERIOD OF RECORD.--October 1965 to current year (low flow only).

GAGE.--Water-stage recorder. Datum of gage is 116.79 ft (35.598 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Most water released from Lake McClure (station 11269500) is diverted upstream into the Main Canal of Merced Irrigation District. Flow past station consists of releases from diversion dam, irrigation return flow, and tributary inflow. No records computed above 200 ft³/s (5.66 m³/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	194	---	---	---	---	199	135	108	85	54	102
2	---	156	---	---	---	---	---	115	102	69	67	102
3	---	156	---	---	---	---	---	131	105	65	85	88
4	---	---	---	---	---	---	194	174	88	74	71	96
5	---	---	---	---	---	---	194	165	74	99	76	112
6	---	---	---	---	---	---	189	127	74	127	74	112
7	---	---	---	---	---	---	169	147	96	96	83	112
8	---	---	---	---	---	---	160	108	102	83	99	102
9	---	---	---	---	---	---	169	102	91	88	91	115
10	---	---	---	---	---	---	160	96	69	83	93	---
11	---	---	---	---	---	199	151	80	65	108	93	---
12	---	---	---	---	---	---	151	85	80	119	108	179
13	---	---	---	---	---	199	156	71	76	112	98	115
14	---	---	---	---	---	---	---	65	85	102	83	169
15	---	---	---	---	---	---	---	93	131	102	71	108
16	---	---	---	---	---	---	---	96	108	85	80	38
17	---	---	---	199	---	199	---	139	71	56	83	27
18	184	---	---	199	---	189	174	151	91	62	51	28
19	179	---	---	199	---	---	---	135	96	83	63	23
20	194	---	---	194	---	---	---	119	83	112	78	29
21	174	---	---	184	---	---	---	131	96	80	102	38
22	179	---	---	189	---	---	---	127	119	83	92	18
23	174	---	---	---	---	---	194	127	93	52	91	26
24	165	---	---	---	---	---	165	165	85	37	108	44
25	165	---	---	---	---	---	194	179	99	44	99	56
26	174	---	---	---	---	---	194	169	88	52	78	93
27	174	---	---	---	---	---	174	123	76	78	74	74
28	174	---	---	---	---	---	147	80	76	91	76	58
29	165	---	---	---	---	---	139	71	80	78	91	60
30	165	---	---	---	---	199	---	91	65	80	99	54
31	179	---	---	---	---	199	---	96	---	69	116	---
TOTAL	---	---	---	---	---	---	---	3693	2672	2554	2627	---
MEAN	---	---	---	---	---	---	---	119	89.1	82.4	84.7	---
MAX	---	---	---	---	---	---	---	179	131	127	116	---
MIN	---	---	---	---	---	---	---	65	65	37	51	---
AC-FT	---	---	---	---	---	---	---	7330	5300	5070	5210	---
†	26130	1630	1340	678	639	720	46650	103400	105600	116000	102100	70860

† Diversion, in acre-feet, to Main Canal near Diversion Dam.

11271320 DRY CREEK NEAR SNELLING, CA

LOCATION.--Lat 37°33'18", long 120°27'44", in NE¼SE¼ sec.30, T.4 S., R.14 E., Merced County, Hydrologic Unit 18040002, on left bank 650 ft (198 m) downstream from Fields Road, and 2.8 mi (4.5 km) northwest of Snelling.

DRAINAGE AREA.--67.6 mi² (175 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records good. Small weir upstream from gage regulates storage for stock pond and irrigation pumping.

AVERAGE DISCHARGE.--15 years, 19.3 ft³/s (0.547 m³/s), 13,980 acre-ft/yr (17.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,710 ft³/s (190 m³/s) Jan. 21, 1969, gage height, 17.01 ft (5.185 m); no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 29	0515	1,160 32.9	8.42 2.566	Mar. 19	2130	*2,410 68.3	10.96 3.341
Mar. 5	0115	2,090 59.2	10.35 3.155				

Minimum, no flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	2.1	19	2.2	9.3	.48				
2			0	2.1	12	3.5	8.4	.30				
3			0	1.9	9.0	12	7.9	.12				
4			0	2.0	6.9	288	6.2	.06				
5			.21	1.9	5.6	619	5.1	.03				
6			1.3	1.9	4.8	66	4.5	.02				
7			1.4	2.0	4.0	31	3.9	0				
8			1.4	2.2	3.7	20	3.4	0				
9			1.4	2.1	5.4	14	3.1	0				
10			1.5	2.2	13	11	2.9	0				
11			1.5	2.1	8.5	8.3	2.6	0				
12			1.5	2.7	5.9	6.7	2.4	0				
13			1.5	2.7	4.7	11	2.1	0				
14			1.6	2.5	36	15	2.0	0				
15			1.7	2.3	22	8.8	1.8	0				
16			1.8	2.2	10	15	1.5	0				
17			2.0	1.8	6.8	15	1.3	0				
18			2.2	1.6	5.2	9.0	1.4	0				
19			2.2	1.5	4.0	537	2.1	0				
20			2.3	1.4	3.3	322	3.5	0				
21			2.3	1.3	2.8	200	3.2	0				
22			2.3	1.3	2.4	239	2.2	0				
23			2.5	120	2.2	75	1.8	0				
24			2.4	36	2.2	40	1.4	0				
25			2.3	9.6	2.4	123	1.1	0				
26			2.3	4.8	2.6	96	.91	0				
27			2.2	13	2.2	43	.78	0				
28			2.1	63	2.1	27	.73	0				
29			2.1	434	---	20	.70	0				
30			2.2	130	---	15	.49	0				
31		---	2.1	35	---	11	---	0	---			---
TOTAL	0	0	50.31	889.2	208.7	2903.5	88.71	1.01	0	0	0	0
MEAN	0	0	1.62	28.7	7.45	93.7	2.96	.033	0	0	0	0
MAX	0	0	2.5	434	36	619	9.3	.48	0	0	0	0
MIN	0	0	0	1.3	2.1	2.2	.49	0	0	0	0	0
AC-FT	0	0	100	1760	414	5760	176	2.0	0	0	0	0
CAL YR 1980	TOTAL	14238.37	MEAN 38.9	MAX 1450	MIN 0	AC-FT 28240						
WTR YR 1981	TOTAL	4141.43	MEAN 11.3	MAX 619	MIN 0	AC-FT 8210						

SAN JOAQUIN RIVER BASIN

11272000 MERCED RIVER AT MILLIKEN BRIDGE, NEAR NEWMAN, CA

LOCATION.--Lat 37°21'45", long 120°50'58", in SE4SE4 sec.34, T.6 S., R.10 E., Merced County, Hydrologic Unit 18040002, at Milliken Bridge 2.4 mi (3.9 km) north of Stevinson, and 10.0 mi (16.1 km) northeast of Newman.

DRAINAGE AREA.--1,267 mi² (3,282 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1965-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	HARDNESS (MG/L AS CAC03)	CALCIUM CA+DISS (MG/L)	MGNSIUM MG+DISS (MG/L)	SODIUM NA+DISS (MG/L)	POTASSIUM K+DISS (MG/L)
80/10/08	12 00	54	7.0	16.0	8.9	6.0	14	4	1	2	0.6
80/11/13	11 30	74	7.1	7.5	8.5	6.0					
80/12/10	12 45	85	7.1	8.0	8.8	8.0					
81/01/14	11 15	156	7.1	10.0	9.6	6.0	49	13	4	14	1.3
81/02/10	11 00	153		10.0	9.6	0.0					
81/03/11	11 45	172	7.1	15.0	9.2	15					
81/04/08	10 00	176	7.3	17.0	9.0	9.0	58	15	5	14	1.8
81/05/13	09 45	152	7.2	19.0	8.0	10					
81/06/10	12 00	150	7.3	24.5	8.0	9.0					
81/07/07	12 45	169	7.6	21.5	8.5		56	14	5	18	1.4

DATE	TIME	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N (MG/L)	PHOS-TOT AS P (MG/L)
80/10/08	12 00	16	0	2	34	10	0.16	0.02	0.20	0.04
80/11/13	11 30					4	0.32	0.02	0.20	0.03
80/12/10	12 45					6	0.55	0.04	0.20	0.02
81/01/14	11 15	50	9	10	114	8	1.50	0.09	0.20	0.04
81/02/10	11 00					26	1.30	0.08	0.40	0.11
81/03/11	11 45					13	1.40	0.08	0.60	0.10
81/04/08	10 00	60	10	9	117	7	1.50	0.03	0.30	0.09
81/05/13	09 45					9	1.30	0.08	0.30	0.08
81/06/10	12 00					5	1.20	0.03	0.40	0.06
81/07/07	12 45	58	26	14	120					

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	BORON B+DISS (UG/L)
80/10/08	12 00	0.01	0
80/11/13	11 30	0.01	
80/12/10	12 45	0.01	
81/01/14	11 15	0.01	0
81/02/10	11 00	0.03	
81/03/11	11 45	0.05	
81/04/08	10 00	0.03	0
81/05/13	09 45	0.05	
81/06/10	12 00	0.04	
81/07/07	12 45		100

11272500 MERCED RIVER NEAR STEVINSON, CA

LOCATION.--Lat 37°22'15", long 120°55'46", in SW¼NE¼ sec.36, T.6 S., R.9 E., Merced County, Hydrologic Unit 18040002, on right bank 4.4 mi (7.1 km) upstream from mouth, and 5.3 mi (8.5 km) northwest of Stevinson.

DRAINAGE AREA.--1,273 mi² (3,297 km²).

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. October 1940 to Aug. 15, 1955, at datum 55.74 ft (16.990 m) higher, Aug. 16, 1955, to Sept. 30, 1959, at datum 54.74 ft (16.685 m) higher.

REMARKS.--Records good, except those below 140 ft³/s (3.96 m³/s), which are fair. Practically entire flow is diverted above station for irrigation of 120,000 acres (486 km²) during low runoff years. Some return flow enters above station. Flow regulated by three reservoirs, combined capacity, 1,035,000 acre-ft (1.28 km³), the largest of which is Lake McClure (station 11269500).

AVERAGE DISCHARGE.--41 years, 658 ft³/s (18.63 m³/s), 476,700 acre-ft/yr (588 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Dec. 5, 1950, elevation, 73.79 ft (22.491 m) present datum; no flow July 19 to Aug. 21, 1961, result of temporary dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s (36.5 m³/s) Oct. 14, elevation, 61.02 ft (18.599 m); minimum daily, 130 ft³/s (3.68 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	228	655	495	457	268	276	228	233	136	148	151
2	1100	229	655	476	384	268	273	259	225	135	162	150
3	1140	226	651	459	353	268	262	244	209	136	158	166
4	1150	216	604	449	339	267	243	264	193	154	162	171
5	1170	314	576	445	319	270	226	293	148	203	168	161
6	1190	515	553	440	322	862	229	283	155	187	140	206
7	1190	572	538	434	307	512	223	261	173	159	150	208
8	1150	592	527	426	295	386	204	265	214	145	152	170
9	1180	601	520	426	290	335	214	261	182	136	159	165
10	1180	606	516	424	290	307	221	266	176	139	188	172
11	1170	613	516	424	289	288	231	277	156	141	159	165
12	1180	618	514	426	288	276	223	260	149	175	175	204
13	1230	633	514	422	288	268	214	249	141	195	175	226
14	1160	649	513	392	288	263	217	230	187	160	166	222
15	692	654	510	338	286	262	219	212	226	145	170	211
16	516	659	507	316	295	262	278	209	219	155	192	202
17	424	661	507	304	298	260	286	212	196	146	178	164
18	402	651	507	291	291	258	274	232	166	148	152	156
19	395	652	507	283	286	257	324	238	196	147	142	149
20	380	650	512	276	281	394	362	239	191	164	145	154
21	331	649	516	271	278	935	321	257	191	149	146	186
22	301	648	516	266	276	558	293	253	206	142	141	188
23	280	650	511	268	274	536	299	242	149	137	164	163
24	260	650	507	300	271	483	285	235	133	133	192	145
25	313	652	505	361	270	385	254	260	135	130	176	141
26	345	653	507	361	270	346	251	273	163	137	172	136
27	356	653	507	356	269	372	292	277	156	160	155	159
28	316	653	505	361	268	363	278	275	197	146	154	188
29	265	654	503	401	---	329	254	248	182	138	177	198
30	243	655	502	616	---	305	229	225	149	147	184	156
31	239	---	500	625	---	285	---	235	---	152	166	---
TOTAL	22318	17056	16481	12132	8422	11428	7755	7762	5396	4677	5068	5233
MEAN	720	569	532	391	301	369	259	250	180	151	163	174
MAX	1230	661	655	625	457	935	362	293	233	203	192	226
MIN	239	216	500	266	268	257	204	209	133	130	140	136
AC-FT	44270	33830	32690	24060	16710	22670	15380	15400	10700	9280	10050	10380
CAL YR 1980	TOTAL	512862	MEAN	1401	MAX	5470	MIN	201	AC-FT	1017000		
WTR YR 1981	TOTAL	123728	MEAN	339	MAX	1230	MIN	130	AC-FT	245400		

SAN JOAQUIN RIVER BASIN

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA

LOCATION.--Lat 37°21'02", long 120°58'34", in NW¼SW¼ sec.3, T.7 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 600 ft (180 m) downstream from bridge on Hills Ferry Road, 650 ft (198 m) downstream from Merced River, and 3.5 mi (5.6 km) northeast of Newman.

DRAINAGE AREA.--9,520 mi² (24,657 km²).

PERIOD OF RECORD.--April 1912 to current year. Prior to Oct. 1, 1937, and subsequent to Oct. 1, 1943, flow that bypassed station at discharges above 9,000 ft³/s (255 m³/s) not included in records.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Aug. 9, 1960.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, ground-water withdrawals, diversions for irrigation, and imported water; low flows consist mainly of return water from irrigated areas.

AVERAGE DISCHARGE.--69 years, 1,981 ft³/s (56.10 m³/s), 1,435,000 acre-ft/yr (1.77 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (river only), 28,000 ft³/s (793 m³/s) Feb. 26, 1969, elevation, 65.90 ft (20.086 m) from high-water mark in well; river and Merced River Slough, 34,400 ft³/s (974 m³/s) Feb. 26, 1969, elevation, 65.90 ft (20.086 m) present datum; minimum, 15 ft³/s (0.42 m³/s) Aug. 9, 10, 1924.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 2, 1868, reached a stage of 21.7 ft (6.61 m) from floodmarks; flood of February 1886, reached a stage of 19.8 ft (6.04 m) from floodmarks; and flood of 1911 reached a stage of 19 ft (5.8 m) from floodmarks. All stages referred to datum in use from 1931 to 1959. Discharges unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,230 ft³/s (63.2 m³/s) Mar. 22, elevation, 52.84 ft (16.106 m); minimum daily, 329 ft³/s (9.32 m³/s) June 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	462	889	672	1680	783	1040	619	456	367	383	403
2	1430	521	869	645	1500	799	948	634	455	376	401	388
3	1450	539	849	626	1290	897	848	620	464	383	424	378
4	1420	517	825	622	1190	1170	764	652	486	386	443	366
5	1420	617	857	605	1110	1480	706	718	445	406	450	374
6	1460	765	861	583	1070	1830	687	714	423	408	409	395
7	1460	787	857	561	995	1840	663	704	419	395	393	409
8	1420	806	814	560	939	1590	617	673	444	386	385	399
9	1430	822	757	577	942	1290	602	608	441	377	373	380
10	1440	822	728	573	976	1120	577	620	433	369	406	376
11	1420	833	725	552	995	1040	561	649	426	364	402	355
12	1410	853	722	575	982	970	570	649	408	369	370	370
13	1450	825	732	555	954	942	577	631	399	389	378	378
14	1440	818	732	510	939	926	596	549	428	387	371	388
15	1080	822	710	449	926	936	604	454	465	378	386	388
16	876	810	695	442	948	961	670	449	449	391	396	382
17	852	806	680	459	936	961	654	458	430	383	392	365
18	809	795	680	509	908	954	622	510	385	387	400	347
19	746	802	683	622	865	975	691	535	385	378	387	335
20	723	802	671	727	841	1110	813	534	386	395	393	344
21	675	818	674	754	814	1960	958	560	378	401	403	362
22	636	822	677	734	761	2160	978	507	388	400	402	382
23	595	829	682	798	741	2180	958	473	371	383	442	370
24	568	841	694	1010	722	2040	907	471	336	385	501	361
25	579	841	704	1220	722	1760	799	558	329	383	509	350
26	597	849	702	1170	722	1470	743	579	348	391	511	343
27	640	845	686	1160	744	1380	770	571	353	421	487	360
28	625	857	681	1310	768	1370	697	561	362	404	448	378
29	565	877	682	1440	---	1280	687	484	367	373	447	396
30	527	877	675	1670	---	1150	638	460	354	392	433	392
31	505	---	675	1800	---	1080	---	484	---	396	419	---
TOTAL	31678	23280	22868	24490	26980	40404	21945	17688	12213	12003	12966	11214
MEAN	1022	776	738	790	964	1303	732	571	407	387	418	374
MAX	1460	877	889	1800	1680	2180	1040	718	486	421	511	409
MIN	505	462	671	442	722	783	561	449	329	364	371	335
AC-FT	62830	46180	45360	48580	53510	80140	43530	35080	24220	23810	25720	22240

CAL YR 1980 TOTAL 1270926 MEAN 3472 MAX 23300 MIN 462 AC-FT 2521000
WTR YR 1981 TOTAL 257729 MEAN 706 MAX 2180 MIN 329 AC-FT 511200

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA

LOCATION.--Lat 37°18'48", long 121°07'32", in SE4NE4 sec.19, T.7 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 220 ft (67 m) upstream from California aqueduct siphon, 3 mi (5 km) downstream from Oso Creek, and 5 mi (8 km) west of Newman.

DRAINAGE AREA.--134 mi² (347 km²).

PERIOD OF RECORD.--January 1932 to current year.

REVISED RECORDS.--WSP 1445: 1932(M), 1938(P), 1940-41(M), 1945, 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 216.01 ft (65.837 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1958, at site 1,320 ft (402 m) downstream at datum 24.14 ft (7.358 m) lower. Oct. 1, 1958, to Aug. 13, 1969, at site 1,200 ft (366 m) downstream at datum 27.14 ft (8.272 m) lower.

REMARKS.--Records fair. No storage or diversion above station except for minor stock ponds.

AVERAGE DISCHARGE.--49 years, 15.4 ft³/s (0.436 m³/s), 11,160 acre-ft/yr (13.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) Apr. 2, 1958, gage height, 6.57 ft (2.003 m) site and datum then in use, from rating curve extended above 5,000 ft³/s (142 m³/s); no flow for all or parts of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 29	0715	*1,130 32.0	6.38 1.945
Mar. 21	1915	152 4.30	4.91 1.497

Minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0		0	11					
2				0		.23	11					
3				0		7.3	11					
4				0		10	10					
5				0		9.8	7.5					
6				0		6.9	7.5					
7				0		3.8	5.8					
8				0		2.5	3.8					
9				0		2.1	2.6					
10				0		1.8	2.3					
11				0		1.7	2.0					
12				0		1.3	1.7					
13				0		1.0	1.4					
14				0		1.2	1.4					
15				0		1.9	1.1					
16				0		2.5	.89					
17				0		2.6	.79					
18				0		3.1	.68					
19				0		15	.52					
20				0		17	.21					
21				0		55	.07					
22				0		71	0					
23				0		31	0					
24				0		19	0					
25				0		16	0					
26				0		15	0					
27				0		14	0					
28				.06		13	0					
29				52		13	0					
30				.65		12	0					
31		---		0	---	12	---		---			---
TOTAL	0	0	0	52.71	0	362.73	83.26	0	0	0	0	0
MEAN	0	0	0	1.70	0	11.7	2.78	0	0	0	0	0
MAX	0	0	0	52	0	71	11	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	105	0	719	165	0	0	0	0	0
CAL YR 1980	TOTAL	20262.93	MEAN	55.4	MAX	2720	MIN	0	AC-FT	40190		
WTR YR 1981	TOTAL	498.70	MEAN	1.37	MAX	71	MIN	0	AC-FT	989		

SAN JOAQUIN RIVER BASIN

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA

LOCATION.--Lat 37°29'12", long 121°12'29", in SE¼NW¼ sec.21, T.5 S., R.7 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 1.0 mi (1.6 km) upstream from Delta-Mendota Canal crossing, and 4.4 mi (7.1 km) west of Patterson.

DRAINAGE AREA.--72.6 mi² (188.0 km²).

PERIOD OF RECORD.--October 1958 to May 1965 (maximums only), June 1965 to current year.

REVISED RECORDS.--WSP 1930: 1959-60(M), drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 200 ft (61 m), from topographic map. Prior to June 1965, crest-stage gage at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Records good. Some stock ponds and small diversions above station.

AVERAGE DISCHARGE.--16 years, 5.18 ft³/s (0.147 m³/s), 3,750 acre-ft/yr (4.62 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) Feb. 16, 1959, gage height, 14.68 ft (4.474 m) site and datum then in use, from rating curve extended above 690 ft³/s (19.5 m³/s); no flow for several months in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft³/s (2.27 m³/s) Jan. 29 (0745 hrs), gage height, 2.63 ft (0.802 m), no other peak above base of 50 ft³/s (1.42 m³/s); minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.83	1.1	6.1	3.6	5.3	.80	.07			
2		0	.81	1.2	4.9	4.7	5.5	.68	.05			
3		0	.93	1.2	4.0	4.3	5.3	.65	.03			
4		0	4.0	1.1	3.6	4.3	5.2	.62	.02			
5		0	3.8	1.1	3.4	5.1	4.9	.58	0			
6		0	2.6	1.1	3.1	4.1	5.0	.47	0			
7		0	1.9	1.1	2.8	3.4	5.0	.43	0			
8		0	1.6	1.1	2.8	3.0	4.8	.41	0			
9		0	1.4	1.1	4.2	2.6	4.8	.36	0			
10		0	1.2	1.1	4.0	2.4	4.5	.30	0			
11		0	1.2	1.1	3.2	2.2	4.0	.27	0			
12		0	1.2	1.2	3.0	2.2	3.9	.20	0			
13		0	1.2	1.1	2.8	2.3	3.5	.17	0			
14		0	1.1	1.1	2.9	2.8	3.5	.18	0			
15		0	1.1	1.1	2.9	2.8	3.4	.21	0			
16		0	1.0	1.1	2.7	3.5	3.2	.22	0			
17		0	.95	1.1	2.4	3.3	3.2	.19	0			
18		0	.95	1.1	2.2	3.0	3.4	.26	0			
19		0	.95	1.2	2.0	4.9	4.6	.32	0			
20		0	.95	1.2	1.9	6.1	4.5	.43	0			
21		0	1.0	1.2	1.6	8.6	3.5	.37	0			
22		.10	1.2	1.0	1.6	16	2.9	.33	0			
23		.27	1.1	1.5	1.6	10	2.2	.28	0			
24		.37	1.1	1.7	1.4	7.9	1.7	.26	0			
25		.42	1.1	1.7	1.6	6.8	1.6	.25	0			
26		.49	1.1	1.7	2.0	6.4	1.5	.35	0			
27		.49	1.1	4.3	1.9	6.3	1.4	.27	0			
28		.57	1.1	16	1.9	5.6	1.2	.19	0			
29		.66	1.1	38	---	5.4	1.1	.14	0			
30		.77	1.1	15	---	5.4	.90	.10	0			
31		---	1.1	8.5	---	5.2	---	.08	---			---
TOTAL	0	4.14	41.77	113.1	78.5	154.2	105.50	10.37	.17	0	0	0
MEAN	0	.14	1.35	3.65	2.80	4.97	3.52	.33	.006	0	0	0
MAX	0	.77	4.0	38	6.1	16	5.5	.80	.07	0	0	0
MIN	0	0	.81	1.0	1.4	2.2	.90	.08	0	0	0	0
AC-FT	0	8.2	83	224	156	306	209	21	.3	0	0	0
CAL YR 1980	TOTAL	5676.73	MEAN 15.5	MAX 767	MIN 0	AC-FT 11260						
WTR YR 1981	TOTAL	507.75	MEAN 1.39	MAX 38	MIN 0	AC-FT 1010						

SAN JOAQUIN RIVER BASIN

11275000 FALLS CREEK NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'15", long 119°45'48", in NW¼ sec.3, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on right bank 0.2 mi (0.3 km) upstream from Wampana Falls, 0.6 mi (1.0 km) upstream from mouth, and 2 mi (3 km) northeast of Hetch Hetchy.

DRAINAGE AREA.--46.0 mi² (119.1 km²).

PERIOD OF RECORD.--October 1915 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1918, published as "near Sequoia."

REVISED RECORDS.--WSP 531: 1917(M). WSP 931: 1938. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,350 ft (1,631 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--66 years, 141 ft³/s (3.993 m³/s), 102,200 acre-ft/yr (126 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s (189 m³/s) Nov. 19, 1950, Dec. 23, 1955, gage height, 9.0 ft (2.74 m) from floodmarks, from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of velocity-area studies; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 867 ft³/s (24.6 m³/s) May 1, gage height, 5.69 ft (1.734 m), no peak above base of 900 ft³/s (25.5 m³/s); minimum, no flow on many days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	5.3	6.5	19	48	47	81	726	393	27	2.2	
2	4.3	5.0	6.5	17	49	49	71	698	412	24	2.1	
3	4.0	4.8	11	16	44	47	63	531	369	22	1.9	
4	3.8	4.6	49	16	42	47	70	368	340	21	1.6	
5	3.8	4.3	23	14	40	43	106	313	402	20	1.4	
6	3.6	4.1	21	13	38	41	152	269	423	19	1.2	
7	3.4	3.9	20	12	36	47	172	245	351	18	1.1	
8	3.2	3.7	18	12	36	54	165	255	293	18	.86	
9	3.1	3.6	16	11	45	63	190	347	280	17	.68	
10	3.0	3.5	14	11	38	72	215	436	248	14	.56	
11	2.9	14	13	9.9	40	76	198	462	187	12	.46	
12	2.9	16	14	9.6	44	67	182	449	148	10	.36	
13	3.1	13	14	9.5	56	72	198	447	114	9.5	.31	
14	3.4	11	14	9.5	159	68	235	506	86	8.7	.28	
15	5.2	10	16	9.5	134	64	247	368	69	8.0	.24	
16	5.8	9.0	22	9.9	111	66	304	225	63	7.4	.19	
17	5.9	8.3	24	10	121	63	323	155	66	6.9	.14	
18	5.7	8.0	23	10	117	58	314	193	66	6.7	.10	
19	5.6	7.6	23	9.6	122	81	283	246	65	6.6	.08	
20	5.5	7.4	21	9.4	112	79	212	197	69	6.4	.06	
21	5.5	7.2	19	8.8	87	83	205	142	66	5.9	.04	
22	5.4	7.1	22	8.8	85	93	318	153	60	5.4	.03	
23	5.4	7.2	25	12	86	93	486	203	56	5.0	.02	
24	5.4	7.2	22	19	84	90	639	268	51	4.5	.02	
25	5.4	6.7	20	19	75	128	667	384	46	4.1	.01	
26	7.7	6.2	19	20	66	117	539	453	42	3.8	.08	
27	7.2	6.2	20	59	56	85	305	362	38	3.5	0	
28	6.9	6.0	21	37	51	85	259	425	35	3.3	0	
29	6.7	5.9	20	40	---	97	457	442	32	3.0	0	
30	6.2	6.1	20	40	---	81	660	465	29	2.7	0	
31	5.7	---	19	45	---	78	---	452	---	2.4	0	---
TOTAL	150.2	212.9	596.0	546.5	2022	2234	8316	11185	4899	325.8	16.02	0
MEAN	4.85	7.10	19.2	17.6	72.2	72.1	277	361	163	10.5	.52	0
MAX	7.7	16	49	59	159	128	667	726	423	27	2.2	0
MIN	2.9	3.5	6.5	8.8	36	41	63	142	29	2.4	0	0
AC-FT	298	422	1180	1080	4010	4430	16490	22190	9720	646	.32	0
CAL YR 1980	TOTAL	59881.60	MEAN	164	MAX	3240	MIN	2.9	AC-FT	118800		
WTR YR 1981	TOTAL	30503.42	MEAN	83.6	MAX	726	MIN	0	AC-FT	60500		

11275500 HETCH HETCHY RESERVOIR AT HETCH HETCHY, CA

LOCATION.--Lat 37°56'52", long 119°47'13", in NW¼NW¼ sec.16, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, near center of O'Shaughnessy Dam on Tuolumne River at Hetch Hetchy, 1.5 mi (2.4 km) downstream from Falls Creek.

DRAINAGE AREA.--455 mi² (1,178 km²).

PERIOD OF RECORD.--May 1923 to current year. Prior to October 1930 monthend contents, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 1.84 ft (0.561 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1927, nonrecording gage at same site and datum. Oct. 1, 1927, to July 9, 1972, water-stage recorder at same site and datum. Prior to October 1974, datum published as at mean sea level.

REMARKS.--Reservoir is formed by concrete gravity-type dam, completed to crest gage height 3,726.5 ft (1,135.84 m) in 1923 and raised to 3,812.0 ft (1,161.90 m) in 1937. Storage began Apr. 6, 1923. Ten-foot (3-m) drum gates were installed on spillway in 1949. Capacity, 360,400 acre-ft (444 hm³) between gage heights 3,512.0 ft (1,070.46 m) bottom outlet, and 3,806.0 ft (1,160.07 m) top of drum-type spillway gates. Water is diverted from reservoir through tunnel to Robert C. Kirkwood powerplant 15 mi (24 km) downstream. Flow is diverted from powerplant tailrace in a closed conduit through Hetch Hetchy aqueduct to Moccasin Creek powerplant with flows in excess of aqueduct capacity being spilled to the river. At Moccasin 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 (station 11287500) at Red Mountain Bar. Flow down river is for State Department of Fish and Game and Raker Act requirements. Hetch Hetchy Reservoir is main storage unit of Hetch Hetchy water-supply system for San Francisco. See schematic diagram of Tuolumne River basin. Records, including extremes, represent contents at 0800 hours.

COOPERATION.--Record of gage heights furnished by city and county of San Francisco.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 369,100 acre-ft (455 hm³) Dec. 3, 1950, gage height, 3,810.4 ft (1,161.41 m); no contents at times in 1929-31.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 360,600 acre-ft (445 hm³) June 10, gage height, 3,806.1 ft (1,160.10 m); minimum, 109,100 acre-ft (135 hm³) Feb. 13, 14, gage height, 3,650.8 ft (1,112.76 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

3,512	0	3,540	8,700	3,640	97,000	3,740	238,900
3,513	51	3,560	22,900	3,660	119,900	3,760	273,700
3,515	154	3,580	39,500	3,680	146,200	3,780	310,400
3,520	410	3,600	57,400	3,700	175,000	3,800	348,600
3,530	3,300	3,620	76,500	3,720	206,000	3,810.4	369,100

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288600	241800	198100	153200	112200	112600	115000	193000	323400	351700	308900	259600
2	287100	240300	196500	151800	112100	112400	115100	201700	329300	350900	307400	258000
3	285400	239100	194900	150500	111800	112200	115100	209200	333900	350200	305700	256400
4	283800	237600	193800	149100	111600	111800	115000	214800	338300	349000	304200	254900
5	282400	235900	192700	147700	111400	111600	114900	218900	343500	347800	302500	253300
6	280900	234500	191200	146200	111000	111200	115300	221900	349600	346700	301100	251800
7	279300	232700	189600	145000	110700	110900	116000	224500	355800	345700	299400	250200
8	277800	231200	188100	143600	110300	110500	116900	227200	358800	344500	297900	248500
9	276400	230000	186700	142200	110100	110300	117600	230200	360200	343400	296300	246900
10	274800	228200	185300	140800	109700	110100	118700	234800	360600	342000	294800	245400
11	273300	227000	183800	139400	109600	109800	119900	240800	360200	340600	293300	243700
12	271900	225700	182300	138100	109400	109700	120900	246800	359800	339300	291800	242100
13	270400	225800	180800	136800	109100	109800	121800	246900	359800	337900	290000	240600
14	268900	221200	179300	135100	109100	110000	123200	258500	360200	336600	288400	239100
15	267300	220600	177900	133600	110200	109800	124900	263600	360000	334900	286700	237400
16	265900	219400	176400	132300	110600	109700	127300	266600	360000	333500	285300	235900
17	264500	217900	174800	130900	110900	109700	130000	268400	359600	332000	283600	234300
18	262900	216500	173500	129500	111200	109500	132700	270100	359200	330400	282000	232800
19	261300	214700	172000	128100	111700	109400	135300	271900	359000	329100	280500	231200
20	260100	213200	170600	126800	112100	109800	137400	273900	358800	327600	278900	229700
21	258500	211600	169100	125200	112300	110200	139300	275000	358800	326100	277300	228300
22	257000	210200	167900	123700	112400	110700	141600	275800	358600	324500	275700	226500
23	255400	208700	166400	122500	112600	111100	146100	277300	358200	323000	274100	225200
24	253800	208700	164800	120900	112900	111500	152200	279500	357800	321500	272500	223500
25	252300	207300	163300	119600	112900	111700	159200	284000	357200	320000	270900	222000
26	250900	205700	161800	118300	112900	112900	165200	288500	356400	318300	269300	220600
27	249300	204200	160400	117100	112900	113600	169500	293300	355600	316800	267700	218900
28	247800	202700	159100	116400	112900	114000	173100	298800	354500	315300	266100	217500
29	246400	201100	157700	115400	---	114400	177300	304200	353500	313800	264300	215700
30	244900	199700	156100	114400	---	114900	184300	310600	352700	312300	262900	214400
31	243300	---	154700	113200	---	115100	---	317100	---	310400	261200	---
MAX	288600	241800	198100	153200	112900	115100	184300	317100	360600	351700	308900	259600
MIN	243300	199700	154700	113200	109100	109400	114900	193000	323400	310400	261200	214400
†	3742.6	3716.0	3686.1	3654.3	3654.0	3655.9	3706.1	3783.6	3802.1	3780.0	3752.9	3725.2
‡	-46700	-43600	-45000	-41500	-300	+2200	+69200	+132800	+35600	-42300	-49200	-46800

CAL YR 1980 ‡ +9400

WTR YR 1981 ‡ -75600

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°56'15", long 119°47'50", in SW¼SE¼ sec.17, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on left bank 1 mi (2 km) downstream from O'Shaughnessy Dam at Hetch Hetchy, and 2.5 mi (4.0 km) downstream from Falls Creek.

DRAINAGE AREA. --457 mi² (1,184 km²).

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Hetch Hetchy damsite, near Sequoia" 1910-14 and as "below Hetch Hetchy damsite, near Sequoia" 1915-18.

REVISID RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder with concrete control since May 5, 1970. Altitude of gage is 3,480 ft (1,061 m), from topographic map. Prior to Jan. 1, 1915, water-stage recorder at site 1 mi (2 km) upstream, at damsite, at different datum. Jan. 1, 1915, to Sept. 30, 1968, water-stage recorder, at same site and datum. Oct. 1, 1968, to May 4, 1970, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 1 mi (2 km) upstream beginning in April 1925. Flow diverted above station through tunnel to Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct beginning Apr. 26, 1967. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (prior to diversion to Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct).--57 years (water years 1911-67), 999 ft³/s (28.29 m³/s), 723,800 acre-ft/yr (892 hm³/yr); 14 years (water years 1968-81), 334 ft³/s (9.459 m³/s), 242,000 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft³/s (365 m³/s) June 1, 1943, gage height, 13.90 ft (4.237 m); no flow at times in 1968-70.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) June 10, gage height, 7.94 ft (2.420 m); minimum daily, 30 ft³/s (0.85 m³/s) Apr. 14, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	38	38	36	39	39	44	58	78	76	78	77
2	37	38	37	36	39	39	44	70	78	76	78	77
3	37	38	38	37	39	39	43	71	78	75	78	77
4	37	37	39	37	39	39	39	72	80	77	78	77
5	37	37	38	36	39	39	34	69	85	78	78	77
6	37	37	38	36	39	39	32	69	81	77	78	77
7	37	37	38	36	39	39	32	69	243	75	78	77
8	37	38	38	37	39	38	32	70	1070	76	77	77
9	37	38	37	38	39	38	32	70	1620	77	77	77
10	36	37	36	39	39	38	32	70	1640	75	77	77
11	36	38	36	38	38	38	32	70	1400	76	77	70
12	37	38	36	38	38	46	32	71	853	76	77	73
13	37	38	37	37	38	89	31	70	263	73	76	77
14	37	38	38	37	40	96	30	71	81	75	76	77
15	37	37	38	39	40	41	31	72	81	76	76	77
16	37	37	38	38	40	40	31	70	78	76	76	54
17	36	37	38	38	40	40	30	69	77	76	76	36
18	36	37	38	38	54	39	31	70	77	76	75	36
19	36	37	38	38	39	41	32	76	77	76	75	36
20	36	37	38	38	39	45	32	77	77	76	75	36
21	37	36	37	39	39	50	32	76	77	75	76	36
22	38	36	37	39	39	46	32	76	77	75	76	36
23	36	37	37	40	39	44	33	76	76	75	75	36
24	36	37	37	39	39	44	33	77	76	75	75	36
25	37	37	38	38	39	45	32	77	76	75	75	36
26	37	37	37	38	39	49	34	77	75	76	74	36
27	37	37	37	41	39	46	34	78	77	75	77	36
28	37	37	36	35	39	45	34	78	77	74	78	36
29	37	38	36	37	---	45	34	78	77	74	77	36
30	37	38	36	35	---	45	34	78	77	74	77	35
31	38	---	36	38	---	44	---	78	---	77	77	---
TOTAL	1141	1119	1156	1166	1108	1405	1008	2253	8882	2343	2373	1701
MEAN	36.8	37.3	37.3	37.6	39.6	45.3	33.6	72.7	296	75.6	76.5	56.7
MAX	38	38	39	41	54	96	44	78	1640	78	78	77
MIN	36	36	36	35	38	38	30	58	75	73	74	35
AC-FT	2260	2220	2290	2310	2200	2790	2000	4470	17620	4650	4710	3370
CAL YR 1980	TOTAL	271452	MEAN 742	MAX 6950	MIN 34	AC-FT 538400						
WTR YR 1981	TOTAL	25655	MEAN 70.3	MAX 1640	MIN 30	AC-FT 50890						

LOCATION.--Lat 37°52'46", long 119°56'46", in SE&SW¼ sec.1, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 0.5 mi (0.8 km) upstream from Early Intake, 2.4 mi (3.9 km) upstream from Cherry Creek, and 5.0 mi (8.0 km) west of Mather.

PERIOD OF RECORD.--October 1970 to current year. Records for the period October 1939 to September 1970 in the files of the California district office of the Geological Survey.

REMARKS.--Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 12 mi (19 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,520 ft³/s (270 m³/s) June 12, 1974, gage height, 20.94 ft (6.383 m); minimum daily, 33 ft³/s (0.93 m³/s) Aug. 17, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1943, reached a stage of 22.1 ft (6.74 m), discharge, 12,900 ft³/s (365 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) June 10, gage height, 16.16 ft (4.926 m); minimum daily, 37 ft³/s (1.05 m³/s) on several days during September.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	42	43	42	68	63	79	54	82	80	80	80
2	40	43	43	42	67	67	80	86	82	80	81	80
3	40	42	46	42	66	68	85	88	82	79	81	80
4	40	42	70	43	62	65	77	89	82	78	80	80
5	40	42	53	41	60	62	70	89	87	81	80	80
6	40	42	46	41	59	60	66	85	90	81	80	79
7	40	42	44	41	57	59	62	85	93	79	80	78
8	40	42	44	41	56	58	60	84	808	78	79	78
9	39	42	44	41	67	57	59	84	1590	79	78	78
10	39	42	43	42	67	55	57	84	1610	78	79	78
11	39	53	43	42	62	55	56	85	1430	77	78	78
12	39	48	43	42	60	54	53	84	917	78	78	70
13	40	43	43	42	58	63	52	84	407	77	78	78
14	41	43	44	42	74	61	51	84	98	77	78	79
15	42	42	44	42	71	59	51	84	93	79	78	79
16	42	42	44	44	64	59	50	85	87	80	78	78
17	42	42	44	43	61	58	49	82	85	80	78	48
18	41	42	44	42	65	57	50	83	85	80	77	39
19	41	42	44	42	65	73	68	86	84	79	77	37
20	41	42	44	42	58	106	78	85	84	79	78	37
21	41	42	43	41	56	145	67	84	83	79	77	37
22	40	42	43	43	54	136	62	84	82	78	77	37
23	42	42	43	59	53	109	58	83	82	78	77	37
24	41	42	43	59	60	94	56	83	81	78	77	37
25	42	42	43	47	65	100	54	84	81	78	77	38
26	44	41	43	45	65	172	57	84	81	77	77	38
27	42	41	43	84	64	126	60	84	80	77	77	37
28	41	41	43	128	61	103	56	86	81	78	80	37
29	41	41	43	122	---	93	54	84	81	78	80	37
30	41	43	42	88	---	88	53	83	81	77	80	37
31	41	---	42	74	---	82	---	82	---	77	80	---
TOTAL	1262	1277	1384	1629	1745	2507	1830	2591	8789	2434	2435	1786
MEAN	40.7	42.6	44.6	52.5	62.3	80.9	61.0	83.6	293	78.5	78.5	59.5
MAX	44	53	70	128	74	172	85	89	1610	81	81	80
MIN	39	41	42	41	53	54	49	54	80	77	77	37
AC-FT	2500	2530	2750	3230	3460	4970	3630	5140	17430	4830	4830	3540
WTR YR 1980	TOTAL	289169	MEAN	790	MAX	6830	MIN	38	AC-FT	573600		
WTR YR 1981	TOTAL	29669	MEAN	81.3	MAX	1610	MIN	37	AC-FT	58850		

SAN JOAQUIN RIVER BASIN

11276900 TUOLUMNE RIVER BELOW EARLY INTAKE, NEAR MATHER, CA

LOCATION.--Lat 37°52'54", long 119°58'09", in NW¼SW¼ sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 0.6 mi (1.0 km) upstream from Cherry Creek, 0.7 mi (1.1 km) downstream from Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct, and 6.3 mi (10.1 km) west of Mather.

DRAINAGE AREA.--487 mi² (1,261 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,200 ft (671 m), from topographic map.

REMARKS.--Records excellent. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 13 mi (21 km) upstream and Robert C. Kirkwood powerplant beginning Apr. 26, 1967. Water is diverted to Hetch Hetchy aqueduct from the tailrace of the powerplant through a closed conduit. Flow in excess of aqueduct capacity is diverted to river. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--15 years, 464 ft³/s (13.14 m³/s), 336,200 acre-ft/yr (415 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s) June 4, 1969, gage height, 9.82 ft (2.993 m); minimum daily, 12 ft³/s (0.34 m³/s) Nov. 28-30, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) June 10, gage height, 6.26 ft (1.908 m); minimum daily, 49 ft³/s (1.39 m³/s) Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	94	161	91	67	62	81	163	234	191	120	146
2	113	85	165	101	65	66	82	150	232	184	130	139
3	118	137	161	88	64	68	87	140	227	179	163	140
4	97	138	184	96	61	65	79	210	219	142	160	141
5	87	136	161	98	59	63	71	200	220	153	167	134
6	113	137	120	90	59	62	65	192	217	199	174	132
7	109	175	108	97	58	60	61	185	229	193	174	147
8	113	711	155	95	58	59	59	182	884	193	130	151
9	116	321	156	93	69	59	58	119	1650	194	129	150
10	114	115	155	90	68	58	56	134	1670	182	180	146
11	87	101	155	96	63	57	55	188	1500	161	173	140
12	94	148	158	105	62	57	54	181	1030	141	175	129
13	118	143	131	100	60	62	53	206	529	190	173	160
14	121	140	106	100	76	60	52	197	195	190	163	170
15	127	65	164	101	73	58	52	195	233	185	129	163
16	124	49	169	105	65	58	51	186	221	189	127	157
17	121	112	169	95	61	55	51	166	223	180	170	127
18	93	138	163	101	66	56	51	208	217	169	173	114
19	89	150	164	102	65	71	68	211	216	165	172	105
20	129	148	137	103	57	105	78	201	208	199	168	99
21	128	151	123	105	55	142	68	198	225	194	168	124
22	128	114	174	108	55	140	64	196	235	190	133	119
23	124	107	177	122	54	114	60	185	223	186	133	113
24	123	149	178	116	61	97	58	193	223	183	188	116
25	96	159	112	101	58	100	57	203	224	162	184	110
26	106	158	175	115	65	172	59	229	216	147	178	97
27	131	96	146	175	63	131	62	203	209	199	168	108
28	132	155	130	224	62	109	60	209	191	201	170	119
29	135	122	188	221	---	97	57	211	241	191	138	115
30	130	96	183	178	---	90	57	204	234	191	140	111
31	130	---	175	154	---	85	---	172	---	191	180	---
TOTAL	3559	4550	4803	3566	1749	2538	1866	5817	12575	5614	4930	3922
MEAN	115	152	155	115	62.5	81.9	62.2	188	419	181	159	131
MAX	135	711	188	224	76	172	87	229	1670	201	188	170
MIN	87	49	106	88	54	55	51	119	191	141	120	97
AC-FT	7060	9020	9530	7070	3470	5030	3700	11540	24940	11140	9780	7780

CAL YR 1980 TOTAL 329843 MEAN 901 MAX 6980 MIN 49 AC-FT 654200
WTR YR 1981 TOTAL 55489 MEAN 152 MAX 1670 MIN 49 AC-FT 110100

11277200 CHERRY LAKE NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'33", long 119°54'47", in SE¼NW¼ sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on upstream face of Cherry Valley Dam on Cherry Creek, 4.2 mi (6.8 km) upstream from Eleanor Creek, 7 mi (11 km) north of Early Intake, and 7.3 mi (11.7 km) northwest of Hetch Hetchy.

DRAINAGE AREA.--117 mi² (303 km²).

PERIOD OF RECORD.--August 1956 to current year. Prior to October 1959, published as Lake Lloyd near Hetch Hetchy.

GAGE.--Water-stage recorder. Datum of gage is 2.42 ft (0.738 m) National Geodetic Vertical Datum of 1929. Prior to October 1974, datum published as at mean sea level.

REMARKS.--Reservoir is formed by a rockfill dam completed in 1956. Storage began in December 1955. Capacity, 268,800 acre-ft (331 hm³) between gage heights 4,430 ft (1,350.3 m) bottom of sluice gates, and 4,700 ft (1,432.6 m) top of spillway gates. No dead storage. Water is released down Cherry Creek for power development and domestic supply as part of Hetch Hetchy system of city and county of San Francisco. Unmeasured diversion from Lake Eleanor into Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake through tunnel to Cherry powerhouse near mouth of Cherry Creek began Aug. 1, 1960. See schematic diagram of Tuolumne River basin. Records, including extremes, represent contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 273,500 acre-ft (337 hm³) July 9, 11-15, 1980, gage height, 4,702.6 ft (1,433.35 m); normal minimum since reservoir first filled, 7,660 acre-ft (9.44 hm³) Jan. 24, 1960, gage height, 4,502.1 ft (1,372.24 m). Reservoir drained for inspection in 1961 and 1964.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 239,900 acre-ft (296 hm³) June 8, 9, gage height, 4,683.4 ft (1,427.50 m); minimum, 157,200 acre-ft (194 hm³) Sept. 30, gage height, 4,631.7 ft (1,411.74 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

4,440	0	4,490	3,020	4,560	60,800	4,660	201,100
4,450	75	4,500	6,030	4,580	85,100	4,680	234,100
4,460	250	4,510	11,700	4,600	111,800	4,700	268,800
4,470	675	4,520	19,700	4,620	139,900	4,705	277,900
4,480	1,530	4,540	38,900	4,640	169,700		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188400	169200	165800	166800	167600	172600	175300	209700	235400	223600	194700	176400
2	187600	169400	165600	166700	167600	172500	175000	212200	236100	222400	194700	175600
3	186800	169400	165900	166700	167400	172200	174700	214300	236600	221400	193900	174100
4	186200	169400	166400	166700	167300	172000	174500	214800	237200	221000	193100	174000
5	186200	169400	166500	166700	167100	171700	175100	215300	237900	220700	192200	173400
6	185400	169400	166700	166500	167100	171600	175900	215400	238500	219700	191600	173400
7	184400	169200	166700	166400	167000	171400	175900	215400	239700	218500	190800	173400
8	183600	168800	166500	166400	167100	171700	176500	215700	239900	217400	190400	172500
9	183000	168200	166400	166400	167100	171700	176700	217000	239900	216400	190400	171700
10	182200	167700	166400	166200	167100	171700	177300	219000	239700	215300	189600	170900
11	181600	167100	166400	166100	167100	171700	177900	220700	239400	214300	188900	170200
12	181600	166800	166400	166100	167000	171600	179100	221400	238700	214100	188100	169500
13	180800	168200	166400	165900	167100	171700	181300	222400	238200	213000	187300	169500
14	180100	168000	166200	165800	167700	171700	180500	223400	238200	211800	186500	168800
15	179200	167400	166400	165800	168000	172200	180900	223700	237300	210700	186200	168000
16	178500	167100	166500	165800	168000	172200	182900	223900	236500	209600	186200	166500
17	177800	167100	166500	165800	168300	172000	184100	224400	235400	208300	185400	165800
18	177300	167000	166500	165800	169800	172000	185400	224700	234600	207300	184600	165000
19	177100	167000	166500	165600	170500	172300	187100	225200	233600	207100	183800	164400
20	176500	166800	166500	165500	170800	172300	187600	225100	232900	206000	183000	164400
21	175700	166700	166700	165500	171100	172800	188400	224600	232900	204800	182200	163500
22	175000	166500	166700	165500	171600	173300	190100	224200	231900	203700	181800	162700
23	174000	166500	166800	165500	171900	173400	192700	224700	230900	202600	181800	162000
24	173300	166500	166800	165600	172200	173600	195800	226100	229900	201400	181000	161200
25	172800	166400	166800	165800	172300	174000	197100	227700	228900	200300	180200	160500
26	172800	166200	166800	165900	172300	174500	201400	228700	227900	200000	179500	159700
27	171900	164900	166800	166400	172300	174500	201900	229600	226900	198900	179100	159600
28	171100	165300	166800	166700	172300	174800	202900	230700	226700	197900	178400	158800
29	170300	165800	167000	167000	---	175300	204700	231400	225700	197000	178100	157900
30	169500	165800	166800	167100	---	175400	207400	232900	224600	196000	178100	157200
31	169400	---	166800	167300	---	175400	---	234800	---	195200	177100	---
MAX	188400	169400	167000	167300	172300	175400	207400	234800	239900	223600	194700	176400
MIN	169400	164900	165600	165500	167000	171400	174500	209700	224600	195200	177100	157200
†	4639.8	4637.4	4638.1	4638.4	4641.7	4643.7	4663.9	4680.4	4674.3	4656.3	4644.8	4631.7
‡	-19800	-3600	+1000	+500	+5000	+3100	+32000	+27400	-10200	-29400	-18100	-19900

CAL YR 1980 † 44000
WTR YR 1981 ‡ -32000

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

11277500 LAKE ELEANOR NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'27", long 119°52'48", in SE¼NW¼ sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, 720 ft (219 m) from left bank on downstream side of dam on Eleanor Creek, 1.7 mi (2.7 km) upstream from Miguel Creek, and 5.5 mi (8.8 km) northwest of Hetch Hetchy.

DRAINAGE AREA.--78.1 mi² (202.3 km²).

PERIOD OF RECORD.--June 1918 to current year. Prior to October 1930, published in WSP 1315-A. Published as "near Sequoia" 1919-20.

REVISED RECORDS.--WSP 1445: 1938(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.46 ft (0.750 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1927, nonrecording gage on upstream side of dam at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch dam completed in 1918; storage began June 23, 1918. Usable capacity, 25,510 acre-ft (31.4 hm³) between gage heights, 4,620.9 ft (1,408.45 m), natural outlet of old lake and 4,660.0 ft (1,420.37 m), top of 5-ft (1.5-m) flashboards. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of Tuolumne River basin.

COOPERATION.--Periodic observations of gage height furnished by city and county of San Francisco.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,000 acre-ft (38.2 hm³) Dec. 11, 1937, from capacity table then in use, gage height, 4,663.4 ft (1,421.40 m); no usable contents at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,500 acre-ft (33.9 hm³) Apr. 29, gage height, 4,661.4 ft (1,420.79 m); minimum 3,860 acre-ft (4.76 hm³) Sept. 30, gage height, 4,632.5 ft (1,411.99 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

4,608	0	4,620	36	4,628	1,480	4,646	13,500
4,610	6	4,622	49	4,630	2,450	4,650	17,000
4,612	12	4,624	92	4,632	3,580	4,655	21,500
4,614	18	4,625	211	4,635	5,270	4,660	26,100
4,616	24	4,626	550	4,638	7,330	4,663	29,100
4,618	27	4,627	996	4,642	10,300		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20500	10000	6920	7470	8090	11300	13600	27300	27100	26100	23500	12900
2	20200	9660	6920	7470	8090	11300	13600	27300	27100	26100	23300	12600
3	19900	9420	6990	7470	8160	11200	13600	27100	27000	26100	22900	12200
4	19500	9180	7400	7400	8160	11200	13600	27000	26900	26100	22600	11900
5	19100	8950	7400	7400	8160	11200	13700	26800	26900	26100	22300	11600
6	19000	8790	7400	7330	8090	11100	14000	26800	26900	26000	22000	11200
7	18500	8710	7400	7330	8090	11000	14500	26900	26800	26000	21600	10900
8	18300	8570	7330	7260	8020	11000	14700	27100	26700	25900	21200	10600
9	18100	8430	7330	7260	8090	11000	15000	27200	26500	25900	21000	10300
10	17600	8230	7330	7190	8090	11100	15200	27300	26300	25800	20600	9980
11	17300	8230	7260	7190	8090	11200	16000	27300	26000	25700	20200	9660
12	16900	8160	7260	7130	8160	11200	16400	27300	25800	25700	20000	9340
13	16600	8090	7260	7060	8160	11200	16700	27300	25500	25600	19500	8950
14	16200	8020	7190	7060	8790	11200	17300	27200	25400	25600	19100	8710
15	15900	7950	7260	6990	9260	11200	18000	27200	25500	25600	18800	8430
16	15500	7810	7260	6990	9580	11300	18700	27000	25600	25500	18500	8160
17	15200	7680	7330	6990	9900	11300	19300	26800	25700	25400	18200	7810
18	14800	7610	7330	6920	10100	11200	20000	26700	25800	25400	17800	7470
19	14600	7540	7330	6920	10500	11600	20600	27000	25800	25400	17400	7130
20	14200	7470	7400	6920	10700	11700	21000	27100	25900	25300	17100	6850
21	13700	7470	7400	6850	10800	11900	21500	27100	26000	25200	16700	6510
22	13400	7400	7400	6780	10900	12000	22300	27000	26000	25200	16400	6230
23	13000	7330	7470	6850	11000	12200	23500	27000	26000	25100	16000	5890
24	12600	7260	7470	6920	11200	12400	25000	27000	26000	25100	15700	5540
25	12300	7260	7470	6920	11200	12800	26300	27100	26100	25000	15400	5160
26	12000	7190	7540	6990	11300	13100	27400	27200	26100	24900	15100	4930
27	11600	7130	7540	7470	11300	13200	27400	27200	26100	24900	14700	4650
28	11300	7130	7540	7680	11300	13300	27300	27300	26200	24800	14300	4420
29	11000	7060	7540	7880	---	13400	27500	27200	26200	24500	14000	4140
30	10700	6990	7540	7950	---	13500	27400	27200	26200	24200	13600	3860
31	10300	---	7470	8020	---	13500	---	27200	---	23900	13300	---
MAX	20500	10000	7540	8020	11300	13500	27500	27300	27100	26100	23500	12900
MIN	10300	6990	6920	6780	8020	11000	13600	26700	25400	23900	13300	3860
†	4642.0	4637.5	4638.2	4639.0	4643.3	4646.0	4661.3	4661.1	4660.1	4657.6	4645.7	4632.5
‡	-10600	-3310	+480	+550	+3280	+2200	+13900	-200	-1000	-2300	-10600	-9440

CAL YR 1980 † +5550

WTR YR 1981 ‡ -17040

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11278000 ELEANOR CREEK NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'09", long 119°52'52", in NW¼SW¼ sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on right bank 0.5 mi (0.8 km) downstream from Lake Eleanor Dam, 1.1 mi (1.8 km) upstream from Miguel Creek, and 5.5 mi (8.8 km) northwest of Hetch Hetchy.

DRAINAGE AREA.--78.4 mi² (203.1 km²).

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "near Sequoia" 1910-18.

REVISED RECORDS.--WSP 1315-A: 1923(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,500 ft (1,370 m), from topographic map. November 1909 to November 1915, nonrecording gage and water-stage recorder at site 1 mi (2 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by Lake Eleanor (station 11277500) 0.5 mi (0.8 km) upstream beginning in 1918. Diversion from Lake Eleanor to Cherry Lake began in March 1960. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (prior to diversion to Cherry Lake).--50 years (water years 1910-59), 223 ft³/s (6.315 m³/s), 161,400 acre-ft/yr (199 hm³/yr); 22 years (water years 1960-81), 67.3 ft³/s (1.906 m³/s), 48,760 acre-ft/yr (60.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s (331 m³/s) Nov. 19, 1950, gage height, 14.95 ft (4.557 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurements at gage heights 9.94 ft (3.030 m) and 12.24 ft (3.731 m); no flow at times in 1910, 1930-31, 1933, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s (36.5 m³/s) Apr. 30, gage height, 5.48 ft (1.670 m); minimum daily, 4.3 ft³/s (0.12 m³/s) Oct. 28, 29, Nov. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	4.6	6.0	7.5	8.1	7.2	6.7	890	347	15	16	15
2	5.6	4.6	6.0	7.5	8.1	7.2	6.7	833	334	20	16	15
3	5.6	4.6	6.3	7.5	8.1	7.2	6.7	687	330	18	16	15
4	5.6	4.6	7.3	7.5	8.1	7.2	6.7	562	325	17	16	15
5	5.5	4.6	6.7	7.7	8.1	7.0	6.7	494	321	16	16	15
6	5.3	4.6	6.7	7.8	8.1	7.0	6.7	367	306	16	16	15
7	5.1	4.6	6.7	7.8	8.1	7.0	6.7	271	295	16	16	15
8	4.9	4.6	6.7	7.8	8.1	6.4	6.7	279	293	16	16	15
9	5.6	4.6	6.7	7.8	8.3	6.2	6.7	293	288	16	15	15
10	4.9	4.6	6.8	7.8	8.4	6.2	6.7	395	291	15	15	14
11	4.9	4.6	7.0	7.8	8.4	6.2	6.5	467	287	15	15	16
12	4.9	4.6	7.0	7.8	8.4	6.3	6.2	436	269	15	15	16
13	4.9	4.4	7.0	7.8	8.4	6.5	6.2	419	233	15	15	16
14	4.9	4.3	7.0	7.8	9.1	6.5	6.2	449	148	18	15	16
15	4.9	4.9	7.0	7.8	8.7	6.5	6.2	406	48	16	15	16
16	4.9	5.3	7.0	7.8	8.7	6.5	6.2	357	6.5	13	14	16
17	4.9	5.3	7.2	7.8	8.7	6.5	5.4	318	5.6	16	14	16
18	4.9	5.3	7.2	7.8	8.4	6.5	5.1	308	6.0	16	14	16
19	4.9	5.3	7.2	7.8	7.9	6.9	6.0	309	6.2	16	14	15
20	4.7	5.3	7.2	7.8	7.8	7.1	6.2	329	6.2	16	14	15
21	4.6	5.3	7.2	7.8	7.8	8.5	6.2	317	6.2	16	16	15
22	4.6	5.3	7.2	7.8	7.7	7.3	6.3	296	6.1	16	16	15
23	4.6	5.3	7.4	7.8	7.5	7.0	6.1	295	6.0	16	16	15
24	4.6	5.4	7.5	7.8	7.5	6.7	7.6	298	6.0	16	16	15
25	4.6	5.6	7.5	7.8	7.5	7.8	12	298	6.0	16	16	15
26	4.6	5.6	7.5	7.8	7.2	7.6	211	340	6.0	16	16	15
27	4.4	5.7	7.5	12	7.0	7.0	613	357	6.0	16	16	15
28	4.3	6.0	7.5	9.6	7.0	7.0	563	357	6.0	16	16	15
29	4.3	6.0	7.4	8.6	---	7.0	690	360	6.0	15	15	15
30	4.5	6.0	7.5	8.3	---	6.7	924	360	6.0	15	15	15
31	4.6	---	7.5	8.1	---	6.7	---	368	---	15	15	---
TOTAL	155.1	151.5	218.4	248.1	225.2	213.4	3166.4	12515	4205.8	494	476	457
MEAN	5.00	5.05	7.05	8.00	8.04	6.88	106	404	140	15.9	15.4	15.2
MAX	8.5	6.0	7.5	12	9.1	8.5	924	890	347	20	16	16
MIN	4.3	4.3	6.0	7.5	7.0	6.2	5.1	271	5.6	13	14	14
AC-FT	308	301	433	492	447	423	6280	24820	8340	980	944	906
CAL YR 1980	TOTAL	72705.1	MEAN 199	MAX 4060	MIN 4.3	AC-FT 144200						
WTR YR 1981	TOTAL	22525.9	MEAN 61.7	MAX 924	MIN 4.3	AC-FT 44680						

LOCATION.--Lat 37°53'40", long 119°57'42", in NW¼SE¼ sec.35, T.1 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 1.2 mi (1.9 km) upstream from mouth, 1.3 mi (2.1 km) north of Early Intake, and 10.3 mi (16.6 km) southwest of Hetch Hetchy.

PERIOD OF RECORD. -- May 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,272.00 ft (692.506 m) National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--Records good. Flow regulated by Cherry Lake (station 11277200) 10 mi (16 km) upstream and Lake Eleanor (station 11277500) 9.8 mi (15.8 km) upstream. Diversion from Cherry Lake to Dion R. Holm powerplant began Aug. 1, 1960. Water is returned to creek 1.2 mi (1.9 km) below station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (since diversion to Dion R. Holm powerplant).--21 years (water years 1961-81), 109 ft³/s (3.087 m³/s), 78,970 acre-ft/yr (97.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s (467 m³/s) Feb. 1, 1963, gage height, 14.50 ft (4.420 m), from rating curve extended above 4,600 ft³/s (130 m³/s); minimum daily, 0.30 ft³/s (0.008 m³/s) Apr. 5, 6, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft³/s (36.2 m³/s) Apr. 30, gage height, 7.24 ft (2.207 m); minimum daily, 12 ft³/s (0.34 m³/s) on several days during June.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	15	15	17	27	33	55	883	366	13	31	28
2	19	15	15	17	27	36	56	829	352	39	31	31
3	16	15	16	17	27	37	57	691	348	37	31	31
4	16	15	29	18	26	35	52	567	343	33	31	31
5	16	15	22	17	26	35	49	510	340	33	31	31
6	16	15	18	17	26	33	46	409	328	33	31	31
7	15	15	18	17	25	32	45	313	315	32	30	31
8	15	15	17	17	25	31	43	320	312	32	30	31
9	15	15	17	17	33	31	41	334	307	24	30	30
10	15	15	17	17	31	30	40	419	308	24	30	30
11	15	15	17	17	28	29	38	478	307	24	30	31
12	16	14	17	17	28	29	37	454	290	24	30	32
13	16	14	17	17	29	37	37	434	257	25	30	32
14	17	13	18	17	45	35	35	452	185	49	30	32
15	19	14	18	17	50	34	34	423	93	45	30	32
16	17	15	18	18	40	36	33	381	18	31	30	31
17	17	15	18	18	39	34	33	340	15	28	30	31
18	17	15	18	17	36	32	32	332	14	29	29	31
19	17	15	18	17	34	51	50	339	14	30	29	31
20	17	15	18	17	33	69	54	360	14	32	29	31
21	17	15	18	17	31	85	45	345	13	32	29	31
22	16	15	18	17	29	97	40	321	13	32	31	30
23	16	15	18	30	28	88	36	321	12	32	31	30
24	16	15	18	26	33	73	36	325	12	32	31	30
25	16	15	18	21	33	89	40	326	12	32	31	31
26	18	15	18	19	33	153	180	376	12	32	31	30
27	17	15	18	59	32	102	628	417	12	32	31	30
28	16	15	17	67	32	83	571	402	12	31	30	30
29	16	15	17	52	---	71	684	393	12	31	30	30
30	15	15	17	35	---	64	914	401	13	31	30	30
31	15	---	17	28	---	58	---	393	---	31	30	---
TOTAL	520	445	555	714	886	1682	4041	13288	4649	965	938	921
MEAN	16.8	14.8	17.9	23.0	31.6	54.3	135	429	155	31.1	30.3	30.7
MAX	31	15	29	67	50	153	914	883	366	49	31	32
MIN	15	13	15	17	25	29	32	313	12	13	29	28
AC-FT	1030	883	1100	1420	1760	3340	8020	26360	9220	1910	1860	1830
CAL YR 1980	TOTAL	101286	MEAN 277	MAX 4980	MIN 13	AC-FT	200900					
WTR YR 1981	TOTAL	29604	MEAN 81.1	MAX 914	MIN 12	AC-FT	58720					

SAN JOAQUIN RIVER BASIN

11278400 CHERRY CREEK BELOW DION R. HOLM POWERHOUSE, NEAR MATHER, CA

LOCATION.--Lat 37°53'24", long 119°58'08", in NE¼NW¼ sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 600 ft (183 m) upstream from mouth, 0.5 mi (0.8 km) downstream from powerhouse, 0.8 mi (1.3 km) northwest of Early Intake, and 6.2 mi (10.0 km) west of Mather.

DRAINAGE AREA.--234 mi² (606 km²).

PERIOD OF RECORD.--March 1963 to current year. Prior to October 1965, published as "below Cherry powerhouse, near Mather."

GAGE.--Water-stage recorder. Altitude of gage is 2,150 ft (655 m), from topographic map.

REMARKS.--Records good. Flow regulated by Cherry Lake (station 11277200) 11 mi (18 km) upstream and Lake Eleanor (station 11277500) 10 mi (16 km) upstream. Prior to May 1971, Cherry Creek Canal diverted 2 mi (3 km) upstream from station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--18 years, 637 ft³/s (18.04 m³/s), 461,500 acre-ft/yr (569 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,210 ft³/s (261 m³/s) Jan. 14, 1980, gage height, 13.86 ft (4.225 m), from rating curve extended above 3,300 ft³/s (93.5 m³/s); minimum daily, 1.6 ft³/s (0.045 m³/s) June 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft³/s (60.6 m³/s) Apr. 30, gage height, 9.61 ft (2.929 m); minimum daily, 79 ft³/s (2.24 m³/s) Dec. 27, Jan. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	561	87	86	82	139	148	669	1670	1020	625	403	633
2	576	397	86	94	310	428	662	1380	995	666	146	626
3	573	448	88	84	314	429	661	988	989	665	620	627
4	489	143	114	79	315	427	559	1360	995	152	618	632
5	137	93	92	112	315	429	163	1300	996	159	628	496
6	546	92	87	108	313	436	649	1190	883	654	647	146
7	570	88	88	95	266	340	648	1060	457	656	638	150
8	569	223	85	107	136	144	638	1080	951	665	395	634
9	568	327	92	98	326	421	644	796	945	649	142	623
10	565	295	96	98	324	423	644	632	943	656	617	626
11	487	89	91	92	321	424	541	1260	943	537	640	621
12	136	88	89	123	322	424	155	1240	926	142	659	489
13	551	88	86	100	324	433	638	1220	792	656	659	156
14	467	159	86	97	293	342	642	1240	318	678	647	626
15	119	225	91	103	166	146	649	1200	723	677	418	629
16	508	274	91	106	153	431	639	868	647	663	153	636
17	602	88	91	88	333	429	638	545	639	647	652	617
18	688	88	93	88	330	423	542	1090	642	550	646	629
19	142	83	92	98	327	438	170	1090	651	148	658	501
20	287	83	87	104	325	467	662	1110	549	657	679	149
21	439	81	88	107	277	410	648	1100	121	656	649	635
22	657	83	92	105	141	224	650	1080	638	653	428	631
23	657	83	93	204	322	482	641	790	641	652	148	620
24	653	87	90	108	329	469	638	528	640	652	637	617
25	655	87	86	93	328	486	541	531	649	534	652	632
26	278	88	91	274	329	561	294	1150	651	152	663	489
27	89	84	79	314	325	495	1270	1180	551	602	622	146
28	88	86	82	286	279	404	1230	1180	136	642	631	633
29	96	87	91	260	---	192	1390	1180	639	633	404	624
30	87	88	89	190	---	460	1620	884	649	635	156	610
31	86	---	89	103	---	457	---	612	---	633	627	---
TOTAL	12926	4312	2781	4000	7982	12222	20135	32534	21319	17346	16282	15883
MEAN	417	144	89.7	129	285	394	671	1049	711	560	525	529
MAX	688	448	114	314	333	561	1620	1670	1020	678	679	636
MIN	86	81	79	79	136	144	155	528	121	142	142	146
AC-FT	25640	8550	5520	7930	15830	24240	39940	64530	42290	34410	32300	31500
CAL YR 1980	TOTAL	350799	MEAN 958	MAX 5660	MIN 79	AC-FT 695800						
WTR YR 1981	TOTAL	167722	MEAN 460	MAX 1670	MIN 79	AC-FT 332700						

11281000 SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'18", long 120°00'43", in SE¼SE¼ sec.29, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 75 ft (23 m) downstream from highway bridge on Big Oak Flat Road, 0.5 mi (0.8 km) southwest of Oakland Recreation Camp, and 0.6 mi (1.0 km) upstream from Middle Tuolumne River.

DRAINAGE AREA.--87.0 mi² (225.3 km²).

PERIOD OF RECORD.--March 1923 to current year.

REVISED RECORDS.--WSP 1445: 1923, 1925(M), 1926-28, 1929-30(M), 1932(M), 1935-36(M), 1937-38, 1943(M), 1945(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (853 m), from topographic map. Prior to Nov. 22, 1931, at site 50 ft (15 m) upstream and Nov. 22, 1931, to July 19, 1977, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. No diversion above station. One small recreation reservoir (capacity unknown) is located approximately 3.5 mi (5.6 km) upstream. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--58 years, 93.1 ft³/s (2.637 m³/s), 67,450 acre-ft/yr (83.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s (337 m³/s) Dec. 23, 1955, gage height, 11.9 ft (3.63 m) from floodmarks, present datum, from rating curve extended above 3,300 ft³/s (93.5 m³/s) on basis of slope-area measurements at gage heights 9.08 ft (2.768 m) and 11.9 ft (3.63 m); minimum, 0.3 ft³/s (0.008 m³/s) Aug. 23, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 334 ft³/s (9.46 m³/s) Jan. 28, gage height, 4.80 ft (1.463 m), no peak above base of 900 ft³/s (25.5 m³/s); minimum daily, 2.6 ft³/s (0.074 m³/s) on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	15	17	40	46	78	223	57	12	4.3	2.6
2	11	12	15	17	39	51	92	210	53	11	4.2	2.6
3	11	12	21	17	37	52	77	174	49	11	4.2	2.6
4	10	12	106	19	35	48	71	145	45	10	4.2	2.7
5	10	12	39	18	33	46	72	135	42	10	4.1	2.7
6	10	12	25	17	33	43	81	118	38	9.9	4.0	2.7
7	10	12	21	17	32	41	88	110	35	9.6	3.9	2.7
8	10	12	20	17	32	42	83	110	33	9.2	3.7	2.7
9	9.9	12	20	17	46	42	85	122	31	8.8	3.6	2.7
10	9.7	12	20	17	47	42	92	132	29	8.4	3.4	2.7
11	9.7	23	19	16	42	44	89	129	27	8.0	3.3	2.8
12	10	26	19	16	42	45	88	120	26	7.7	3.2	2.7
13	11	19	19	17	42	53	89	117	25	7.5	3.3	2.7
14	12	17	18	17	82	47	101	115	24	7.3	3.2	2.7
15	13	18	18	16	76	48	111	94	23	7.0	3.2	2.8
16	14	17	18	18	60	51	121	80	22	6.8	3.1	2.8
17	14	16	19	19	59	48	124	75	21	6.5	3.0	3.0
18	14	16	19	18	57	45	131	81	20	6.3	2.9	3.4
19	14	16	18	17	57	124	135	111	19	6.2	2.7	3.2
20	13	16	18	17	57	123	111	91	18	6.1	2.7	2.9
21	13	16	18	17	53	135	104	77	17	5.8	2.8	2.9
22	13	16	19	17	51	133	128	77	16	5.5	2.7	2.9
23	12	16	19	48	50	108	177	78	15	5.4	2.7	2.9
24	12	16	18	34	57	91	207	105	15	5.3	2.6	2.9
25	12	16	18	24	53	118	199	93	15	5.1	2.7	3.2
26	14	16	18	22	49	194	177	94	14	4.9	2.7	3.1
27	14	16	18	175	45	127	134	90	14	4.8	2.8	3.6
28	14	15	18	236	45	105	147	83	13	4.7	2.8	3.9
29	13	15	18	124	---	99	197	76	13	4.6	2.6	6.5
30	13	15	17	61	---	90	227	71	12	4.5	2.6	4.8
31	13	---	17	45	---	81	---	63	---	4.4	2.6	---
TOTAL	370.3	461	685	1147	1351	2362	3606	3399	781	224.3	99.8	92.4
MEAN	11.9	15.4	22.1	37.0	48.3	76.2	120	110	26.0	7.24	3.22	3.08
MAX	14	26	106	236	82	194	227	223	57	12	4.3	6.5
MIN	9.7	12	15	16	32	41	71	63	12	4.4	2.6	2.6
AC-FT	734	914	1360	2280	2680	4690	7150	6740	1550	445	198	183
CAL YR 1980	TOTAL	66192.3	MEAN 181	MAX 2740	MIN 9.7	AC-FT 131300						
WTR YR 1981	TOTAL	14578.8	MEAN 39.9	MAX 236	MIN 2.6	AC-FT 28920						

SAN JOAQUIN RIVER BASIN

11282000 MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'42", long 120°00'38", in SW¼NW¼ sec.28, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 1,000 ft (305 m) downstream from Oakland Recreation Camp, 0.8 mi (1.3 km) upstream from South Fork Tuolumne River, and 2.7 mi (4.3 km) east of Buck Meadows Post Office.

DRAINAGE AREA.--73.5 mi² (190.4 km²).

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A. Published as Middle Fork of Tuolumne River near Buck Meadows 1917-32 and as "near Buck Meadows" 1933-40.

REVISED RECORDS.--WSP 1395: 1919(M), 1938(M), 1951(P). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (853 m), from topographic map.

REMARKS.--Records good. No regulation but small diversion above station for irrigation. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--65 years, 74.9 ft³/s (2.121 m³/s), 54,270 acre-ft/yr (66.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft³/s (139 m³/s) Dec. 23, 1955, gage height, 11.75 ft (3.581 m) from flood profile, 11.05 ft (3.368 m) from floodmarks inside gage well, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of slope-area measurement of maximum flow; no flow at times in 1924, 1931, 1934, 1961, and 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 349 ft³/s (9.88 m³/s) May 2, gage height, 3.93 ft (1.198 m), no peak above base of 380 ft³/s (10.8 m³/s); minimum daily, 0.12 ft³/s (0.003 m³/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	6.5	6.4	7.1	22	25	42	267	107	4.4	.64	.33
2	3.9	6.5	6.1	7.0	21	26	43	264	98	4.1	.45	.29
3	3.8	6.3	8.7	7.5	21	27	41	226	87	3.7	.66	.36
4	3.6	6.2	36	7.8	20	25	39	187	78	3.4	.56	.37
5	3.5	6.2	19	7.4	19	25	40	180	72	3.2	.59	.37
6	3.3	6.2	12	6.8	20	23	46	163	64	3.0	.62	.41
7	3.2	6.2	8.3	6.1	19	22	51	152	54	2.9	.64	.38
8	3.1	6.2	6.5	6.6	19	22	51	153	47	2.6	.64	.39
9	3.1	6.2	7.6	6.7	24	22	53	178	39	2.3	.70	.44
10	3.1	6.2	7.8	6.7	25	23	58	201	33	2.1	.64	.51
11	3.2	10	7.7	6.3	22	24	59	203	30	1.8	.46	.52
12	3.6	11	8.0	7.3	22	24	59	197	27	1.1	.51	.50
13	4.2	8.0	7.9	6.7	22	27	60	197	25	1.0	.29	.52
14	5.5	7.2	7.5	6.7	33	25	67	199	23	.97	.33	.56
15	7.1	7.0	7.8	6.9	34	26	77	163	21	.92	.45	.61
16	7.0	6.7	7.8	8.3	30	26	89	139	19	.75	.44	.90
17	6.7	6.4	8.3	8.6	28	25	98	129	18	.62	.33	.97
18	6.4	6.8	8.7	7.2	28	25	102	142	16	.59	.33	1.1
19	6.5	6.2	8.8	6.7	27	41	106	170	15	.53	.36	.97
20	6.8	6.4	8.7	6.6	27	50	87	144	14	.37	.31	.86
21	7.0	6.8	8.3	6.5	27	58	81	121	12	.35	.33	.90
22	6.3	6.8	8.7	7.0	26	55	105	121	11	.31	.36	.90
23	6.0	6.7	9.3	27	26	46	142	131	9.5	.23	.39	.82
24	6.0	6.5	9.4	20	29	41	174	183	8.9	.21	.48	.75
25	5.9	6.3	9.0	14	27	50	178	164	8.5	.21	.39	1.0
26	7.2	6.3	9.0	11	29	81	169	156	7.9	.16	.40	1.5
27	8.3	6.4	9.0	66	25	56	132	145	7.1	.14	.46	1.5
28	7.5	6.2	9.0	121	24	47	140	143	5.8	.12	.50	1.3
29	7.2	6.3	9.1	94	---	45	194	136	5.2	.23	.51	1.3
30	7.0	6.2	7.9	31	---	44	243	127	4.6	.62	1.1	1.2
31	6.8	---	7.6	24	---	43	---	116	---	.60	.36	---
TOTAL	167.0	202.9	295.9	562.5	696	1099	2826	5197	967.5	43.53	15.23	22.53
MEAN	5.39	6.76	9.55	18.1	24.9	35.5	94.2	168	32.3	1.40	.49	.75
MAX	8.3	11	36	121	34	81	243	267	107	4.4	1.1	1.5
MIN	3.1	6.2	6.1	6.1	19	22	39	116	4.6	.12	.29	.29
AC-FT	331	402	587	1120	1380	2180	5610	10310	1920	86	30	45
CAL YR 1980 TOTAL	53112.50			MEAN 145	MAX 1360	MIN 3.1	AC-FT 105300					
WTR YR 1981 TOTAL	12095.09			MEAN 33.1	MAX 267	MIN .12	AC-FT 23990					

11283500 CLAVEY RIVER NEAR BUCK MEADOWS, CA

LOCATION.--Lat 37°54'02", long 120°04'15", in SE¼NE¼ sec.35, T.1 N., R.17 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 300 ft (91 m) upstream from Forest Service road bridge, 1.7 mi (2.7 km) downstream from Quilty Creek, and 6 mi (10 km) north of Buck Meadows Post Office.

DRAINAGE AREA.--144 mi² (373 km²).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,374.08 ft (723.620 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No storage or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--22 years, 250 ft³/s (7.080 m³/s), 181,100 acre-ft/yr (223 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft³/s (549 m³/s) Jan. 13, 1980 gage height, 21.47 ft (6.544 m), from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement at gage height 21.40 ft; minimum daily, 1.2 ft³/s (0.034 m³/s) Sept. 11, 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Apr. 23, gage height, 8.80 ft (2.682 m), no peak above base of 1,400 ft³/s (39.6 m³/s); minimum daily, 6.0 ft³/s (0.17 m³/s) Aug. 30, 31, Sept. 7-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	21	26	80	102	293	677	207	23	9.4	6.1
2	19	20	22	26	82	105	286	619	200	21	9.2	6.2
3	18	20	24	26	77	100	255	500	171	20	9.1	6.1
4	18	19	159	35	73	103	239	424	156	20	9.1	6.2
5	18	19	63	34	72	101	302	399	171	21	9.0	6.1
6	18	19	41	28	71	100	383	362	157	22	8.8	6.1
7	18	19	32	26	69	104	407	346	129	21	8.5	6.0
8	18	18	26	26	68	109	377	338	112	20	8.1	6.0
9	17	19	28	26	85	117	393	379	100	19	7.8	6.0
10	17	19	27	25	84	131	433	402	91	18	7.6	6.0
11	18	25	26	25	80	155	400	396	82	18	7.5	6.0
12	18	31	27	25	84	147	387	374	74	17	7.4	6.0
13	20	26	26	25	87	157	402	369	68	17	7.6	6.3
14	20	24	26	25	152	132	449	372	63	16	7.6	6.5
15	23	23	26	25	174	129	479	319	58	16	7.4	6.6
16	24	22	27	27	165	138	503	272	54	16	7.3	6.6
17	24	22	27	33	169	137	499	223	51	15	7.1	6.3
18	24	22	28	31	185	131	493	239	49	14	6.9	6.5
19	23	22	30	29	183	263	471	509	47	14	6.7	6.7
20	23	21	29	28	193	306	399	362	44	14	6.8	6.3
21	22	21	29	28	167	316	392	272	41	13	6.9	6.3
22	21	21	30	27	159	357	523	242	39	13	6.9	6.3
23	21	21	32	78	161	339	687	268	36	12	6.8	6.2
24	20	23	32	67	171	304	769	360	33	12	6.8	6.2
25	20	22	31	52	144	367	676	337	31	11	6.8	8.0
26	24	21	30	49	121	493	640	332	29	11	6.8	11
27	24	21	29	305	107	378	441	321	27	11	6.6	9.3
28	23	21	30	341	104	334	474	307	26	10	6.4	8.5
29	22	21	30	147	---	346	635	282	24	10	6.2	8.4
30	21	21	28	100	---	319	709	273	24	9.7	6.0	8.3
31	20	---	27	85	---	288	---	238	---	9.5	6.0	---
TOTAL	635	643	1043	1830	3367	6608	13796	11113	2394	484.2	231.1	203.1
MEAN	20.5	21.4	33.6	59.0	120	213	460	358	79.8	15.6	7.45	6.77
MAX	24	31	159	341	193	493	769	677	207	23	9.4	11
MIN	17	18	21	25	68	100	239	223	24	9.5	6.0	6.0
AC-FT	1260	1280	2070	3630	6680	13110	27360	22040	4750	960	458	403
CAL YR 1980	TOTAL	172847.0	MEAN 472	MAX 9870	MIN 17	AC-FT 342800						
WTR YR 1981	TOTAL	42347.4	MEAN 116	MAX 769	MIN 6.0	AC-FT 84000						

SAN JOAQUIN RIVER BASIN

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA

LOCATION.--Lat 37°50'31", long 120°11'02", in SW¼NE¼ sec.23, T.1 S., R.16 E., Tuolumne County, Hydrologic Unit 18040009, on right bank 500 ft (152 m) upstream from Whites Gulch, and 2.5 mi (4.0 km) east of Groveland.

DRAINAGE AREA.--16.4 mi² (42.5 km²).

PERIOD OF RECORD.--May 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,561.79 ft (780.834 m) National Geodetic Vertical Datum of 1929 (levels by Boise-Cascade Corp.).

REMARKS.--Records good. No storage or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--12 years, 7.17 ft³/s (0.203 m³/s), 5,190 acre-ft/yr (6.40 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft³/s (41.1 m³/s) Jan. 13, 1980, gage height, 6.51 ft (1.984 m) from rating curve extended above 700 ft³/s (19.8 m³/s) on basis of slope-area measurement of peak flow; no flow many days in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of 6.4 ft (1.95 m) from floodmarks, discharge, 1,390 ft³/s (39.4 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft³/s (7.65 m³/s) Jan. 29 (0315 hrs), gage height, 3.96 ft (1.207 m), no other peak above base of 150 ft³/s (4.25 m³/s); minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.20	7.7	3.0	5.9	1.1	.22			
2			0	.19	4.9	4.8	5.5	1.1	.18			
3			.13	.20	3.8	3.8	4.8	1.0	.14			
4			3.5	.37	2.9	3.1	3.9	.98	.11			
5			.59	.36	2.4	4.2	3.4	.94	.08			
6			.19	.29	2.0	3.1	3.0	.92	.06			
7			.10	.26	1.7	2.5	2.7	.88	.04			
8			.06	.25	1.6	2.1	2.4	.84	.03			
9			.05	.24	3.7	1.9	2.3	.81	.03			
10			.05	.24	2.7	1.8	2.2	.78	.02			
11			.05	.23	2.2	1.7	2.0	.74	.02			
12			.05	.23	1.9	1.5	1.9	.71	.02			
13			.05	.23	1.8	3.8	1.8	.67	.01			
14			.05	.23	3.5	2.9	1.7	.65	.01			
15			.06	.23	2.6	2.2	1.5	.64	0			
16			.07	.34	1.9	2.9	1.5	.67	0			
17			.08	.36	1.7	2.2	1.4	.63	0			
18			.10	.30	1.5	1.9	2.0	.70	0			
19			.10	.27	1.4	18	8.4	.83	0			
20			.10	.27	1.3	56	6.0	.77	0			
21			.11	.26	1.2	50	3.5	.72	0			
22			.16	.34	1.2	42	2.7	.67	0			
23			.17	14	1.1	22	2.2	.62	0			
24			.17	7.9	4.1	14	1.8	.56	0			
25			.17	2.0	5.8	21	1.7	.55	0			
26			.17	1.3	4.3	38	1.6	.64	0			
27			.17	28	3.0	23	1.5	.74	0			
28			.17	72	2.6	15	1.4	.56	0			
29			.17	127	---	11	1.4	.45	0			
30			.18	30	---	8.8	1.2	.36	0			
31		---	.20	14	---	7.0	---	.28	---			---
TOTAL	0	0	7.22	302.09	76.5	375.2	83.3	22.51	.97	0	0	0
MEAN	0	0	.23	9.74	2.73	12.1	2.78	.73	.032	0	0	0
MAX	0	0	3.5	127	7.7	56	8.4	1.1	.22	0	0	0
MIN	0	0	0	.19	1.1	1.5	1.2	.28	0	0	0	0
AC-FT	0	0	14	599	152	744	165	45	1.9	0	0	0
CAL YR 1980	TOTAL	6196.29	MEAN	16.9	MAX	593	MIN	0	AC-FT	12290		
WTR YR 1981	TOTAL	867.79	MEAN	2.38	MAX	127	MIN	0	AC-FT	1720		

11284700 NORTH FORK TUOLUMNE RIVER NEAR LONG BARN, CA

LOCATION.--Lat 38°05'56", long 120°05'55", in NW¼SW¼ sec.22, T.3 N., R.17 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 0.6 mi (1.0 km) upstream from small tributary, 1.5 mi (2.4 km) east of Long Barn, and 3.8 mi (6.1 km) upstream from Wrights Creek.

DRAINAGE AREA.--23.1 mi² (59.8 km²).

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,650 ft (1,417 m), from topographic map.

REMARKS.--Records good. No storage or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--19 years, 27.2 ft³/s (0.770 m³/s), 19,710 acre-ft/yr (24.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft³/s (62.0 m³/s) (revised) Jan. 13, 1980, gage height, 8.80 ft (2.682 m) from floodmarks, from rating curve extended above 1,000 ft³/s (28.3 m³/s); minimum daily, 0.07 ft³/s (0.002 m³/s) July 29, 1976, and many days during 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 9.52 ft (2.902 m) (revised) from floodmarks, discharge, 2,560 ft³/s (72.5 m³/s) by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 131 ft³/s (3.71 m³/s) Mar. 25, gage height, 3.97 ft (1.210 m), no peak above base of 150 ft³/s (4.25 m³/s); minimum daily, 0.17 ft³/s (0.005 m³/s) Aug. 30, 31.

REVISIONS.--The maximum discharge for the water years 1963 and 1980 have been revised to 1,390 ft³/s (39.4 m³/s) Feb. 1, 1963, gage height 7.23 ft (2.204 m), and 2,190 ft³/s (62.0 m³/s) Jan. 13, 1980, gage height 8.80 ft (2.682 m), superceding figures published in WDR Calif. 1963 and WDR CA-80-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.0	4.6	3.3	9.0	15	41	51	12	2.4	.72	.21
2	1.3	2.0	3.2	3.1	9.8	16	42	47	11	2.3	.68	.29
3	1.2	2.0	3.0	2.7	9.8	17	38	40	11	2.2	.59	.32
4	1.3	1.9	3.0	4.6	10	17	35	35	10	2.2	.59	.37
5	1.3	1.9	2.9	3.2	11	17	36	31	9.2	2.1	.59	.37
6	1.3	1.8	2.5	3.1	10	16	38	29	8.5	2.2	.59	.33
7	1.2	1.8	2.5	3.0	9.7	16	39	27	8.1	2.1	.58	.32
8	1.2	1.8	2.6	3.2	10	17	37	25	7.7	1.9	.57	.33
9	1.2	1.8	2.6	3.5	13	17	38	24	6.7	1.7	.55	.33
10	1.2	1.8	2.7	3.4	13	17	38	24	4.2	1.6	.44	.32
11	1.3	3.2	2.8	3.6	15	19	37	23	5.9	1.5	.44	.34
12	1.6	3.2	2.8	2.8	16	19	36	21	5.9	1.3	.44	.37
13	1.7	3.0	2.8	2.7	18	19	35	20	5.8	1.2	.37	.36
14	2.2	2.9	2.8	2.6	39	19	37	20	5.6	1.2	.31	.30
15	2.3	2.9	3.0	2.6	30	19	39	19	5.2	1.1	.31	.30
16	2.2	2.8	3.4	4.0	25	21	40	20	4.7	1.1	.30	.30
17	2.2	3.0	3.0	3.8	26	20	41	17	4.4	1.0	.29	.31
18	2.4	3.3	2.9	3.2	24	19	44	22	4.1	1.0	.28	.30
19	2.7	3.0	2.9	3.1	24	58	48	28	4.0	.91	.27	.30
20	2.4	2.9	2.8	3.0	25	52	42	24	3.9	.84	.27	.29
21	2.2	2.9	3.0	2.9	21	52	40	22	3.9	.84	.23	.28
22	2.1	2.9	3.3	3.8	20	60	42	20	3.7	.87	.22	.22
23	2.0	2.7	3.0	6.0	19	54	51	18	3.5	.88	.21	.22
24	1.9	2.6	2.9	4.7	20	47	57	17	3.4	.88	.21	.23
25	2.1	2.6	2.9	4.7	18	75	56	17	3.2	.86	.21	.54
26	2.2	2.6	2.9	5.7	17	90	58	19	3.0	.80	.21	.34
27	2.1	2.9	2.7	15	16	64	48	20	2.6	.73	.21	.32
28	2.1	3.3	2.6	12	15	56	44	18	2.7	.74	.21	.34
29	2.1	3.1	2.6	8.0	---	52	47	15	2.6	.75	.18	.33
30	2.0	2.8	2.6	4.5	---	46	51	14	2.6	.73	.17	.28
31	2.0	---	3.0	4.5	---	42	---	13	---	.73	.17	---
TOTAL	56.4	77.4	90.3	136.3	493.3	1068	1275	740	169.1	40.66	11.41	9.46
MEAN	1.82	2.58	2.91	4.40	17.6	34.5	42.5	23.9	5.64	1.31	.37	.32
MAX	2.7	3.3	4.6	15	39	90	58	51	12	2.4	.72	.54
MIN	1.2	1.8	2.5	2.6	9.0	15	35	13	2.6	.73	.17	.21
AC-FT	112	154	179	270	978	2120	2530	1470	335	81	23	19
CAL YR 1980	TOTAL	18557.50	MEAN 50.7	MAX 960	MIN 1.2	AC-FT 36810						
WTR YR 1981	TOTAL	4167.33	MEAN 11.4	MAX 90	MIN .17	AC-FT 8270						

SAN JOAQUIN RIVER BASIN

11287500 DON PEDRO RESERVOIR NEAR LA GRANGE, CA

LOCATION.--Lat 37°42'06", Long 120°25'16", in NE¼SW¼ sec.3, T.3 S., R.14 E., Tuolumne County, Hydrologic Unit 18040009, on left end of New Don Pedro Dam on Tuolumne River, 500 ft (152 m) downstream from Mexican Gulch, and 3.4 mi (5.5 km) northeast of La Grange.

DRAINAGE AREA.--1,533 mi² (3,970 km²).

PERIOD OF RECORD.--September 1923 to current year. Year-end contents only 1923-24 and October 1924 to September 1930 monthend contents, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District). Prior to Feb. 1, 1941, nonrecording gage at site 1.5 mi (2.4 km) upstream at same datum. Feb. 2, 1941, to Nov. 3, 1970, water-stage recorder at site 1.5 mi (2.4 km) upstream at same datum. Nov. 4, 1970, to Apr. 26, 1972, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed June 23, 1971. Storage began Nov. 3, 1970. Total capacity, 2,030,000 acre-ft (2.50 km³) at elevation 830.0 ft (252.98 m) top of uncontrolled spillway, of which 309,000 acre-ft (381 hm³) below elevation 600.0 ft (182.88 m), mutually agreed-upon minimum, is not available for release. Water passes through powerplant at dam and down Tuolumne River to La Grange Dam, 2.5 mi (4.0 km) downstream, where it is diverted into Turlock and Modesto Canals (stations 11289500 and 11289000) for irrigation. This reservoir is operated jointly by Turlock and Modesto Irrigation Districts. Prior to June 1971, reservoir was formed by a concrete gravity-type dam completed Jan. 1, 1923, capacity, 290,400 acre-ft (358 hm³). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,938,000 acre-ft (2.39 km³) July 25, 1980, elevation, 822.8 ft (250.79 m); minimum, 29,200 acre-ft (36.0 hm³) Sept. 1-3, 5, 1934; minimum elevation, 475.0 ft (144.78 m) Sept. 1, 2, 1934. Minimum since construction of New Don Pedro Dam in 1970 under normal operations, 302,600 acre-ft (373 hm³) Oct. 14, 15, 1977, elevation, 598.2 ft (182.33 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,740,000 acre-ft (2.15 km³) Oct. 1, elevation, 806.3 ft (245.76 m); minimum, 1,117,000 acre-ft (1.38 km³) Sept. 22-25, elevation, 742.8 ft (226.41 m).

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

550	158,700	650	517,400	770	1,359,000
570	212,900	680	679,000	800	1,669,000
590	274,800	710	869,700	830	2,030,000
620	384,100	740	1,095,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740000	1673000	1617000	1546000	1504000	1482000	1494000	1467000	1458000	1375000	1256000	1155000
2	1733000	1670000	1614000	1542000	1503000	1481000	1494000	1469000	1455000	1372000	1255000	1151000
3	1728000	1666000	1611000	1540000	1501000	1479000	1493000	1470000	1453000	1369000	1252000	1149000
4	1721000	1661000	1610000	1540000	1500000	1479000	1494000	1471000	1450000	1368000	1249000	1146000
5	1714000	1659000	1607000	1537000	1498000	1479000	1495000	1473000	1447000	1367000	1247000	1144000
6	1707000	1657000	1605000	1533000	1496000	1478000	1495000	1474000	1445000	1364000	1242000	1144000
7	1700000	1653000	1605000	1529000	1496000	1478000	1494000	1475000	1444000	1362000	1239000	1144000
8	1695000	1651000	1602000	1525000	1496000	1479000	1494000	1476000	1442000	1357000	1232000	1141000
9	1698000	1650000	1598000	1520000	1495000	1478000	1492000	1476000	1443000	1353000	1227000	1138000
10	1685000	1649000	1594000	1518000	1493000	1477000	1491000	1476000	1444000	1349000	1224000	1134000
11	1682000	1649000	1590000	1518000	1492000	1475000	1491000	1476000	1445000	1344000	1221000	1132000
12	1680000	1647000	1587000	1515000	1491000	1474000	1492000	1477000	1446000	1339000	1218000	1129000
13	1680000	1645000	1585000	1512000	1490000	1473000	1492000	1478000	1445000	1335000	1215000	1129000
14	1679000	1642000	1585000	1508000	1491000	1473000	1491000	1479000	1445000	1330000	1211000	1128000
15	1679000	1641000	1582000	1505000	1492000	1474000	1487000	1478000	1442000	1325000	1208000	1125000
16	1679000	1640000	1578000	1503000	1492000	1472000	1483000	1475000	1439000	1321000	1203000	1124000
17	1679000	1638000	1574000	1500000	1491000	1471000	1480000	1472000	1436000	1317000	1199000	1121000
18	1679000	1636000	1571000	1501000	1490000	1469000	1476000	1470000	1432000	1312000	1196000	1119000
19	1680000	1634000	1569000	1498000	1490000	1471000	1476000	1468000	1427000	1308000	1192000	1119000
20	1679000	1630000	1567000	1495000	1489000	1474000	1472000	1467000	1421000	1302000	1189000	1119000
21	1678000	1628000	1567000	1492000	1489000	1477000	1470000	1467000	1416000	1297000	1185000	1118000
22	1678000	1627000	1563000	1489000	1490000	1481000	1469000	1466000	1411000	1293000	1182000	1117000
23	1678000	1627000	1559000	1490000	1487000	1483000	1467000	1465000	1407000	1288000	1178000	1117000
24	1678000	1625000	1557000	1489000	1487000	1483000	1466000	1465000	1402000	1283000	1175000	1117000
25	1677000	1623000	1557000	1490000	1485000	1485000	1466000	1464000	1398000	1278000	1173000	1117000
26	1676000	1620000	1556000	1487000	1483000	1490000	1467000	1463000	1395000	1275000	1172000	1118000
27	1675000	1620000	1555000	1490000	1482000	1491000	1467000	1463000	1390000	1270000	1168000	1120000
28	1675000	1620000	1554000	1494000	1481000	1493000	1466000	1461000	1387000	1267000	1165000	1120000
29	1676000	1619000	1552000	1502000	---	1495000	1465000	1461000	1381000	1263000	1162000	1120000
30	1676000	1620000	1548000	1504000	---	1495000	1465000	1459000	1377000	1260000	1162000	1120000
31	1677000	---	1546000	1504000	---	1495000	---	1459000	---	1258000	1160000	---
MAX	1740000	1673000	1617000	1546000	1504000	1495000	1495000	1479000	1458000	1375000	1256000	1155000
MIN	1675000	1619000	1546000	1487000	1481000	1469000	1465000	1459000	1377000	1258000	1160000	1117000
†	800.7	795.6	788.6	784.6	782.4	783.7	780.8	780.2	771.9	759.1	747.8	743.1
‡	-67000	-57000	-74000	-42000	-23000	+14000	-30000	-6000	-82000	-119000	-98000	-40000

CAL YR 1980 † -51000

WTR YR 1981 ‡ -624000

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

11289000 MODESTO CANAL NEAR LA GRANGE, CA

LOCATION.--Lat 37°40'04", long 120°27'26", in SE¼SW¼ sec.17, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.5 mi (0.8 km) northeast of La Grange, and 1.4 mi (2.2 km) downstream from intake at La Grange Dam.

PERIOD OF RECORD.--April 1903 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1904-9 (monthly figures only).

GAGE.--Water-stage recorder. V-notch sharp-crested weir since Mar. 19, 1963. Datum of gage is 272.4 ft (83.03 m) National Geodetic Vertical Datum of 1929 (levels by Modesto Irrigation District). See WSP 1930 for history of changes prior to March 1932. March 1932 to Aug. 14, 1975, on right bank at same datum.

REMARKS.--Records good. Canal diverts from right bank of Tuolumne River at La Grange Dam for irrigation in Modesto and Waterford Irrigation Districts. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--78 years, 411 ft³/s (11.64 m³/s), 297,800 acre-ft/yr (367 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,820 ft³/s (51.5 m³/s) July 1, 1935; no flow at times most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	764	34	524	.14	.13	27	550	381	478	824	444	975
2	792	34	580	.13	.12	1050	328	957	491	829	431	911
3	792	34	664	.12	.11	122	444	957	856	770	441	674
4	790	34	504	.11	.09	37	193	452	1080	445	480	747
5	793	762	541	.11	.09	37	24	283	1130	445	710	578
6	795	35	172	.09	.08	35	736	302	1160	762	960	257
7	796	30	24	.09	.08	29	766	290	1050	789	1010	253
8	915	29	678	.08	.07	27	743	321	1170	1080	1040	865
9	988	28	665	.07	.07	34	829	1110	1090	1120	945	810
10	960	410	684	.06	.05	144	686	1040	1110	1010	1020	848
11	304	530	704	.05	.05	209	290	535	1160	1010	828	849
12	273	856	690	.04	.04	259	177	430	1110	807	847	600
13	278	892	206	.04	.04	265	832	355	1050	1050	775	83
14	381	856	27	.03	.04	160	965	347	960	1220	743	668
15	454	524	675	.03	.03	26	1220	370	1190	1180	797	670
16	556	474	609	.01	.03	378	1280	1120	1250	1220	738	710
17	520	900	622	.01	.02	395	1100	1160	1070	1010	868	740
18	404	917	545	7.7	.01	386	1070	822	1110	1010	733	677
19	28	967	511	1060	.01	452	1050	821	1290	807	736	367
20	12	920	215	1020	0	971	1200	793	1160	1190	745	136
21	.15	874	26	1090	0	452	1220	790	570	1200	729	467
22	19	251	33	1050	0	26	1300	790	1140	1160	755	379
23	31	29	33	1050	0	361	1080	723	1020	1090	725	266
24	30	644	33	951	0	332	956	720	1020	1120	702	241
25	34	789	24	27	0	333	410	722	1030	1050	677	225
26	33	840	33	1040	0	330	331	720	1040	803	740	187
27	33	34	32	553	51	333	1000	810	997	1080	942	180
28	30	286	25	22	35	271	1100	906	447	1070	1040	255
29	29	252	32	1.5	---	22	1150	728	1000	1020	875	311
30	29	29	13	.26	---	330	1170	860	995	934	740	439
31	29	---	.17	.14	---	332	---	723	---	777	929	---
TOTAL	11892.15	13294	10124.17	7873.81	87.16	8165	24200	21338	30224	29882	24145	15368
MEAN	384	443	327	254	3.11	263	807	688	1007	964	779	512
MAX	988	967	704	1090	51	1050	1300	1160	1290	1220	1040	975
MIN	.15	28	.17	.01	0	22	24	283	447	445	431	83
AC-FT	23590	26370	20080	15620	173	16200	48000	42320	59950	59270	47890	30480
CAL YR 1980	TOTAL	205843.20	MEAN 562	MAX 1550	MIN 0	AC-FT 408300						
WTR YR 1981	TOTAL	196593.29	MEAN 539	MAX 1300	MIN 0	AC-FT 389900						

11289500 TURLOCK CANAL NEAR LA GRANGE, CA

LOCATION.--Lat 37°39'57", long 120°26'24", in NW¼NW¼ sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 2,400 ft (730 m) downstream from intake at La Grange Dam, and 1.2 mi (1.9 km) east of La Grange.

PERIOD OF RECORD.--October 1898 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1899-1908 (monthly figures only). WSP 1445: 1917-20, 1922.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 277.70 ft (84.643 m) National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District). See WSP 1930 for history of changes prior to Apr. 17, 1924.

REMARKS.--Records excellent. Canal diverts from left bank of Tuolumne River at La Grange Dam for irrigation in Turlock Irrigation District and to supply town of La Grange. Capacity of canal increased in March 1980. During fall and winter some unmeasured flow is diverted from canal at tunnel 0.3 mi (0.5 km) upstream from gage, passed through La Grange powerplant and returned to river. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--83 years, 629 ft³/s (17.81 m³/s), 455,700 acre-ft/yr (562 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,110 ft³/s (88.1 m³/s) July 15, 1980; no diversion for irrigation during some periods in some years. Prior to 1939, unmeasured small discharge during winter called zero.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	938	9.5	1670	23	45	9.0	937	1700	1980	1670	1470	1960
2	1080	8.3	1600	24	50	10	1210	1170	2080	1640	852	1930
3	1080	8.3	1570	24	50	787	1000	508	2050	1580	1810	1700
4	1080	17	1470	23	50	1050	490	1530	2100	810	1830	1680
5	1090	673	1480	23	49	909	50	1460	1830	770	1960	1240
6	1080	1600	1200	16	49	761	1110	1430	1550	1600	2110	56
7	1090	1980	67	15	26	452	1310	1550	380	1280	2150	56
8	1090	1520	1610	15	7.6	51	1330	1510	1570	1930	2520	1670
9	764	1110	1550	15	8.6	869	1330	1380	1350	2160	2510	1800
10	570	1480	1540	15	8.3	809	1280	442	1350	2220	1990	1760
11	565	61	1560	15	7.8	798	1210	1600	1340	2220	1480	1720
12	564	616	1570	15	7.4	854	54	1610	1170	2380	1640	1540
13	74	494	1310	15	6.9	952	1340	1630	1170	2200	2150	61
14	62	468	69	15	6.2	314	1360	1580	411	2200	2130	1450
15	59	231	1570	15	5.6	51	1580	2180	1420	2250	2090	1550
16	39	62	1550	14	5.5	219	2460	2270	1660	2140	2100	1400
17	27	526	1510	14	6.5	57	2470	2230	1780	2260	2210	1520
18	26	588	1470	13	6.5	56	2480	2300	2300	2240	2120	1320
19	25	633	1530	7.0	7.8	57	1950	2300	2530	2410	2100	962
20	26	600	74	3.6	10	55	1780	2090	2690	2340	2500	40
21	25	543	69	3.6	10	53	1530	1770	2760	2320	2150	924
22	24	560	75	3.4	9.1	48	1460	1800	2660	2320	2010	1010
23	20	382	65	3.2	11	53	1690	1590	2680	2350	1880	969
24	13	879	57	2.9	11	452	1440	1060	2640	2370	1680	909
25	13	954	50	2.7	11	678	1130	1020	2030	2450	1330	742
26	12	769	56	3.2	11	706	488	1750	1440	1990	1300	554
27	10	73	42	3.2	11	664	1450	2000	2470	2370	1700	24
28	10	342	24	2.7	10	235	1610	2020	2210	1700	1780	593
29	10	430	26	51	---	50	1770	1950	2730	1610	1110	713
30	10	83	26	110	---	604	1810	1710	2160	1590	67	640
31	8.3	---	25	52	---	588	---	1090	---	1500	1350	---
TOTAL	11484.3	17700.1	26485	557.5	497.8	13251.0	41109	50230	56491	60870	56079	32493
MEAN	370	590	854	18.0	17.8	427	1370	1620	1883	1964	1809	1083
MAX	1090	1980	1670	110	50	1050	2480	2300	2760	2450	2520	1960
MIN	8.3	8.3	24	2.7	5.5	9.0	50	442	380	770	67	24
AC-FT	22780	35110	52530	1110	987	26280	81540	99630	112000	120700	111200	64450
CAL YR 1980	TOTAL	374493.86	MEAN	1023	MAX	3110	MIN	0	AC-FT	742800		
WTR YR 1981	TOTAL	367247.70	MEAN	1006	MAX	2760	MIN	2.7	AC-FT	728400		

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA

LOCATION.--Lat 37°39'59", long 120°26'28", in NW¼NW¼ sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.5 mi (0.8 km) downstream from La Grange Dam, and 1.1 mi (1.8 km) east of La Grange.

DRAINAGE AREA.--1,538 mi² (3,983 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 170.19 ft (51.874 m) National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District).

REMARKS.--Records good. Flow diverted into Modesto Canal (station 11289000) and Turlock Canal (station 11289500) at La Grange Dam. Flow regulated by Don Pedro powerplant, Don Pedro Reservoir (station 11287500), 4.5 mi (7.2 km) upstream, Hetch Hetchy Reservoir (station 11275500), Cherry Lake (station 11277200), and Lake Eleanor (station 11277500). Tuolumne Canal (station 11297500) diverts water from the Stanislaus River basin into the Tuolumne River basin for power, irrigation, and domestic supply in the vicinity of Sonora upstream from station. Diversion through Hetch Hetchy aqueduct to San Francisco began Oct. 19, 1934; an average of 301 ft³/s (8.52 m³/s) was diverted during the current year. See schematic diagram of Tuolumne River basin. For records of combined discharge of river and Modesto and Turlock canals, see following page.

AVERAGE DISCHARGE (River only).--11 years, 620 ft³/s (17.56 m³/s), 449,200 acre-ft/yr (554 hm³/yr).
(Combined river and canals).--11 years, 1,924 ft³/s (54.49 m³/s), 1,394,000 acre-ft/yr (1.72 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 7,330 ft³/s (208 m³/s) Mar. 18, 1980, gage height, 12.98 ft (3.956 m); no flow for several days during September and October 1977.
Combined flow, maximum daily discharge, 7,280 ft³/s (206 m³/s) Mar. 18, 1980; minimum daily, 0.45 ft³/s (0.01 m³/s) Nov. 2, 1970.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 4,860 ft³/s (138 m³/s) Jan. 5, gage height, 10.87 ft (3.313 m); minimum daily, 6.2 ft³/s (0.18 m³/s) Sept. 13.
Combined flow, maximum daily discharge, 4,540 ft³/s (129 m³/s) Oct. 8; minimum daily, 150 ft³/s (4.25 m³/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1580	2800	525	392	386	381	452	23	128	123	19	232
2	2620	2560	522	2460	1490	812	448	20	17	126	19	71
3	2620	2860	523	1840	1480	1030	445	21	137	99	19	20
4	2610	2870	541	406	1480	984	448	20	226	15	98	19
5	2620	553	523	2920	1610	964	134	20	180	14	154	19
6	2640	415	523	2790	1440	780	213	21	17	102	196	21
7	2630	420	412	2980	1010	428	132	20	15	14	176	21
8	2530	422	524	2800	378	382	132	20	15	114	89	95
9	2210	421	523	2660	1550	838	150	20	14	139	23	21
10	1660	420	524	1990	1540	723	212	20	14	19	20	68
11	1270	421	523	378	1340	666	134	20	14	18	20	86
12	1300	476	520	2630	1310	627	135	20	14	18	20	20
13	1060	575	521	2420	1330	562	135	20	14	37	20	6.2
14	821	576	410	2480	632	523	136	20	14	171	20	10
15	854	576	523	2540	386	387	136	18	14	174	20	11
16	680	522	521	2250	389	1150	136	17	100	15	20	13
17	696	527	523	1640	1360	1240	136	20	16	14	20	10
18	480	524	524	407	1300	1360	136	17	98	14	20	8.8
19	258	529	524	1320	1340	1370	135	16	194	14	20	9.0
20	1700	530	1650	1350	1420	719	143	15	100	94	44	8.6
21	1620	527	415	1350	741	589	135	35	19	108	20	8.6
22	974	531	2410	1380	385	389	136	20	184	113	20	9.2
23	1000	418	2300	1100	1410	1180	136	19	142	58	20	9.4
24	1070	530	1940	589	1490	843	135	19	131	61	20	9.6
25	1950	529	377	376	1600	852	134	19	185	20	19	10
26	1450	530	1680	1010	1570	795	133	19	230	20	76	10
27	1390	413	1640	1450	1380	647	132	64	18	93	19	9.6
28	901	527	385	1990	967	525	135	147	17	70	63	8.6
29	928	526	2390	2000	---	385	264	19	16	104	21	11
30	923	409	2510	1900	---	877	253	17	130	19	19	10
31	931	---	2290	1500	---	780	---	17	---	19	19	---
TOTAL	45976	23937	29716	53298	32714	23788	5721	783	2413	2019	1353	865.6
MEAN	1483	798	959	1719	1168	767	191	25.3	80.4	65.1	43.6	28.9
MAX	2640	2870	2510	2980	1610	1370	452	147	230	174	196	232
MIN	258	409	377	376	378	381	132	15	14	14	19	6.2
AC-FT	91190	47480	58940	105700	64890	47180	11350	1550	4790	4000	2680	1720
CAL YR 1980 TOTAL	792206.7			MEAN 2164	MAX 7280	MIN 6.7	AC-FT 1571000					
WTR YR 1981 TOTAL	222583.6			MEAN 610	MAX 2980	MIN 6.2	AC-FT 441500					

SAN JOAQUIN RIVER BASIN

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF TUOLUMNE RIVER, MODESTO CANAL NEAR LA GRANGE, AND TURLOCK CANAL NEAR LA GRANGE, CA., WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3280	2840	2720	415	431	417	1940	2100	2590	2610	1930	3170
2	4490	2600	2700	2480	1540	1870	1990	2150	2590	2600	1300	2910
3	4490	2900	2750	1860	1530	1940	1890	1490	3050	2450	2270	2390
4	4480	2920	2510	429	1530	2070	1130	2000	3410	1280	2410	2450
5	4500	1990	2540	2940	1660	1910	208	1760	3140	1230	2820	1840
6	4520	2060	1890	2810	1490	1580	2060	1750	2730	2460	3270	334
7	4520	2430	503	3000	1040	909	2210	1860	1450	2080	3340	330
8	4540	1970	2810	2820	386	460	2200	1850	2760	3120	3650	2640
9	3960	1560	2740	2680	1560	1740	2310	2510	2450	3420	3480	2630
10	3190	2310	2740	2010	1550	1680	2180	1500	2470	3250	3030	2680
11	2140	1010	2780	393	1350	1680	1630	2160	2510	3250	2330	2660
12	2140	1950	2780	2650	1320	1740	366	2060	2290	3210	2510	2160
13	1410	1970	2040	2440	1340	1780	2310	2010	2230	3290	2950	150
14	1260	1900	506	2500	638	997	2470	1950	1380	3590	2890	2130
15	1370	1330	2770	2560	392	464	2940	2570	2620	3600	2910	2230
16	1280	1060	2680	2260	395	1750	3880	3410	3010	3380	2860	2120
17	1240	1960	2650	1650	1370	1690	3710	3410	2870	3280	3100	2270
18	910	2030	2540	428	1310	1800	3690	3140	3510	3260	2870	2010
19	311	2130	2560	2390	1350	1880	3140	3140	4010	3230	2860	1340
20	1740	2050	1940	2370	1430	1750	3120	2900	3950	3620	3290	185
21	1650	1950	510	2440	751	1090	2890	2600	3350	3630	2900	1400
22	1020	1340	2520	2430	394	463	2900	2610	3980	3590	2790	1400
23	1050	829	2400	2150	1420	1590	2910	2330	3840	3500	2630	1250
24	1110	2050	2030	1540	1500	1630	2540	1800	3790	3550	2400	1160
25	2000	2270	451	406	1610	1860	1670	1760	3250	3520	2030	977
26	1500	2140	1770	2050	1580	1840	952	2490	2710	2810	2120	751
27	1430	520	1710	2010	1440	1640	2580	2870	3490	3540	2660	214
28	941	1160	434	2020	1010	1030	2850	3080	2680	2840	2880	857
29	967	1210	2450	2050	---	457	3180	2700	3750	2730	2010	1030
30	962	521	2550	2010	---	1810	3230	2590	3290	2540	826	1090
31	968	---	2320	1550	---	1700	---	1830	---	2300	2300	---
TOTAL	69369	54960	66294	61741	33317	45217	71076	72380	89150	92760	81616	48758
MEAN	2238	1832	2139	1992	1190	1459	2369	2335	2972	2992	2633	1625
MAX	4540	2920	2810	3000	1660	2070	3880	3410	4010	3630	3650	3170
MIN	311	520	434	393	386	417	208	1490	1380	1230	826	150
AC-FT	137600	109000	131500	122500	66080	89690	141000	143600	176800	184000	161900	96710
CAL YR 1980	TOTAL	1372630	MEAN	3750	MAX	7280	MIN	311	AC-FT	2723000		
WTR YR 1981	TOTAL	786638	MEAN	2155	MAX	4540	MIN	150	AC-FT	1560000		

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 29.0°C Sept. 27, Oct. 15, 1977; minimum recorded, 6.0°C Feb. 6-8, 10, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 21.5°C Sept. 13; minimum recorded, 10.5°C on several days during April and July.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	12.0	13.0	12.0	13.0	12.5	12.0	12.0	12.0	11.5	11.5	11.5
2	12.5	12.5	13.0	12.5	13.0	13.0	12.0	11.5	12.0	11.5	11.5	11.5
3	12.5	12.5	13.0	12.5	13.0	13.0	12.5	12.0	12.0	11.5	12.0	11.5
4	13.0	12.5	13.0	12.5	13.0	13.0	12.0	12.0	12.0	11.5	11.5	11.5
5	13.0	12.5	13.0	12.5	13.0	12.5	12.0	11.5	12.0	11.5	12.0	11.5
6	13.0	12.5	13.0	12.5	13.0	12.5	12.0	12.0	12.0	11.5	12.0	11.5
7	13.0	12.5	13.0	12.5	13.0	12.5	12.0	11.5	12.0	11.5	12.0	11.5
8	13.0	12.5	13.0	12.5	13.0	12.0	12.0	12.0	11.5	11.5	12.0	11.5
9	13.0	12.5	13.0	12.5	13.0	12.5	12.0	12.0	12.0	11.5	12.0	11.5
10	13.0	12.5	13.0	12.5	13.0	12.5	12.0	12.0	12.0	11.5	12.0	11.5
11	12.5	12.5	13.0	12.5	13.0	12.5	12.0	11.5	12.0	11.5	12.0	11.5
12	13.0	12.5	13.0	12.5	13.0	12.5	12.0	11.5	12.0	11.5	12.0	11.5
13	12.5	12.0	13.0	12.5	13.0	12.5	12.5	12.0	11.5	11.5	12.0	11.5
14	12.5	12.0	13.0	12.5	13.0	12.5	12.5	12.0	12.0	11.5	12.0	11.5
15	12.5	12.0	13.0	12.5	13.0	12.5	12.5	12.0	12.0	11.5	11.5	11.5
16	12.5	12.0	13.0	12.5	13.0	12.5	12.5	12.0	12.0	11.5	12.0	11.5
17	12.5	12.0	13.0	12.5	13.0	12.5	12.0	12.0	12.0	11.5	12.0	11.5
18	12.5	12.0	13.0	12.5	13.0	12.5	12.0	12.0	12.0	11.5	12.0	11.5
19	12.5	12.0	13.0	12.5	13.0	12.5	12.0	11.5	12.0	11.5	12.0	11.5
20	12.5	12.5	13.0	12.5	13.0	12.0	12.0	12.0	12.0	11.0	12.0	11.5
21	13.0	12.0	13.0	12.5	13.0	12.5	12.0	12.0	12.0	11.5	12.0	11.5
22	12.5	12.0	13.0	13.0	13.0	12.5	12.0	12.0	12.0	11.0	12.5	11.5
23	12.5	12.0	13.0	12.5	12.5	12.5	12.0	12.0	12.0	11.5	12.5	11.5
24	12.5	12.0	13.0	12.5	12.5	12.0	12.0	11.5	11.5	11.5	12.0	11.5
25	12.5	12.0	13.0	12.5	12.5	12.0	12.0	11.5	11.5	11.5	12.0	11.5
26	12.5	12.0	13.0	12.5	12.5	12.0	12.0	11.5	12.0	11.5	12.0	11.5
27	12.5	12.0	13.0	12.5	12.5	12.0	12.0	12.0	12.0	11.0	12.0	11.5
28	12.5	12.0	13.0	12.5	12.0	12.0	12.0	12.0	11.5	11.5	12.5	11.5
29	12.5	12.0	13.0	12.5	12.0	12.0	12.0	11.5	---	---	12.0	11.5
30	12.5	12.0	13.0	12.5	12.0	12.0	12.0	12.0	---	---	12.0	11.5
31	12.5	12.0	---	---	12.5	12.0	12.0	11.5	---	---	12.0	11.5
MONTH	13.0	12.0	13.0	12.0	13.0	12.0	12.5	11.5	12.0	11.0	12.5	11.5
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.5	14.0	11.0	13.0	11.5	13.5	11.0	17.0	12.5	15.0	13.0
2	12.0	11.5	13.5	11.0	15.5	11.0	14.5	10.5	16.0	12.5	15.5	13.0
3	12.0	11.5	13.5	11.0	14.0	11.0	14.0	10.5	17.0	13.0	16.0	13.5
4	12.0	11.5	13.5	11.0	13.0	11.0	16.0	11.5	15.0	12.0	16.0	13.5
5	12.5	11.5	13.5	11.0	13.0	11.0	15.5	12.0	14.5	11.5	16.5	13.5
6	12.5	11.5	13.0	11.0	15.0	11.5	14.5	11.0	18.0	12.0	16.0	13.5
7	12.0	11.0	14.0	11.0	15.0	12.0	11.5	11.5	17.5	12.5	17.5	14.0
8	12.0	11.0	13.0	11.0	15.5	12.5	14.5	10.5	15.0	13.0	15.5	13.0
9	12.0	11.0	14.0	11.0	15.0	12.0	13.5	10.5	15.0	13.0	17.0	13.5
10	12.0	11.0	13.5	11.0	15.0	12.0	15.0	11.0	17.0	13.0	16.0	13.0
11	12.0	11.0	14.5	11.0	15.5	12.0	15.0	11.5	15.5	13.0	15.0	13.0
12	12.0	11.0	13.5	11.0	14.5	12.0	15.0	12.0	15.5	13.5	16.5	13.5
13	12.0	11.0	14.0	11.0	14.0	12.0	17.5	12.0	15.5	13.0	21.5	13.5
14	12.0	11.0	13.5	11.0	14.5	11.5	15.0	11.5	17.5	13.0	17.0	15.0
15	12.0	11.0	---	---	14.5	12.0	14.0	11.0	17.5	13.0	18.0	14.0
16	12.0	11.0	---	---	14.5	11.5	17.0	11.0	16.0	13.5	18.5	14.0
17	11.5	11.0	---	---	16.0	11.5	16.0	12.5	16.5	13.5	18.0	14.0
18	11.0	11.0	---	---	16.0	11.5	15.0	12.5	17.5	13.5	18.0	14.0
19	11.0	11.0	13.5	11.5	14.0	11.0	15.0	12.5	16.0	13.5	17.5	14.0
20	11.5	11.0	14.0	11.5	16.5	11.0	14.5	12.0	17.0	13.0	18.0	14.0
21	11.5	11.0	12.5	11.5	16.5	11.5	14.0	11.5	17.5	14.0	16.5	14.0
22	11.5	11.0	14.0	11.0	13.0	11.0	14.0	11.5	15.5	13.0	16.0	13.5
23	11.5	11.0	14.5	11.5	14.0	11.0	15.0	11.5	16.5	13.0	15.0	13.5
24	11.5	11.0	14.5	11.5	14.0	11.0	14.5	11.5	16.5	13.5	15.5	13.0
25	11.5	11.0	13.5	11.5	13.5	11.5	15.5	12.0	16.5	13.5	16.5	13.0
26	11.5	10.5	14.5	11.5	12.0	11.0	15.0	12.5	14.0	13.0	16.5	13.0
27	11.5	10.5	12.5	11.5	14.5	11.5	14.5	12.0	17.5	13.0	18.5	13.5
28	11.5	10.5	13.5	11.0	16.5	12.0	15.0	12.5	16.0	13.0	17.0	14.5
29	11.5	10.5	15.0	11.0	16.5	12.0	15.0	12.0	17.0	13.0	16.0	14.0
30	11.0	11.0	14.5	11.5	14.0	11.5	15.5	12.0	16.5	13.5	16.5	13.5
31	---	---	15.0	12.0	---	---	15.0	12.5	16.0	13.5	---	---
MONTH	12.5	10.5	15.0	11.0	16.5	11.0	17.5	10.5	18.0	11.5	21.5	13.0

SAN JOAQUIN RIVER BASIN

11289660 TUOLUMNE RIVER AT LA GRANGE BRIDGE, AT LA GRANGE, CA

LOCATION.--Lat 37°39'57", long 120°27'40", in NW¼NW¼ sec.20, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, at La Grange Bridge 0.2 mi (0.3 km) north of La Grange.

DRAINAGE AREA.--1,539 mi² (3,986 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1952-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOW LEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM CA+DISS (MG/L)	MAGNESIUM MG+DISS (MG/L)	SODIUM NA+DISS (MG/L)
80/10/07	10 30	26	7.1	12.0	10.4	6.0	0.6	12	3	1	2
81/01/14	13 15	32	7.1	13.0	12.1			12	3	1	1
81/04/08	11 00	41	6.9	13.0	9.4	6.0	1.6	14	4	1	2
81/05/13	09 30	40	7.0	12.0	9.9	5.0	0.8				
81/06/10	12 15	42	7.0	16.0	9.9	4.0	0.6				
81/07/08	09 15	37	6.8	15.0	9.7			12	3	1	2

DATE	TIME	PTSSIUH K+DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/10/07	10 30	0.4	11	0	1	24	0	0.06	0.00	0.10	0.01
81/01/14	13 15	0.5	10	1	1	13					
81/04/08	11 00	0.5	13	1	1	32	1	0.07	0.00	0.10	0.01
81/05/13	09 30						0	0.05	0.00	0.20	0.01
81/06/10	12 15						0	0.05	0.00	0.10	0.01
81/07/08	09 15	0.5	12	0	1	30					

DATE	TIME	DEPTH	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B+DISS (UG/L)
80/10/07	10 30		0.00	2.1	0
81/01/14	13 15				0
81/04/08	11 00		0.00	2.4	0
81/05/13	09 30		0.00	1.8	
81/06/10	12 15		0.00	1.7	
81/07/08	09 15				100

DATE	TIME	ARSENIC AS+DISS (UG/L)	BARIUM BA+DISS (UG/L)	CADMIUM CD+DISS (UG/L)	CHROMIUM CR+DISS (UG/L)	COPPER CU+DISS (UG/L)	IRON FE+DISS (UG/L)	LEAD PB+DISS (UG/L)	MANGNESE MN+DISS (UG/L)	MERCURY HG+TOTAL (UG/L)	SELENIUM SE+DISS (UG/L)
80/10/07	10 30	0	0	0	0	0	10	0	0	0.0	10
81/04/08	11 00	0	0	0	0	0	20	0	0	0.0	0

11290000 TUOLUMNE RIVER AT MODESTO, CA

LOCATION.--Lat 37°37'38", long 120°59'11", in SE¼SW¼ sec.33, T.3 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank at bridge on Ninth Street in Modesto, and 0.2 mi (0.3 km) downstream from Dry Creek.

DRAINAGE AREA.--1,884 mi² (4,880 km²).

PERIOD OF RECORD.--1878-84, 1891-94, 1897 (gage heights only), January 1895 to December 1896, April 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Modesto Irrigation District). Prior to July 11, 1947, at site 1,700 ft (518 m) downstream at same datum, July 11, 1947, to Nov. 16, 1953, at site 1,000 ft (305 m) downstream at same datum.

REMARKS.--Records good. Flow regulated by reservoirs and powerplants above station. In addition to diversions into Modesto and Turlock Canals (stations 11289000, 11289500), there are diversions for irrigation of about 1,300 acres (526 hm²) between station above La Grange Dam and at Modesto. See REMARKS for station 11289650 for Tuolumne River below La Grange Dam. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--42 years (water years 1896, 1941-81), 1,335 ft³/s (37.81 m³/s), 967,200 acre-ft/yr (1.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1895-96, 1941-81).--Maximum discharge observed, 57,000 ft³/s (1,610 m³/s) Dec. 9, 1950, elevation, 69.19 ft (21.089 m); minimum, 56 ft³/s (1.59 m³/s) Aug. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,250 ft³/s (120 m³/s) Jan. 30, elevation, 47.33 ft (14.426 m); minimum daily, 192 ft³/s (5.44 m³/s) July 9, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	2200	1500	2430	2050	1110	945	423	275	219	237	213
2	1660	3530	1510	1110	1130	724	739	353	229	284	223	219
3	2800	3590	1550	2170	1640	870	673	296	268	296	254	309
4	3020	3550	1600	2060	1730	1080	682	246	227	296	212	266
5	3120	3520	1600	1050	1710	1440	671	235	333	326	194	252
6	3160	1840	1670	2480	1810	1900	456	230	355	243	276	240
7	3170	1250	1660	2760	1700	1090	444	269	313	200	313	234
8	3140	1310	1590	2920	1320	839	385	241	258	224	352	219
9	3060	1310	1490	2850	946	697	415	240	224	192	347	234
10	2760	1300	1440	2740	1550	906	399	245	232	256	312	279
11	2230	1290	1440	2260	1700	917	432	233	222	285	210	236
12	1770	1280	1440	1100	1550	858	370	220	212	223	205	268
13	1660	1320	1480	2390	1500	851	363	224	214	214	217	274
14	1420	1380	1500	2550	1550	816	349	212	225	192	208	237
15	1230	1290	1450	2560	1110	771	339	223	216	221	219	202
16	1230	1290	1490	2650	899	662	346	242	211	297	245	208
17	1140	1270	1490	2490	794	1140	348	254	211	291	239	210
18	1260	1260	1490	2020	1390	1330	377	250	262	236	235	216
19	1200	1280	1480	1070	1480	1580	575	230	216	234	241	244
20	1090	1300	1460	1470	1500	3260	557	243	281	226	252	234
21	1990	1290	2170	1560	1580	2190	473	234	314	195	256	216
22	2130	1530	1570	1590	1130	1280	407	228	272	246	259	226
23	1530	1530	2660	1770	864	942	415	214	232	259	246	235
24	1520	1490	3000	1660	1420	1250	428	245	289	267	232	243
25	1730	1540	2490	1170	1570	1100	384	261	282	230	222	232
26	2580	1560	1130	969	1640	1860	374	242	326	258	241	235
27	2300	1560	1680	1360	1640	1510	379	244	369	247	215	246
28	2320	1500	1800	2120	1460	1020	351	252	339	241	230	240
29	2030	1530	1020	3260	---	887	373	279	271	248	221	245
30	2000	1560	2120	3940	---	731	404	297	225	258	259	282
31	2010	---	2500	2920	---	969	---	267	---	274	257	---
TOTAL	62810	51450	52470	65449	40363	36580	13853	7872	7903	7678	7629	7194
MEAN	2026	1715	1693	2111	1442	1180	462	254	263	248	246	240
MAX	3170	3590	3000	3940	2050	3260	945	423	369	326	352	309
MIN	550	1250	1020	969	794	662	339	212	211	192	194	202
AC-FT	124600	102100	104100	129800	80060	72560	27480	15610	15680	15230	15130	14270
CAL YR 1980 TOTAL	956011			2612	MAX 7970	MIN 211	AC-FT 1896000					
WTR YR 1981 TOTAL	361251			990	MAX 3940	MIN 192	AC-FT 716500					

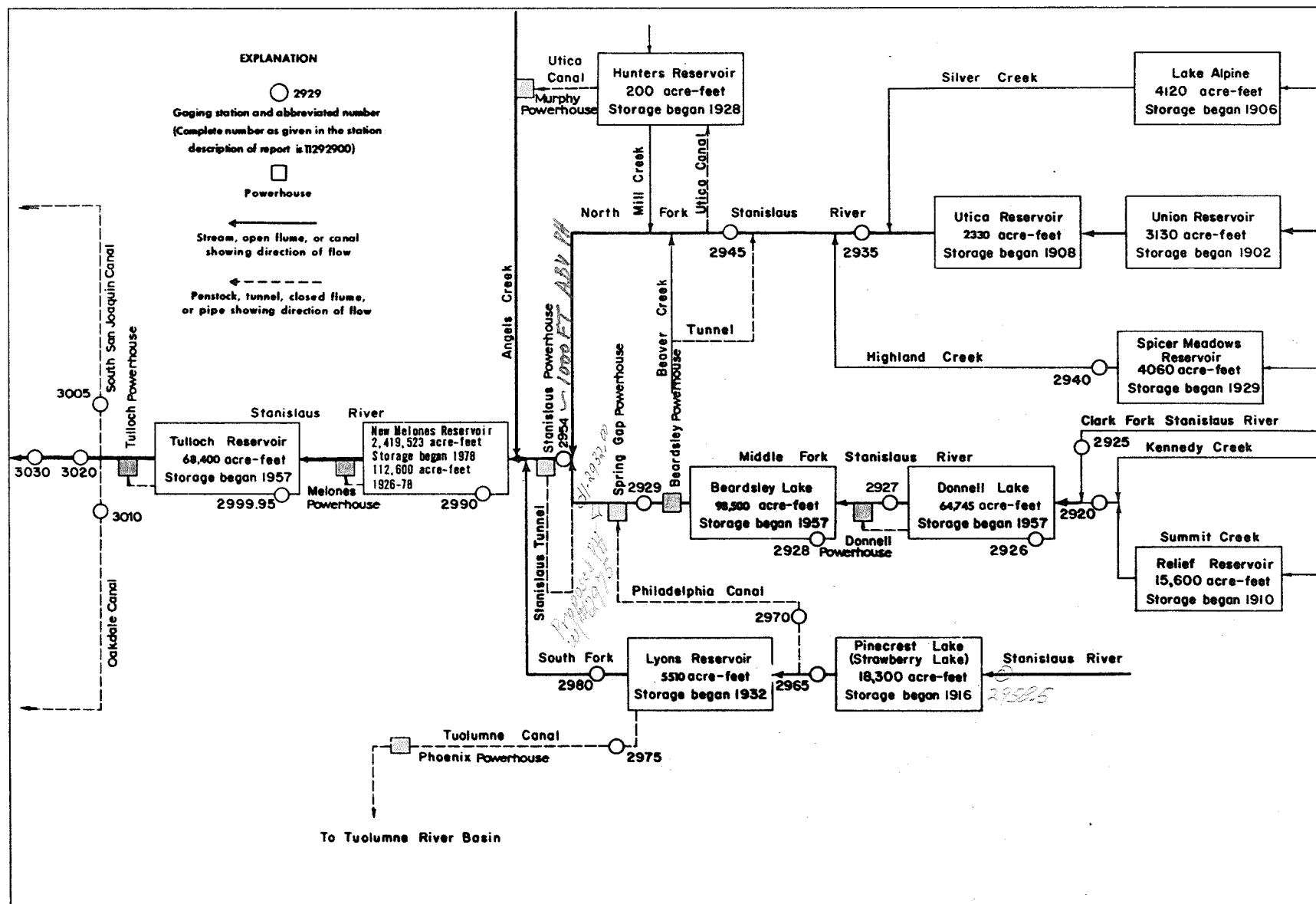


FIGURE 10.--Schematic diagram showing diversions and storage in Stanislaus River basin.

11290200 TUOLUMNE RIVER AT TUOLUMNE CITY, NEAR GRAYSON, CA

LOCATION.--Lat 37°36'12", long 121°07'49", in SE¼NE¼ sec.7, T.4 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, at Shiloh Bridge at the old town of Tuolumne City, 3.8 mi (6.1 km) northeast of Grayson, and 6.7 mi (10.8 km) southwest of Modesto.

DRAINAGE AREA.--1,897 mi² (4,913 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1934-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOW LEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM CA, DISS (MG/L)	MAGNESIUM MG, DISS (MG/L)	SODIUM NA, DISS (MG/L)
80/10/08	08 15	50	7.1	14.0	9.2	6.0	0.8	18	4	2	2
80/11/12	12 00	95	7.2	12.0	9.1	6.0					
80/12/10	11 00	86	7.2	9.0	9.2	9.0					
81/01/14	09 15	39	7.2	10.0	9.9	6.0	0.7	14	4	1	2
81/02/10	09 30	189		11.0	10.6	15					
81/03/11	09 00	129	7.3	13.0	9.3	9.0					
81/04/08	07 45	221	7.3	15.0	9.2	11	1.2	69	16	7	20
81/05/13	07 30	401	7.4	16.0	6.6	12	0.8				
81/06/10	10 15	345	7.6	24.0	7.2	11	0.5				
81/07/07	14 10	326	7.8	24.0	8.2			90	21	9	30

DATE	TIME	POTASSIUM K, DISS (MG/L)	ALKALINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT (MG/L)	PHOS-TOT AS P (MG/L)
80/10/08	08 15	0.8	16	0	2	33	10	0.06	0.00	0.20	0.04
80/11/12	12 00						12	0.42	0.01	0.20	0.04
80/12/10	11 00						32	0.32		0.30	0.04
81/01/14	09 15	0.6	14	1	2	22	12	0.09	0.01	0.20	0.03
81/02/10	09 30						11	1.00		0.20	0.05
81/03/11	09 00						13	0.43		0.30	0.06
81/04/08	07 45	1.8	64	8	24	143	17	1.00	0.04	0.30	0.08
81/05/13	07 30						16	1.80	0.04	0.50	0.21
81/06/10	10 15						16	1.40	0.02	1.00	0.20
81/07/07	14 10	2.8	88	12	37	207					

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)
80/10/08	08 15	0.01	2.8
80/11/12	12 00	0.02	
80/12/10	11 00		
81/01/14	09 15	0.01	2.7
81/03/11	09 00		
81/04/08	07 45	0.03	3.2
81/05/13	07 30	0.13	3.5
81/06/10	10 15	0.14	4.0
81/07/07	14 10		

DATE	TIME	ARSENIC AS, DISS (UG/L)	BARIUM BA, DISS (UG/L)	BORON B, DISS (UG/L)	CADMIUM CD, DISS (UG/L)	CHROMIUM CR, DISS (UG/L)	COPPER CU, DISS (UG/L)	IRON FE, DISS (UG/L)	LEAD PB, DISS (UG/L)	MANGANESE MN, DISS (UG/L)	MERCURY HG, TOTAL (UG/L)
80/10/08	08 15	0	0	0	0	0	0	20	0	0	0.0
81/01/14	09 15			0							
81/04/08	07 45	10	0	100	0	0	0	40	0	20	0.0
81/07/07	14 10			100							

DATE	TIME	SELENIUM SE, DISS (UG/L)
80/10/08	08 15	0
81/01/14	09 15	
81/04/08	07 45	10
81/07/07	14 10	

LOCATION.--Lat 38°17'51", long 119°44'25", in SW¼NE¼ sec.11, T.5 N., R.20 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at upper end of Kennedy Meadows, 1.3 mi (2.1 km) upstream from Deadman Creek, 1.6 mi (2.6 km) downstream from Relief Reservoir, and 5.8 mi (9.3 km) southwest of Bardanelle.

PERIOD OF RECORD.--October 1938 to current year. Records for water year 1946 incomplete, yearly estimate published in WSP 1315-A. Prior to October 1960, published as "at Kennedy Meadows."

GAGE.--Water-stage recorder. Datum of gage is 6,326.3 ft (1,928.26 m) National Geodetic Vertical Datum of 1929.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 1,700 ft³/s (48.1 m³/s) Nov. 20, 1950, gage height, 6.66 ft (2.030 m); minimum daily recorded, 7.1 ft³/s (0.20 m³/s) Jan. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 602 ft³/s (17.0 m³/s) May 29, gage height, 4.83 ft (1.472 m); minimum daily, 9.9 ft³/s (0.28 m³/s) Sept. 24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	18	17	18	17	22	28	237	398	109	168	14
2	149	18	18	18	17	22	28	221	402	157	167	14
3	147	18	19	18	16	22	28	184	392	243	165	13
4	147	18	21	19	17	22	28	152	403	239	163	13
5	145	18	20	18	17	22	34	132	462	236	160	13
6	144	18	20	18	16	21	43	115	550	234	159	13
7	141	18	21	16	16	21	47	102	533	236	156	12
8	140	18	23	15	16	21	47	98	467	230	154	13
9	139	18	29	15	16	21	53	114	467	222	153	13
10	137	17	25	15	16	22	59	177	441	217	151	13
11	135	22	21	15	16	24	59	311	323	214	150	13
12	142	20	19	15	16	23	58	209	168	210	148	14
13	136	18	19	15	18	24	61	392	99	207	146	13
14	133	18	19	15	34	23	71	491	83	204	144	13
15	131	18	22	15	25	23	86	453	74	202	142	12
16	129	17	21	15	24	23	101	448	82	201	140	12
17	126	19	20	14	31	23	102	427	91	198	137	14
18	124	18	20	14	29	23	101	430	125	196	135	13
19	122	18	19	14	31	27	96	427	189	193	132	12
20	120	18	19	14	30	28	81	285	203	191	132	11
21	118	18	20	14	27	28	87	74	186	189	138	11
22	115	18	21	14	27	28	125	77	170	187	136	11
23	113	18	19	16	28	28	173	85	166	185	132	10
24	110	17	19	15	27	26	210	104	158	183	127	9.9
25	107	17	19	16	27	30	197	139	142	181	120	13
26	103	17	19	17	26	32	161	144	114	180	113	12
27	63	17	19	18	24	29	126	144	112	178	100	11
28	19	17	19	16	23	28	125	207	109	176	24	10
29	19	17	19	16	---	32	174	380	117	174	15	10
30	19	17	19	20	---	29	225	555	132	172	14	11
31	19	---	19	18	---	28	---	477	---	171	14	---
TOTAL	3542	538	624	496	627	775	2814	7791	7358	6115	3935	366.9
MEAN	114	17.9	20.1	16.0	22.4	25.0	93.8	251	245	197	127	12.2
MAX	150	22	29	20	34	32	225	555	550	243	168	14
MIN	19	17	17	14	16	21	28	74	74	109	14	9.9
AC-FT	7030	1070	1240	984	1240	1540	5580	15450	14590	12130	7810	728
CAL YR 1980	TOTAL	70230.0	MEAN	192	MAX	1070	MIN	17	AC-FT	139300		
WTR YR 1981	TOTAL	34981.9	MEAN	95.8	MAX	555	MIN	9.9	AC-FT	69390		

11292500 CLARK FORK STANISLAUS RIVER NEAR DARDANELLE, CA

LOCATION.--Lat 38°21'50", long 119°52'13", in NE¼NE¼ sec.22, T.6 N., R.19 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.5 mi (0.8 km) upstream from mouth, and 2.6 mi (4.2 km) northwest of Dardanelle.

DRAINAGE AREA.--67.5 mi² (175 km²).

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,507.3 ft (1,678.62 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records good except those for the winter months, which are fair. No storage or diversion above station. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--31 years, 148 ft³/s (4.191 m³/s), 107,200 acre-ft/yr (132 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,350 ft³/s (123 m³/s) Nov. 20, 1950, gage height, 11.88 ft (3.621 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement of maximum flow; minimum daily, 9.8 ft³/s (0.28 m³/s) Sept. 11-15, 26-30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 766 ft³/s (21.7 m³/s) Apr. 30, gage height, 5.62 ft (1.713 m), no other peak above base of 600 ft³/s (17.0 m³/s); minimum daily, 17 ft³/s (0.48 m³/s) Sept. 6, 7, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	36	33	29	32	45	67	563	417	62	27	18
2	42	36	37	29	34	45	63	514	406	58	26	18
3	41	35	40	29	33	44	62	420	375	57	26	18
4	41	35	45	28	32	46	67	370	398	56	26	18
5	41	34	37	26	32	44	85	336	441	54	25	18
6	40	34	35	25	31	44	110	304	411	56	24	17
7	40	34	28	25	30	46	116	286	373	53	23	17
8	39	35	26	24	29	46	114	301	346	49	23	18
9	39	33	27	24	33	50	132	344	337	47	22	18
10	39	33	27	23	32	56	142	384	282	46	22	18
11	39	43	28	22	32	57	131	394	239	45	23	18
12	51	39	27	23	32	54	134	395	204	42	22	18
13	46	37	27	23	39	52	152	411	171	38	22	19
14	45	37	26	24	71	51	181	409	148	37	24	21
15	45	37	26	24	54	52	219	329	136	36	22	19
16	45	35	29	24	49	52	239	264	135	35	22	19
17	44	36	33	23	66	51	234	236	129	35	22	19
18	45	36	35	23	61	51	229	255	122	34	24	20
19	44	35	34	23	65	54	195	236	118	33	22	18
20	42	35	33	22	62	52	172	203	113	33	21	18
21	42	36	35	22	55	52	206	192	106	32	20	18
22	41	36	40	22	56	53	300	208	106	31	20	18
23	40	37	35	29	58	55	400	230	98	31	20	17
24	40	33	34	31	57	55	458	285	90	30	20	18
25	39	35	35	28	53	64	419	353	85	30	19	24
26	41	35	35	29	49	61	347	355	79	29	19	21
27	39	35	36	31	47	56	276	370	74	29	19	19
28	37	35	34	34	46	59	317	393	70	28	19	19
29	38	34	33	29	---	68	439	410	69	28	19	19
30	37	33	31	27	---	61	542	445	68	27	18	19
31	37	---	30	29	---	62	---	420	---	27	18	---
TOTAL	1282	1064	1011	804	1270	1638	6548	10615	6146	1228	679	559
MEAN	41.4	35.5	32.6	25.9	45.4	52.8	218	342	205	39.6	21.9	18.6
MAX	51	43	45	34	71	68	542	563	441	62	27	24
MIN	37	33	26	22	29	44	62	192	68	27	18	17
AC-FT	2540	2110	2010	1590	2520	3250	12990	21050	12190	2440	1350	1110
CAL YR 1980	TOTAL	84783	MEAN 232	MAX 1230	MIN 26	AC-FT 168200						
WTH YR 1981	TOTAL	32844	MEAN 90.0	MAX 563	MIN 17	AC-FT 65150						

11292600 DONNELL LAKE NEAR DARDANELLE, CA

LOCATION.--Lat 38°19'46", long 119°57'37" unsurveyed, T.6 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank in hoist house of Donnell Dam on Middle Fork Stanislaus River, 1.2 mi (1.9 km) downstream from Niagara Creek, and 6.9 mi (11.1 km) west of Dardanelle.

DRAINAGE AREA.--230 mi² (596 km²).

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1960, published as Donnell's Reservoir near Dardanelle.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.84 ft (1.475 m) National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Lake is formed by concrete arch-type dam complete in 1957. Usable capacity, 64,745 acre-ft (79.8 hm³), between gage heights 4,720.0 ft (1,438.66 m), minimum operating head and 4,917.0 ft (1,498.70 m), top of spillway gates. Lake is for power and conservation storage. Water passes through a 7.2-mi (11.6-km) tunnel to a powerplant and down the Middle Fork Stanislaus River to Beardsley Lake (station 11292800). Records, including extremes, represent total contents at 2400 hours of which 2,150 acre-ft (2.65 hm³) is below minimum operating head. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 64,900 acre-ft (80.0 hm³) May 8, 1963, gage height, 4,917.3 ft (1,498.79 m); minimum since reservoir first filled, 2,380 acre-ft (2.93 hm³) June 30, 1977, gage height, 4,721.8 ft (1,439.20 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 64,200 acre-ft (79.2 hm³) June 10, gage height, 4,915.7 ft (1,498.31 m); minimum, 5,850 acre-ft (7.21 hm³) Apr. 3, gage height, 4,740.1 ft (1,444.78 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

4,720	2,150	4,780	16,200
4,725	2,850	4,790	19,100
4,730	3,730	4,800	22,100
4,735	4,730	4,820	28,400
4,740	5,830	4,850	38,700
4,750	8,220	4,880	49,800
4,760	10,800	4,917.3	64,900
4,770	13,400		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31500	39700	42900	13100	6590	9510	6850	23500	63000	58000	51900	37100
2	31900	39700	43000	11800	6520	9280	6450	26400	63900	57500	52200	36200
3	32200	39800	43200	10400	6480	8850	5850	28900	64000	57500	51700	35200
4	32500	39900	43400	9050	6380	8520	6310	30000	64100	57600	51200	34300
5	32900	40000	43500	8340	6240	8270	6900	30900	64100	57400	50700	34300
6	33200	40100	43600	8140	6170	8240	6810	31200	64100	57500	50200	34300
7	33500	40200	43700	7970	6290	8490	6950	31400	64100	57300	49700	33800
8	33800	40300	43200	7870	6450	8770	7070	31600	64000	57000	49200	33000
9	34100	40400	41900	7700	5880	8620	7340	33000	64100	56700	48600	32100
10	34400	40500	40700	7820	5970	8470	7920	35100	64200	56300	48100	31200
11	34700	40700	39500	7920	6040	8320	8190	36600	64100	56800	47500	30300
12	35100	40800	38300	7800	6060	8140	8440	37700	63800	57300	46900	30300
13	35400	40900	37100	7630	6130	8020	8850	39300	63200	57000	46400	30300
14	35700	41000	35800	7480	6570	8290	9510	41100	62500	56600	45900	29500
15	36000	41100	34600	7360	6900	8600	10100	42500	61900	56200	45300	28600
16	36300	41200	33400	7240	7210	8420	10300	44600	61300	55900	44700	27700
17	36600	41300	32200	7360	7260	8390	10800	46400	60800	55800	44000	26700
18	36900	41400	30900	7460	7380	8270	10900	47600	60600	56200	43500	25800
19	37200	41500	29700	7310	7550	8270	10700	48700	60400	56400	42800	25800
20	37500	41600	28400	7140	7750	8170	10400	49500	60800	56100	42600	25800
21	37800	41700	27200	7020	8070	8520	10400	49900	61100	55700	42000	24900
22	38100	41800	26000	6880	8420	8870	11000	50000	60900	55300	42200	23900
23	38300	41900	24700	6810	8490	8390	12500	51100	60700	55000	42200	23200
24	38600	42000	23400	6920	8570	7950	14200	52400	60500	54700	41900	22200
25	38800	42200	22200	7020	8700	7700	15600	54100	60400	54200	41200	21400
26	39400	42200	20900	7040	8900	7410	16600	55000	59900	53800	40500	21400
27	39300	42400	19600	6760	9000	7040	16900	55900	59700	53300	39800	21400
28	39300	42500	18300	6590	9250	7460	17700	56600	59300	52900	39000	20700
29	39400	42600	17100	6500	---	7950	19100	57600	58800	52400	38900	19800
30	39500	42700	15700	6430	---	7600	21200	60300	58400	52000	38900	18900
31	39600	---	14400	6500	---	7190	---	61900	---	51500	38100	---
MAX	39600	42700	43700	13100	9250	9510	21200	61900	64200	58000	52200	37100
MIN	31500	39700	14400	6430	5880	7040	5850	23500	58400	51500	38100	18900
†	4852.4	4861.1	4773.6	4742.9	4754.1	4745.8	4797.1	4910.2	4901.8	4884.4	4848.3	4789.4
‡	+8500	+3100	-28300	-7900	+2750	-2060	+14010	+40700	-3500	-6900	-13400	-19200

CAL YR 1980 ‡ +1400
WTR YR 1981 ‡ -12200

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

LOCATION.--Lat 38°14'50", long 120°02'01", in NW¼NE¼ sec.31, T.5 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 200 ft (61 m) upstream from Donnell powerhouse, 800 ft (244 m) downstream from Hells Half Acre bridge, 1.1 mi (1.8 km) upstream from Cow Creek, and 4.7 mi (7.6 km) northwest of Pinecrest.

PERIOD OF RECORD.--February 1956 to current year. Prior to October 1965, published as Middle Fork Stanislaus River at Hells Half Acre bridge.

REMARKS.--Records good. Flow regulated by Relief Reservoir since 1909, capacity, 15,600 acre-ft (19.2 hm³), by Donnell Lake (station 11292600), and by diversion around station through Donnell powerplant. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) Dec. 24, 1964, gage height, 13.64 ft (4.158 m) in gage well, 14.2 ft (4.33 m) outside, from floodmarks, from rating curve extended above 5,200 ft³/s (147 m³/s) on basis of slope-area measurement at gage height 12.20 ft (3.719 m); minimum daily, 3.3 ft³/s (0.094 m³/s) Nov. 9, 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) June 6, gage height, 6.45 ft (1.966 m); minimum daily, 13 ft³/s (0.37 m³/s) Dec. 30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	36	14	18	26	50	130	349	93	46	35	38
2	39	36	14	18	28	51	121	311	91	46	35	37
3	39	36	16	17	27	49	114	257	372	45	35	37
4	39	28	37	21	26	50	113	227	535	44	34	36
5	49	26	22	18	27	50	131	210	642	44	34	36
6	49	26	19	17	24	50	156	194	771	44	34	36
7	49	26	18	17	24	54	166	182	686	44	34	36
8	49	26	17	16	25	56	162	173	592	43	34	36
9	49	26	17	16	32	59	174	174	496	42	33	36
10	49	26	17	16	31	63	185	179	310	43	33	36
11	50	31	17	16	31	70	179	171	249	43	43	35
12	51	28	17	16	33	66	175	161	107	42	50	34
13	51	27	16	16	35	69	183	157	68	42	50	34
14	51	27	16	16	74	64	197	153	64	40	50	34
15	52	27	16	16	75	64	215	141	56	40	49	33
16	52	27	16	18	64	66	225	130	53	40	49	33
17	52	27	16	18	68	67	226	119	50	40	49	33
18	52	27	16	17	67	66	235	142	48	40	48	32
19	52	27	16	17	68	86	225	204	57	39	48	32
20	52	22	15	16	73	91	196	157	59	39	48	32
21	52	21	15	16	65	93	212	140	57	39	48	33
22	52	21	16	16	63	102	264	133	56	38	48	31
23	52	21	16	26	64	106	341	131	54	36	48	31
24	52	21	15	24	69	102	364	127	53	36	45	31
25	52	21	15	20	64	154	333	131	52	36	44	31
26	53	21	15	19	58	200	341	140	50	36	43	30
27	53	21	14	60	52	140	257	130	49	35	43	30
28	53	21	14	69	51	131	278	117	49	35	42	30
29	53	16	14	43	---	138	335	109	48	35	42	30
30	49	14	13	32	---	126	365	102	47	35	40	29
31	36	---	16	27	---	121	---	97	---	35	38	---
TOTAL	1522	760	515	692	1344	2654	6598	5148	5914	1242	1306	1002
MEAN	49.1	25.3	16.6	22.3	48.0	85.6	220	166	197	40.1	42.1	33.4
MAX	53	36	37	69	75	200	365	349	771	46	50	38
MIN	36	14	13	16	24	49	113	97	47	35	33	29
AC-FT	3020	1510	1020	1370	2670	5260	13090	10210	11730	2460	2590	1990
CAL YR 1980	TOTAL	159184	MEAN	435	MAX	5250	MIN	13	AC-FT	315700		
WTR YR 1981	TOTAL	28697	MEAN	78.6	MAX	771	MIN	13	AC-FT	28620		

SAN JOAQUIN RIVER BASIN

11292800 BEARDSLEY LAKE NEAR STRAWBERRY, CA

LOCATION.--Lat 38°12'17", long 120°04'31", in SE¼NW¼ sec.14, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, in hoist house of Beardsley Dam on Middle Fork Stanislaus River, 2.4 mi (3.9 km) upstream from Spring Gap powerhouse, 3.9 mi (6.3 km) west of Strawberry, and 4.7 mi (7.6 km) west of Pinecrest.

DRAINAGE AREA.--309 mi² (800 km²).

PERIOD OF RECORD.--June 1957 to current year. Prior to October 1960, published as Lake Hartley near Strawberry.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.84 ft (2.390 m) National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Reservoir is formed by rockfill, earth-core dam completed in 1957. Capacity, 98,500 acre-ft (121 hm³) between gage heights 3,145.0 ft (958.60 m), tunnel invert and 3,398.0 ft (1,035.71 m), top of spillway gates. No dead storage. Reservoir is used for power and conservation storage. Water passes through Beardsley powerplant and down Middle Fork Stanislaus River to Melones Reservoir (station 11299000). Records, including extremes, represent contents at 2400 hours. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 98,700 acre-ft (122 hm³) June 27, 1957, gage height, 3,398.2 ft (1,035.77 m); minimum since reservoir first filled, 3 acre-ft (3,700 m³) Sept. 23, 1976, gage height, 3,154.4 ft (961.46 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 93,800 acre-ft (116 hm³) Oct. 1, gage height, 3,391.4 ft (1,033.70 m); minimum, 23,700 acre-ft (29.2 hm³) Feb. 8, gage height, 3,269.8 ft (996.64 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

3,154	2	3,240	11,600
3,160	41	3,260	19,500
3,170	267	3,290	33,100
3,180	693	3,320	48,800
3,190	1,370	3,350	66,400
3,200	2,373	3,370	79,200
3,210	3,790	3,398	98,500
3,220	5,720		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93800	64600	42300	47100	27300	24200	28200	46600	50900	65700	58600	51100
2	92500	64600	41300	47600	26600	24400	28200	46400	51600	65600	57600	51100
3	91400	64600	40400	48100	25900	24600	28600	46000	52700	65300	57400	51100
4	90200	64600	39600	48400	25200	24900	27800	46600	54100	64900	57300	51100
5	89100	64600	38600	48500	24600	25100	27200	47100	55800	64500	57200	50100
6	87900	64500	38400	47700	24200	24800	27500	47900	57600	64500	57100	49200
7	86700	64300	38100	47000	23900	24500	27700	48600	59300	65200	57000	48700
8	85500	64200	37600	46200	23700	24200	27800	49500	60800	65100	56900	48600
9	84200	64000	38000	45600	24300	24200	28000	49300	62200	64900	56800	48400
10	83000	64000	38300	44500	24300	24400	28000	48900	63200	64800	56600	48400
11	81800	63900	38700	43500	24100	24400	28000	49100	64200	63900	56600	48300
12	80600	63200	39000	42600	24000	24600	28200	49500	64700	62900	56500	47300
13	79500	62300	39300	41800	24000	24800	28400	49900	65300	62800	56500	46400
14	78300	61300	39600	41100	24200	24400	28500	50300	65800	62700	56400	46300
15	77100	60100	39900	40400	24100	24100	29000	50500	66200	62700	56300	46300
16	75900	58300	40200	39600	24200	24200	30100	49800	66700	63300	56300	46300
17	74700	57800	40600	38700	24400	24100	30800	49100	67100	62800	56200	46300
18	73500	56700	41200	37500	24500	24400	32300	49500	67100	61800	56100	46200
19	72300	56100	42300	36700	24600	24400	33200	49800	67100	60900	56000	45200
20	71200	54400	42700	36000	24700	24600	34100	50100	66700	60800	55500	44300
21	70100	53700	43100	35200	24700	24500	35000	50500	66400	60700	55500	44200
22	68900	52100	43600	34500	24300	24200	36000	50700	66400	60500	54900	44200
23	67700	51100	44000	33800	24400	24800	37100	50000	66300	60200	53500	43900
24	66600	49900	44300	32900	24600	25300	38300	49500	66300	60000	53400	43900
25	65400	48800	44600	31900	24700	26200	39600	48900	66100	60100	53300	43800
26	64500	47700	44900	31600	24600	27000	40900	49100	66100	60200	53200	42900
27	64600	46700	45200	30900	24600	27700	41900	49300	66000	60000	53100	42000
28	64700	45600	45600	30400	24400	27500	43000	50000	65900	59900	53100	42000
29	64800	44500	45800	29900	---	27300	44300	50600	65800	59800	52200	42000
30	64600	44000	46300	29600	---	27900	45600	50100	65800	59500	51200	41800
31	64600	---	46700	28200	---	28100	---	50300	---	59500	51100	---
MAX	93800	64600	46700	48500	27300	28100	45600	50700	67100	65700	58600	51100
MIN	64500	44000	37600	28200	23700	24100	27200	46000	50900	59500	51100	41800
†	5547.1	3311.2	3316.2	3279.6	3271.4	3279.4	3314.1	3322.8	3349.0	3338.6	3324.2	3307.1
‡	-30300	-20600	+2700	-18500	-3800	+3700	+17500	+4700	+15500	-6300	-8400	-9300

CAL YR 1980 † +3800

WTR YR 1981 † -53100

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

11292900 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA

LOCATION.--Lat 38°11'36", long 120°05'53", in NW¼NW¼ sec.22, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.5 mi (0.8 km) downstream from Beardsley afterbay dam, 1.5 mi (2.4 km) downstream from Beardsley Dam, and 5.7 mi (9.2 km) west of Pinecrest.

DRAINAGE AREA.--316 mi² (818 km²).

PERIOD OF RECORD.--December 1956 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,044.7 ft (928.02 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records good. No diversion above station. Flow regulated by Relief Reservoir, capacity, 15,600 acre-ft (19.2 hm³), Donnell Lake since April 1957 (station 11292600), and by Beardsley Lake since January 1957 (station 11292800). See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--24 years (water years 1958-81), 612 ft³/s (17.33 m³/s), 443,400 acre-ft/yr (547 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,630 ft³/s (188 m³/s) May 24, 1969, gage height, 11.07 ft (3.374 m); minimum daily, 3.0 ft³/s (0.085 m³/s) Oct. 10, 11, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 737 ft³/s (20.9 m³/s) Dec. 23, gage height, 5.82 ft (1.774 m); minimum daily, 25 ft³/s (0.71 m³/s) Nov. 2, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	494	26	564	504	483	151	459	435	450	473	502	510
2	506	25	561	508	480	194	481	437	443	493	500	510
3	513	50	561	509	476	234	473	436	444	492	494	510
4	509	50	482	511	472	228	443	463	445	490	492	507
5	486	50	537	505	469	229	435	475	444	489	495	507
6	485	25	123	508	343	228	438	456	443	462	493	505
7	485	77	136	505	167	230	439	449	447	127	488	506
8	486	74	502	508	152	228	431	446	443	453	490	508
9	486	118	517	506	125	230	432	444	445	524	488	507
10	480	98	520	508	131	231	436	443	445	507	488	508
11	478	102	520	507	150	233	441	446	442	498	486	507
12	477	270	521	519	151	228	440	449	440	502	483	508
13	478	541	523	535	133	229	436	443	437	501	483	506
14	477	582	524	508	52	229	438	445	437	500	487	508
15	475	589	511	511	53	230	437	447	438	489	487	508
16	475	622	488	521	54	232	436	447	435	142	486	507
17	477	615	487	519	134	227	432	446	441	474	499	506
18	477	610	429	518	151	226	270	444	455	514	508	506
19	478	599	138	517	155	230	464	446	467	538	506	507
20	479	601	493	515	151	231	490	441	468	520	508	506
21	479	600	486	513	153	231	507	442	466	508	510	509
22	477	599	426	511	153	233	510	444	466	505	509	506
23	580	596	535	513	152	226	506	444	466	501	510	506
24	635	592	544	506	152	228	476	443	463	499	510	506
25	634	589	545	501	153	230	439	442	464	425	508	504
26	492	576	545	497	151	231	439	444	434	361	507	504
27	47	578	547	505	150	231	440	445	432	496	507	437
28	53	574	547	504	149	229	438	446	499	501	506	372
29	51	569	549	500	---	230	435	447	492	502	508	506
30	66	568	522	492	---	307	438	446	469	499	508	510
31	50	---	505	488	---	400	---	450	---	500	510	---
TOTAL	13265	11565	14888	15772	5695	7254	13379	13831	13560	14485	15456	15007
MEAN	428	386	480	509	203	234	446	446	452	467	499	500
MAX	635	622	564	535	483	400	510	475	499	538	510	510
MIN	47	25	123	488	52	151	270	435	432	127	483	372
AC-FT	26310	22940	29530	31280	11300	14390	26540	27430	26900	28730	30660	29770
CAL YR 1980	TOTAL	366693	MEAN	1002	MAX	3950	MIN 25	AC-FT	727300			
WTR YR 1981	TOTAL	154157	MEAN	422	MAX	635	MIN 25	AC-FT	305800			

LOCATION.--Lat 38°26'22", long 120°00'53", in SE⁴ sec.20, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 100 ft (30 m) downstream from Silver Creek, and 5.6 mi (9.0 km) northeast of Big Meadows.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	45	10	9.8	5.3	10	22	508	118	4.9	18	23
2	21	44	13	8.7	4.8	9.6	17	404	111	4.8	18	23
3	21	44	13	7.5	4.6	11	17	281	94	4.7	18	23
4	20	44	14	8.8	4.4	13	27	238	85	4.7	17	23
5	20	44	13	7.2	4.3	11	50	217	88	4.4	17	23
6	20	44	13	4.3	4.2	12	65	193	81	5.0	17	23
7	20	43	13	3.9	4.0	16	60	183	65	4.6	17	23
8	20	43	13	3.7	4.0	18	60	190	53	4.4	17	24
9	20	43	13	3.6	4.1	23	74	232	47	4.2	17	25
10	23	37	13	3.6	4.2	27	64	260	41	4.3	17	25
11	35	31	13	3.6	4.2	25	61	249	32	4.7	19	25
12	36	30	13	3.5	4.5	18	70	228	27	4.6	20	25
13	35	29	13	3.5	7.8	16	74	232	23	4.5	20	25
14	34	29	13	3.5	25	14	85	233	29	4.4	20	25
15	33	29	10	3.5	25	16	155	186	18	4.4	21	25
16	33	28	4.7	3.6	23	15	244	126	14	4.4	20	24
17	35	21	4.4	4.0	29	16	227	105	13	4.3	20	24
18	35	12	4.4	4.4	28	15	217	193	12	4.3	20	26
19	35	12	4.3	4.4	31	14	174	248	11	4.3	20	28
20	38	12	4.3	4.1	33	13	131	147	10	4.3	20	28
21	41	12	5.1	3.9	23	12	181	117	9.5	4.2	20	28
22	41	12	8.6	4.1	24	14	311	126	8.7	4.2	20	28
23	41	12	5.9	6.9	26	18	425	145	7.8	4.1	20	28
24	43	11	4.7	6.8	22	20	461	172	7.0	8.8	20	27
25	45	9.7	4.6	5.7	16	22	408	206	6.6	23	20	29
26	45	9.5	5.3	4.5	13	18	361	221	6.2	23	20	30
27	45	9.5	5.5	4.2	11	14	198	183	5.6	22	20	30
28	46	9.4	4.8	4.7	11	17	288	172	5.4	21	22	30
29	46	9.3	6.2	5.6	---	24	492	160	5.3	21	23	30
30	46	9.1	11	6.5	---	18	550	150	5.2	21	23	30
31	45	---	11	5.8	---	20	---	134	---	20	23	---
TOTAL	1039	767.5	284.8	157.9	400.4	509.6	5569	6439	1039.3	263.0	604	780
MEAN	33.5	25.6	9.19	5.09	14.3	16.4	186	208	34.6	8.48	19.5	26.0
MAX	46	45	14	9.8	33	27	550	508	118	23	23	30
MIN	20	9.1	4.3	3.5	4.0	9.6	17	105	5.2	4.1	17	23
AC-FT	2060	1520	565	313	794	1010	11050	12770	2060	522	1200	1550
CAL YR 1980	TOTAL	43424.3	MEAN	119	MAX	1040	MIN	4.3	AC-FT	86130		
WTR YR 1981	TOTAL	17653.5	MEAN	48.9	MAX	550	MIN	3.5	AC-FT	35410		

LOCATION.--Lat 38°23'34", long 119°59'50", in SW¼ sec.5, T.6 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 500 ft (152 m) downstream from Spicer Meadows Reservoir dam, 5.8 mi (9.3 km) upstream from mouth, and 7 mi (11 km) east of Big Meadow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
Apr. 23	2030	*1,010	28.6	5.89	1.795
Apr. 30	2015	992	28.1	5.86	1.786

Minimum daily, no flow Nov. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	3.7	3.5	3.6	3.3	23	86	652	308	35	6.0	7.0
2	5.8	0	4.0	3.5	3.3	34	71	561	293	35	6.1	7.1
3	5.8	0	4.4	3.6	3.3	36	70	435	249	34	6.1	7.1
4	5.8	0	14	3.6	3.3	42	86	374	261	34	6.2	7.1
5	5.8	.70	10	3.6	3.4	39	133	340	266	33	6.1	7.1
6	5.8	3.9	8.1	3.6	3.4	40	184	307	240	33	6.2	7.2
7	5.8	4.1	6.8	3.6	3.4	47	185	292	206	33	6.1	7.2
8	5.8	4.1	5.8	3.6	3.4	51	173	298	181	33	6.4	7.4
9	5.7	4.0	4.4	3.6	3.5	60	207	341	172	33	6.3	7.4
10	5.7	3.8	4.2	3.6	3.5	69	233	377	130	32	5.9	7.5
11	5.7	3.6	6.3	3.6	3.5	72	211	373	99	32	5.8	7.5
12	5.7	60	5.0	3.6	3.6	61	206	360	83	32	5.9	7.8
13	5.7	15	5.3	3.7	3.6	60	231	371	69	29	5.9	7.7
14	5.6	4.5	7.0	3.7	3.7	53	292	367	59	26	6.0	8.0
15	5.6	4.0	5.3	3.7	3.7	57	346	298	53	26	6.0	8.1
16	5.6	3.7	5.8	3.7	3.8	58	365	223	50	26	6.1	8.2
17	5.6	3.7	6.0	3.7	4.2	57	348	205	48	22	6.1	8.1
18	5.6	3.5	6.0	3.7	4.2	56	336	300	44	19	6.2	8.0
19	5.5	3.3	6.1	3.7	4.2	68	278	363	41	19	6.4	8.0
20	5.4	3.1	6.2	3.7	4.3	58	228	254	40	19	6.3	7.9
21	5.2	3.0	7.5	3.7	4.3	59	293	222	37	19	6.4	7.5
22	5.4	3.0	5.7	3.5	4.4	64	455	235	47	19	6.4	7.5
23	5.3	3.1	3.5	3.2	4.5	69	608	258	44	19	6.5	7.5
24	5.3	3.1	3.4	3.2	5.0	70	666	301	39	11	6.5	7.5
25	5.3	2.8	3.4	3.2	5.5	106	559	362	39	6.0	6.6	7.5
26	5.2	3.1	3.5	3.2	5.8	100	510	380	31	5.9	6.6	7.5
27	5.2	3.2	3.5	3.2	6.4	69	307	341	25	5.8	6.7	7.5
28	5.1	3.2	3.6	3.2	9.6	73	416	341	25	5.7	6.7	7.5
29	5.0	3.2	3.6	3.2	---	91	609	334	30	5.8	6.8	7.5
30	5.0	3.3	3.6	3.2	---	74	688	336	35	5.9	6.8	7.5
31	4.5	---	3.6	3.3	---	76	---	313	---	6.0	7.0	---
TOTAL	170.3	159.70	169.1	108.8	118.1	1892	9380	10514	3244	694.1	195.1	226.4
MEAN	5.49	5.32	5.45	3.51	4.22	61.0	313	339	108	22.4	6.29	7.55
MAX	5.8	60	14	3.7	9.6	106	688	652	308	35	7.0	8.2
MIN	4.5	0	3.4	3.2	3.3	23	70	205	25	5.7	5.8	7.0
AC-FT	338	317	335	216	234	3750	18610	20850	6430	1380	387	449
CAL YR 1980	TOTAL	66897.40	MEAN	183	MAX	3110	MIN	0	AC-FT	132700		
WTR YR 1981	TOTAL	26671.60	MEAN	73.6	MAX	688	MIN	0	AC-FT	53300		

SAN JOAQUIN RIVER BASIN

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA

LOCATION.--Lat 38°14'45", long 120°17'20", in SW¼NE¼ sec.35, T.5 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 700 ft (213 m) upstream from intake of Utica Canal, 3.3 mi (5.3 km) upstream from Beaver Creek, and 5.1 mi (8.2 km) northeast of Avery.

DRAINAGE AREA.--163 mi² (422 km²).

PERIOD OF RECORD.--July 1914 to September 1925, November 1928 to current year. Yearly discharge only for some years, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1938(M). WSP 1515: 1915(M), 1932(M), 1936(M), 1938, 1940(M).

GAGE.--Water-stage recorder. Datum of gage is 3,388.3 ft (1,032.75 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to September 1922, nonrecording gage at same site at datum 0.05 ft (0.015 m) lower.

REMARKS.--Flow regulated at low and medium stages of Lake Alpine, Spicer Meadows, Union and Utica Reservoirs, combined capacity, 13,600 acre-ft (16.8 hm³). Diversion of a maximum of 10 ft³/s (0.28 m³/s) during summer from Beaver Creek into river above station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--64 years, 415 ft³/s (11.75 m³/s), 300,700 acre-ft/yr (371 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s) Jan. 31, 1963, gage height, 15.00 ft (4.572 m), from floodmarks, from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of slope-area measurement at gage height 13.8 ft (4.21 m); minimum daily, 5.5 ft³/s (0.16 m³/s) Dec. 6, 7, 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 23	2400	2,430 68.8	6.42 1.957
Apr. 26	0315	2,260 64.0	6.26 1.908
May 1	0130	*2,490 70.5	6.47 1.972

Minimum daily, 22 ft³/s (0.62 m³/s) on several days during January and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	60	25	29	57	121	371	1930	545	55	28	26
2	34	59	25	28	58	135	315	1740	524	53	25	26
3	34	58	40	28	57	138	281	1340	456	52	25	26
4	34	57	139	37	58	150	290	1140	415	51	25	26
5	33	56	63	35	60	144	427	1040	416	49	24	26
6	33	55	48	32	59	142	620	945	402	51	24	26
7	33	55	40	27	58	156	676	884	342	49	23	26
8	33	60	33	25	60	176	603	869	293	47	23	26
9	32	59	36	24	70	201	668	967	265	46	23	26
10	32	58	34	23	72	229	747	1060	245	45	23	28
11	38	59	32	22	71	270	679	1050	201	44	22	28
12	54	53	33	22	80	216	646	985	170	44	22	28
13	54	55	32	23	92	202	683	982	148	43	25	30
14	52	56	32	22	259	171	823	1000	129	41	25	31
15	53	45	33	22	251	174	953	876	117	36	25	29
16	52	42	34	27	173	189	1120	662	98	36	25	28
17	51	42	31	29	239	190	1110	545	91	35	24	28
18	52	39	29	28	210	179	1100	728	88	34	24	30
19	52	28	28	27	225	297	994	1170	88	29	24	29
20	52	26	28	27	256	281	764	792	82	28	24	31
21	55	26	28	26	187	258	878	608	77	28	24	31
22	57	25	34	26	176	319	1280	589	71	27	24	30
23	57	26	39	57	182	342	1670	610	77	27	24	30
24	56	27	31	60	197	310	1870	686	73	26	24	30
25	59	26	27	46	164	567	1720	806	66	26	24	35
26	63	25	26	43	137	680	1760	902	64	28	24	36
27	62	23	26	165	121	391	1070	801	57	31	24	34
28	61	23	27	178	122	321	1190	750	47	31	23	34
29	61	23	26	91	---	422	1700	693	45	29	23	33
30	61	24	24	65	---	361	1970	655	47	29	26	33
31	61	---	26	57	---	318	---	616	---	29	26	---
TOTAL	1496	1270	1109	1351	3751	8050	28978	28421	5739	1179	749	880
MEAN	48.3	42.3	35.8	43.6	134	260	966	917	191	38.0	24.2	29.3
MAX	63	60	139	178	259	680	1970	1930	545	55	28	36
MIN	32	23	24	22	57	121	281	545	45	26	22	26
AC-FT	2970	2520	2200	2680	7440	15970	57480	56370	11380	2340	1490	1750
CAL YR 1980	TOTAL	246848	MEAN 674	MAX 15100	MIN 23	AC-FT 489600						
WTR YR 1981	TOTAL	82973	MEAN 227	MAX 1970	MIN 22	AC-FT 164600						

PKS: 79 WY 6920 CFS @ 14.00'
 78 6750 — 13.91
 77 467 — 8.35
 76 1,340 — 9.94
 75 10,600 — 15.59

70 17,300 @ 17.98'

for 11-2954.00

SAN JOAQUIN RIVER BASIN

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA

LOCATION.--Lat 38°08'29", long 120°22'19", in NW¼SW¼ sec.6, T.3 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, on right bank 1,000 ft (300 m) upstream from Stanislaus powerplant, and 3.6 mi (5.8 km) south of Hathaway Pines.

DRAINAGE AREA.--629 mi² (1,629 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1967 to current year.

REVISED RECORDS.--WDR CA-80-3: 1979.

GAGE.--Water-stage recorder. Datum of gage is 1,030.00 ft (313.944 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Records good. Many diversions above station for hydroelectric powerplants. Small diversions for domestic water supply. Stanislaus tunnel diverts from left bank of Middle Fork Stanislaus River 13.7 mi (22.0 km) upstream from station in SE¼ sec.24, T.4 N., R.16 E., to Stanislaus powerplant 1,000 ft (300 m) downstream from station. See schematic diagram of Stanislaus River basin. For records of combined discharge of river and tunnel, see following page.

COOPERATION.--Records of diversion to Stanislaus powerplant furnished by Pacific Gas and Electric Co.

AVERAGE DISCHARGE.--River only: 14 years, 781 ft³/s (22.12 m³/s), 565,800 acre-ft/yr (698 hm³/yr); Combined river and powerplant: 14 years, 1,245 ft³/s (35.26 m³/s), 902,000 acre-ft/yr (1.11 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 34,400 ft³/s (974 m³/s) Jan. 13, 1980, gage height, 21.50 ft (6.553 m) from rating curve extended above 10,000 ft³/s (283 m³/s) on basis of computation of peak flow over a weir; minimum daily, 9.4 ft³/s (0.27 m³/s) Aug. 7, 1977. Combined flow, maximum discharge, 34,800 ft³/s (986 m³/s) Jan. 13, 1980; minimum daily, 27 ft³/s (0.76 m³/s) July 20, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 3,090 ft³/s (87.5 m³/s) Apr. 24, gage height, 11.68 ft (3.560 m); minimum daily, 13 ft³/s (0.37 m³/s) July 18. Combined flow, maximum discharge, 3,700 ft³/s (105 m³/s) Apr. 24; minimum daily, 28 ft³/s (0.79 m³/s) Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	55	115	33	138	127	643	2320	534	41	23	22
2	161	42	113	30	88	131	639	2090	505	31	24	22
3	165	40	108	30	75	146	594	1550	444	30	25	22
4	177	60	281	43	67	147	543	1270	382	27	24	22
5	186	82	115	42	61	155	640	1170	388	25	21	22
6	197	74	94	36	61	157	849	1030	370	23	22	22
7	208	94	36	33	53	145	936	933	309	21	23	22
8	208	36	25	33	49	169	856	889	266	19	24	22
9	208	25	65	32	63	223	884	986	228	16	20	22
10	208	24	82	31	71	258	985	1110	211	39	20	22
11	208	26	86	30	66	305	919	1110	174	37	20	21
12	210	29	65	30	67	289	873	1020	140	33	20	21
13	207	29	48	40	70	243	888	1010	110	33	21	22
14	206	49	49	49	283	213	1020	1030	89	33	21	23
15	208	119	51	36	388	185	1160	903	95	33	22	23
16	206	136	48	37	228	244	1390	702	65	32	22	23
17	198	149	34	49	276	246	1370	571	44	17	21	23
18	195	149	31	45	263	227	1320	649	41	13	21	23
19	194	147	33	42	260	390	1210	1300	39	31	21	22
20	193	135	29	41	307	566	947	850	38	52	21	22
21	193	141	25	39	235	477	1040	641	43	38	21	22
22	188	141	46	38	204	629	1490	595	44	35	21	22
23	185	141	62	113	205	614	2050	607	46	33	21	22
24	182	141	36	106	246	520	2360	664	44	31	21	22
25	176	134	52	60	218	1040	2180	757	42	32	21	25
26	175	132	55	46	169	1640	2190	885	42	22	21	23
27	70	113	56	387	138	935	1270	820	33	21	22	22
28	38	118	61	637	129	732	1320	740	27	23	21	22
29	28	117	61	400	---	764	1960	681	55	24	21	22
30	50	113	60	239	---	705	2360	641	53	26	21	23
31	79	---	43	187	---	624	---	607	---	24	21	---
TOTAL	5264	2791	2065	2994	4478	13246	36886	30131	4901	895	668	668
MEAN	170	93.0	66.6	96.6	160	427	1230	972	163	28.9	21.5	22.3
MAX	210	149	281	637	388	1640	2360	2320	534	52	25	25
MIN	28	24	25	30	49	127	543	571	27	13	20	21
AC-FT	10440	5540	4100	5940	8880	26270	73160	59760	9720	1780	1320	1320
CAL YR 1980 TOTAL	527062			1440	20100	MIN 24	AC-FT	1045000				
WTR YR 1981 TOTAL	104987			288	2360	MIN 13	AC-FT	208200				

From Tom Hunter: PZF = 5.05 50 1077.21
5.05
1082.26' EI amsl when BW starts.

IN '83 WY: July 10, '83, MAX GH 12.67 = 4510 CFS (WITHOUT BW EFFECTS)
MEAN GH 12.27' = ?? CFS NEW MELONS = 1086.42 (MAX FOR WY '83)

CMM's MAY 16 & AUG 3 SHOWED +3% ± FROM RT ?

PK FOR '83 WY ON JUNE 18 @ 15.78 = 14,100 CFS

JOHN SILVEIRA
W/GIBBS & HILL, SAN JOE
HOME: SAC 481-1045
DONALD CHARLTON, NY

SAN JOAQUIN RIVER BASIN

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF STANISLAUS RIVER AND STANISLAUS POWERPLANT AT STANISLAUS, NEAR HATHAWAY PINES, CA., WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	648	55	594	576	653	284	1160	2860	1050	584	552	556
2	684	42	685	557	560	357	1160	2580	990	538	534	551
3	682	40	587	581	598	454	1140	2130	995	547	551	561
4	739	60	834	580	584	337	1090	1780	870	529	560	542
5	706	82	636	499	542	393	1160	1710	912	598	540	534
6	684	74	469	559	501	467	1370	1540	869	481	510	495
7	708	147	143	550	255	384	1470	1430	795	324	571	554
8	686	100	450	562	202	436	1350	1390	808	425	481	505
9	737	126	597	564	191	482	1360	1520	757	538	571	573
10	778	115	597	560	161	584	1530	1640	790	589	557	560
11	731	60	634	613	269	583	1500	1540	689	569	593	531
12	757	216	629	530	214	587	1340	1570	673	558	497	537
13	669	580	569	574	241	554	1380	1550	589	580	570	543
14	742	568	595	527	396	513	1540	1530	627	505	541	522
15	694	638	550	598	452	486	1760	1430	632	532	535	554
16	758	711	562	539	292	568	1880	1210	524	307	529	531
17	690	675	574	577	423	506	1880	1080	585	498	534	566
18	720	677	440	555	461	411	1610	1190	545	545	591	534
19	697	690	348	545	460	712	1800	1850	563	519	519	534
20	734	686	482	601	479	909	1450	1340	559	602	555	524
21	747	672	538	554	392	761	1590	1140	568	626	545	525
22	694	606	501	572	389	999	2010	1160	645	529	480	537
23	727	669	592	644	342	901	2540	1170	498	565	599	540
24	685	674	543	637	362	908	2970	1160	622	553	504	561
25	722	691	562	580	311	1340	2640	1280	570	548	569	534
26	671	653	513	532	424	2050	2710	1410	569	362	536	578
27	211	662	473	940	308	1270	1770	1310	540	571	498	482
28	38	614	628	1160	269	1070	1910	1250	519	549	548	326
29	28	648	649	940	---	1070	2480	1220	624	555	522	543
30	50	652	603	754	---	1060	2830	1140	544	536	521	424
31	79	---	549	719	---	1100	---	1140	---	571	538	---
TOTAL	18896	12883	17126	19279	10731	22536	52380	46250	20521	16333	16751	15857
MEAN	610	429	552	622	383	727	1746	1492	684	527	540	529
MAX	778	711	834	1160	653	2050	2970	2860	1050	626	599	578
MIN	28	40	143	499	161	284	1090	1080	498	307	480	326
AC-FT	37480	25550	33970	38240	21280	44700	103900	91740	40780	32400	33230	31450
CAL YR 1980	TOTAL	715380	MEAN	1955	MAX	20600	MIN 28	AC-FT	1419000			
WTR YR 1981	TOTAL	269543	MEAN	738	MAX	2970	MIN 28	AC-FT	534600			

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1970 to March 1978, October 1978 to current year.

INSTRUMENTATION.--Temperature recorder February 1970 to March 1978 and since October 1978.

REMARKS.--Water temperatures are affected by the powerplant operation.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C July 19, 20, 1977; minimum recorded, 1.5°C Jan. 3, 1975, Dec. 22, 27-29, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 19.0°C June 5, 6, 8, Aug. 29; minimum recorded, 5.5°C Jan. 31, Feb. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.0	13.5	11.5	10.5	12.0	11.5	8.5	8.0	7.5	5.5	7.5	7.0
2	16.0	14.0	12.5	10.5	12.5	12.0	8.5	8.0	7.5	6.5	8.5	7.5
3	15.5	13.5	12.5	10.5	12.0	11.5	9.0	8.5	7.5	7.0	8.5	7.5
4	15.5	14.0	12.5	10.5	11.5	10.0	9.0	8.5	7.5	6.5	9.0	8.5
5	15.5	14.0	12.0	10.5	11.5	10.5	8.5	8.0	7.5	7.0	8.5	8.0
6	15.5	14.0	13.0	11.5	11.0	9.0	8.0	7.5	8.0	7.0	9.5	8.5
7	15.5	14.0	13.0	11.5	9.0	7.5	8.0	7.5	8.0	7.0	9.5	8.5
8	15.5	14.0	14.0	12.5	9.5	7.0	8.0	7.5	7.5	7.0	10.0	9.0
9	15.5	14.0	13.5	12.5	10.0	8.0	8.0	7.5	8.5	7.5	10.0	9.0
10	15.0	13.5	13.0	12.0	9.5	7.5	8.0	7.5	8.5	7.5	10.5	9.0
11	14.5	13.5	13.0	12.5	9.5	8.0	8.5	7.5	8.5	7.5	10.0	9.0
12	14.5	14.0	13.0	11.5	10.0	8.0	8.5	8.0	9.5	8.0	9.5	8.5
13	14.5	13.5	12.5	12.0	10.0	9.0	8.5	8.5	8.5	8.0	9.0	8.0
14	13.5	13.0	12.5	11.5	10.0	9.0	8.5	8.0	9.5	8.0	8.0	7.0
15	13.0	12.0	12.0	11.0	10.0	7.5	8.5	8.5	8.5	7.0	8.0	7.5
16	13.0	12.0	12.0	11.5	10.0	8.5	9.0	8.5	8.5	7.5	9.5	8.0
17	13.0	12.5	12.5	10.5	10.0	9.0	9.0	8.5	9.0	8.5	9.5	8.5
18	13.5	12.5	12.5	11.0	10.0	9.5	9.0	8.5	9.0	8.0	9.0	8.5
19	14.0	13.0	12.5	11.0	9.5	8.5	9.0	8.5	9.5	8.5	8.5	8.0
20	14.0	13.0	12.0	11.0	9.5	9.0	9.0	8.5	9.5	8.5	8.0	6.5
21	14.0	13.5	12.5	11.0	9.5	9.0	9.0	8.5	8.0	7.0	8.0	6.5
22	14.0	13.5	13.0	12.0	10.0	9.0	9.5	9.0	8.5	7.5	8.5	7.5
23	14.0	13.5	12.5	12.0	9.5	9.0	9.5	8.0	8.5	8.0	9.5	7.5
24	14.5	13.5	12.5	11.5	9.0	9.0	8.5	8.0	9.0	7.0	9.5	8.0
25	14.0	13.5	12.0	11.5	9.5	8.5	8.5	8.0	7.0	6.5	9.5	8.5
26	14.0	13.5	12.0	10.5	9.5	9.0	8.0	7.5	7.5	6.0	8.0	6.5
27	14.5	12.5	12.0	11.0	9.5	9.0	8.0	7.5	7.5	6.5	8.0	6.0
28	13.5	11.5	12.0	11.0	9.0	8.5	8.0	7.5	7.5	6.5	9.5	7.0
29	13.5	11.5	12.0	10.0	9.0	8.5	7.0	6.5	---	---	10.0	8.5
30	12.0	10.5	12.0	11.5	9.0	8.0	7.5	6.5	---	---	9.0	7.0
31	12.0	10.5	---	---	8.5	8.0	7.0	5.5	---	---	9.5	8.0
MONTH	16.0	10.5	14.0	10.0	12.5	7.0	9.5	5.5	9.5	5.5	10.5	6.0

SAN JOAQUIN RIVER BASIN

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	8.5	13.5	10.5	17.5	14.0	16.5	13.5	---	---	18.0	16.5
2	8.5	7.5	13.5	10.5	18.0	14.0	16.0	13.5	---	---	17.5	16.5
3	9.5	7.5	11.5	10.0	17.5	14.0	16.0	13.5	---	---	17.5	16.5
4	10.0	8.5	12.0	10.5	18.5	14.0	16.5	14.0	---	---	17.5	16.5
5	11.0	9.5	12.0	11.0	19.0	15.0	16.0	14.0	---	---	18.5	16.5
6	11.0	9.5	11.5	10.5	19.0	15.5	17.0	14.0	---	---	18.5	16.5
7	10.5	9.0	12.0	10.5	18.5	15.0	17.5	14.0	---	---	18.0	16.5
8	10.5	8.5	13.0	10.5	19.0	14.5	17.0	13.5	---	---	18.0	16.5
9	11.0	9.0	13.5	11.5	18.5	15.0	---	---	---	---	18.5	16.5
10	10.5	9.0	14.5	13.0	17.5	14.5	---	---	---	---	18.0	16.5
11	10.0	8.5	14.0	12.5	17.5	14.0	---	---	---	---	18.0	17.0
12	10.0	8.5	14.0	12.5	17.0	14.0	---	---	17.5	16.0	18.0	17.0
13	11.0	9.0	15.5	12.5	16.0	13.0	---	---	17.5	16.0	18.0	16.5
14	11.0	9.5	15.0	13.5	14.5	12.5	---	---	17.5	16.0	18.5	16.5
15	11.0	10.0	14.0	12.0	15.0	13.0	---	---	17.5	16.0	18.5	17.0
16	10.5	9.0	13.0	11.0	15.5	13.0	---	---	17.5	16.0	18.5	17.0
17	11.0	9.5	13.5	11.5	15.5	13.5	---	---	18.0	16.0	18.5	17.5
18	10.5	9.0	13.5	12.0	15.5	13.5	---	---	17.5	16.0	18.0	17.0
19	9.0	7.5	12.5	11.0	16.0	13.5	---	---	17.5	16.0	18.5	17.0
20	9.5	7.5	12.0	10.0	16.0	13.5	---	---	17.0	15.5	18.0	17.0
21	11.5	9.5	13.5	10.5	16.0	14.0	---	---	17.0	15.5	18.5	17.0
22	12.5	10.5	15.0	11.5	18.0	14.0	---	---	17.5	16.0	18.5	17.0
23	12.5	10.0	15.0	12.5	18.5	14.0	---	---	17.0	16.0	17.5	16.5
24	12.0	9.5	16.0	13.5	16.0	13.5	---	---	17.5	16.0	17.0	16.5
25	11.5	9.0	15.5	13.5	16.0	13.5	---	---	17.5	16.0	18.0	17.0
26	10.5	8.5	14.5	13.0	16.5	14.0	---	---	17.5	16.0	18.5	17.0
27	11.5	8.0	16.0	12.5	16.5	14.0	---	---	17.5	16.5	18.0	17.0
28	13.0	10.5	17.0	13.5	16.0	13.5	---	---	18.5	16.5	18.5	17.5
29	13.0	10.5	16.5	14.0	17.0	14.0	---	---	19.0	16.5	18.0	17.0
30	13.5	10.5	17.5	14.0	17.5	14.0	---	---	18.0	16.5	18.5	17.0
31	---	---	17.0	14.0	---	---	---	---	18.5	16.5	---	---
MONTH	13.5	7.5	17.5	10.0	19.0	12.5	---	---	---	---	18.5	16.5

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA

LOCATION.--Lat 38°11'51", long 120°00'27", in SW¼ sec.16, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.3 mi (0.5 km) downstream from bridge on State Highway 108 at Strawberry, 0.6 mi (1.0 km) downstream from Herring Creek, and 1.2 mi (1.9 km) downstream from Pinecrest Lake.

DRAINAGE AREA.--44.8 mi² (116.0 km²).

PERIOD OF RECORD.--October 1911 to January 1917, August 1938 to current year. Monthly discharge only for October 1913 and yearly estimates for 1912-13, published in WSP 1315-A. Published as "near Confidence" 1911-13.

REVISED RECORDS.--WSP 1215: 1945(M). WSP 1515: 1916, 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 5,235.1 ft (1,595.66 m) National Geodetic Vertical Datum of 1929 (river-profile survey). October 1911 to January 1917, nonrecording gage at site 1 mi (2 km) downstream at different datum.

REMARKS.--Flow at low and medium stages regulated beginning in 1916 by Pinecrest Lake 1.2 mi (1.9 km) upstream, capacity, 18,300 acre-ft (22.6 hm³). No diversion above station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--48 years (water years 1912-16, 1939-81), 126 ft³/s (3.568 m³/s), 91,290 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s (110 m³/s) Nov. 21, 1950, gage height, 9.25 ft (2.819 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of contracted-opening measurement of maximum flow at bridge 0.3 mi (0.5 km) below station; minimum, 1.3 ft³/s (0.037 m³/s) Nov. 22, 23, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 595 ft³/s (16.9 m³/s) May 10, gage height, 4.17 ft (1.271 m); minimum daily, 10 ft³/s (0.28 m³/s) Oct. 28 to Nov. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	10	63	20	22	27	58	231	387	48	27	42
2	65	10	62	20	22	27	57	201	335	32	27	42
3	65	10	63	20	22	26	55	161	307	32	27	42
4	64	10	65	20	22	27	56	143	328	31	27	42
5	63	25	63	20	21	27	62	131	330	32	27	41
6	63	40	63	20	21	27	66	120	314	32	27	41
7	63	40	63	20	21	28	67	119	241	31	27	42
8	64	40	63	20	21	28	65	132	227	31	27	43
9	63	40	61	20	22	42	69	243	205	31	27	43
10	63	40	60	20	22	61	75	458	184	31	27	43
11	63	40	43	20	22	62	66	417	134	31	27	43
12	63	69	17	20	21	61	64	418	102	30	27	43
13	63	59	22	20	22	61	68	428	84	31	27	43
14	63	46	20	19	25	60	82	451	67	31	27	42
15	62	72	21	19	25	59	92	331	65	31	27	42
16	62	84	23	20	25	32	99	199	66	31	27	42
17	62	84	23	20	26	12	99	172	65	31	27	42
18	62	83	23	20	27	41	91	260	63	31	30	42
19	62	83	22	20	27	64	66	323	62	31	32	42
20	62	82	21	19	28	62	58	201	64	31	32	41
21	63	81	21	19	28	62	77	164	64	31	32	41
22	64	81	21	20	28	62	130	173	65	31	32	42
23	64	81	21	22	29	62	183	211	65	31	31	41
24	63	80	21	22	30	62	206	294	65	31	31	41
25	63	80	21	21	30	65	175	440	65	31	34	41
26	63	71	21	21	29	66	135	497	64	31	36	41
27	40	65	21	26	28	64	100	430	65	31	36	41
28	10	65	21	24	27	62	144	450	65	31	36	41
29	10	64	21	23	---	63	196	474	66	28	36	41
30	10	63	21	22	---	61	234	497	66	27	36	41
31	10	---	21	22	---	59	---	404	---	27	38	---
TOTAL	1721	1698	1092	639	693	1522	2995	9173	4280	970	931	1254
MEAN	55.5	56.6	35.2	20.6	24.8	49.1	99.8	296	143	31.3	30.0	41.8
MAX	65	84	65	26	30	66	234	497	387	48	38	43
MIN	10	10	17	19	21	12	55	119	62	27	27	41
AC-FT	3410	3370	2170	1270	1370	3020	5940	18190	8490	1920	1850	2490
CAL YR 1980 TOTAL	64942		MEAN 177	MAX 839	MIN 10	AC-FT 128800						
WTR YR 1981 TOTAL	26968		MEAN 73.9	MAX 497	MIN 10	AC-FT 53490						

11297000 PHILADELPHIA CANAL NEAR STRAWBERRY, CA

LOCATION.--Lat 38°10'39", long 120°02'46", in NW¼NW¼ sec.30, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 250 ft (76 m) downstream from diversion dam on South Fork Stanislaus River, and 2.8 mi (4.5 km) southwest of Strawberry.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,960 ft (1,511.8 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Canal diverts from right bank of South Fork Stanislaus River for power development in Spring Gap powerplant of Pacific Gas and Electric Co.; tailrace empties into Middle Fork Stanislaus River at powerplant above Sand Bar Flat. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--42 years, 42.1 ft³/s (1.192 m³/s), 30,500 acre-ft/yr (37.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 64 ft³/s (1.81 m³/s) in 1941, 1961-63, 1965, 1971-72, 1974-75; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	0	57	.87	1.1	22	60	57	60	41	20	0
2	60	0	56	.86	1.1	23	60	59	59	25	20	.32
3	60	2.5	56	.85	1.1	23	60	60	59	25	20	.27
4	60	2.3	56	.86	7.0	23	60	60	60	25	20	0
5	60	3.2	60	.87	12	23	61	60	59	25	20	0
6	60	3.7	55	.98	12	23	60	59	59	25	20	0
7	60	3.1	57	.99	12	23	60	59	60	25	17	0
8	60	1.6	57	.99	12	23	61	59	59	25	20	0
9	60	1.6	57	.93	12	41	61	60	59	25	20	0
10	60	1.4	57	.87	12	60	60	59	59	25	20	2.0
11	60	.97	50	.86	12	60	58	59	59	25	20	.74
12	60	17	9.0	.85	18	60	58	59	60	25	20	1.1
13	60	36	10	.87	19	60	60	60	60	25	20	1.0
14	60	46	10	.86	19	60	59	60	59	25	20	.41
15	60	56	10	.87	22	60	58	60	59	25	20	0
16	60	60	10	.87	22	34	57	61	59	25	20	0
17	60	60	10	.86	22	6.0	58	61	59	25	6.2	.44
18	60	61	6.0	.85	22	26	57	60	58	25	0	1.1
19	60	61	7.0	.86	24	60	60	60	50	25	0	.87
20	60	60	10	.86	24	59	60	61	59	25	.90	.87
21	60	60	10	.84	24	60	58	61	59	25	1.1	.87
22	60	60	9.0	.88	25	60	58	60	59	26	.34	.81
23	60	60	.87	.92	25	59	58	60	59	23	0	.82
24	60	60	.87	.87	25	58	60	61	59	25	.25	.83
25	60	59	.87	.87	25	57	59	60	59	25	.36	.87
26	41	59	.87	1.0	24	59	58	60	59	25	0	.86
27	0	59	.87	1.0	21	59	59	61	59	25	0	.86
28	0	60	.87	1.2	22	60	58	60	59	25	.12	.80
29	0	60	.87	1.1	---	60	60	60	60	22	.44	.83
30	0	60	.87	1.1	---	60	56	60	60	20	0	.76
31	0	---	.87	1.1	---	60	---	60	---	20	0	---
TOTAL	1541	1074.37	726.83	28.56	477.3	1421.0	1772	1856	1767	777	326.71	17.43
MEAN	49.7	35.8	23.4	.92	17.0	45.8	59.1	59.9	58.9	25.1	10.5	.58
MAX	60	61	60	1.2	25	60	61	61	60	41	20	2.0
MIN	0	0	.87	.84	1.1	6.0	56	57	50	20	0	0
AC-FT	3060	2130	1440	57	947	2820	3510	3680	3500	1540	648	35

CAL YR 1980 TOTAL 18240.30 MEAN 49.8 MAX 63 MIN 0 AC-FT 36180
WTR YR 1981 TOTAL 11785.20 MEAN 32.3 MAX 61 MIN 0 AC-FT 23380

11297500 TUOLUMNE CANAL NEAR LONG BARN, CA

LOCATION.--Lat 38°05'35", long 120°10'03", in SW¼ sec.24, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 300 ft (91 m) downstream from intake, 350 ft (107 m) downstream from Lyons Reservoir on South Fork Stanislaus River, 2 mi (3 km) west of Long Barn, and 15 mi (24 km) northeast of Sonora.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,110.0 ft (1,252.73 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to June 1938, at site 200 ft (61 m) downstream at different datum.

REMARKS.--Canal diverts from left bank of South Fork Stanislaus River into Tuolumne River basin for power and domestic supply in vicinity of Sonora. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--44 years, 27.9 ft³/s (0.790 m³/s), 20,210 acre-ft/yr (24.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 59 ft³/s (1.67 m³/s) May 11, 1975; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	24	21	16	29	15	15	38	46	40	43	39
2	31	24	22	16	29	15	15	39	48	41	42	38
3	29	24	22	16	24	15	15	43	51	40	42	38
4	28	24	22	16	16	15	15	42	49	40	42	38
5	27	25	22	16	16	16	15	42	49	40	42	38
6	28	25	22	16	16	16	15	44	49	41	41	39
7	30	25	22	15	16	16	16	45	48	42	42	38
8	30	25	22	15	16	16	16	46	48	42	42	38
9	31	25	22	15	16	16	24	46	49	42	42	38
10	31	25	21	15	16	16	37	47	50	42	42	38
11	31	25	21	15	16	16	35	47	48	41	43	38
12	31	25	21	15	16	15	35	48	40	41	42	38
13	31	22	21	15	16	15	35	46	36	41	42	38
14	30	26	21	15	16	15	37	46	35	41	41	38
15	30	26	20	15	16	15	39	47	35	41	41	38
16	30	26	19	15	16	15	39	47	34	42	42	38
17	30	26	18	15	16	15	39	47	38	43	40	38
18	30	26	18	15	16	15	38	47	40	43	39	38
19	29	26	18	14	15	20	38	49	38	42	39	37
20	27	26	18	14	15	26	38	48	36	43	39	36
21	24	24	18	15	15	26	37	47	35	44	39	35
22	24	20	18	16	15	26	37	47	38	44	39	35
23	24	20	18	16	15	19	37	48	41	44	39	35
24	24	20	17	16	22	14	37	49	41	43	40	34
25	24	20	17	16	27	15	38	50	41	43	40	33
26	23	20	17	16	19	15	38	48	41	43	40	33
27	24	20	17	16	14	15	38	48	40	43	40	32
28	21	20	17	17	15	15	38	47	40	43	40	32
29	25	20	17	22	---	15	40	47	40	42	40	33
30	25	20	17	29	---	15	38	49	40	43	40	33
31	24	---	16	29	---	15	---	49	---	43	39	---
TOTAL	860	704	602	512	494	513	934	1433	1264	1303	1264	1094
MEAN	27.7	23.5	19.4	16.5	17.6	16.5	31.1	46.2	42.1	42.0	40.8	36.5
MAX	34	26	22	29	29	26	40	50	51	44	43	39
MIN	21	20	16	14	14	14	15	38	34	40	39	32
AC-FT	1710	1400	1190	1020	980	1020	1850	2840	2510	2580	2510	2170
CAL YR 1980	TOTAL	13123	MEAN 35.9	MAX 51	MIN 16	AC-FT	26030					
WTR YR 1981	TOTAL	10977	MEAN 30.1	MAX 51	MIN 14	AC-FT	21770					

SAN JOAQUIN RIVER BASIN

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA

LOCATION.--Lat 38°05'33", long 120°10'02", in SW¼ sec.24, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 600 ft (183 m) downstream from Lyons Dam, 2 mi (3 km) west of Long Barn, and 15 mi (24 km) northeast of Sonora.

DRAINAGE AREA.--66.9 mi² (173.3 km²).

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1938(M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 4,073.4 ft (1,241.57 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Flow regulated by Lyons Reservoir 600 ft (183 m) upstream, capacity, 5,510 acre-ft (6.79 hm³) and Pinecrest Lake, capacity, 18,300 acre-ft (22.6 hm³). Tuolumne Canal (station 11297500) diverts at Lyons Dam; other diversions, see schematic diagram of Stanislaus River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--44 years, 82.0 ft³/s (2.322 m³/s), 59,410 acre-ft/yr (73.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft³/s (139 m³/s) Nov. 21, 1950, gage height, 9.3 ft (2.83 m), from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of computation of maximum flow over Lyons Dam; no flow at times in 1937-39, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 376 ft³/s (10.6 m³/s) May 12, gage height, 3.72 ft (1.134 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.8	2.0	2.2	2.0	2.2	2.0	100	290	2.2	2.0	2.0
2	1.8	1.8	2.0	2.2	2.0	2.3	2.0	49	237	2.2	2.0	2.0
3	2.1	1.8	2.0	2.2	2.0	2.4	2.0	43	206	2.2	2.0	1.9
4	2.6	1.8	2.0	2.3	1.9	2.4	2.0	28	161	2.2	2.0	1.8
5	2.6	1.8	2.0	2.2	1.8	2.2	2.0	17	169	2.2	2.0	1.8
6	2.3	1.8	2.0	2.2	1.9	2.0	2.0	12	242	2.1	2.0	1.9
7	1.9	1.8	2.0	2.2	1.9	2.0	2.0	11	259	2.1	2.0	1.8
8	2.0	1.8	2.0	2.2	1.9	2.0	2.0	9.7	151	2.2	3.2	1.8
9	2.0	1.8	2.0	2.2	2.0	2.0	2.1	9.3	46	2.1	2.9	2.0
10	2.0	1.9	2.0	2.2	2.0	1.9	2.2	53	4.5	2.2	1.8	2.2
11	2.0	2.0	2.0	2.3	2.0	1.7	2.2	234	4.2	2.2	1.8	2.2
12	2.0	2.0	2.0	2.2	2.0	1.8	2.2	317	2.4	2.2	1.7	2.2
13	2.0	2.0	2.0	2.3	1.8	1.8	2.2	305	2.0	2.2	1.6	2.2
14	2.0	2.0	2.1	2.2	2.0	1.8	2.2	308	2.0	2.2	2.1	2.2
15	2.0	2.0	2.2	2.2	2.0	1.8	2.2	277	1.9	2.2	2.7	2.2
16	2.0	2.0	2.2	2.2	2.0	1.8	2.2	205	1.8	2.2	2.7	2.2
17	2.0	2.0	2.2	2.2	2.0	1.7	2.2	120	1.8	2.2	2.7	2.2
18	2.0	2.0	2.2	2.2	1.9	2.1	2.2	32	1.8	2.2	2.7	2.1
19	2.0	2.0	2.1	2.1	1.8	2.5	2.3	98	1.8	2.0	2.6	2.2
20	2.0	2.0	2.0	2.0	2.0	2.5	2.2	199	1.8	2.0	2.3	1.9
21	2.0	2.0	2.0	2.0	1.9	2.5	2.2	82	1.8	2.0	2.1	1.9
22	2.0	2.0	2.0	2.0	1.8	2.4	2.2	45	1.8	2.0	2.0	1.9
23	2.0	2.0	2.0	2.4	2.0	2.2	2.2	77	1.8	2.0	2.0	1.8
24	2.0	2.0	2.0	2.2	2.3	2.2	2.2	164	1.8	2.0	2.0	1.9
25	2.0	2.0	2.0	2.2	2.4	2.4	2.2	281	1.8	2.0	2.0	2.0
26	2.0	2.0	2.0	2.1	2.3	2.4	2.2	349	2.0	2.0	2.0	2.0
27	1.8	2.0	1.8	2.5	2.2	2.2	2.2	352	2.2	2.0	2.0	2.0
28	2.0	2.0	1.8	2.6	2.2	2.0	2.5	280	2.2	2.0	2.0	2.0
29	2.0	2.0	1.8	2.3	---	2.0	58	311	2.2	2.0	2.0	2.0
30	2.0	2.0	1.8	2.0	---	2.0	112	356	2.2	2.0	2.0	2.0
31	1.8	---	2.0	2.0	---	2.0	---	334	---	2.0	2.0	---
TOTAL	62.6	58.1	62.2	68.3	56.0	65.2	230.3	5058.0	1806.8	65.3	66.9	60.3
MEAN	2.02	1.94	2.01	2.20	2.00	2.10	7.68	163	60.2	2.11	2.16	2.01
MAX	2.6	2.0	2.2	2.6	2.4	2.5	112	356	290	2.2	3.2	2.2
MIN	1.7	1.8	1.8	2.0	1.8	1.7	2.0	9.3	1.8	2.0	1.6	1.8
AC-FT	124	115	123	135	111	129	457	10030	3580	130	133	120

CAL YR 1980 TOTAL 47750.14 MEAN 130 MAX 1450 MIN .17 AC-FT 94710
WTR YR 1981 TOTAL 7660.00 MEAN 21.0 MAX 356 MIN 1.6 AC-FT 15190

11298600 STANISLAUS RIVER AT PARROTTS FERRY BRIDGE, NEAR COLUMBIA, CA

LOCATION.--Lat 38°02'47", long 120°26'51", in NW¼NW¼ sec.9, T.2 N., R.14 E., Stanislaus County, Hydrologic Unit 18040010, at Parrotts Ferry Bridge, 2.7 mi (4.3 km) northwest of Columbia.

DRAINAGE AREA.--803 mi² (2,080 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1973-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY RECORDS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM CA,DISS (MG/L)	MAGNESIUM MG,DISS (MG/L)	SODIUM NA,DISS (MG/L)
80/10/07	12 45	37	7.4	15.0	10.3			16	5	1	2
80/12/10	11 15	45	7.2	7.0	11.8			16	5	1	2
81/01/14	11 15	57	7.3	13.5	11.1			26	7	2	2
81/02/10	12 25	70	7.2	11.5	9.8	20					
81/04/08	13 30	55	8.3	13.0	11.6	11	3.6	23	6	2	2
81/05/13	11 45	38	7.5	14.0	10.1	5.0	0.5				
81/06/10	10 15	85	8.4	25.0	8.8	14	2.2	26	7	2	2

DATE	TIME	PTSSSIUM K,DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/10/07	12 45	0.7	17	0	0	30		0.01	0.00	0.10	0.01
80/12/10	11 15	0.7	20	0	1	36		0.03	0.01	0.20	0.01
81/01/14	11 15	0.8	26	1	1	40					
81/02/10	12 25						1	0.01	0.03	0.40	0.02
81/04/08	13 30	0.9	23	0	1	44	4	0.00	0.00	0.50	0.03
81/05/13	11 45						2	0.02	0.00	0.10	0.02
81/06/10	10 15	0.9	28	0	1	35	4	0.00	0.00	0.50	0.03

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B,DISS (UG/L)
80/10/07	12 45	0.00		0
80/12/10	11 15	0.00		0
81/01/14	11 15			0
81/02/10	12 25	0.00	2.4	
81/04/08	13 30	0.00	4.3	0
81/05/13	11 45	0.00	2.1	
81/06/10	10 15	0.00	7.5	0

DATE	TIME	ARSENIC AS,DISS (UG/L)	BARIUM BA,DISS (UG/L)	CADMIUM CD,DISS (UG/L)	CHROMIUM CR,DISS (UG/L)	COPPER CU,DISS (UG/L)	IRON FE,DISS (UG/L)	LEAD PB,DISS (UG/L)	MANGNESE MN,DISS (UG/L)	MERCURY HG,TOTAL (UG/L)	SELENIUM SE,DISS (UG/L)
80/12/10	11 15	0	0	0	0	0	30	0	0	0.0	10
81/02/10	12 25	0	0	0	0	0	10	0	20	0.0	20
81/04/08	13 30	0	0	0	30	0	20	0	0	0.0	10

11299000 NEW MELONES RESERVOIR NEAR SONORA, CA

LOCATION.--Lat 37°57'02", long 120°30'49", in NW¼SE¼ sec.11, T.1 N., R.13 E., Tuolumne County, Hydrologic Unit 18040010, at left abutment of New Melones Dam on Stanislaus River, 0.1 mi (0.2 km) downstream from the old Melones Dam, and 7.6 mi (12.2 km) southwest of Sonora.

DRAINAGE AREA.--904 mi² (2,341 km²).

PERIOD OF RECORD.--1926 (year-end content only, published in WSP 1315-A), June 1927 to current year. Prior to October 1970, published as Melones Reservoir at Melones Dam. October 1970 to September 1978, published as Melones Lake near Sonora.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Feb. 28, 1961, nonrecording gage and Mar. 1, 1961, to Nov. 26, 1978, water-stage recorder at site on left side of old Melones Dam, at same datum.

REMARKS.--Reservoir is formed by earth and rockfill dam completed in November 1978. Dam is downstream from the original concrete dam which was completed in December 1926. Usable capacity 2,419,523 acre-ft (2,983 hm³) between elevations 543.0 ft (165.51 m) invert entrance to outlet tunnel, and 1,088.0 ft (331.62 m) gross pool elevation. No dead storage. When elevation is above 808.0 ft (246.28 m) water is released through a powerplant to Tullock Reservoir where it is used for irrigation. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 446,700 acre-ft (551 hm³) Mar. 16, 1980, elevation, 845.82 ft (257.806 m); minimum, 2,995 acre-ft (3.69 hm³) Aug. 8 to Dec. 29, 1977, elevation, 612.2 ft (186.60 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 428,100 acre-ft (528 hm³) Apr. 5, elevation, 841.50 ft (256.489 m); minimum, 124,200 acre-ft (153 hm³) Sept. 29, elevation 743.50 ft (226.619 m).

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

700	53,904	760	160,548	880	611,454	1,000	1,471,168
710	66,950	780	212,276	900	723,006	1,020	1,661,930
720	81,803	800	272,772	920	846,524	1,040	1,867,012
730	98,530	820	342,450	940	982,608	1,060	2,086,649
740	117,193	840	421,769	960	1,131,797	1,088	2,419,523
750	137,848	860	511,246	980	1,294,537		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	278300	268600	286800	317500	342300	372500	421800	405400	383400	302100	216500	148000
2	279900	268200	297600	318600	344000	372000	423400	405500	382300	298600	213100	146500
3	281300	268100	289200	319800	345400	371400	424600	404800	381100	295200	210700	145200
4	282800	268200	291200	321000	346900	371500	425900	403600	379300	292300	208500	144400
5	284200	268400	292400	322100	348300	371200	428100	401800	376700	289200	206200	143200
6	285600	268700	293400	322000	349600	370800	427700	400200	374600	286200	203700	141900
7	287100	269100	294100	321400	350300	371800	427800	397800	376300	283100	202000	140100
8	288700	269400	295200	320500	351200	373000	427900	394400	373700	281200	199600	138900
9	290200	269700	296100	320600	351800	374600	426900	391600	371000	278600	196700	137700
10	291600	269700	296900	321600	352700	374600	423000	390400	367900	275900	194300	136700
11	289500	269700	297800	323100	353300	373900	424300	387900	365200	273400	192100	135600
12	286400	270100	298800	322600	354100	373400	422600	386800	362900	270600	189500	134400
13	283400	270500	299900	321500	356000	373200	420800	387700	361100	267400	187000	133100
14	280600	271400	301600	320900	356500	374400	418200	388200	361700	264100	185500	132000
15	277700	272300	302200	320100	357500	375500	415500	387900	358300	260900	182900	131800
16	274900	273200	303000	319500	358600	376800	412700	387700	354900	257200	179600	131300
17	272100	274100	303500	320600	359800	377000	413000	388400	351500	254700	177100	130700
18	270500	275100	304100	322100	360900	377400	411000	388700	347500	252300	174600	130400
19	269000	276000	304800	321400	361900	382500	409200	386200	342900	253100	172200	129900
20	267700	277000	305600	320700	363000	386200	407300	385100	339600	250600	169800	129400
21	266300	278000	306700	319900	364100	389500	405800	384600	337100	248300	167500	128800
22	266200	278700	307800	320000	365200	392100	405100	383300	332900	245300	165100	128000
23	266300	279700	309100	320500	366300	394600	404100	381800	328600	244000	162500	127200
24	267200	280700	309900	322100	367600	396900	404300	381600	324400	240900	162000	126200
25	268100	281600	310600	323800	369000	403500	403300	381500	322300	237900	161400	126000
26	268800	282500	311300	323600	369900	408600	406100	382500	320200	235300	160200	125800
27	269100	283300	311900	327100	370700	411900	404900	382800	316800	230900	158400	125200
28	269400	284200	312600	331200	371700	414400	401900	383500	313000	228300	156500	124400
29	269500	285100	313900	336200	---	417100	403100	383200	309100	225900	154200	124200
30	269200	285900	315000	338700	---	419500	404200	382900	305700	223000	150800	124300
31	268900	---	316000	340800	---	420800	---	383800	---	219800	149400	---
MAX	291600	285900	316000	340800	371700	420800	428100	405500	383400	302100	216500	148000
MIN	266200	268100	286800	317500	342300	370800	401900	381500	305700	219800	149400	124200
†	798.80	803.98	812.71	819.55	827.66	839.77	835.78	830.73	809.79	782.66	755.20	743.55
††	-8000	+17000	+30100	+24800	+30900	+49100	-16600	-78100	-85900	-70400	-25100	-25100
†††	1280	580	350	410	590	760	1600	2350	3300	2910	2070	1360

CAL YR 1980 † +134300
WTR YR 1981 † -152600

† Elevation, in feet NGVD, at end of month.
† Change in contents, in acre-feet.
†† Evaporation, in acre-feet.

(MAX FORECAST IN '84 WY: 1074 FT IN JULY)

CHANNEL CAP BL MDAM IS 8,000 CFS

GEN RELEASE 5,000 ±

03-15-84: TODAY RELEASE 2,000 BUT ONLY 1,200 INTO R (REST INTO PH??) ??

PK OF RECORD on July 10, 1983 @ 1086.42' = 23,419,523

July 1, 1983: 1084.13

2 → .60

3- .62

4- .97

5- 5.37

6- .79

7- 6.27

8- .40

9- .41

10 → .42 -PK

11- .02

7-13 = 1085.67

.51

.44

.21

4.88

.55

.35

SEE PG 307

11299995 TULLOCH RESERVOIR NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°52'34", long 120°36'12", in Rancheria Del Rio Estanislao Grant, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, in center of dam on Stanislaus River, 1.9 mi (3.1 km) upstream from Goodwin Dam, and 5.3 mi (8.5 km) northeast of Knights Ferry.

DRAINAGE AREA.--980 mi² (2,538 km²).

PERIOD OF RECORD.--November 1957 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Reservoir is formed by gravity-type concrete dam completed in October 1957. Usable capacity, 56,840 acre-ft (70.1 hm³) between elevations 431.0 ft (131.37 m) normal minimum water surface, and 511.0 ft (155.75 m) top of radial gates. Dead storage, 11,560 acre-ft (14.3 hm³). Reservoir is used for irrigation and power. Water passes down Stanislaus River, some first passing through Tulloch powerplant at dam. Part of flow is diverted at Goodwin Dam to Oakdale Canal (station 11301000) and South San Joaquin Canal (station 11300500). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 69,500 acre-ft (85.7 hm³) Jan. 7, 1965, elevation, 512.0 ft (156.06 m); minimum, 4,580 acre-ft (5.65 hm³) Oct. 3, 1960, elevation, 404.0 ft (123.14 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 66,300 acre-ft (81.7 hm³) July 16, elevation, 509.5 ft (155.30 m); minimum, 23,300 acre-ft (28.7 hm³) Oct. 11, elevation, 459.5 ft (140.06 m).

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

404	4,580	460	23,600
411	6,020	475	33,100
420	8,200	490	45,300
430	11,100	512	69,500
445	16,400		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46600	45500	45700	45900	58400	52500	59800	61100	61400	65400	65500	64900
2	44900	45700	46000	45700	58200	53400	59600	60700	61700	65200	65700	64900
3	42400	45900	46100	45500	57700	54100	59500	60800	62200	65200	65600	64900
4	39800	45800	45900	45400	57400	56700	58800	60900	63300	65000	65100	65000
5	37100	45500	45800	45200	56900	57800	56900	61000	64900	64900	65000	65000
6	34300	45200	45700	46400	56700	59100	58300	61100	66000	65200	65000	65000
7	31700	44800	45300	47700	56500	58500	58200	61300	62300	65200	65000	64700
8	28900	44400	45200	48500	56300	57900	58400	62100	63400	64500	65000	64700
9	26200	44100	45200	48500	56200	57300	59000	63200	64200	64200	65000	64500
10	23600	44000	45500	47500	56000	57600	60100	63400	65100	64400	64900	64400
11	23300	44100	45300	46500	55800	58600	61400	65000	65200	64200	64900	64200
12	25200	44200	45200	47200	55600	59900	59900	65500	65400	64100	64900	64400
13	27400	44200	45300	48100	55500	60900	60000	64100	64900	64700	64700	64400
14	30000	44300	45200	48900	55200	60200	61100	63200	62000	65400	64900	64500
15	32800	44400	45200	49800	55000	59800	61100	62900	62400	66000	64900	64400
16	35600	44600	45500	50800	54900	59000	61000	62600	62800	66300	65000	64100
17	38400	44700	45800	49800	54800	58800	60600	61000	63200	66200	65000	64100
18	40600	44900	46100	48800	54600	59500	60700	62200	64100	66200	65100	64000
19	41900	45000	46300	49700	54300	60700	60300	62900	65500	62600	65100	64000
20	43200	45100	46000	50600	54100	60800	60400	63800	65200	62800	65100	63900
21	44500	45500	45800	51600	53900	60300	60800	63400	63600	62800	65200	63600
22	45200	45400	45600	52700	53700	59800	60700	64100	63800	63400	65500	63500
23	45200	45200	45600	54200	53500	59200	58700	64900	64500	62200	65700	63500
24	45100	45300	45300	53600	53400	58600	61400	64900	65500	61500	65700	63500
25	45400	45300	45600	52800	53200	58700	61700	65200	64600	62000	65000	63500
26	45800	45300	45900	53500	53000	58800	58400	65100	64000	62200	64000	63400
27	45700	45400	46300	55700	52800	58700	59900	64500	64100	64000	63500	63400
28	45500	45400	46500	58000	52700	58500	61700	63800	64400	64100	63900	63300
29	45200	45400	46500	60700	---	58300	61500	63500	65000	64200	64400	63200
30	45100	45500	46300	59800	---	57900	61600	63800	65200	64400	64700	63000
31	45400	---	46100	58500	---	58800	---	61800	---	64900	64900	---
MAX	46600	45900	46500	60700	58400	60900	61700	65500	66000	66300	65700	65000
MIN	23300	44000	45200	45200	52700	52500	56900	60700	61400	61500	63500	63000
†	490.1	490.2	490.8	503.0	497.6	503.2	505.6	505.8	508.6	508.3	508.3	506.8
‡	-2800	-100	+600	+12400	-5800	+6100	+2800	+200	+3400	-300	0	-1900

CAL YR 1980 † -15000
WTR YR 1981 ‡ +14800

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°52'34", long 120°36'15", in Rancheria del Rio Estanislao Grant, T.1 S., R.12 E., on Calaveras-Tuolumne County line, Hydrologic Unit 18040010, temperature recorder in south corner of Tulloch powerplant at downstream side of Tulloch Dam, 5.2 mi (8.4 km) northeast of Knights Ferry.

DRAINAGE AREA.--980 mi² (2,538 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1972 to current year.

INSTRUMENTATION.--Temperature recorder since June 1972.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 27.5°C Aug. 30, 1977; minimum recorded, 5.0°C Jan. 13, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 20.0°C Oct. 10-12; minimum recorded, 10.0°C on several days during January and February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.5	18.5	13.0	12.5	12.0	11.5	---	---	11.0	10.5	10.5	10.5
2	18.5	18.5	13.0	12.5	12.0	11.5	---	---	10.5	10.5	11.0	10.5
3	18.5	18.5	13.5	12.5	11.5	11.5	10.5	10.5	10.5	10.0	11.0	10.5
4	19.0	18.5	14.0	12.5	12.0	11.5	11.0	10.5	11.0	10.0	10.5	10.5
5	19.0	19.0	13.5	12.5	---	---	10.5	10.5	11.0	10.0	12.0	10.5
6	19.0	19.0	14.0	12.5	---	---	11.0	10.5	10.5	10.0	11.0	10.5
7	19.0	19.0	13.5	12.5	---	---	10.5	10.0	11.0	10.5	10.5	10.5
8	19.5	19.0	13.5	12.5	---	---	10.5	10.5	10.5	10.5	11.0	10.5
9	19.5	19.5	13.5	12.5	---	---	10.5	10.5	11.0	10.5	11.0	10.5
10	20.0	19.5	13.0	12.5	---	---	10.5	10.5	11.0	10.0	11.0	10.5
11	20.0	20.0	13.0	12.5	---	---	10.5	10.5	11.5	10.5	11.0	10.5
12	20.0	16.0	13.0	12.5	---	---	10.5	10.5	11.5	10.5	11.0	10.5
13	16.0	14.0	13.0	12.5	---	---	10.5	10.5	10.5	10.5	11.0	10.5
14	14.0	13.0	13.0	12.0	---	---	10.5	10.5	11.0	10.5	11.0	10.5
15	13.0	13.0	13.5	12.0	---	---	10.5	10.5	11.0	10.5	11.0	10.5
16	12.5	12.5	12.5	12.0	---	---	10.5	10.5	11.5	10.5	11.0	10.5
17	12.5	12.5	13.0	12.0	---	---	10.5	10.5	11.5	10.5	11.0	10.5
18	12.5	12.5	12.5	12.0	---	---	10.5	10.5	11.5	10.5	11.0	11.0
19	12.5	12.5	12.5	12.0	---	---	10.5	10.5	11.5	10.5	11.0	11.0
20	12.5	12.5	12.5	12.0	---	---	10.5	10.5	10.5	10.5	11.0	11.0
21	12.5	12.5	12.0	12.0	---	---	10.5	10.5	11.0	10.5	11.0	11.0
22	12.5	12.5	12.5	12.0	---	---	10.5	10.5	12.0	10.5	11.0	11.0
23	12.5	12.5	12.0	12.0	---	---	10.5	10.5	12.0	10.5	11.5	11.0
24	12.5	12.5	12.0	12.0	---	---	10.5	10.5	12.0	10.5	11.5	11.0
25	12.5	12.5	12.0	11.5	---	---	10.5	10.5	11.0	10.5	11.0	11.0
26	13.5	12.5	12.5	11.5	---	---	10.5	10.5	11.0	10.5	11.5	11.0
27	13.5	12.5	12.0	11.5	---	---	10.5	10.5	11.0	10.5	11.5	11.0
28	13.5	12.5	12.0	11.5	---	---	11.0	10.5	10.5	10.5	11.5	11.0
29	13.5	12.5	12.0	11.5	---	---	11.0	10.5	---	---	11.5	11.0
30	13.0	12.5	12.0	11.5	---	---	11.0	10.5	---	---	11.5	11.0
31	13.5	12.5	---	---	---	---	10.5	10.5	---	---	11.5	11.0
MONTH	20.0	12.5	14.0	11.5	---	---	11.0	10.0	12.0	10.0	12.0	10.5

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	11.0	12.5	12.5	14.0	14.0	17.0	17.0	15.0	14.5	17.0	16.5
2	11.5	11.5	12.5	12.5	14.0	14.0	17.5	17.0	14.5	14.0	17.0	17.0
3	11.5	11.5	12.5	12.5	14.5	14.0	17.5	17.5	14.0	14.0	17.0	17.0
4	11.5	11.5	12.5	12.5	14.5	14.5	17.5	17.5	14.0	14.0	17.0	17.0
5	12.0	11.5	12.5	12.5	14.5	14.5	18.0	17.5	14.0	13.5	17.5	17.0
6	12.0	11.5	12.5	12.5	14.5	14.5	18.0	17.5	14.0	14.0	17.5	17.5
7	12.0	12.0	13.0	12.5	15.0	14.5	18.0	18.0	14.0	13.5	17.5	17.5
8	12.0	12.0	13.0	12.5	15.0	15.0	18.0	18.0	13.5	13.5	17.5	17.5
9	12.0	12.0	13.0	12.5	15.0	15.0	18.0	18.0	14.0	13.5	17.5	17.5
10	12.5	12.0	13.0	13.0	15.0	15.0	18.5	18.0	14.0	13.5	18.0	17.5
11	12.5	12.0	13.0	13.0	15.0	15.0	18.5	18.5	14.0	14.0	18.0	18.0
12	12.0	12.0	13.0	13.0	15.0	15.0	18.5	18.5	14.0	14.0	18.0	18.0
13	12.0	12.0	13.0	13.0	15.5	15.0	19.0	18.5	14.0	14.0	18.0	18.0
14	12.0	12.0	13.0	13.0	15.5	15.5	19.0	18.5	14.0	14.0	18.0	18.0
15	12.0	12.0	13.0	13.0	15.5	15.5	19.0	19.0	14.5	14.0	18.0	18.0
16	12.0	12.0	13.0	13.0	15.5	15.5	19.0	19.0	14.5	14.5	18.0	18.0
17	12.0	12.0	13.0	13.0	15.5	15.5	19.0	19.0	14.5	14.5	18.0	18.0
18	12.0	12.0	13.5	13.0	16.0	15.5	19.5	19.0	15.0	14.5	18.0	18.0
19	12.0	12.0	13.5	13.0	16.0	16.0	19.5	19.5	15.0	15.0	18.0	18.0
20	12.0	12.0	13.5	13.5	16.0	16.0	19.5	19.5	15.0	15.0	18.5	18.0
21	12.0	12.0	13.5	13.5	16.0	16.0	19.5	19.5	15.5	15.0	18.0	18.0
22	12.0	12.0	13.5	13.5	16.0	16.0	19.5	19.5	15.5	15.5	18.5	18.0
23	12.0	12.0	13.5	13.5	16.0	16.0	19.5	19.5	15.5	15.5	18.5	18.5
24	12.0	12.0	13.5	13.5	16.5	16.5	19.5	19.5	16.0	15.5	18.5	18.5
25	12.0	12.0	13.5	13.5	16.5	16.5	19.5	19.5	16.0	16.0	18.5	18.5
26	12.5	12.0	13.5	13.5	16.5	16.5	19.5	18.0	16.0	16.0	18.5	18.5
27	12.5	12.0	13.5	13.5	17.0	16.5	18.0	17.5	16.0	16.0	18.5	18.5
28	12.5	12.0	14.0	13.5	17.0	17.0	17.0	17.0	16.5	16.0	18.5	18.5
29	12.5	12.0	14.0	14.0	17.0	17.0	17.0	16.0	16.5	16.5	18.5	18.5
30	12.5	12.5	14.0	14.0	17.0	17.0	16.0	15.5	16.5	16.5	18.5	18.5
31	---	---	14.0	14.0	---	---	15.5	15.0	16.5	16.5	---	---
MONTH	12.5	11.0	14.0	12.5	17.0	14.0	19.5	15.0	16.5	13.5	18.5	16.5

SAN JOAQUIN RIVER BASIN

11300500 SOUTH SAN JOAQUIN CANAL NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'16", long 120°38'14", in Rancheria Del Rio Estanislao Grant, Calaveras County revised, Hydrologic Unit 18040010, on left bank 0.8 mi (1.3 km) downstream from headgate at Goodwin Dam, and 3.0 mi (4.8 km) northeast of Knights Ferry.

PERIOD OF RECORD.--May 1914 to current year. Monthly and yearly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 334.18 ft (101.858 m) National Geodetic Vertical Datum of 1929 (levels by Oakdale Irrigation District). Prior to Mar. 12, 1915, nonrecording gage 100 ft (30 m) downstream. Mar. 12, 1915, to July 1, 1921, nonrecording gage at present site and datum.

REMARKS.--Records excellent. Canal diverts from right bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale and South San Joaquin Irrigation Districts. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--67 years, 432 ft³/s (12.23 m³/s), 313,000 acre-ft/yr (386 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,320 ft³/s (37.4 m³/s) Aug. 10-17, 1978; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	410	6.2	3.1	0	173	1.0	273	1150	970	1250	1180	645
2	543	6.2	3.2	0	79	255	486	1210	971	1250	1190	609
3	847	6.3	3.5	1.1	118	398	564	1210	958	1210	1180	606
4	920	6.3	3.3	8.7	110	387	587	1220	960	1170	1100	577
5	950	6.3	3.2	11	109	214	644	1210	1000	1170	982	567
6	950	6.4	3.2	5.4	59	202	740	1130	1040	1100	978	587
7	948	6.9	3.1	175	4.3	249	815	1210	1040	1050	977	639
8	948	6.7	3.1	456	4.4	250	858	1210	1050	1050	976	817
9	908	6.6	2.5	494	4.4	297	947	1210	1080	1050	981	829
10	877	6.7	1.6	487	4.1	431	952	1210	1100	1140	965	827
11	875	6.7	1.4	482	4.4	494	1000	1210	1050	1180	951	763
12	876	6.3	0.32	484	4.2	424	1010	1150	1020	1190	975	756
13	811	6.2	0	478	4.3	333	1050	1150	1020	1210	987	756
14	567	6.1	0	465	4.4	286	1100	1080	1010	1240	986	653
15	372	6.1	0	466	4.4	287	1140	1080	1080	1240	986	568
16	376	6.3	0	457	4.4	373	1120	985	1180	1210	984	542
17	378	6.1	0	437	2.5	436	1120	988	1230	1200	984	536
18	379	6.4	0	444	1.1	303	1130	987	1220	1200	1040	535
19	379	6.0	0	444	1.1	162	1030	983	1210	1190	1070	532
20	379	6.3	0	444	1.1	55	972	888	1210	1180	1050	531
21	378	8.2	0	439	1.1	56	983	1180	1210	1170	989	545
22	383	9.7	0	439	1.1	56	1040	1180	1160	1120	959	572
23	260	9.5	0	440	1.0	23	1050	869	1070	1080	840	570
24	260	9.4	0	430	1.0	1.5	1090	869	1030	1080	665	570
25	175	9.3	0	411	1.0	1.9	1090	727	1060	1080	614	424
26	4.5	9.4	0	422	1.0	1.5	1100	727	1120	1070	738	379
27	6.0	9.9	0	433	1.0	1.4	815	932	1130	1070	817	379
28	6.0	9.1	0	441	1.0	1.4	408	1070	1130	1070	809	377
29	6.0	9.5	0	464	---	1.4	759	1070	1210	1150	761	377
30	6.1	6.2	0	468	---	1.4	1100	969	1250	1200	759	265
31	6.1	---	0	454	---	1.3	---	970	---	1180	718	---
TOTAL	15183.7	217.3	31.52	11080.2	705.3	5983.8	26973	33034	32769	35750	29191	17353
MEAN	490	7.24	1.02	357	25.2	193	899	1066	1092	1153	942	578
MAX	950	9.9	3.5	494	173	494	1140	1220	1250	1250	1190	829
MIN	4.5	6.0	0	0	1.0	1.0	273	727	958	1050	614	265
AC-FT	30120	431	63	21980	1400	11870	53500	65520	65000	70910	57900	34420
CAL YR 1980 TOTAL	213258.25			MEAN 583	MAX 1300	MIN 0	AC-FT 423000					
WTR YR 1981 TOTAL	208271.82			MEAN 571	MAX 1250	MIN 0	AC-FT 413100					

LOCATION.--Lat 37°51'32", long 120°37'56", in SW¼SE¼ sec.10, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 0.3 mi (0.5 km) downst ream from headgate at Goodwin Dam, and 3.4 mi (5.5 km) northeast of Knights Ferry.

GAGE.--Water-stage recorder. Altitude of gage is 350 ft (107 m), from topographic map. Prior to Apr. 29, 1916, nonrecording gage at site 1,000 ft (300 m) upstream at different datum. Apr. 29, 1916, to July 3, 1925, nonrecording gage and July 4, 1925, to Apr. 3, 1949, water-stage recorder at present site at datum 0.18 ft (0.055 m) higher.

AVERAGE DISCHARGE.--67 years, 167 ft³/s (4.729 m³/s), 121,000 acre-ft/yr (149 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 556 ft³/s (15.7 m³/s) July 8-11, 1967; no flow at times in most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	9.4	5.8	3.0		0	0	459	510	520	524	402
2	414	9.1	5.9	1.5		0	0	459	509	521	519	402
3	414	9.1	5.9	.05		0	0	459	499	521	522	400
4	414	3.2	2.2	0		.02	0	459	496	521	467	277
5	414	.16	0	0		.03	0	459	495	520	422	276
6	415	.03	0	0		0	91	459	494	521	422	276
7	415	4.0	0	.22		0	128	458	494	524	422	276
8	415	7.0	0	.31		0	210	458	495	523	423	278
9	415	6.7	0	.58		0	263	478	494	524	424	276
10	415	6.7	0	.01		0	266	490	496	524	425	275
11	414	6.5	0	0		0	337	489	502	524	425	275
12	415	6.2	0	0		0	341	493	519	525	426	275
13	409	6.1	0	0		0	344	525	519	523	426	276
14	386	6.0	0	0		0	385	524	519	523	426	276
15	389	6.0	0	0		0	408	524	521	524	426	275
16	380	6.0	2.6	0		0	447	524	516	525	427	275
17	373	5.7	3.9	0		0	460	525	520	527	427	263
18	373	5.9	4.1	0		0	459	524	521	523	427	257
19	374	5.4	3.5	0		.44	276	524	521	524	427	256
20	362	5.7	3.3	0		.08	151	523	520	524	408	257
21	352	5.5	3.3	0		0	174	522	521	525	397	278
22	351	5.4	3.3	0		0	323	522	521	525	397	278
23	352	5.4	3.4	.06		0	325	523	520	526	398	340
24	282	5.3	3.4	0		0	340	523	521	525	399	350
25	1.6	5.2	3.5	0		.12	433	523	521	525	398	350
26	0	5.3	2.8	0		.01	433	523	521	525	399	350
27	0	5.6	2.3	.20		0	433	517	521	525	398	350
28	0	5.0	2.4	.07		0	434	509	521	526	403	350
29	0	5.4	2.6	.76	---	0	435	510	520	527	404	350
30	5.4	5.7	2.7	.09	---	0	441	510	519	528	404	349
31	9.4	---	2.9	0	---	0	---	510	---	526	403	---
TOTAL	9372.4	168.69	69.8	6.85	0	.70	8337	15505	15366	16244	13215	9218
MEAN	302	5.62	2.25	.22	0	.023	278	500	512	524	426	307
MAX	415	9.4	5.9	3.0	0	.44	460	525	521	528	524	402
MIN	0	.03	0	0	0	0	0	458	494	520	397	256
AC-FT	18590	335	138	14	0	1.4	16540	30750	30480	32220	26210	18280
CAL YR 1980	TOTAL	101271.79	MEAN 277	MAX 533	MIN 0	AC-FT 200900						
WTR YR 1981	TOTAL	87503.44	MEAN 240	MAX 528	MIN 0	AC-FT 173600						

SAN JOAQUIN RIVER BASIN

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'06", long 120°38'13", in Rancheria del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on right bank 250 ft (76 m) upstream from Owl Creek, 0.9 mi (1.4 km) downstream from Goodwin Dam, and 2.9 mi (4.7 km) northeast of Knights Ferry.

DRAINAGE AREA.--986 mi² (2,554 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1957 to current year. Records equivalent to those published as Stanislaus River at Knights Ferry, 1903-14, and as Stanislaus River near Knights Ferry, 1915-32, if adjusted for diversions in Stanislaus and San Joaquin Water Company's canal and Oakdale and South San Joaquin canals.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 252.83 ft (77.063 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by New Melones Reservoir (station 11299000) since 1978 and Tulloch Reservoir. South San Joaquin Canal (station 11300500) and Oakdale Canal (station 11301000) divert at Goodwin Dam 1.0 mi (1.6 km) upstream. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--24 years, 728 ft³/s (20.62 m³/s), 527,400 acre-ft/yr (650 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s (1,140 m³/s) Dec. 24, 1964, gage height, 28.85 ft (8.793 m) in gage well, 31.2 ft (9.51 m) outside, from floodmarks, from rating curve extended above 27,000 ft³/s (765 m³/s); minimum daily, 0.12 ft³/s (0.003 m³/s) Feb. 8, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 37.7 ft (11.49 m), from floodmarks, discharge, 62,900 ft³/s (1,780 m³/s), by computation of flow over Goodwin Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft³/s (39.9 m³/s) Apr. 14, gage height, 10.44 ft (3.182 m); minimum daily, 8.4 ft³/s (0.24 m³/s) Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	138	107	107	72	115	224	808	210	396	199	245
2	24	137	109	106	85	75	225	782	150	433	170	251
3	20	138	112	104	100	85	233	780	109	455	264	251
4	16	149	113	97	111	109	246	782	116	401	293	263
5	13	158	112	94	111	85	266	788	159	343	281	258
6	11	157	112	100	107	86	281	790	187	250	282	264
7	9.9	156	112	91	106	83	293	793	181	195	282	271
8	9.5	156	112	65	106	83	271	797	191	182	283	117
9	8.9	155	113	62	106	94	272	795	200	182	282	34
10	8.9	156	116	60	106	79	383	806	240	164	310	34
11	8.9	156	115	60	108	61	805	639	282	170	327	35
12	8.9	155	114	60	106	57	746	493	287	170	332	35
13	8.4	155	113	60	108	53	769	423	287	132	314	36
14	65	154	114	59	108	49	974	422	287	88	298	37
15	139	154	113	59	108	49	1330	309	286	92	296	36
16	139	156	113	59	110	70	1290	156	226	77	296	35
17	139	154	112	59	113	95	1280	150	356	36	287	35
18	138	159	113	59	113	94	1270	147	406	36	256	36
19	137	151	112	59	115	153	1280	159	566	36	241	35
20	137	155	111	59	115	328	1270	135	680	36	246	35
21	137	182	111	59	115	472	1260	97	674	36	245	36
22	137	197	110	59	117	469	1270	142	715	67	247	37
23	135	200	109	61	115	389	1250	176	655	117	250	37
24	136	199	108	59	115	345	1240	181	578	106	224	37
25	146	198	108	58	115	356	1260	179	522	106	205	40
26	147	202	107	58	115	262	1250	173	483	106	260	38
27	135	209	108	61	115	187	1210	164	474	106	264	36
28	141	200	108	61	115	206	1280	163	476	106	254	36
29	136	211	108	159	---	205	1050	196	407	104	332	36
30	136	154	107	300	---	205	803	220	359	104	339	37
31	136	---	107	208	---	204	---	220	---	168	342	---
TOTAL	2586.4	5001	3439	2622	3036	5203	25581	12865	10749	5000	8501	2713
MEAN	83.4	167	111	84.6	108	168	853	415	358	161	274	90.4
MAX	147	211	116	300	117	472	1330	808	715	455	342	271
MIN	8.4	137	107	58	72	49	224	97	109	36	170	34
AC-FT	5130	9920	6820	5200	6020	10320	50740	25520	21320	9920	16860	5380
CAL YR 1980 TOTAL	501969.4			1372	MAX 4800	MIN 8.4	AC-FT 995700					
WTR YR 1981 TOTAL	87296.4			239	MAX 1330	MIN 8.4	AC-FT 173200					

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1966 to current year.

INSTRUMENTATION.--Temperature recorder since February 1966.

REMARKS.--Temperature recorder located 2,300 ft (701 m) upstream from gaging station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 30.5°C July 25, 1974; minimum recorded, 5.5°C Feb. 3, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 21.5°C on several days during July; minimum recorded, 9.5°C on several days during December, February, and March.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	13.5	13.0	12.0	11.0	---	---	---	---	10.5	9.5
2	---	---	13.5	13.0	11.5	11.0	---	---	---	---	10.5	9.5
3	---	---	13.5	13.0	12.0	11.0	10.5	10.0	---	---	10.5	9.5
4	---	---	13.5	13.0	12.0	11.0	11.0	10.5	11.0	10.0	10.0	9.5
5	---	---	13.5	13.0	11.5	10.5	11.0	10.5	10.5	9.5	10.5	9.5
6	---	---	13.5	12.5	11.5	10.5	11.5	10.5	10.5	10.0	10.5	9.5
7	---	---	13.5	12.5	11.0	10.5	11.0	10.5	10.5	9.5	11.0	10.0
8	21.0	19.0	13.5	12.5	11.0	10.0	11.0	10.0	10.5	9.5	11.0	10.0
9	21.0	19.0	13.0	12.5	11.0	10.0	11.0	10.5	10.5	9.5	11.0	10.0
10	20.5	19.0	13.0	12.5	10.5	10.0	11.0	10.5	10.5	10.0	11.0	10.5
11	20.0	19.0	13.0	12.5	10.5	9.5	11.0	10.5	11.0	10.5	11.0	10.0
12	21.0	19.5	13.0	12.0	---	10.0	---	---	11.5	10.0	11.0	10.0
13	19.5	17.5	12.5	11.5	---	---	---	---	11.0	10.5	11.0	9.5
14	17.5	14.5	12.5	11.5	---	---	---	---	11.5	10.0	11.0	9.5
15	14.5	14.0	12.5	11.5	---	---	---	---	11.5	10.5	11.0	10.0
16	14.0	13.5	12.0	11.5	---	---	---	---	11.5	10.0	11.5	10.0
17	13.5	13.0	12.0	11.0	---	---	---	---	11.5	10.0	11.0	10.5
18	13.5	13.0	12.0	11.0	---	---	---	---	11.5	10.5	11.0	10.5
19	13.5	13.0	12.0	11.5	---	---	---	---	11.5	10.5	11.5	10.0
20	13.5	13.0	12.0	11.0	---	---	---	---	11.5	10.5	11.0	10.0
21	13.5	13.0	12.0	10.5	---	---	---	---	11.5	10.0	11.0	10.5
22	13.5	13.0	12.0	11.5	---	---	---	---	11.0	10.0	11.0	10.0
23	13.5	13.0	12.5	11.5	---	---	---	---	11.0	10.0	11.0	10.5
24	13.5	13.0	12.0	11.5	---	---	---	---	11.0	10.0	11.0	10.0
25	13.5	13.5	11.5	11.0	---	---	---	---	10.5	10.0	11.0	10.0
26	14.0	13.5	11.5	11.0	---	---	---	---	10.5	10.0	11.0	10.0
27	13.5	13.5	11.5	10.5	---	---	---	---	10.5	9.5	11.5	10.5
28	13.5	13.5	11.5	10.5	---	---	---	---	10.5	9.5	12.0	10.5
29	13.5	13.5	11.5	10.0	---	---	---	---	---	---	12.5	10.5
30	13.5	13.0	12.0	11.0	---	---	---	---	---	---	11.5	11.0
31	13.5	13.0	---	---	---	---	---	---	---	---	12.0	11.0
MONTH	---	---	13.5	10.0	---	---	---	---	11.5	9.5	12.5	9.5

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.5	14.0	12.5	---	---	18.0	17.0	15.5	15.0	17.0	17.0
2	12.0	11.0	14.0	12.5	15.5	14.5	18.0	17.5	17.5	15.0	17.5	17.0
3	12.0	11.5	14.0	13.0	15.5	14.5	18.5	17.5	15.0	14.5	17.5	17.0
4	12.5	11.5	14.0	13.0	15.5	14.5	18.5	17.5	15.0	14.5	17.5	17.0
5	12.5	11.5	14.0	13.0	15.5	14.5	18.5	17.5	15.0	14.5	17.5	17.5
6	12.5	11.5	14.0	13.0	15.5	15.0	19.0	18.5	15.0	14.5	18.0	17.5
7	12.5	11.5	14.0	13.0	15.5	15.0	19.0	18.0	15.0	14.5	18.0	17.5
8	12.5	11.5	14.0	13.0	16.0	15.0	19.0	18.0	15.0	14.5	19.0	17.5
9	12.5	11.5	14.5	13.5	16.0	15.0	19.0	18.5	15.0	14.5	19.0	18.0
10	13.0	12.0	14.0	13.5	16.0	15.0	19.0	18.5	15.0	14.5	19.0	18.0
11	13.0	12.0	14.0	13.0	16.0	15.5	19.5	18.5	15.0	14.5	19.5	18.0
12	13.0	12.0	14.0	13.0	16.0	15.5	19.5	18.5	15.0	14.5	19.5	18.5
13	13.0	12.0	14.0	13.0	16.0	15.5	20.0	18.5	15.0	14.5	19.5	18.5
14	---	---	14.0	13.0	16.0	15.5	20.5	19.0	15.0	14.5	19.5	18.5
15	---	---	13.5	13.0	16.5	15.5	20.5	19.0	15.5	14.5	19.5	18.5
16	14.0	13.5	14.0	12.5	19.0	16.0	20.5	19.0	15.5	14.5	19.5	18.5
17	14.0	13.5	14.0	12.5	16.5	16.0	21.5	19.5	15.5	14.5	19.5	19.0
18	13.5	13.0	14.0	13.0	16.5	16.0	21.5	19.5	15.5	14.5	19.5	19.0
19	13.0	12.5	13.5	13.0	17.0	16.0	21.5	19.5	15.5	15.0	19.5	18.5
20	13.0	12.5	14.0	12.5	17.0	16.0	21.5	19.5	16.0	15.0	19.5	19.0
21	13.0	12.5	14.5	13.0	17.0	16.0	21.5	19.5	16.0	15.0	19.5	18.5
22	13.5	12.5	15.0	13.0	17.0	16.5	21.5	19.5	16.0	15.5	19.5	18.5
23	13.5	12.5	14.5	13.5	17.0	16.0	20.5	20.0	16.5	15.0	19.0	18.0
24	13.5	13.0	14.5	13.5	17.0	16.5	21.0	20.0	16.5	15.5	19.0	18.0
25	13.5	12.5	---	---	17.5	16.5	21.0	20.0	16.5	16.0	19.5	18.5
26	13.5	12.5	---	---	17.5	16.5	20.5	19.0	16.5	16.0	19.5	19.0
27	13.5	12.5	---	---	17.5	16.5	19.0	18.5	16.5	16.0	20.0	19.0
28	13.5	12.0	---	---	17.5	17.0	18.5	18.0	18.0	16.0	19.5	19.0
29	13.5	12.5	---	---	18.0	16.5	18.0	16.5	17.0	16.5	19.5	19.0
30	14.0	13.0	---	---	18.0	17.0	17.0	16.0	17.0	16.0	19.5	18.5
31	---	---	---	---	---	---	16.0	15.5	17.0	17.0	---	---
MONTH	14.0	11.0	---	---	19.0	14.5	21.5	15.5	18.0	14.5	20.0	17.0

11303000 STANISLAUS RIVER AT RIPON, CA

LOCATION.--Lat 37°43'47", long 121°06'34", in NW¼SE¼ sec.29, T.2 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 15 ft (5 m) downstream from railroad bridge, 1.1 mi (1.8 km) southeast of Ripon, and 15 mi (24 km) upstream from mouth.

DRAINAGE AREA.--1,075 mi² (2,784 km²).

PERIOD OF RECORD.--October 1940 to current year. April to September 1940 in reports of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is 0.72 ft (0.219 m) National Geodetic Vertical Datum of 1929. October 1940 to Nov. 17, 1953, at site 100 ft (30 m) upstream at same datum.

REMARKS.--Records good. Flow regulated by reservoirs and powerplants above station (see REMARKS for station 11302000). South San Joaquin and Oakdale Canals (stations 11300500, 11301000) divert at Goodwin Dam 34 mi (55 km) upstream. Diversions for irrigation of 57,250 acres (232 km²) in vicinity of Oakdale. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--41 years, 1,000 ft³/s (28.32 m³/s), 724,500 acre-ft/yr (893 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,500 ft³/s (1,770 m³/s) Dec. 24, 1955, gage height, 63.25 ft (19.279 m); minimum daily, 0.11 ft³/s (0.003 m³/s) Aug. 4-6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 12, 1938, reached a stage of 64.4 ft (19.63 m) from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) Apr. 20, gage height, 43.64 ft (13.301 m); minimum daily, 143 ft³/s (4.05 m³/s) Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	453	230	372	183	427	173	292	1050	356	511	236	429
2	494	228	312	183	288	175	306	1010	378	533	310	399
3	377	228	264	182	234	209	301	980	323	553	337	350
4	372	226	264	182	214	223	312	957	286	578	313	355
5	348	234	259	179	211	239	325	922	265	572	358	365
6	366	294	245	175	207	313	345	927	296	512	363	341
7	403	326	239	172	203	238	365	935	323	461	372	336
8	410	292	234	173	197	205	385	950	358	372	362	338
9	416	339	230	168	195	195	375	970	314	369	388	348
10	394	352	219	158	193	178	380	964	282	328	383	269
11	384	345	207	154	191	176	600	972	342	330	376	223
12	398	344	203	150	189	202	940	866	362	352	431	203
13	429	345	199	160	187	212	900	725	387	341	411	181
14	403	345	196	297	187	218	930	663	400	344	446	171
15	356	356	194	240	187	184	1060	624	411	281	394	186
16	367	356	192	225	186	186	1380	562	369	265	428	174
17	370	357	193	193	183	218	1350	495	359	285	420	169
18	382	359	194	180	181	237	1360	440	390	245	395	157
19	419	360	193	184	180	258	1450	400	470	228	357	168
20	404	365	190	167	178	513	1630	414	575	226	339	160
21	390	366	192	143	177	588	1500	423	695	201	371	183
22	384	367	193	148	176	605	1450	397	725	188	358	186
23	386	376	191	180	175	581	1460	366	725	229	401	168
24	388	377	190	190	177	550	1470	379	696	237	446	178
25	391	373	189	193	177	495	1420	404	637	262	395	163
26	349	372	188	177	175	530	1440	395	600	256	324	167
27	285	375	188	225	173	503	1410	347	588	260	333	190
28	260	381	186	354	172	357	1370	376	606	223	371	164
29	245	381	186	491	---	322	1380	368	625	215	341	156
30	241	380	185	694	---	305	1290	347	571	247	376	151
31	233	---	185	597	---	295	---	363	---	237	398	---
TOTAL	11497	10029	6672	7097	5620	9683	29176	19991	13714	10241	11533	7028
MEAN	371	334	215	229	201	312	973	645	457	330	372	234
MAX	494	381	372	694	427	605	1630	1050	725	578	446	429
MIN	233	226	185	143	172	173	292	347	265	188	236	151
AC-FT	22800	19890	13230	14080	11150	19210	57870	39650	27200	20310	22880	13940
CAL YR 1980 TOTAL	607531			1660		4780		185		1205000		
WTR YR 1981 TOTAL	142281			390		1630		143		282200		

11303300 STANISLAUS RIVER AT KOETITZ RANCH, NEAR RIPON, CA

LOCATION.--Lat 37°41'58", long 121°10'07", in NE&SW¼ sec.2, T.3 S., R.7 E., Stanislaus County, Hydrologic Unit 18040002, at Koetitz Ranch 1.9 mi (3.1 km) upstream from Caswell Memorial State Park, and 3.6 mi (5.8 km) southwest of Ripon.

DRAINAGE AREA.--1,081 mi² (2,800 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1980 to current year. Water years 1900-79 in files of California Department of Water Resources.

COOPERATION.--Records furnished by California Department of Water Resources.

WATER QUALITY RECORDS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM CA,DISS (MG/L)	MAGNESIUM MG,DISS (MG/L)	SODIUM NA,DISS (MG/L)
80/10/07	12 45	112	7.3	19.0	8.7			42	10	4	5
80/12/10	10 30	184	7.3	8.0	8.5			74	18	7	10
81/02/09	13 30	202		11.0	10.0	20		87	20	9	12
81/04/07	13 00	111	7.8	17.0	9.5	9.0	1.2	46	10	5	5
81/05/12	11 15	88	7.8	16.0	9.1	11	0.7				
81/06/09	14 15	115	7.5	25.0	7.9	10	1.1	42	10	4	5

DATE	TIME	POTASSIUM K,DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)
80/10/07	12 45	1.7	43	2	2	74		0.51	0.04	0.40	0.15
80/12/10	10 30	1.6	76	9	6	125		1.00	0.01	0.40	0.11
81/02/09	13 30	2.7	84	12	8	151	8	1.30	0.04	0.50	0.13
81/04/07	13 00	1.3	44	5	3	74	18	0.37	0.00	0.30	0.08
81/05/12	11 15						53	0.12	0.01	0.20	0.07
81/06/09	14 15	1.4	43	3	3	67	16	0.32	0.11	0.40	0.10

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B,DISS (UG/L)
80/10/07	12 45	0.06		0
80/12/10	10 30	0.03		0
81/02/09	13 30	0.08	3.7	0
81/04/07	13 00	0.03	3.5	100
81/05/12	11 15	0.03	3.0	
81/06/09	14 15	0.06	3.6	0

DATE	TIME	ARSENIC AS,DISS (UG/L)	BARIUM BA,DISS (UG/L)	CADMIUM CO,DISS (UG/L)	CHROMIUM CR,DISS (UG/L)	COPPER CU,DISS (UG/L)	IRON FE,DISS (UG/L)	LEAD PB,DISS (UG/L)	MANGNESE MN,DISS (UG/L)	MERCURY HG,TOTAL (UG/L)	SELENIUM SE,DISS (UG/L)
80/12/10	10 30	0	0	0	0	0	40	0	50	0.0	10
81/02/09	13 30	0	0	0	0	0	40	0	50	0.0	10
81/04/07	13 00	0	0	0	0	0	30	0	10	0.0	10

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA
(National stream-quality accounting network station)

LOCATION.--Lat 37°40'34", long 121°15'55", in El Pescadero Grant, San Joaquin County, Hydrologic Unit 18040003, on left bank 12 ft (4 m) downstream from Durham Ferry highway bridge, 2.6 mi (4.2 km) downstream from Stanislaus River, and 3.2 mi (5.1 km) northeast of Vernalis.

DRAINAGE AREA.--13,536 mi² (35,058 km²), includes about 2,100 mi² (5,440 km²) in James Bypass.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1922 to current year (1922-23 and 1925-29, low-water records only).

REVISED RECORDS.--WSP 831: 1936. WSP 931: 1940. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 2130 for history of changes prior to Nov. 30, 1967.

REMARKS.--Records excellent. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, and diversions for irrigation; low flows consist mainly of return flow from irrigated areas.

AVERAGE DISCHARGE.--53 years (water years 1924, 1930-81), 4,351 ft³/s (123.2 m³/s), 3,152,000 acre-ft/yr (3.89 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 79,000 ft³/s (2,240 m³/s) Dec. 9, 1950, elevation, 32.81 ft (10.000 m) present datum, including flow through breaks in levee; maximum elevation, 34.55 ft (10.531 m) Jan. 27, 1969; minimum discharge, 19 ft³/s (0.54 m³/s) Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,830 ft³/s (165 m³/s) Jan. 31, elevation, 15.99 ft (4.874 m); minimum daily, 1,030 ft³/s (29.2 m³/s) July 24, Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3150	3310	3180	3460	4960	2600	2950	2380	1760	1420	1200	1260
2	3300	3670	3100	3230	4090	2350	2920	2280	1640	1410	1250	1230
3	4230	4380	3080	2510	3280	2090	2710	2310	1540	1510	1360	1200
4	4760	4480	3130	3130	3420	2300	2470	2300	1470	1590	1330	1250
5	5070	4480	3140	2920	3340	2520	2380	2200	1490	1620	1300	1260
6	5230	4270	3120	2430	3250	3080	2260	2160	1480	1710	1260	1270
7	5380	3390	3130	3310	3220	3470	1970	2160	1540	1490	1340	1320
8	5410	3040	3090	3540	2990	3250	1900	2160	1570	1320	1290	1380
9	5380	3060	3000	3620	2690	2830	1830	2240	1500	1240	1320	1290
10	5270	3060	2820	3560	2450	2490	1760	2270	1370	1190	1370	1210
11	4990	3040	2740	3420	2950	2490	1760	2330	1270	1200	1330	1240
12	4670	3030	2710	2970	3030	2370	1820	2220	1260	1290	1270	1100
13	4490	3030	2690	2380	2920	2340	2000	2000	1320	1290	1230	1110
14	4390	3060	2740	3190	2880	2320	1960	1890	1420	1210	1220	1170
15	4190	3070	2750	3400	2810	2340	2030	1850	1550	1180	1180	1110
16	3840	2970	2690	3350	2400	2350	2240	1860	1470	1110	1200	1030
17	3540	2980	2700	3390	2220	2290	2440	1830	1400	1180	1360	1080
18	3310	2940	2690	3260	2220	2710	2550	1910	1350	1250	1240	1100
19	3330	2920	2700	2840	2630	2990	2910	1850	1390	1290	1130	1090
20	3280	2940	2680	2300	2660	3420	3330	1790	1420	1340	1120	1180
21	3190	2940	2730	2690	2690	4950	3260	1800	1660	1180	1170	1170
22	3840	3010	3170	2760	2630	4600	3250	1780	1840	1050	1220	1130
23	3630	3170	2900	2880	2230	4430	3180	1770	1700	1070	1260	1080
24	3340	3170	3640	3060	2060	4180	3140	1700	1580	1030	1420	1110
25	3300	3110	3820	3010	2480	4260	3040	1760	1490	1070	1410	1160
26	3560	3150	3340	2820	2640	3970	2990	1810	1430	1220	1290	1160
27	3900	3180	2540	2810	2730	4410	2930	1680	1470	1240	1230	1200
28	3770	3180	2890	3340	2740	3880	2780	1610	1560	1190	1180	1260
29	3690	3120	2870	4270	---	3420	2640	1650	1540	1140	1210	1190
30	3450	3180	2450	5220	---	3170	2570	1680	1480	1070	1300	1100
31	3360	---	3200	5700	---	2910	---	1740	---	1120	1360	---
TOTAL	126240	98330	91430	100770	80610	96780	75970	60970	44960	39220	39350	35440
MEAN	4072	3278	2949	3251	2879	3122	2532	1967	1499	1265	1269	1181
MAX	5410	4480	3820	5700	4960	4950	3330	2380	1840	1710	1420	1380
MIN	3150	2920	2450	2300	2060	2090	1760	1610	1260	1030	1120	1030
AC-FT	250400	195000	181400	199900	159900	192000	150700	120900	89180	77790	78050	70300
CAL YR 1980 TOTAL	3103740		MEAN 8480		MAX 33700	MIN 1760	AC-FT 6156000					
WTR YR 1981 TOTAL	890070		MEAN 2439		MAX 5700	MIN 1030	AC-FT 1765000					

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

CHEMICAL ANALYSES: Water years 1951 to current year.

BIOLOGICAL DATA: Water years 1974 to current year.

SPECIFIC CONDUCTANCE: Water years 1951-63, 1973 to current year.

WATER TEMPERATURES: Water years 1951 to current year.

SEDIMENT RECORDS: Water years 1957 to current year.

TURBIDITY: Water years 1972 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: March 1951 to May 1963.

SPECIFIC CONDUCTANCE: March 1951 to May 1963, January 1973 to current year.

WATER TEMPERATURES: March 1951 to current year.

SEDIMENT RECORDS: November 1956 to current year.

INSTRUMENTATION.--Conductivity recorder since January 1973. Temperature recorder October 1961 to September 1963, and since December 1972.

COOPERATION.--The letter "A" following a date indicates chemical-quality data furnished by California Department of Water Resources.

REMARKS.--Mean daily specific conductance records since January 1973, furnished by Bureau of Reclamation; unpublished records are included in extremes and are available in files of district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,350 micromhos Aug. 11, 1961; minimum daily, 60 micromhos June 21, 1953.

WATER TEMPERATURES: Maximum recorded 30.0°C July 7, 1970, July 30, 1977; minimum recorded, 3.0°C Jan. 24, 1962.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,590 mg/L Dec. 25, 1964; minimum daily mean, 9 mg/L Jan. 4, 1960, Nov. 18, 1961.

SEDIMENT DISCHARGE: Maximum daily, 54,100 tons (49,100 metric tons) Dec. 25, 1964; minimum daily, 2 tons (1.8 metric tons) Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 1170 micromhos Apr. 8; minimum daily recorded, 179 micromhos Oct. 8.

WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 5, 6; minimum recorded, 8.5°C Dec. 11-15.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 207 mg/L Jan. 30; minimum daily mean, 30 mg/L Mar. 2.

SEDIMENT DISCHARGE: Maximum daily, 2,920 tons (2,650 metric tons) Jan. 30; minimum daily, 184 tons (167 metric tons) Sept. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-HF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT										
01...A	1100	3160	350	7.5	20.0	21	7.6	780	740	83
14...A	1535	4360	263	7.4	16.0	14	8.4	--	--	--
27...A	1405	3900	315	7.7	15.0	10	8.8	--	--	--
NOV										
03...A	1300	4430	282	7.5	14.5	8.5	9.1	<1200	320	64
12...A	1455	3050	458	7.6	--	14	8.7	--	--	--
DEC										
10...A	1300	2800	480	7.5	9.0	4.5	10.4	K150	--	110
10...A	1310	2800	522	7.5	9.0	7.0	10.2	--	--	--
JAN										
08...A	1155	3500	345	7.4	9.0	8.0	9.2	--	--	--
14...A	1200	3180	333	7.2	10.5	11	9.9	K8700	120	77
FEB										
10...A	1215	2380	1150	7.4	11.5	21	8.3	K120	330	250
24...A	1405	1980	1210	7.6	14.0	13	8.4	--	--	--
MAR										
11...A	1100	2540	917	7.6	16.0	23	8.0	--	--	--
23...A	1330	4460	533	7.4	14.5	60	--	K740	230	110
24...A	1355	4130	680	7.6	16.0	39	8.0	--	--	--
APR										
09...A	1255	1840	1120	7.9	18.0	22	9.0	--	--	--
21...A	1130	3270	464	7.5	17.0	2.0	8.8	K700	74	110
MAY										
11...A	1640	2330	638	7.9	22.0	23	8.7	--	--	--
18...A	1130	1950	735	7.5	19.5	2.7	7.9	670	110	170
26...A	1350	1830	795	7.9	22.0	34	8.3	--	--	--
JUN										
08...A	1410	1580	819	8.0	25.0	22	9.3	--	--	--
23...A	1230	1700	635	7.9	25.0	27	8.8	420	490	140
JUL										
06...A	1315	1740	602	7.8	26.0	36	7.7	--	--	--
21...A	1200	1200	872	7.8	26.0	35	7.8	--	--	--
24...A	1430	1040	870	7.6	27.5	45	6.7	<600	84	200
AUG										
05...A	1050	1330	909	7.8	24.0	37	7.3	--	--	--
18...A	1055	1280	775	7.8	23.0	29	7.2	--	--	--
SEP										
01...A	1130	1270	778	7.7	24.0	26	7.7	--	--	--
04...A	1030	1240	736	7.6	22.5	19	7.1	120	340	180
15...A	1035	1140	826	7.6	22.0	20	7.1	--	--	--

See footnotes at end of table.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
01...	23	19	8.7	36	48	1.7	2.3	60	30
14...A	--	--	--	--	--	--	--	47	--
27...A	--	--	--	--	--	--	--	49	--
NOV									
03...	10	14	7.0	32	51	1.7	1.7	54	29
12...A	--	--	--	--	--	--	--	62	--
DEC									
10...	36	23	12	58	47	2.4	2.0	74	64
10...A	--	--	--	--	--	--	--	71	--
JAN									
08...A	--	--	--	--	--	--	--	40	--
14...	27	16	8.9	42	54	2.1	1.2	50	46
FEB									
10...	110	52	28	150	57	4.2	3.6	140	190
24...A	--	--	--	--	--	--	--	--	--
MAR									
11...A	--	--	--	--	--	--	--	--	--
23...	--	23	12	63	55	2.7	3.7	--	100
24...A	--	--	--	--	--	--	--	--	--
APR									
09...A	--	--	--	--	--	--	--	--	--
21...	36	24	13	58	52	2.4	2.8	74	65
MAY									
11...A	--	--	--	--	--	--	--	--	--
18...	--	36	19	87	52	2.9	3.4	90	91
26...A	--	--	--	--	--	--	--	--	--
JUN									
08...A	--	--	--	--	--	--	--	--	--
23...	49	30	15	65	50	2.4	2.8	91	70
JUL									
06...A	--	--	--	--	--	--	--	--	--
21...A	--	--	--	--	--	--	--	--	--
24...	72	41	23	100	52	3.1	4.0	130	100
AUG									
05...A	--	--	--	--	--	--	--	--	--
18...A	--	--	--	--	--	--	--	--	--
SEP									
01...A	--	--	--	--	--	--	--	--	--
04...	60	39	20	83	50	2.7	3.4	120	73
15...A	--	--	--	--	--	--	--	--	--
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 OIS- SOLVED (MG/L AS N)
OCT									
01...	41	.1	15	183	193	--	--	1.0	.90
14...A	30	--	13	150	--	48	4	--	.60
27...A	--	--	12	--	--	27	6	--	.70
NOV									
03...	38	.1	12	166	169	--	--	.65	.64
12...A	63	--	15	255	--	34	4	--	1.0
DEC									
10...	67	.2	15	--	290	--	--	.97	.99
10...A	68	--	14	304	--	15	2	--	.90
JAN									
08...A	45	--	10	205	--	24	4	--	.70
14...	45	.1	11	194	203	--	--	.59	.57
FEB									
10...	160	.2	17	691	694	--	--	2.1	2.1
24...A	170	--	18	761	--	32	4	--	2.1
MAR									
11...A	120	--	16	581	--	65	8	--	1.8
23...	56	.2	14	300	--	--	--	1.1	1.1
24...A	--	--	14	--	--	86	10	--	1.3
APR									
09...A	170	--	18	666	--	75	10	--	1.8
21...	62	.1	15	302	289	--	--	.97	1.0
MAY									
11...A	84	--	16	362	--	63	8	--	1.3
18...	110	.1	18	444	436	--	--	1.7	1.7
26...A	--	--	18	--	--	88	7	--	1.5
JUN									
08...A	120	--	20	474	--	91	10	--	1.3
23...	86	.1	19	349	347	90	10	1.1	1.0
JUL									
06...A	80	--	16	351	--	116	10	--	1.3
21...A	--	--	19	--	--	101	9	--	1.7
24...	130	.1	19	515	497	--	--	1.7	1.8
AUG									
05...A	130	--	19	523	--	92	9	--	1.8
18...A	--	--	20	--	--	59	7	--	1.5
SEP									
01...A	110	--	18	457	--	66	7	--	1.4
04...	110	.1	22	430	428	--	--	1.2	1.2
15...A	--	--	17	--	--	60	9	--	1.5

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
01...	.080	.030	.79	.55	.87	.58	.230	.140	--
14...A	--	.100	--	.20	.50	--	.160	--	--
27...A	--	.080	--	.10	.40	--	--	--	--
NOV									
03...	.130	.120	.77	.51	.90	.63	.270	.200	3.4
12...A	--	.180	--	.20	.80	--	.220	--	--
DEC									
10...	--	.070	--	.49	1.00	.56	.160	.100	--
10...A	--	--	--	--	--	--	.160	--	--
JAN									
08...A	--	.130	--	.20	.40	--	.120	--	--
14...	.170	.150	.48	.36	.65	.51	.200	.070	3.8
FEB									
10...	.300	.290	1.2	.91	1.50	1.2	.370	.230	7.7
24...A	--	.200	--	.40	.90	--	.240	--	--
MAR									
11...A	--	.150	--	.60	1.20	--	.310	--	--
23...	.230	.140	1.6	.86	1.80	1.0	.370	.280	--
24...A	--	.150	--	.80	1.30	--	.350	--	--
APR									
09...A	--	.040	--	.40	1.00	--	.380	--	--
21...	.090	.080	1.0	.68	1.10	.76	.400	.240	5.2
MAY									
11...A	--	.020	--	.30	.70	--	.260	--	--
18...	--	.090	--	.90	2.50	.99	.310	.220	16
26...A	--	.020	--	.40	.90	--	.290	--	--
JUN									
08...A	--	.010	--	.40	1.10	--	.350	--	--
23...	.030	.010	.77	.40	.80	--	.300	.150	--
JUL									
06...A	--	.010	--	.30	.80	--	.300	--	--
21...A	--	.100	--	.40	1.20	--	--	--	--
24...	.120	.070	1.5	.84	1.60	.91	.400	.210	6.0
AUG									
05...A	--	.120	--	.50	1.30	--	.400	--	--
18...A	--	.060	--	.40	.90	--	--	--	--
SEP									
01...A	--	.040	--	.50	.80	--	.290	--	--
04...	.140	.150	1.5	.85	1.60	1.0	.290	.160	6.6
15...A	--	.100	--	.40	1.00	--	--	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
SEP											
25...	1300	1170	771	7.4	19.0	12	7.7	560	750	170	40

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
SEP										
25...	38	19	88	52	3.2	4.1	130	70	120	.1

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
SEP										
25...	23	442	1.4	1.5	.120	.000	1.1	1.20	.290	.160

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 01...	1100	2	2	100	50	2	<1	0	0	0	<3
DEC 10...	1300	1	1	0	50	0	<1	20	0	0	<3
MAR 23...	1330	3	2	100	60	0	3	20	10	2	<3
JUN 23...	1230	3	3	0	100	1	<1	20	10	4	<1
SEP 25...	1300	3	3	200	65	0	<1	0	0	1	<3

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 01...	23	6	2000	20	13	0	120	10	.2	.1
DEC 10...	15	5	680	20	6	0	80	50	.1	.0
MAR 23...	19	7	5000	190	4	0	200	20	1.1	.1
JUN 23...	9	4	3700	20	17	0	200	10	3.0	.1
SEP 25...	8	3	2000	16	6	1	170	47	.3	.0

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
OCT 01...	4	0	0	0	0	0	50	10	6.2	1.0
DEC 10...	5	5	0	0	0	0	20	10	22	.5
MAR 23...	7	4	1	1	0	0	40	10	8.0	1.8
JUN 23...	14	3	0	0	0	0	30	8	21	1.7
SEP 25...	5	3	0	0	0	0	30	10	41	--

< Actual value is known to be less than the value shown.

K Results based on colony count outside the acceptable range (non-ideal colony count).

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF
BIOLOGICAL DATA WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	MAR 23,81 1330	MAY 12,81 1130	JUN 23,81 1230	JUL 24,81 1430	SEP 4,81 1030	SEP 25,81 1300				
TOTAL CELLS/ML	5100	23000	27000	21000	6700	32000				
DIVERSITY: DIVISION	1.7	1.3	1.3	1.4	0.6	1.5				
..CLASS	1.7	1.3	1.3	1.4	0.6	1.5				
..ORDER	2.7	2.0	1.8	2.1	1.4	2.2				
...FAMILY	3.2	2.3	2.0	2.3	1.6	2.4				
....GENUS	3.7	3.0	2.6	2.5	2.1	3.1				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...BACILLARIALES										
....NITZSCHIAEAE										
.....NITZSCHIA	340	7	2600	11	550	2	340	2	140	2
....EPITHEMIALES										
.....EPITHEMIAEAE										
.....EPITHEMIA	--	-	--	-	--	-	--	-	*	0
....EUPODISCALES										
.....COSCINODISCAEAE										
.....CYCLOTELLA	660	13	6200#	27	11000#	42	5000#	24	910	14
.....HELOSIRA	260	5	5300#	23	3900	14	470	2	3700#	56
.....STEPHANODISCUS	--	-	--	-	690	3	--	-	--	-
....FRAGILARIALES										
.....FRAGILARIAEAE										
.....ASTERIONELLA	180	4	--	-	--	-	--	-	--	-
.....SYNEDRA	80	2	--	-	280	1	--	-	500	7
....NAVICULALES										
.....CYMBELLACEAE										
.....CYMBELLA	*	0	--	-	--	-	--	-	--	-
.....ENTOMONEIDACEAE										
.....ENTOMONEIS	*	0	--	-	--	-	--	-	--	-
.....GOMPHONEMACEAE										
.....GOMPHONEMA	*	0	*	0	--	-	--	-	--	-
.....NAVICULACEAE										
.....NAVICULA	120	2	180	1	410	2	*	0	500	7
....SURIRELLALES										
.....SURIRELLACEAE										
.....SURIRELLA	*	0	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHLOROCOCCACEAE										
.....SCHROEDERIA	--	-	--	-	--	-	--	-	450	7
.....TETRAEDRON	--	-	--	-	--	-	*	0	--	-
....DICTYOSPHAERIACEAE										
.....DICTYOSPHAERIUM	160	3	700	3	--	-	270	1	--	-
....MICRACTINIACEAE										
.....GOLENKINIA	40	1	--	-	--	-	--	-	--	-
.....MICRACTINIUM	--	-	--	-	550	2	2000	10	--	-
....OOCYSTACEAE										
.....ANKISTRODESMUS	320	6	260	1	280	1	*	0	--	-
.....CHODATELLA	--	-	*	0	--	-	--	-	--	-
.....CLOSTERIOPSIS	*	0	--	-	--	-	--	-	--	-
.....KIRCHNERIELLA	140	3	180	1	--	-	--	-	180	3
.....OOCYSTIS	40	1	610	3	140	1	--	-	--	-
.....QUADRIGULA	80	2	--	-	--	-	--	-	--	-
.....SELENASTRUM	80	2	--	-	--	-	*	0	--	-
....RADIOCOCCACEAE										
.....RADIOCOCCUS	80	2	--	-	--	-	--	-	--	-
....SCENEDESMACEAE										
.....ACTINASTRUM	--	-	700	3	--	-	--	-	--	-
.....SCENEDESMUS	280	5	2800	12	6100#	22	410	2	270	4
....VOLVOCALES										
.....CHLAMYDOMONADACEAE										
.....CARTERIA	--	-	--	-	140	1	--	-	--	-
.....CHLAMYDOMONAS	280	5	350	2	550	2	470	2	--	-
....ZYGNEHATALES										
.....DESMIDIACEAE										
.....COSMARIUM	--	-	*	0	--	-	--	-	--	-
CHRYSTOPHYTA										
..XANTHOPHYCEAE										
...MISCHOCOCCALES										
....SCIADACEAE										
.....CENTRITRACTUS	--	-	--	-	140	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	MAR 23,81 1330		MAY 12,81 1130		JUN 23,81 1230		JUL 24,81 1430		SEP 4,81 1030		SEP 25,81 1300	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
....CHROOCOCCACEAE												
.....AGMENELLUM	--	-	--	-	--	-	2200	11	--	-	7100#	22
.....ANACYSTIS	260	5	350	2	550	2	610	3	--	-	5500#	17
...OSCILLATORIALES												
....OSCILLATORIAEAE												
.....OSCILLATORIA	1500#	29	2200	10	1400	5	8500#	41	--	-	3800	12
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
.....TRACHELOMONAS	80	2	*	0	140	1	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...DINOKONTAE												
....GLENODINIACEAE												
.....GLENODINIUM	*	0	--	-	140	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	326	402	340			---	900	601	766	616	780	674
2	325	339	364			---	925	586	751	650	777	689
3	244	283	370			---	956	604	797	623	762	692
4	192	283	386			---	1020	622	831	588	726	678
5	192	274	403			---	1110	641	824	577	772	691
6	186	341	428			---	1090	623	802	552	817	686
7	182	444	423			---	1160	591	753	595	785	714
8	179	447	427			---	1170	582	766	642	757	685
9	189	427	441			---	1090	559	805	696	734	645
10	189	420	482			---	1090	514	816	762	713	710
11	201	---	502			---	1050	562	818	757	717	724
12	215	424	501			---	977	598	826	736	730	752
13	223	417	500			---	887	622	813	732	749	785
14	224	405	482			---	856	679	787	743	718	735
15	244	400	497			---	772	675	778	716	726	730
16	280	402	419			---	684	637	819	753	736	753
17	---	392	---			---	612	674	819	730	669	749
18	---	408	---			---	560	684	798	725	673	769
19	---	405	---			---	545	692	757	748	696	760
20	---	400	---			---	534	707	757	788	731	780
21	408	403	---			---	499	685	702	804	743	790
22	311	397	---			---	513	740	616	874	726	783
23	331	366	---			---	495	759	592	823	701	754
24	381	353	---			---	462	779	571	810	659	732
25	375	362	---			---	480	786	605	830	663	706
26	342	341	---			---	503	776	613	789	705	754
27	291	338	---			---	622	532	742	757	713	750
28	296	342	---			---	758	551	760	587	810	742
29	---	347	---			---	814	535	774	547	816	727
30	378	338	---			---	845	559	795	596	815	744
31	390	---	---			---	895	---	775	---	791	686
MONTH	273	376	---			---	771	672	731	731	729	729

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	20.0	15.5	14.5	12.0	11.0	10.5	10.5	10.5	10.0	12.5	12.0
2	21.5	20.5	15.0	14.5	12.0	12.0	10.5	10.0	10.5	10.0	13.0	12.0
3	21.5	19.0	14.5	14.0	12.0	12.0	11.0	10.0	11.0	10.0	13.0	12.0
4	19.0	18.5	15.0	14.0	12.5	12.0	11.5	10.5	11.5	10.5	13.0	12.5
5	19.0	18.5	15.0	14.0	12.5	11.5	11.5	11.0	11.5	11.0	13.0	12.0
6	19.0	18.0	15.5	14.0	11.5	11.0	12.0	11.5	11.5	11.0	13.0	12.0
7	19.0	18.0	16.0	15.0	11.0	10.5	11.0	10.5	11.5	11.5	14.0	12.5
8	18.5	18.0	16.5	15.5	10.0	9.5	10.5	10.5	11.5	11.0	14.5	13.0
9	18.5	18.0	16.0	15.0	9.5	9.0	10.5	10.0	12.0	11.0	15.5	14.0
10	18.5	17.5	15.5	14.5	9.5	9.0	10.5	10.0	12.5	11.5	16.0	15.0
11	17.5	17.0	15.5	14.5	9.5	8.5	10.0	10.0	13.5	12.0	17.0	15.0
12	17.5	17.0	15.0	14.0	9.5	8.5	10.5	9.5	13.5	12.5	16.5	15.5
13	17.5	17.0	14.0	13.0	9.5	8.5	11.0	10.0	13.5	13.0	16.0	15.0
14	17.0	16.0	13.0	12.0	9.0	8.5	11.0	10.5	14.5	13.5	15.5	14.5
15	16.0	15.5	12.5	11.5	9.5	8.5	11.0	10.5	14.5	13.5	15.5	14.0
16	16.0	15.0	12.0	11.0	10.0	9.0	11.5	11.0	15.5	14.0	15.0	13.5
17	16.0	15.0	12.0	11.0	10.0	9.0	12.0	11.5	15.5	15.0	15.0	14.0
18	16.0	15.0	12.0	11.5	10.5	10.0	12.0	11.5	16.0	14.5	14.5	14.0
19	16.0	15.0	12.0	11.0	11.0	10.0	12.5	12.0	15.5	14.5	14.5	13.5
20	16.5	15.5	11.5	11.0	11.0	10.5	13.0	12.5	14.5	13.0	14.0	13.5
21	17.0	16.0	11.5	11.0	10.5	10.5	13.0	12.5	13.5	12.0	14.0	13.5
22	16.5	15.5	12.5	11.5	11.5	10.5	12.5	12.0	13.5	12.0	15.0	14.0
23	16.5	15.0	13.0	12.5	12.0	11.5	12.5	12.0	14.5	13.0	15.5	14.0
24	16.5	15.5	13.0	12.0	11.5	11.5	12.0	11.5	15.0	14.0	16.5	15.0
25	16.5	15.5	12.0	11.5	12.0	11.5	11.5	11.0	14.0	13.0	16.5	16.0
26	15.5	15.0	12.0	11.0	12.0	11.5	11.0	10.5	13.5	12.5	16.5	15.0
27	15.0	14.5	11.5	11.0	12.0	11.5	11.0	10.5	13.0	12.0	16.0	15.0
28	15.0	14.5	11.5	10.5	11.5	11.5	11.0	10.5	12.5	12.0	16.5	15.0
29	15.5	14.5	11.5	11.0	11.5	11.5	11.0	11.0	---	---	17.0	16.0
30	15.5	14.5	11.5	11.0	11.5	11.0	11.0	10.5	---	---	17.0	15.5
31	15.5	14.5	---	---	11.0	10.5	10.5	10.0	---	---	17.0	15.5
MONTH	21.5	14.5	16.5	10.5	12.5	8.5	13.0	9.5	16.0	10.0	17.0	12.0

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	16.0	23.0	20.5	25.0	23.0	26.0	24.0	25.5	23.0	---	---
2	17.0	15.5	23.0	20.0	25.0	22.5	26.5	23.5	26.0	23.5	---	---
3	17.5	15.5	21.0	19.0	25.0	22.5	26.5	24.0	27.0	24.0	---	---
4	18.0	16.0	20.5	19.0	26.0	23.0	26.5	24.5	28.0	25.0	---	---
5	19.0	17.0	20.0	18.5	27.0	24.5	26.5	24.0	28.5	26.0	25.5	23.0
6	19.5	17.5	19.5	18.0	26.5	24.5	26.0	24.5	28.5	25.5	25.5	23.0
7	19.0	17.0	20.0	17.5	26.0	23.0	24.5	23.0	27.5	24.5	25.5	23.0
8	19.0	17.0	20.5	18.0	26.0	23.0	25.5	22.0	27.0	24.0	25.5	23.5
9	19.5	17.5	22.0	19.0	25.0	23.0	26.0	23.0	26.5	24.0	25.0	23.5
10	19.5	16.5	22.0	19.5	24.5	22.5	25.5	23.0	26.5	23.5	25.5	23.0
11	19.0	16.5	22.0	20.5	24.5	22.0	25.0	22.5	26.0	23.0	25.5	23.0
12	19.0	16.5	22.5	20.5	23.5	21.0	25.0	22.0	26.0	23.5	25.5	23.5
13	19.0	16.5	22.5	20.0	23.0	20.0	25.0	22.0	26.5	23.5	25.0	23.0
14	19.0	17.0	22.0	20.5	22.0	19.5	26.5	23.0	26.0	23.5	25.0	23.0
15	19.5	17.5	21.5	20.0	23.0	19.5	27.0	24.0	25.5	22.5	25.0	22.5
16	19.5	17.5	20.5	19.0	24.5	21.5	26.5	23.5	24.5	22.0	24.5	22.0
17	19.5	17.5	20.5	18.5	24.5	22.0	26.0	23.0	24.5	22.0	24.5	22.0
18	18.0	16.5	21.0	19.5	24.5	22.5	27.0	23.5	25.0	22.5	24.0	22.0
19	16.5	16.0	20.0	18.5	26.5	23.0	27.5	24.5	25.5	22.5	24.0	22.0
20	17.0	15.5	21.0	18.0	27.5	24.5	27.5	25.0	24.5	22.0	24.0	22.0
21	18.5	16.5	22.0	19.0	27.0	25.0	27.5	25.0	24.5	22.0	23.0	21.5
22	20.0	18.0	22.5	20.0	26.5	24.5	27.5	24.5	24.5	22.0	21.5	20.0
23	21.0	19.0	24.0	21.5	26.0	23.5	27.5	24.5	25.0	22.5	21.0	19.5
24	21.5	19.5	24.5	22.5	26.0	23.0	27.5	24.5	25.5	23.5	20.5	18.5
25	20.5	19.0	23.5	22.0	26.5	23.0	28.0	25.0	26.5	24.0	21.0	19.0
26	19.0	17.5	23.5	21.5	27.0	23.5	27.5	25.0	26.5	23.5	22.0	19.0
27	19.0	17.0	24.5	22.0	27.0	24.5	27.5	25.0	25.5	23.5	23.0	20.0
28	20.0	17.5	25.5	23.0	27.0	25.0	26.0	25.0	25.5	23.5	22.0	20.5
29	21.5	19.0	25.0	23.0	26.5	24.5	25.5	23.0	26.0	23.5	21.0	19.5
30	22.0	20.0	25.0	23.0	26.5	24.0	25.5	23.0	26.0	23.0	20.5	18.5
31	---	---	25.0	22.5	---	---	25.0	23.0	---	---	---	---
MONTH	22.0	15.5	25.5	17.5	27.5	19.5	28.0	22.0	28.5	22.0	25.5	18.5

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3150	71	604	3310	37	331	3180	44	378
2	3300	77	686	3670	51	505	3100	47	393
3	4230	82	937	4380	61	721	3080	43	358
4	4760	87	1120	4480	55	665	3130	56	473
5	5070	94	1290	4480	59	714	3140	54	458
6	5230	76	1070	4270	63	726	3120	48	404
7	5380	78	1130	3390	53	485	3130	41	346
8	5410	83	1210	3040	55	451	3090	44	367
9	5380	85	1230	3060	51	421	3000	51	413
10	5270	80	1140	3060	55	454	2820	37	282
11	4990	94	1270	3040	54	443	2740	34	252
12	4670	93	1170	3030	51	417	2710	46	337
13	4490	75	909	3030	46	376	2690	44	320
14	4390	77	913	3060	44	364	2740	36	266
15	4190	85	962	3070	41	340	2750	37	275
16	3840	71	736	2970	39	313	2690	37	269
17	3540	61	583	2980	38	306	2700	39	284
18	3310	67	599	2940	39	310	2690	45	327
19	3330	62	557	2920	52	410	2700	44	321
20	3280	68	602	2940	36	286	2680	49	355
21	3190	64	551	2940	33	262	2730	46	339
22	3840	77	798	3010	41	333	3170	54	462
23	3630	58	568	3170	52	445	2900	56	438
24	3340	52	469	3170	46	394	3640	70	688
25	3300	66	588	3110	37	311	3820	68	701
26	3560	76	731	3150	36	306	3340	55	496
27	3900	64	674	3180	34	292	2540	46	315
28	3770	49	499	3180	43	369	2890	52	406
29	3690	49	488	3120	44	371	2870	63	488
30	3450	45	419	3180	37	318	2450	64	423
31	3360	36	327	---	---	---	3200	74	639
TOTAL	126240	---	24830	98330	---	12439	91430	---	12273

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3460	89	831	4960	137	1830	2600	33	232
2	3230	85	741	4090	109	1200	2350	30	190
3	2510	52	352	3280	87	770	2090	39	220
4	3130	52	439	3420	72	665	2300	53	329
5	2920	67	528	3340	73	658	2520	55	374
6	2430	75	492	3250	66	579	3080	76	632
7	3310	69	617	3220	62	539	3470	101	946
8	3540	70	669	2990	48	388	3250	102	895
9	3620	78	762	2690	42	305	2830	91	695
10	3560	58	557	2450	52	344	2490	84	565
11	3420	53	489	2950	68	542	2490	80	538
12	2970	46	369	3030	66	540	2370	73	467
13	2380	48	308	2920	62	489	2340	61	385
14	3190	53	456	2880	54	420	2320	60	376
15	3400	64	588	2810	53	402	2340	63	398
16	3350	58	525	2400	54	350	2350	61	387
17	3390	61	558	2220	51	306	2290	62	383
18	3260	46	405	2220	57	342	2710	74	541
19	2840	47	360	2630	59	419	2990	66	533
20	2300	51	317	2660	52	373	3420	78	720
21	2690	77	559	2690	46	334	4950	160	2140
22	2760	63	469	2630	38	270	4600	139	1730
23	2880	58	451	2230	35	211	4430	139	1660
24	3060	68	562	2060	50	278	4180	108	1220
25	3010	68	553	2480	50	335	4260	91	1050
26	2820	71	541	2640	40	285	3970	133	1430
27	2810	80	607	2730	40	295	4410	133	1580
28	3340	110	992	2740	37	274	3880	96	1010
29	4270	202	2330	---	---	---	3420	83	766
30	5220	207	2920	---	---	---	3170	75	642
31	5700	159	2450	---	---	---	2910	66	519
TOTAL	100770	---	22797	80610	---	13743	96780	---	23553

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2950	65	518	2380	84	540	1760	107	508
2	2920	66	520	2280	87	536	1640	98	434
3	2710	66	483	2310	93	580	1540	94	391
4	2470	60	400	2300	87	540	1470	93	369
5	2380	62	398	2200	84	499	1490	102	410
6	2260	63	384	2160	87	467	1480	107	428
7	1970	57	303	2160	80	467	1540	108	449
8	1900	73	374	2160	82	478	1570	105	445
9	1830	85	420	2240	85	514	1500	108	437
10	1760	79	375	2270	79	484	1370	108	399
11	1760	77	366	2330	92	579	1270	95	326
12	1820	78	383	2220	121	725	1260	93	316
13	2000	72	389	2000	138	745	1320	96	342
14	1960	76	402	1890	104	531	1420	104	399
15	2030	74	406	1850	98	490	1550	102	427
16	2240	76	460	1860	99	497	1470	105	417
17	2440	68	448	1830	106	524	1400	101	382
18	2550	68	468	1910	119	614	1350	100	365
19	2910	93	731	1850	111	554	1390	109	409
20	3330	85	764	1790	92	445	1420	119	456
21	3260	70	616	1800	94	457	1660	126	565
22	3250	72	632	1780	95	457	1840	105	522
23	3180	71	610	1770	100	478	1700	107	491
24	3140	78	661	1700	94	431	1580	113	482
25	3040	82	673	1760	93	442	1490	117	471
26	2990	82	662	1810	104	508	1430	114	440
27	2930	84	665	1680	99	449	1470	118	468
28	2780	114	856	1610	97	422	1560	131	552
29	2640	83	592	1650	106	472	1540	146	607
30	2570	71	493	1680	109	494	1480	143	571
31	---	---	---	1740	108	507	---	---	---
TOTAL	75970	---	15452	60970	---	15926	44960	---	13278

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1420	129	495	1200	139	450	1260	102	347
2	1410	134	510	1250	136	459	1230	113	375
3	1510	142	579	1360	133	488	1200	88	285
4	1590	142	610	1330	127	456	1250	98	331
5	1620	141	617	1300	126	442	1260	94	320
6	1710	146	674	1260	126	429	1270	90	309
7	1490	139	559	1340	127	459	1320	107	381
8	1320	124	442	1290	127	442	1380	92	343
9	1240	144	482	1320	117	417	1290	93	324
10	1190	143	459	1370	130	481	1210	81	265
11	1200	134	434	1330	132	474	1240	94	315
12	1290	142	495	1270	114	391	1100	89	264
13	1290	131	456	1230	102	339	1110	93	279
14	1210	141	461	1220	102	336	1170	106	335
15	1180	135	430	1180	107	341	1110	87	261
16	1110	118	354	1200	100	324	1030	103	286
17	1180	159	507	1360	100	367	1080	85	248
18	1250	153	516	1240	94	315	1100	91	270
19	1290	148	515	1130	85	259	1090	94	277
20	1340	148	535	1120	68	206	1180	86	274
21	1180	109	347	1170	81	256	1170	72	227
22	1050	113	320	1220	102	336	1130	68	207
23	1070	108	312	1260	97	330	1080	72	210
24	1030	116	323	1420	105	403	1110	76	228
25	1070	130	376	1410	109	415	1160	65	204
26	1220	148	488	1290	125	435	1160	71	222
27	1240	145	485	1230	87	289	1200	78	253
28	1190	148	476	1180	84	268	1260	80	272
29	1140	156	480	1210	85	278	1190	67	215
30	1070	136	393	1300	88	309	1100	62	184
31	1120	136	411	1360	91	334	---	---	---
TOTAL	39220	---	14541	39350	---	11528	35440	---	8311
YEAR	890070		188671						

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT								
01...	0930	3160	20.0	67	589	--	--	--
NOV								
03...	1300	4430	14.5	63	777	--	--	--
DEC								
10...	1240	2800	9.0	36	325	--	--	--
10...	1300	2800	9.0	36	272	--	--	--
JAN								
14...	1030	3190	10.0	52	448	--	--	--
FEB								
10...	1215	2380	11.5	52	334	--	--	--
10...	1220	2340	11.0	51	335	44	52	63
MAR								
23...	1330	4450	14.5	151	1810	--	--	--
APR								
21...	1130	3270	17.0	73	645	--	--	--
MAY								
18...	1130	1950	19.5	123	648	--	--	--
JUN								
23...	1230	1690	24.0	100	456	--	--	--
JUL								
24...	1430	1090	27.5	110	324	--	--	--
SEP								
04...	1030	1240	22.0	97	325	--	--	--
25...	1300	1170	19.0	80	253	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT								
01...	--	--	78	83	87	93	100	--
NOV								
03...	--	--	61	72	83	96	100	--
DEC								
10...	--	--	44	51	63	93	100	--
10...	--	--	57	--	--	--	--	--
JAN								
14...	--	--	59	71	82	97	100	--
FEB								
10...	--	--	84	--	--	--	--	--
10...	72	82	89	93	97	100	--	--
MAR								
23...	--	--	82	87	94	100	--	--
APR								
21...	--	--	73	82	88	97	100	--
MAY								
18...	--	--	82	84	87	93	98	100
JUN								
23...	--	--	90	93	97	99	100	--
JUL								
24...	--	--	89	91	94	99	100	--
SEP								
04...	--	--	94	96	100	--	--	--
25...	--	--	95	98	99	100	--	--

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
OCT						
01...	0945	3160	20.0	63	538	11
01...	1100	3160	20.0	--	--	21
04...	1015	4750	19.5	74	949	15
05...	1000	5050	19.0	86	1170	6.0
06...	0745	5260	18.0	64	909	8.0
07...	0740	5370	18.0	67	971	9.0
07...	0745	5360	18.0	64	926	8.0
08...	1710	5430	18.5	92	1350	8.0
09...	0745	5400	18.0	75	1090	8.0
10...	0740	5290	17.5	67	957	10
11...	0905	5050	17.0	83	1130	9.0
12...	1000	4710	17.5	84	1070	9.0
13...	0715	4530	16.5	63	771	15
14...	1535	4360	16.0	--	--	14
14...	1710	4340	16.0	68	797	9.0
15...	1655	4130	16.0	76	847	6.0
16...	1550	3740	16.0	57	576	8.0
17...	1740	3440	16.5	53	492	7.0
18...	1015	3310	15.0	60	536	5.0
19...	0845	3350	15.0	53	479	6.0
20...	1800	3240	16.5	61	534	8.0
21...	0740	3150	15.5	51	434	10
22...	0745	3780	15.5	71	725	10
23...	0750	3760	15.0	52	528	6.0
24...	0750	3380	15.0	42	383	6.0
26...	0650	3440	14.5	67	622	5.0
27...	1405	3900	15.0	--	--	10
27...	1555	3890	15.5	53	557	6.0
28...	0740	3760	14.0	41	416	7.0
29...	0745	3780	14.0	43	439	4.0
30...	0755	3490	14.0	41	386	6.0
31...	1650	3300	16.0	29	258	5.0
NOV						
01...	1545	3280	16.0	32	283	3.0
02...	0755	3480	14.0	40	376	2.0
03...	1300	4430	14.5	63	777	8.5
03...	1625	4450	14.5	52	625	4.0
04...	0650	4470	14.0	48	579	4.0
05...	0655	4460	14.0	51	614	3.0
06...	0730	4480	14.0	58	702	3.0
07...	0730	3480	15.0	45	423	3.0
08...	0935	3020	16.0	50	408	4.0
09...	1545	3060	16.5	42	347	3.0
10...	1700	3050	15.5	48	395	2.0
11...	0745	3040	14.0	48	394	4.0
12...	0730	3040	14.0	44	361	4.0
12...	1455	3050	--	--	--	14
13...	0745	3040	12.5	41	337	5.0
14...	0715	3050	12.5	38	313	5.0
15...	1000	3090	12.0	37	309	3.0
16...	0815	2970	11.0	34	273	4.0
17...	0740	2990	11.0	32	258	3.0
18...	1705	2920	12.5	33	260	3.0
19...	0725	2920	10.5	48	378	3.0
20...	0740	2950	11.0	31	247	2.0
21...	0745	2960	11.0	28	224	3.0
22...	1535	3030	12.0	34	278	2.0
23...	0855	3170	12.0	46	394	4.0
24...	0745	3200	12.0	41	354	4.0
25...	0700	3090	11.5	32	267	2.0
26...	0730	3170	11.0	31	265	4.0
27...	1000	3190	10.5	30	258	3.0
28...	0830	3200	10.0	37	320	2.0
29...	1040	3100	11.0	39	326	2.0
30...	0840	3180	11.0	31	266	3.0
DEC						
01...	0750	3220	10.5	36	313	4.0
02...	0750	3110	11.5	43	361	3.0
03...	0740	3080	12.0	35	291	2.0
04...	0745	3110	12.0	50	420	8.0
05...	0750	3170	11.0	48	411	6.0
06...	1015	3120	11.0	42	354	2.0
07...	0850	3140	10.0	36	305	6.0
08...	0755	3120	9.5	36	303	2.0
09...	0750	3030	9.0	49	401	4.0
10...	0805	2850	9.0	32	246	4.0
10...	1300	2800	9.0	36	272	4.5
10...	1310	2800	9.0	--	--	7.0
10...	1315	2800	9.5	25	189	4.0
11...	0750	2760	8.5	27	201	4.0

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
DEC						
12...	1640	2690	9.0	43	312	3.0
13...	1415	2680	9.5	37	268	3.0
14...	1145	2760	8.0	31	231	4.0
15...	1230	2760	9.0	32	238	6.0
16...	1700	2680	10.0	32	232	3.0
17...	0720	2710	8.5	33	241	4.0
18...	0730	2700	9.5	39	284	3.0
19...	1325	2710	11.0	37	271	4.0
20...	1120	2680	10.5	44	318	4.0
21...	0750	2660	10.0	39	280	2.0
22...	0810	3280	10.5	48	425	3.0
23...	0845	2760	11.5	47	350	6.0
24...	1315	3670	12.0	62	614	4.0
25...	1040	3870	12.0	61	637	6.0
26...	1000	3510	11.5	48	455	5.0
27...	1230	2450	11.5	39	258	4.0
28...	0930	2930	11.5	43	340	4.0
29...	1310	2920	11.5	56	442	4.0
30...	1250	2300	11.0	56	348	4.0
31...	1220	3210	10.5	64	555	6.0
JAN						
01...	1410	3430	10.5	79	732	4.0
02...	1650	3040	10.0	72	591	4.0
03...	1525	2400	11.5	39	253	4.0
04...	1510	3110	12.0	47	395	4.0
05...	0735	3140	11.0	56	475	4.0
06...	1610	2380	12.0	67	431	2.0
07...	1645	3330	11.0	57	512	3.0
08...	0730	3580	10.5	58	561	3.0
08...	1155	3500	9.0	--	--	8.0
09...	0730	3710	10.0	70	701	4.0
10...	1140	3540	10.0	48	459	6.0
11...	0820	3550	10.0	46	441	3.0
12...	0750	3210	9.5	39	338	4.0
13...	0740	2200	9.5	43	255	3.0
14...	0725	3180	10.0	43	369	3.0
14...	0925	3190	10.5	63	543	4.0
14...	1110	3190	10.5	52	448	6.0
14...	1200	3180	10.5	--	--	11
15...	0750	3440	10.5	58	539	2.0
16...	0750	3400	11.0	50	459	2.0
17...	0820	3460	12.0	57	532	3.0
18...	1305	3230	12.0	39	340	4.0
19...	1610	2710	12.5	43	315	2.0
20...	1550	2240	13.0	44	266	3.0
21...	0735	2710	13.0	70	512	4.0
22...	0755	2820	13.0	62	472	2.0
23...	0740	2880	12.5	50	389	3.0
24...	0930	3090	12.0	64	534	4.0
25...	1445	3000	11.5	64	518	4.0
26...	1710	2790	11.0	--	--	15
27...	0750	2720	11.0	--	--	15
28...	1630	3370	11.0	111	1010	10
29...	0710	4070	11.0	183	2010	25
30...	0730	5030	10.5	210	2850	50
31...	0845	5810	10.5	157	2460	20
FEB						
01...	1355	4840	11.0	139	1820	10
02...	0745	4320	10.0	112	1310	20
03...	0730	3270	10.0	90	795	25
04...	1615	3370	11.5	70	637	10
05...	1615	3250	12.0	77	676	3.0
06...	1530	3180	12.0	64	550	9.0
07...	1055	3240	11.5	66	577	5.0
08...	0955	3060	11.0	49	405	6.0
09...	0745	2790	11.0	44	331	4.0
10...	0755	2370	11.0	48	307	3.0
10...	0935	2350	11.5	55	349	3.0
10...	1215	2380	11.5	52	334	21
11...	0730	2980	12.5	71	571	15
12...	1445	2960	13.5	69	551	15
13...	1655	2820	13.5	64	487	15
14...	1515	2810	14.5	56	425	5.0
16...	1045	2410	15.0	58	377	15
17...	1650	2200	15.5	55	327	15
18...	0745	2160	14.5	59	344	15
19...	1555	2660	15.5	63	452	10
20...	0730	2740	13.0	57	422	6.0
21...	1450	2640	14.0	47	335	2.0
22...	0830	2770	12.0	41	307	3.0

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, UIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
FEB						
23...	1640	2180	15.0	37	218	6.0
24...	0750	1990	13.5	51	274	4.0
24...	1405	1980	14.0	--	--	13
25...	0740	2510	13.0	56	380	8.0
26...	1655	2580	13.5	41	286	9.0
27...	0715	2800	11.5	42	318	2.0
28...	0740	2810	12.0	40	303	6.0
MAR						
01...	0820	2700	12.0	35	255	2.0
02...	0730	2450	12.0	32	212	6.0
03...	0740	2080	12.0	37	208	6.0
04...	0730	2270	12.5	63	386	8.0
05...	0720	2560	11.5	54	373	15
06...	0735	2860	11.5	76	587	15
07...	0915	3530	13.0	104	991	20
08...	0810	3330	13.0	108	971	30
09...	0745	2900	14.0	98	767	30
10...	0735	2520	14.5	88	599	20
11...	0720	2540	15.0	85	583	20
11...	1100	2540	16.0	--	--	23
12...	1710	2330	16.0	76	478	10
13...	0710	2370	14.5	67	429	15
14...	0740	2320	14.0	62	388	4.0
15...	0945	2340	14.0	66	417	15
16...	0710	2380	13.0	65	418	10
17...	0730	2260	14.0	61	372	10
18...	0730	2690	13.5	79	574	15
19...	1635	2970	15.0	66	529	10
20...	0730	3280	13.0	70	620	10
21...	1815	5160	14.5	161	2240	35
22...	1600	4460	15.5	142	1710	30
23...	0800	4480	14.0	138	1670	55
23...	1330	4450	14.5	151	1810	50
24...	0740	4170	14.5	119	1340	30
24...	1355	4130	16.0	--	--	39
25...	1400	4260	16.5	90	1040	20
26...	0705	4030	15.5	139	1510	45
27...	0720	4450	15.0	146	1750	40
28...	1830	3680	17.0	88	874	25
29...	0740	3460	15.5	88	822	20
30...	0715	3230	15.5	81	706	15
31...	0745	2930	15.5	76	601	15
APR						
01...	0730	2980	16.5	69	555	10
02...	0715	2980	15.0	68	547	15
03...	0720	2800	15.0	71	537	20
04...	1330	2480	18.0	63	422	15
05...	0800	2430	17.0	64	420	10
06...	0730	2340	17.0	68	430	15
07...	0710	2030	16.5	59	323	10
08...	0800	1950	16.5	74	390	15
09...	1255	1840	18.0	--	--	22
09...	1620	1830	20.0	90	445	20
10...	1545	1750	19.0	80	378	20
11...	1145	1780	18.0	81	389	15
12...	1210	1800	18.0	82	399	15
13...	1645	2020	18.0	73	398	15
14...	0750	1930	16.5	81	422	15
15...	0845	2020	17.0	77	420	15
16...	1435	2260	19.5	80	492	20
17...	0855	2450	17.5	73	483	15
18...	1840	2560	16.5	73	505	15
19...	0810	2840	16.0	99	759	20
20...	0750	3350	15.0	93	841	20
21...	0725	3300	16.5	76	677	15
21...	1130	3270	17.0	73	645	15
22...	0730	3270	18.0	77	680	15
23...	1620	3160	21.0	75	640	15
24...	0630	3200	20.0	79	683	20
25...	1020	3080	19.5	--	--	20
26...	0920	3000	17.0	86	697	15
27...	0735	2980	17.5	81	652	20
28...	1540	2760	18.0	119	887	25
29...	0720	2660	18.5	90	646	20
30...	2000	2520	22.5	72	490	15
MAY						
01...	0800	2420	20.0	89	582	20
02...	1005	2280	20.0	89	548	25
03...	1000	2320	19.0	97	608	20
04...	0800	2330	19.0	92	579	20

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
MAY						
05...	1745	2160	20.0	86	502	25
06...	0755	2200	18.0	91	541	20
07...	1815	2200	20.0	78	463	20
08...	1655	2150	21.0	86	499	15
09...	1015	2270	19.5	89	545	25
10...	0745	2250	19.0	80	486	20
11...	0725	2370	20.0	89	570	20
11...	1640	2330	22.0	--	--	23
12...	0755	2260	20.0	113	696	21
13...	0755	2020	19.5	143	780	27
14...	1600	1880	22.0	99	503	32
15...	1640	1890	21.5	99	505	27
16...	1835	1840	20.5	92	457	27
17...	1100	1840	19.0	106	527	28
18...	1130	1950	19.5	123	648	30
19...	0715	1880	18.0	116	569	35
20...	1635	1790	21.0	89	430	24
21...	1625	1810	22.0	95	464	30
22...	1810	1780	23.0	93	447	17
23...	1730	1760	24.5	101	480	29
24...	0815	1690	22.0	95	433	25
25...	1745	1760	23.0	94	452	27
26...	1350	1830	22.0	--	--	34
26...	1650	1790	24.0	105	507	32
27...	0730	1710	22.0	100	462	32
28...	0720	1620	23.0	94	411	29
29...	0735	1640	22.5	103	456	28
30...	0845	1690	22.5	106	484	32
31...	1015	1750	23.0	106	501	28
JUN						
01...	1840	1750	25.0	104	491	29
02...	1700	1640	25.5	93	412	28
03...	1455	1530	25.5	92	380	30
04...	1640	1460	25.0	90	355	18
05...	0835	1500	24.5	101	409	28
06...	1305	1520	26.5	104	427	28
07...	0840	1540	23.5	106	441	24
08...	0925	1590	23.0	102	438	20
08...	1410	1580	25.0	--	--	22
10...	1155	1280	23.5	107	370	29
11...	0905	1270	22.5	91	312	20
12...	1705	1270	23.5	90	309	17
13...	0945	1360	20.0	91	334	23
14...	1515	1420	22.0	102	391	22
15...	1520	1530	23.0	97	401	22
16...	1405	1500	25.0	102	413	28
17...	0800	1420	22.0	98	376	29
18...	1500	1350	22.5	96	350	27
19...	0710	1380	24.0	103	384	28
20...	1025	1420	26.0	111	426	32
21...	1045	1690	26.0	124	566	38
22...	0805	1870	25.0	98	495	27
23...	0745	1730	24.0	105	490	29
23...	1230	1690	24.0	100	456	25
25...	0810	1520	23.0	111	456	20
26...	0810	1440	24.0	110	428	30
27...	0905	1440	25.0	110	428	29
28...	1330	1580	27.0	126	538	45
29...	0955	1500	24.5	139	593	36
30...	0730	1490	24.0	401	1610	45
JUL						
01...	1005	1440	24.0	122	474	37
02...	0945	1420	24.0	127	487	40
03...	1520	1540	26.5	135	561	45
04...	0705	1610	24.5	135	587	35
05...	1050	1600	25.0	132	570	40
06...	0720	1780	24.0	140	673	40
06...	1315	1740	26.0	--	--	36
07...	1020	1530	23.0	134	554	40
08...	1640	1260	26.5	112	387	30
09...	0830	1260	23.0	137	466	40
10...	1040	1240	23.5	138	462	40
11...	0950	1220	22.5	125	412	40
12...	0910	1280	22.0	137	473	40
13...	1545	1300	25.0	121	425	35
14...	0730	1220	23.0	134	442	45
15...	0930	1230	24.0	132	438	45
16...	1615	1110	27.0	104	312	25
17...	0845	1180	22.5	153	487	45
18...	0945	1260	25.5	148	503	40

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
JUL						
19...	0840	1280	26.0	140	484	40
20...	0915	1370	26.0	146	540	30
21...	1200	1200	26.0	--	--	35
21...	1735	1170	27.0	97	306	25
22...	1005	1060	25.0	110	315	34
23...	1855	1110	26.5	101	303	33
24...	1430	1090	27.5	110	324	30
24...	1810	1020	28.0	120	330	34
25...	0715	1060	25.5	121	346	29
26...	1100	1260	25.5	143	486	50
27...	0850	1280	26.0	139	480	45
28...	0710	1190	24.0	137	440	40
29...	0745	1170	24.0	153	483	45
30...	0940	1070	23.5	129	373	40
31...	1520	1140	24.0	203	625	35
AUG						
01...	1005	1220	23.0	132	435	40
02...	1045	1250	23.0	193	651	38
03...	0825	1350	27.0	129	470	38
04...	0725	1390	27.5	121	454	30
05...	1050	1330	28.5	--	--	37
06...	0900	1250	28.5	120	405	38
07...	1140	1380	26.0	120	447	38
08...	0845	1280	25.5	125	432	40
09...	1045	1310	26.5	108	382	38
10...	0755	1410	25.0	122	464	33
11...	0825	1360	24.0	130	477	38
12...	0805	1280	23.5	111	384	28
13...	0940	1230	23.5	97	322	23
14...	0725	1230	23.0	95	315	30
15...	0845	1220	23.0	104	343	32
16...	0830	1160	23.5	95	298	32
17...	1255	1400	25.0	97	367	24
18...	0900	1280	23.0	90	311	18
18...	1055	1280	23.0	--	--	29
19...	1010	1150	22.5	83	258	22
20...	1740	1130	23.0	62	189	12
21...	1435	1200	25.0	78	253	18
22...	0815	1230	22.0	100	332	18
23...	0855	1240	22.0	90	301	28
24...	1015	1470	24.5	102	405	31
25...	0750	1470	26.5	98	389	24
26...	0710	1290	25.5	124	432	29
27...	1740	1210	23.5	73	238	83
28...	0710	1200	23.0	80	259	18
29...	1145	1200	25.0	81	262	20
30...	1020	1310	23.5	201	711	18
31...	0700	1500	23.0	87	352	21
SEP						
01...	0705	1290	23.0	92	320	22
01...	1130	1270	24.0	--	--	26
02...	0710	1230	23.0	111	369	19
03...	1850	1210	26.0	74	242	17
04...	0710	1230	22.0	93	309	23
04...	1030	1240	22.0	97	325	25
05...	1050	1250	23.5	90	304	26
06...	1015	1290	23.5	85	296	17
07...	1730	1360	26.0	107	393	17
08...	1750	1370	25.0	82	303	15
09...	0725	1310	23.0	91	322	22
10...	1635	1200	26.0	75	243	20
11...	0715	1180	23.0	91	290	21
12...	0925	1100	23.0	85	252	17
13...	1030	1100	23.5	86	255	18
14...	0720	1190	23.0	108	347	25
15...	0720	1120	22.0	78	236	23
15...	1035	1140	22.0	--	--	20
16...	0720	1040	21.5	101	284	17
17...	1830	1090	25.0	75	221	18
18...	0725	1090	21.5	86	253	20
19...	0950	1080	22.0	91	265	18
20...	1145	1200	23.0	158	512	35
21...	0720	1190	21.0	72	231	13
22...	0720	1140	20.0	65	200	12
23...	0730	1070	19.0	68	196	16
24...	0720	1080	19.0	76	222	16
25...	0730	1180	18.5	60	191	4.0
25...	1300	1170	19.0	80	253	16
27...	1215	1200	22.0	74	240	13
28...	0730	1300	21.0	78	274	16
29...	0730	1190	19.0	65	209	10
30...	0730	1120	18.5	60	181	17

11308600 CALAVERAS RIVER ABOVE NEW HOGAN LAKE, NEAR SAN ANDREAS, CA

LOCATION.--Lat 38°11'48", long 120°43'18", in NW¼SW¼ sec.13, T.4 N., R.11 E., Calaveras County, Hydrologic Unit 18040011, on right bank 600 ft (183 m) below confluence of the North and South Forks of the Calaveras River, and 2.3 mi (3.7 km) west of San Andreas.

DRAINAGE AREA.--307 mi² (795 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

REMARKS.--River dry June 19 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 31.5°C Aug. 8, 9, 1978; minimum recorded, 2.0°C Jan. 7, 1973, Jan. 4, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 26.0°C June 6; minimum recorded, 4.0°C Dec. 11, 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	25.0	16.5	12.5	10.5	---	---	---	---	7.5	6.5	9.5	8.5
2	23.5	16.5	14.0	10.5	---	---	---	---	8.0	7.0	11.0	9.5
3	24.0	16.5	14.5	10.5	---	---	---	---	8.5	7.0	11.0	9.0
4	24.5	16.5	---	---	11.0	9.5	---	---	8.0	6.5	10.5	10.0
5	24.5	16.5	---	---	9.5	8.5	---	---	8.0	7.0	11.0	9.0
6	24.0	16.5	---	---	8.5	7.0	8.5	7.5	9.0	7.5	11.5	10.0
7	23.5	16.5	---	---	7.0	6.0	8.0	7.0	9.5	8.0	11.5	9.5
8	23.5	16.5	---	---	6.5	5.0	7.5	7.0	9.0	8.0	12.5	10.5
9	23.5	16.0	---	---	6.0	5.0	7.5	6.5	10.0	8.5	13.0	11.0
10	22.0	16.0	---	---	6.0	4.5	7.0	6.5	10.0	8.5	13.5	11.0
11	18.5	14.5	---	---	6.0	4.0	7.0	6.0	11.5	9.5	13.5	11.5
12	21.5	15.5	---	---	5.5	4.0	8.0	6.5	12.0	10.0	13.5	11.5
13	18.5	14.5	---	---	---	---	8.5	7.0	11.0	10.5	13.0	11.5
14	18.5	13.5	---	---	---	---	8.5	6.5	12.5	10.5	12.0	11.0
15	17.0	12.5	---	---	---	---	9.0	7.0	14.5	11.0	11.0	10.0
16	15.5	12.5	---	---	---	---	9.0	8.0	12.5	10.5	13.0	10.5
17	15.5	11.5	---	---	---	---	9.5	8.0	14.0	10.5	12.5	10.5
18	16.0	11.5	---	---	---	---	10.0	8.5	13.0	11.0	11.5	11.0
19	16.0	11.5	---	---	---	---	10.5	9.0	13.0	11.5	12.0	11.0
20	16.0	11.5	---	---	---	---	10.0	8.5	14.5	11.0	---	---
21	16.0	12.0	---	---	---	---	10.5	9.5	12.0	9.5	---	---
22	16.0	12.0	---	---	---	---	10.5	10.0	12.0	9.5	---	---
23	16.5	12.0	---	---	---	---	10.5	10.0	12.0	9.5	---	---
24	16.5	12.0	---	---	---	---	10.0	9.0	11.5	10.5	---	---
25	14.5	13.0	---	---	---	---	9.0	8.0	10.5	9.5	---	---
26	16.5	13.0	---	---	---	---	8.0	7.5	10.5	8.5	---	---
27	15.5	12.0	---	---	---	---	10.0	8.0	11.0	8.5	---	---
28	14.5	11.0	---	---	---	---	9.5	9.5	10.0	8.5	---	---
29	14.5	11.0	---	---	---	---	9.0	8.5	---	---	---	---
30	13.5	10.5	---	---	---	---	10.5	8.5	---	---	---	---
31	14.0	10.5	---	---	---	---	8.5	7.0	---	---	---	---
MONTH	25.0	10.5	---	---	---	---	10.5	6.0	14.5	6.5	---	---

11308600 CALAVERAS RIVER ABOVE NEW HOGAN LAKE, NEAR SAN ANDREAS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			---	---	24.0	19.5						
2			---	---	24.0	20.0						
3			---	---	24.0	19.5						
4			---	---	25.0	20.0						
5			---	---	25.5	19.5						
6			---	---	26.0	21.0						
7			18.5	15.0	24.5	20.0						
8			19.0	15.0	25.5	20.0						
9			20.5	16.0	25.0	20.5						
10			21.0	17.0	24.0	19.5						
11			21.5	17.5	24.0	19.5						
12			21.0	17.5	24.0	19.5						
13			21.5	18.0	22.5	18.0						
14			21.5	18.0	22.5	17.5						
15			20.0	18.0	23.5	17.5						
16			20.0	16.5	24.5	19.0						
17			19.5	16.0	24.5	19.5						
18			18.5	17.5	25.5	19.5						
19			17.5	16.5	---	---						
20			18.5	15.5	---	---						
21			19.0	15.5	---	---						
22			20.0	16.5	---	---						
23			21.5	17.5	---	---						
24			22.5	19.0	---	---						
25			21.0	19.5	---	---						
26			22.0	19.0	---	---						
27			22.5	19.0	---	---						
28			23.5	19.5	---	---						
29			24.0	20.0	---	---						
30			23.5	20.0	---	---						
31			24.0	19.5	---	---						
MONTH			24.0	15.0	---	---						

11308700 NEW HOGAN LAKE NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°09'01", long 120°48'45", in SW¼SW¼ sec.31, T.4 N., R.11 E., Calaveras County, Hydrologic Unit 18040011, in control house at New Hogan Dam on the Calaveras River, 3.0 mi (4.8 km) south of Valley Springs.

DRAINAGE AREA.--362 mi² (938 km²).

PERIOD OF RECORD.--December 1963 to current year. Prior to October 1971, published as "New Hogan Reservoir."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by an earthfill dam and four earthfill dikes. Storage began Dec. 20, 1963. Total capacity, 317,055 acre-ft (391 hm³) between elevations 534.5 ft (162.92 m), invert of outlet valve and 713.0 ft (217.32 m), top of spillway gates. Elevation of spillway crest is 679.5 ft (207.11 m). No dead storage. The reservoir is operated for flood control according to existing downstream channel conditions. Reservoir releases limited, insofar as possible, to amounts that will not cause flows greater than 6,000 ft³/s (170 m³/s) at Bellota. Records, including extremes, show contents at 2400 hours.

COOPERATION.--Records furnished by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 273,130 acre-ft (337 hm³) May 7, 1974, elevation, 700.88 ft (213.628 m); minimum since initial season of normal operation, 9,360 acre-ft (11.5 hm³) Oct. 27, 1964, elevation, 576.81 ft (175.812 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 181,058 acre-ft (223 hm³) Apr. 21, 22, elevation, 675.95 ft (206.030 m); minimum, 102,563 acre-ft (126 hm³) Sept. 30, elevation, 646.65 ft (197.099 m).

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

545	588	600	26,851
550	1,117	610	38,252
555	1,892	630	68,795
560	2,960	650	110,300
570	6,149	670	163,134
580	11,013	700	264,177
590	17,835	713	317,123

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148522	141931	138696	137574	153970	157480	179420	179543	166667	149636	131284	114444
2	148188	141795	138616	137547	154396	157566	179697	179142	166223	149023	130764	113939
3	147800	141687	138857	137521	154652	157653	179802	178835	165809	148439	130247	113436
4	147412	141578	139098	137494	154851	158257	180037	178496	165337	147856	129730	112934
5	147052	141415	139125	137414	155022	159382	180191	178189	164807	147246	129189	112385
6	146693	141334	139125	137414	155136	159816	180315	177759	164219	146638	128623	111838
7	146417	141227	139072	137361	155164	160105	180408	177300	163603	146031	128110	111340
8	146086	141118	138991	137307	155278	160279	180500	176779	163017	145453	127597	110843
9	145783	141010	138884	137228	155449	160395	180562	176321	162432	144849	127010	110394
10	145453	140848	138830	137201	155563	160511	180593	175832	161878	144273	126399	109994
11	145178	140767	138803	137175	155763	160627	180624	175315	161325	143699	125840	109594
12	144931	140659	138723	137148	155849	160685	180624	174737	160772	143127	125282	109171
13	144685	140551	138669	137068	155934	160772	180624	174160	160192	142555	124752	108750
14	144410	140416	138590	137015	156191	160831	180624	173584	159613	141984	124222	108353
15	144219	140281	138536	136935	156334	161150	180593	173100	159122	141361	123718	107980
16	144082	140173	138482	137042	156506	161558	180531	172647	158516	140740	123216	107608
17	143946	140066	138402	136935	156592	161732	180408	172225	157883	140066	122740	107237
18	143836	139932	138348	136882	156677	161878	180500	171833	157280	139501	122165	106865
19	143699	139824	138268	136802	156649	163397	180810	171472	156706	138937	121617	106472
20	143563	139689	138161	136775	156706	165514	181027	171142	156134	138348	121070	106103
21	143426	139608	138134	136669	156878	166667	181058	170811	155535	137788	120549	105711
22	143318	139501	138108	136855	156849	168062	181058	170541	154936	137201	119980	105321
23	143209	139393	138001	137175	156878	169016	181027	170211	154340	136616	119363	104931
24	143072	139286	138001	137547	157222	169673	180965	169852	153716	135979	118822	104519
25	142909	139206	137948	137627	157251	171743	180841	169493	153064	135371	118257	104176
26	142745	139125	137921	137734	157309	175041	180717	169164	152471	134737	117694	103812
27	142610	139018	137841	139716	157337	176657	180593	168807	151908	134132	117084	103470
28	142446	138937	137841	143672	157394	177575	180469	168419	151345	133554	116524	103129
29	142338	138830	137734	149888	---	178219	180284	168003	150756	132952	115966	102834
30	142175	138776	137681	152331	---	178681	179944	167586	150224	132377	115433	102563
31	142039	---	137627	153375	---	179081	---	167141	---	131830	114926	---
MAX	148522	141931	139125	153375	157394	179081	181058	179543	166667	149636	131284	114444
MIN	142039	138776	137627	136669	153970	157480	179420	167141	150224	131830	114926	102563
†	662.52	661.31	660.88	666.61	668.02	675.31	675.59	671.36	665.49	658.68	651.94	646.65
‡	-6762	-3263	-1149	+15748	+4019	+21687	+863	-12803	-16917	-18394	-16904	-12363
††	1315	653	426	242	370	523	1008	1495	2145	2277	1861	1401
CAL YR 1980	†	-38908										
WTR YR 1981	†	-46238										

† Elevation, in feet NGVD, at end of month.

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°08'53", long 120°49'26", in NW¼NE¼ sec.1, T.3 N., R.10 E., Calaveras County, Hydrologic Unit 18040011, on right bank at county road bridge, 0.5 mi (0.8 km) upstream from Cosgrove Creek, 0.8 mi (1.3 km) downstream from New Hogan Dam, and 3.0 mi (4.8 km) south of Valley Springs.

DRAINAGE AREA.--363 mi² (940 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1961 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 519.8 ft (158.44 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Auxiliary nonrecording gage 300 ft (91 m) downstream at different datum used May 1, 1962, to Jan. 26, 1963.

REMARKS.--Records good. Flow regulated by New Hogan Lake (station 11308700). Some seepage of North Fork Stanislaus River water enters basin from diversion canals and reservoirs, normally not over 1.5 ft³/s (0.042 m³/s). Small diversions above station for irrigation.

AVERAGE DISCHARGE (adjusted for change in contents in and evaporation from New Hogan Lake).--20 years, 212 ft³/s (6,004 m³/s), 153,600 acre-ft/yr (189 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s (283 m³/s) Jan. 22, 1980, gage height, 10.52 ft (3.206 m); no flow many days in 1961-65, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 322 ft³/s (9.12 m³/s) June 17, 18; gage height, 1.89 ft (0.576 m); minimum daily, 16 ft³/s (0.453 m³/s) Mar. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	49	51	43	18	36	26	246	202	275	253	227
2	166	49	48	43	18	36	53	218	212	286	255	227
3	169	58	48	43	23	38	59	176	202	280	255	223
4	161	58	49	43	38	42	60	175	244	280	232	236
5	161	55	48	43	36	34	60	189	275	280	244	253
6	161	52	48	43	35	25	53	201	275	280	265	259
7	136	51	48	43	46	26	49	239	299	260	253	238
8	131	55	49	43	48	26	56	244	299	260	247	227
9	134	60	49	43	40	36	61	246	275	263	268	210
10	128	60	49	43	34	46	66	246	263	257	275	189
11	107	60	49	43	34	46	65	256	249	242	271	182
12	109	59	49	43	35	46	66	278	250	241	257	181
13	109	58	49	47	36	44	64	279	250	258	255	181
14	110	59	49	47	37	38	64	265	261	270	244	182
15	75	60	49	47	37	41	65	218	273	275	229	176
16	48	60	49	48	37	40	88	201	288	288	232	164
17	49	60	49	48	37	33	105	201	319	293	232	164
18	49	60	49	48	37	34	65	193	310	283	250	171
19	48	60	49	48	37	34	65	175	285	265	262	177
20	50	60	49	47	37	22	76	175	285	265	258	175
21	51	60	48	43	37	20	101	164	285	265	260	170
22	51	60	45	43	37	20	101	146	285	265	272	161
23	51	60	42	44	38	21	101	166	285	286	275	169
24	55	57	42	43	39	35	103	175	302	301	259	178
25	62	52	42	43	39	41	104	175	319	301	254	175
26	60	52	43	44	39	16	104	175	296	301	284	175
27	61	52	43	50	38	22	104	175	275	288	301	160
28	60	52	43	34	36	40	127	186	260	275	284	152
29	61	52	43	25	---	43	147	202	260	279	263	132
30	60	52	43	19	---	43	201	202	260	276	265	126
31	54	---	43	18	---	35	---	202	---	263	246	---
TOTAL	2881	1692	1454	1302	1003	1059	2459	6389	8143	8501	8000	5640
MEAN	92.9	56.4	46.9	42.0	35.8	34.2	82.0	206	271	274	258	188
MAX	169	60	51	50	48	46	201	279	319	301	301	259
MIN	48	49	42	18	18	16	26	146	202	241	229	126
AC-FT	5710	3360	2880	2580	1990	2100	4880	12670	16150	16860	15870	11190
CAL YR 1980 TOTAL	126302.2			345	7860		9.2	AC-FT	250500	MEAN ‡ 311		AC-FT ‡ 225700
WTR YR 1981 TOTAL	48523.0			133	319		16	AC-FT	96250	MEAN ‡ 88.0		AC-FT ‡ 63720

‡ Adjusted for change in contents in and evaporation from New Hogan Lake.

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-66, 1971 to current year.

CHEMICAL ANALYSES: Water years 1964-66.

WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 24.0°C Aug. 10, 28, 29, 1977; minimum recorded, 5.5°C Dec. 17, 1971, Jan. 1, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 13.5°C for many days; minimum recorded, 8.5°C Feb. 3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	12.5	13.0	12.5	13.0	12.5	11.0	10.5	11.5	9.0	10.5	9.5
2	13.0	12.5	13.5	12.5	13.0	13.0	11.0	10.5	11.0	9.5	11.0	9.5
3	13.0	12.5	13.5	12.5	13.0	13.0	11.5	10.5	11.5	8.5	11.0	9.5
4	13.0	12.5	13.5	12.5	13.5	12.5	11.0	10.5	10.5	9.0	10.5	10.0
5	13.0	12.5	13.5	12.5	13.0	12.0	11.0	10.5	10.5	9.0	11.5	10.0
6	13.0	12.5	13.5	12.5	13.0	12.0	11.0	10.5	10.5	9.0	12.0	9.5
7	13.5	12.5	13.5	12.5	12.5	12.0	11.0	10.5	10.0	9.0	12.0	9.5
8	13.0	12.5	13.5	12.5	12.5	12.0	10.5	10.0	9.5	9.0	12.5	9.5
9	13.0	12.5	13.0	12.5	12.5	11.5	10.5	10.5	10.5	9.0	12.0	9.5
10	13.0	12.5	13.0	12.5	12.5	11.5	10.5	10.5	10.5	9.0	11.5	10.0
11	13.0	12.5	13.0	12.5	12.0	11.5	10.5	10.0	11.0	9.5	12.0	10.0
12	13.0	12.5	13.0	12.5	12.0	11.5	11.0	10.0	11.0	9.0	11.5	10.0
13	13.0	12.5	13.0	12.5	12.0	11.0	11.0	10.0	10.0	9.5	10.5	10.0
14	13.0	12.5	13.0	12.5	12.0	11.0	11.0	10.0	10.5	9.5	11.0	10.0
15	13.5	12.5	13.0	12.5	12.0	11.0	11.0	10.0	11.0	9.5	10.5	10.0
16	13.5	12.5	13.0	12.5	12.0	11.0	11.0	10.0	11.0	9.5	12.0	9.5
17	13.5	12.5	13.0	12.5	11.5	11.0	11.0	10.0	11.0	9.5	12.0	9.5
18	13.5	12.5	13.0	12.5	11.5	10.5	11.0	10.0	11.5	9.5	11.0	10.0
19	13.5	12.5	13.0	12.5	11.5	10.5	11.0	10.0	11.0	9.5	12.0	10.0
20	13.5	12.5	13.0	12.5	11.5	10.5	11.0	10.0	11.0	9.5	11.5	10.0
21	13.5	12.5	13.0	12.5	11.0	10.5	11.0	10.5	11.5	9.5	12.0	10.0
22	13.5	12.5	13.0	12.5	11.0	11.0	10.5	10.5	11.5	9.5	12.5	10.0
23	13.5	12.5	13.0	12.5	11.0	10.5	11.0	10.0	11.5	9.5	13.0	9.5
24	13.5	12.5	13.0	12.5	11.5	10.5	11.0	10.0	10.5	10.0	12.5	9.5
25	13.0	12.5	13.0	12.5	11.0	10.5	11.0	10.0	10.5	9.5	12.0	10.0
26	13.5	12.5	13.0	12.5	11.5	10.5	10.5	10.0	11.0	9.5	13.0	10.5
27	13.5	12.5	13.0	12.5	11.0	10.5	10.5	10.5	11.5	9.5	13.5	9.5
28	13.5	12.5	13.5	12.5	11.0	10.5	11.0	10.0	10.5	9.5	12.5	10.0
29	13.5	12.5	13.0	12.5	11.0	10.5	10.5	9.5	---	---	11.5	10.5
30	13.0	12.5	13.0	12.5	11.0	10.5	11.0	9.5	---	---	12.5	10.0
31	13.5	12.5	---	---	11.0	10.5	11.0	9.0	---	---	12.5	10.5
MONTH	13.5	12.5	13.5	12.5	13.5	10.5	11.5	9.0	11.5	8.5	13.5	9.5

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	10.5	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0
2	12.0	10.5	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0
3	12.0	10.5	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0
4	12.5	10.5	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0
5	12.5	10.5	12.5	11.5	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0
6	12.5	10.5	12.0	11.5	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0
7	12.5	10.5	12.5	12.0	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0
8	12.5	10.5	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
9	12.5	10.5	12.5	12.0	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0
10	12.5	10.5	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
11	12.5	10.5	12.5	12.0	13.0	12.5	13.0	12.0	13.0	12.5	13.5	13.0
12	12.5	10.5	12.5	12.0	12.5	12.0	13.0	12.0	13.0	12.5	13.5	13.0
13	12.5	10.5	12.5	12.0	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0
14	12.5	11.0	12.5	12.0	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0
15	12.5	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
16	12.5	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
17	12.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
18	11.5	11.0	12.0	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
19	11.5	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
20	12.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
21	12.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.0	12.5	13.5	13.0
22	12.5	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
23	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
24	12.5	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
25	12.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
26	12.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
27	12.5	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
28	12.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
29	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.5	13.0
30	12.0	11.5	12.5	12.0	13.0	12.5	13.5	12.5	13.5	13.0	13.5	13.0
31	---	---	12.5	12.0	---	---	13.0	12.5	13.5	13.0	---	---
MONTH	13.5	10.5	12.5	11.5	13.0	12.0	13.5	12.0	13.5	12.5	13.5	13.0

11312000 BEAR CREEK NEAR LOCKEFORD, CA

LOCATION.--Lat 38°09'10", long 121°08'17", in NW¼ sec.31, T.4 N., R.8 E., San Joaquin County, Hydrologic Unit 18040005, on right bank 15 ft (5 m) downstream from county road bridge, and 0.8 mi (1.3 km) southeast of Lockeford.

DRAINAGE AREA.--47.4 mi² (122.8 km²).

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1315-A. October 1926 to November 1930 at site 3 mi (5 km) downstream; records not equivalent.

REVISED RECORDS.--WSP 1635: Drainage area.

GAGE.--Water-stage recorder and low-water concrete control. Datum of gage is 80.68 ft (24.591 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair. No storage or diversion above station. Occasionally water is released from East Bay Municipal Utility District aqueduct into Bear Creek above station. Summer discharge influenced by return flows from irrigated areas.

AVERAGE DISCHARGE.--51 years, 11.6 ft³/s (0.329 m³/s), 8,400 acre-ft/yr (10.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,930 ft³/s (83.0 m³/s) Apr. 3, 1958, gage height, 15.13 ft (4.612 m); no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 27	2300	*675 19.1	9.42 2.871
Mar. 19	2300	610 17.3	8.89 2.710

Minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0			0	16	.84	3.2	.23	.01	.09	.32	.27
2	.01			0	8.0	.64	2.4	.46	.01	.25	.35	.06
3	.04			0	4.4	.61	2.3	.22	.01	.95	.54	.14
4	.06			0	3.0	1.8	2.4	.49	.02	.96	.45	.06
5	.03			0	2.8	63	2.0	.08	.48	.49	.04	.06
6	.04			0	2.0	22	1.6	.09	.57	.06	.01	.05
7	.02			0	1.6	6.4	1.5	.19	.35	.63	0	.08
8	.01			0	1.3	3.4	1.3	.44	.34	.03	0	.44
9	.01			0	1.3	2.4	1.0	.08	.03	.12	0	.46
10	.01			0	1.5	1.9	.27	.15	.02	.03	0	.18
11	0			0	1.4	1.4	.67	.11	.02	.19	0	.05
12	.01			0	1.2	1.2	.78	.12	0	.48	0	.03
13	0			0	1.1	1.1	.53	.60	0	.05	0	.02
14	0			0	.94	1.0	1.4	.43	.01	.05	.01	.70
15	0			0	.90	1.3	.61	.06	.02	.49	0	.12
16	0			0	.87	13	.51	.05	.03	.20	0	.41
17	0			0	.73	14	.61	.06	.03	.08	0	.13
18	0			0	.66	5.8	.42	.29	.49	.10	.01	.15
19	0			0	.55	252	.31	.50	.45	.62	.02	.15
20	0			0	.46	309	.04	.53	.11	.25	.32	.15
21	0			0	.49	74	.02	.36	.03	.60	.21	.09
22	0			0	.45	45	.03	.03	.07	.14	.08	.18
23	0			.13	.36	23	.67	.02	.07	.03	.03	.17
24	0			.01	.48	16	.06	.02	.04	.01	.02	.10
25	0			1.1	.57	62	.02	.02	.03	.01	0	.55
26	0			2.3	.58	97	.02	.01	.12	.05	0	.16
27	0			162	1.0	30	.01	.01	.05	.12	0	.25
28	0			232	1.1	14	.01	.01	.07	.05	.02	.35
29	0			390	---	10	.16	0	.03	.06	0	.67
30	0			85	---	7.2	1.0	.02	.06	.18	.04	.33
31	0	---		31	---	5.7	---	.01	---	.21	.30	---
TOTAL	.24	0	0	903.54	55.74	1086.69	25.85	5.69	3.57	7.58	2.77	6.56
MEAN	.008	0	0	29.1	1.99	35.1	.86	.18	.12	.24	.089	.22
MAX	.06	0	0	390	16	309	3.2	.60	.57	.96	.54	.70
MIN	0	0	0	0	.36	.61	.01	0	0	.01	0	.02
AC-FT	.5	0	0	1790	111	2160	51	11	7.1	15	5.5	13
CAL YR 1980 TOTAL	6573.09			MEAN 18.0	MAX 837	MIN 0	AC-FT 13040					
WTR YR 1981 TOTAL	2098.23			MEAN 5.75	MAX 390	MIN 0	AC-FT 4160					

LOCATION.--Lat 37°47'49", long 121°35'03", in SW¼SW¼ sec.31, T.1 S., R.4 E., Alameda County, Hydrologic Unit 18040003, at Tracy pumping plant at intake to canal, 6 mi (10 km) southeast of Byron, and 10 mi (16 km) northwest of Tracy.

GAGE.--Water-stage recorder on forebay, pressure gages on pump discharge lines, and operating time of pumps.
Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

AVERAGE DISCHARGE.--30 years, 2,227 ft³/s (63.07 m³/s), 1,613,000 acre-ft/yr (1.99 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,935 ft³/s (140 m³/s) Aug. 11, 1969; no flow many days in most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3970	3910	3980	3920	4230	3190	875	4680	2950	4280	3960	3410
2	3970	3890	3960	3930	4220	3180	873	4670	2940	4770	3950	4000
3	3960	3910	3950	3930	4330	3150	827	4230	2950	4790	3930	4010
4	3940	3910	3980	3930	4220	3200	901	3330	3190	4850	3920	4160
5	3950	3930	3930	3920	4220	3190	949	3260	3180	4770	3920	4640
6	3950	3900	3940	3930	4200	3180	950	3240	3160	4800	3930	4510
7	3940	3800	3960	3930	4180	3180	1750	3130	3160	4700	3930	4510
8	3950	3840	3930	3930	4200	3190	3310	3250	2820	4690	3940	4360
9	3850	3920	3410	3920	4200	2220	3770	3260	3140	4670	3950	4310
10	3960	3630	3150	3920	4190	1670	4680	3240	3240	4730	4000	4300
11	3970	3920	3150	3910	3180	1670	4610	3240	3190	4710	4090	4320
12	3200	3900	3150	3910	3230	1660	4580	3240	3160	4750	4030	4350
13	3840	3900	3370	3900	2790	1660	4620	3250	3240	4690	4370	4130
14	3980	3900	3910	3940	2340	1660	4620	3240	3200	4700	4710	4100
15	3950	3780	3830	3940	2350	1660	4680	2890	3180	4710	4680	3000
16	3940	3940	3610	3900	2350	1660	4640	2390	3200	4690	4640	2480
17	3930	3870	3710	4230	3660	1670	4690	2380	3680	4000	4520	2480
18	3910	3880	3690	4600	4240	1700	4670	2420	3990	3920	4530	2500
19	3850	3030	3720	4390	4230	1700	4690	2470	4060	4010	4610	2510
20	3930	3890	3960	4220	4220	1700	4550	2480	4040	3960	4570	2510
21	3050	3880	3950	4220	4190	1700	4520	2440	4040	3890	4590	2510
22	3920	3890	3950	4260	4180	1690	4540	2740	4010	4020	4560	2510
23	2010	3870	3940	4280	3350	1680	4610	3170	4070	3960	4520	2680
24	1670	3880	3850	4270	3180	1680	4570	3200	4030	3990	4450	2490
25	1670	3890	4000	4260	3180	1670	4560	3190	4060	3940	4460	2420
26	1670	3890	3920	4260	3180	1150	4530	2890	4080	3960	4440	2230
27	3020	3810	3920	4220	3160	881	4620	2950	4140	3960	3970	2240
28	3930	3820	3910	4210	3180	874	4680	2950	4150	3980	3370	2230
29	3910	3960	3880	3910	---	880	4620	2940	4160	4020	3240	2280
30	3920	3970	3900	4250	---	876	4660	3220	4170	3980	2770	3220
31	3770	---	3900	4210	---	878	---	3220	---	3980	2840	---
TOTAL	110480	115510	117410	126570	102380	60049	110945	97200	106580	134870	127390	99400
MEAN	3564	3850	3787	4083	3656	1937	3698	3135	3553	4351	4109	3313
MAX	3980	3970	4000	4600	4330	3200	4690	4680	4170	4850	4710	46

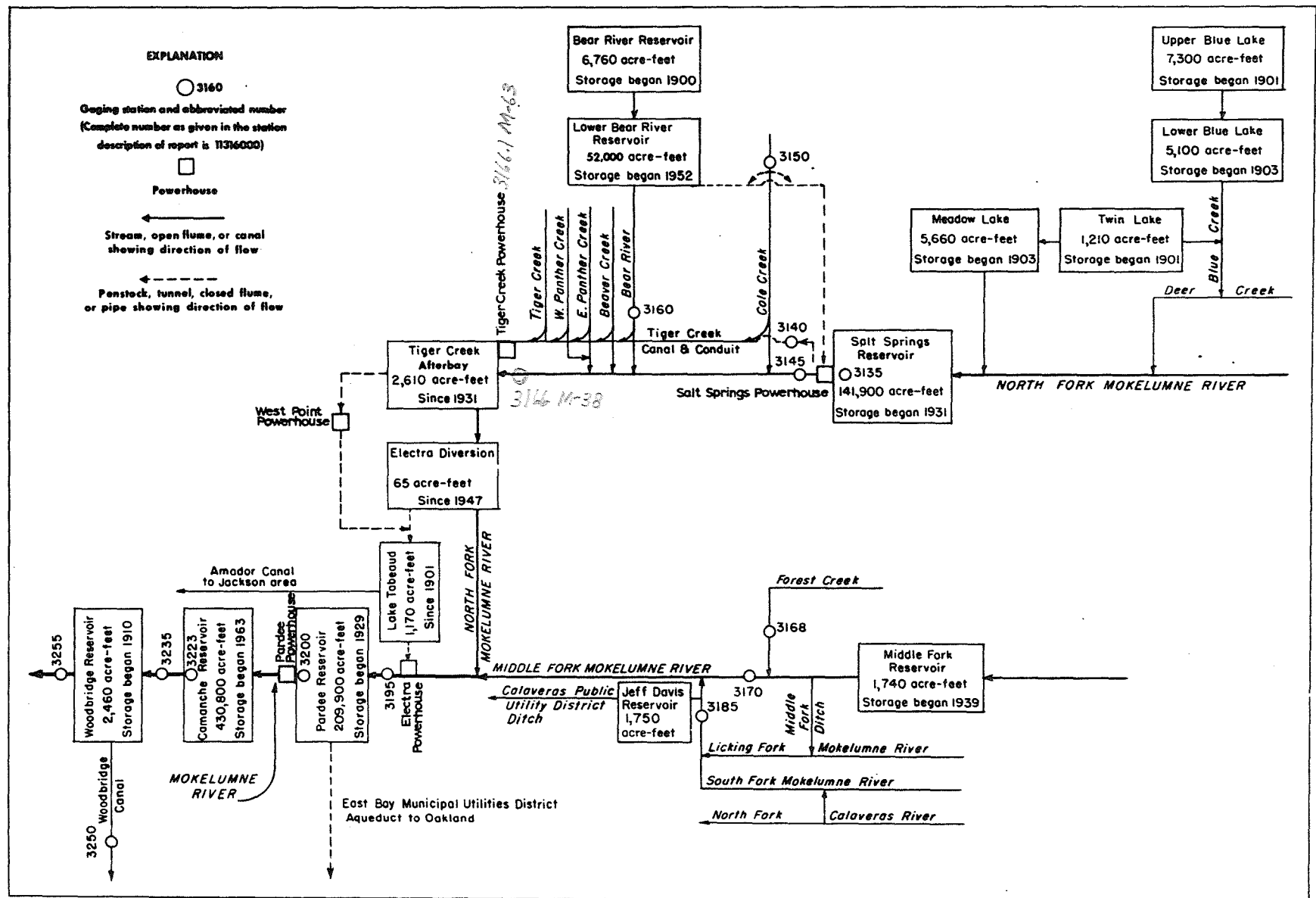


FIGURE 11.--Schematic diagram showing diversions and storage in Mokelumne River basin.

SAN JOAQUIN RIVER BASIN

11313500 SALT SPRINGS RESERVOIR NEAR WEST POINT, CA

LOCATION.--Lat 38°30'00", long 120°12'55", in SE¼ sec.33, T.8 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Eldorado National Forest, at right end of Salt Springs Dam on North Fork Mokelumne River, 2 mi (3 km) upstream from Cole Creek, and 18 mi (29 km) northeast of West Point.

DRAINAGE AREA.--169 mi² (438 km²).

PERIOD OF RECORD.--March 1931 to current year. Prior to October 1964, records published as usable contents.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam, completed in 1931; storage began in March 1931. Capacity, 141,900 acre-ft (175 hm³) between elevations 3,667.75 ft (1,117.930 m), outlet drain, and 3,958.0 ft (1,206.40 m), top of radial gates, NGVD. Storage of 1,860 acre-ft (2.29 hm³) available for release to river only. Water is released through powerhouse just below dam and discharged into Tiger Creek powerhouse conduit (station 11314000). Figures given herein represent total contents. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES (AT 1500) FOR PERIOD OF RECORD.--Maximum contents observed, 141,900 acre-ft (175 hm³) for several days in June or July most years, elevation, 3,958.0 ft (1,206.40 m); no contents at times in 1932-33, 1945, 1962.

EXTREMES (AT 1500) FOR CURRENT YEAR.--Maximum contents observed, 128,900 acre-ft (159 hm³) June 15, elevation, 3,944.3 ft (1,202.22 m); minimum, 3,030 acre-ft (3.74 hm³) Mar. 2-5, elevation, 3,716.6 ft (1,132.82 m).

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

3,667.75	45	3,740.0	7,320
3,700.0	1,250	3,750.0	9,800
3,705.0	1,680	3,760.0	12,700
3,710.0	2,200	3,780.0	19,600
3,715.0	2,810	3,800.0	28,000
3,720.0	3,520	3,850.0	54,900
3,725.0	4,320	3,900.0	90,800
3,730.0	5,230	3,958.0	141,900
3,735.0	6,230		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 1500

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111978	94478	68526	40523	12288	3168	13255	59023	118684	122908	104753	87942
2	111629	93428	67749	39511	11480	3028	13446	62902	120205	122275	104330	87393
3	111194	92624	67116	38459	10425	3028	13542	65166	121373	121914	103907	86846
4	111194	91983	66836	37419	9693	3028	13639	68313	122275	121013	103401	86300
5	111107	91344	66346	36393	8965	3028	13865	70664	123814	120026	102895	86378
6	110760	90786	65304	35381	8219	3326	14422	72901	124950	119220	102391	86144
7	110153	90230	64270	34283	7485	3781	14889	75389	125817	118773	101972	85135
8	109893	89202	63243	33202	6657	4188	15535	75905	126732	118238	101387	84362
9	109547	88178	62495	32137	6023	4620	16580	77165	127099	117793	100553	83900
10	109029	87393	61886	31086	5738	5003	17949	78884	127558	117259	99805	83285
11	108082	86768	61213	30002	5229	5500	19101	81148	127650	116815	99391	82596
12	107139	86300	60544	28980	4818	5982	20015	84054	127650	116283	98977	81528
13	106455	85678	59748	28017	4427	6399	21269	86846	128202	115664	98564	80542
14	105858	84980	58761	26979	4603	6657	22602	89913	128755	115135	98234	79636
15	105347	83900	57849	25916	4855	6920	24317	92624	128940	114782	98234	79184
16	104838	82825	57203	24873	4674	7120	26313	93509	128755	114166	98000	78659
17	104330	81756	56115	23851	4818	7324	28291	93751	128478	113640	97576	78060
18	103401	81072	55040	22808	4837	7508	29862	94559	127926	113114	97002	77538
19	102475	80013	53915	21870	4837	7788	31086	96430	127558	112502	96511	77369
20	101721	78884	52925	20794	4892	8612	32089	97494	127466	112152	95940	76497
21	101136	78809	51885	19747	4710	8762	32571	97823	127374	111455	95370	75463
22	100719	77836	50794	18688	4532	8939	33839	98390	127099	110934	95045	74874
23	100220	76720	49717	17729	4358	9169	36190	100220	126640	110413	93993	74434
24	99805	75684	48651	16900	4239	9693	39988	102224	126183	110066	93187	73921
25	99474	74580	47656	15984	4039	10342	43624	105092	125726	109288	92624	73484
26	98647	73629	46788	14957	3829	11687	46443	107911	125269	108254	92063	72539
27	98070	72539	45700	14224	3641	12319	47598	109375	124723	107310	91504	71526
28	97412	71526	44739	14442	3370	12319	48592	111455	124359	106796	90946	70735
29	96839	70449	43679	14422	---	12596	50975	113289	123996	106199	89755	70091
30	96185	69378	42686	14290	---	12782	54789	115135	123451	105687	89202	69591
31	95452	---	41652	13287	---	13128	---	117081	---	105117	88492	---
MAX	111978	94478	68526	40523	12288	13128	54789	117081	128940	122908	104753	87942
MIN	95452	69378	41652	13287	3370	3028	13255	59023	118684	105117	88492	69591
†	3905.8	3871.6	3827.4	3761.9	3719.0	3761.4	3849.9	3931.2	3938.3	3917.5	3897.1	3871.9
‡	-17100	-26100	-27700	-28400	-9920	+9760	+41700	+62300	+6370	-18300	-16600	-18900

CAL YR 1980 ‡ +14900
WTR YR 1981 ‡ -43000

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

LOCATION.--Lat 38°29'47", long 120°13'04", in SW¼ sec.33, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 1,000 ft (305 m) downstream from Salt Springs Dam and powerhouse.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,620 ft (1,103 m), from topographic map. Auxiliary nonrecording gages in stilling wells upstream and downstream from control.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 577 ft³/s (16.3 m³/s) June 22, 1945; no flow at times in many years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	544	553	552	556	505	234	219	382	550	545	249	518
2	547	552	552	556	536	277	220	5.6	551	545	249	519
3	554	551	548	556	541	383	218	.53	550	542	432	518
4	552	552	536	556	533	386	221	0	550	542	525	554
5	552	553	534	560	521	266	205	0	551	545	506	0
6	552	552	544	556	505	144	489	0	550	544	499	318
7	551	552	544	557	478	100	456	0	551	545	489	529
8	552	551	543	556	453	99	256	0	550	544	483	533
9	553	551	544	556	462	227	233	0	550	545	483	539
10	552	551	553	557	446	228	193	0	550	515	478	539
11	553	552	562	556	431	228	9.1	0	424	434	471	538
12	551	284	560	552	415	228	.16	0	.10	544	471	539
13	553	552	551	547	400	83	0	0	0	545	472	525
14	554	553	539	546	353	11	0	47	288	545	309	536
15	551	552	550	549	361	3.6	0	525	551	545	0	539
16	551	552	556	549	353	227	0	525	550	545	152	539
17	551	479	557	548	417	228	242	343	550	545	511	539
18	552	412	559	548	417	228	252	364	500	546	530	522
19	552	552	516	540	418	228	298	401	198	546	530	172
20	551	440	539	546	422	222	550	444	199	545	528	545
21	551	172	559	545	356	221	551	366	409	532	527	548
22	552	553	561	543	343	221	551	.26	547	545	479	536
23	552	552	559	546	399	229	558	.26	546	472	527	550
24	378	552	558	546	521	229	552	.26	547	520	528	549
25	282	552	559	546	529	229	553	226	547	403	529	549
26	553	553	559	546	513	209	549	557	546	544	530	548
27	553	552	558	332	364	156	550	551	545	545	525	548
28	554	552	558	201	255	223	551	551	545	544	518	548
29	553	553	558	412	---	221	552	551	542	545	519	549
30	552	553	557	507	---	223	483	550	545	543	518	550
31	552	---	554	506	---	220	---	550	---	415	518	---
TOTAL	16660	15590	17079	16277	12247	6411.6	9471.26	6939.91	14082.10	16359	14085	14836
MEAN	537	520	551	525	437	207	316	224	469	528	454	495
MAX	554	553	562	560	541	386	558	557	551	546	530	550
MIN	282	172	516	201	255	3.6	0	0	0	403	0	0
AC-FT	33050	30920	33880	32290	24290	12720	18790	13770	27930	32450	27940	29430
CAL YR 1980	TOTAL	183504.30	MEAN	501	MAX	562	MIN	.40	AC-FT	364000		
WTR YR 1981	TOTAL	160037.87	MEAN	438	MAX	562	MIN	0	AC-FT	317400		

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA

LOCATION.--Lat 38°29'37", long 120°13'12", in NE¼NW¼ sec.4, T.7 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Stanislaus National Forest, on left bank 0.3 mi (0.5 km) downstream from Salt Springs Dam, and 1.3 mi (2.1 km) upstream from Cole Creek.

DRAINAGE AREA.--170 mi² (440 km²).

PERIOD OF RECORD.--September 1926 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "above Moore Creek" 1926-30.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,590 ft (1,094 m), from topographic map. Prior to Sept. 12, 1928, at site 100 ft (30 m) upstream and Sept. 12, 1928, to Sept. 23, 1940, at present site at datum 2.0 ft (0.61 m) higher.

REMARKS.--Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 0.3 mi (0.5 km) upstream. Diversion from Bear River and Cole Creek to Salt Springs powerhouse averaged 191 ft³/s (5.41 m³/s) during current year. Diversion above station through Tiger Creek powerhouse conduit (station 11314000). See schematic diagram of Mokelumne River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (combined flow of North Fork Mokelumne River and Tiger Creek powerhouse conduit minus Bear River-Cole Creek diversion).--55 years, 466 ft³/s (13.20 m³/s), 337,600 acre-ft/yr (416 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s), Nov. 21, 1950, gage height, 17.20 ft (5.243 m), from rating curve extended above 3,900 ft³/s (110 m³/s) on basis of computations of flow over dam and discharge through powerhouse; minimum daily, 0.3 ft³/s (0.008 m³/s) Mar. 31, Apr. 1, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 530 ft³/s (15.0 m³/s) May 10; minimum daily, 4.9 ft³/s (0.14 m³/s) Nov. 28; Mar. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	9.2	5.7	5.5	6.3	5.2	6.1	175	11	11	11	11
2	10	6.6	5.5	5.5	6.2	5.3	5.1	172	12	11	11	11
3	11	6.6	5.6	5.7	6.2	5.4	5.0	174	12	11	11	11
4	11	6.6	6.9	5.7	5.9	5.5	5.0	16	12	11	10	11
5	11	6.6	5.7	5.5	5.8	5.4	5.0	10	12	11	10	11
6	11	6.6	5.5	5.9	5.5	5.3	5.0	10	12	11	10	11
7	11	6.7	5.5	5.5	5.3	5.2	5.0	100	12	11	11	11
8	11	6.7	5.4	5.7	5.6	5.5	5.0	525	12	11	11	11
9	11	6.6	5.2	5.8	6.0	5.5	5.0	525	12	11	11	11
10	11	6.6	5.3	5.9	5.8	5.5	5.0	530	12	10	12	11
11	11	6.6	5.7	5.7	5.7	5.6	5.0	10	12	10	12	11
12	11	6.4	5.7	5.7	5.6	5.6	5.0	11	12	10	11	11
13	11	6.4	5.7	5.7	5.6	4.9	5.0	10	13	10	9.3	11
14	11	6.3	5.7	5.6	5.9	4.9	5.0	11	13	11	9.8	11
15	11	6.6	5.6	5.5	5.9	5.7	5.0	10	12	11	12	11
16	12	7.7	5.6	5.6	5.8	5.8	5.0	10	12	11	13	11
17	11	7.5	5.5	5.5	5.7	5.1	5.0	10	12	11	13	11
18	11	5.8	5.4	5.5	5.6	6.1	5.0	10	12	11	12	11
19	11	5.7	5.2	5.4	5.6	6.6	5.0	9.5	12	11	11	11
20	11	5.7	5.7	5.5	5.5	6.6	8.3	9.2	12	11	11	11
21	11	5.7	5.7	5.9	5.7	6.1	133	9.3	12	11	11	11
22	11	5.7	5.8	5.8	5.7	5.9	133	9.2	12	11	11	11
23	11	5.5	5.7	6.4	5.4	6.1	5.0	9.3	12	11	11	11
24	11	5.5	5.5	6.3	5.8	10	5.0	9.5	12	11	11	11
25	9.2	5.5	5.6	6.0	5.9	8.3	5.0	9.8	12	11	11	11
26	11	5.2	5.7	5.9	5.9	6.7	7.9	10	12	11	11	11
27	11	5.1	5.7	7.9	5.8	6.7	174	11	12	11	11	11
28	12	4.9	5.7	11	5.2	6.6	174	11	12	11	11	11
29	12	5.5	5.7	8.2	---	6.3	183	11	11	11	11	11
30	11	5.7	5.5	7.1	---	6.2	5.0	11	11	11	11	11
31	11	---	5.5	6.5	---	6.4	---	11	---	11	11	---
TOTAL	339.8	187.8	174.2	189.4	160.9	186.0	1075.2	2449.8	359	337	343.1	330
MEAN	11.0	6.26	5.62	6.11	5.75	6.00	35.8	79.0	12.0	10.9	11.1	11.0
MAX	12	9.2	6.9	11	6.3	10	183	530	13	11	13	11
MIN	9.2	4.9	5.2	5.4	5.2	4.9	5.0	9.2	11	10	9.3	11
AC-FT	674	373	346	376	319	369	2130	4860	712	668	681	655
CAL YR 1980 TOTAL	129076.8			353		3370		MIN 4.9	AC-FT 256000			
WTR YR 1981 TOTAL	6132.2			MEAN 16.8		MAX 530		MIN 4.9	AC-FT 12160			

LOCATION.--Lat 38°31'09", long 120°12'41", in NE¼ sec.28, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 200 ft (61 m) downstream from bridge, 1.4 mi (2.3 km) north of Salt Springs Dam, 3.2 mi (5.1 km) upstream from mouth, and 6.5 mi (10.5 km) southwest of Mokelumne Peak.

PERIOD OF RECORD.--July 1927 to November 1942, October 1943 to current year. Prior to October 1958, published as Cold Creek near Mokelumne Peak. October 1958 to September 1960, published as "near Mokelumne Peak,"

GAGE.--Water-stage recorder. Concrete control since Oct. 30, 1974. Altitude of gage is 5,900 ft (1,800 m), from topographic map. Prior to Oct. 30, 1974, at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Occasional pumping for domestic use in summer-home tract began in September 1961. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE,--53 years, 63.6 ft³/s (1.801 m³/s), 46,080 acre-ft/yr (56.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft³/s (174 m³/s) Dec. 23, 1964, gage height, 10.21 ft (3.112 m) site and datum then in use, from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of slope-area measurement at gage height 9.69 ft (2.954 m) site and datum then in use; no flow many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Apr. 23	1915	650	18.4	3.50	1.067
Apr. 29	1845	*677	19.2	3.54	1.079

Minimum daily, no flow on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.21	.45	5.5	15	18	43	338	93	1.3	.19	0
2	.19	.21	.54	4.5	14	17	32	244	84	1.1	.18	0
3	.18	.21	.85	2.2	12	18	29	176	69	1.0	.17	0
4	.17	.21	3.5	3.8	12	20	40	155	69	.93	.17	0
5	.17	.21	1.3	8.8	16	17	79	141	67	.92	.19	0
6	.17	.20	.78	7.0	13	19	108	127	55	.89	.15	0
7	.17	.20	.59	5.2	9.8	24	101	126	48	.80	.13	0
8	.17	.36	.58	5.3	9.5	24	96	143	38	.77	.27	0
9	.17	.29	.49	5.3	8.7	31	113	184	34	.71	.36	0
10	.17	.26	.52	4.3	8.3	40	115	187	28	.66	.22	0
11	.17	.61	.46	4.0	7.8	41	98	170	22	.62	.11	0
12	.40	.59	.48	1.9	9.8	31	96	164	19	.56	.01	0
13	.35	.36	.48	1.8	15	29	117	173	16	.53	.01	.24
14	.29	.30	.48	1.8	121	26	152	155	13	.51	.01	.28
15	.31	.27	.64	1.9	59	28	174	115	11	.47	.01	.07
16	.32	.26	2.9	2.3	38	25	170	78	9.3	.42	.01	.04
17	.28	.25	5.5	3.2	71	27	164	76	8.6	.39	.01	.04
18	.26	.23	4.5	3.7	52	28	159	143	7.7	.38	.01	.04
19	.26	.23	3.7	5.6	58	27	120	159	6.7	.34	0	.03
20	.25	.23	2.8	4.7	64	26	93	93	6.0	.33	.01	.02
21	.23	.23	3.0	3.8	40	24	136	80	5.1	.31	.01	.02
22	.23	.23	22	5.2	38	27	257	93	4.3	.29	.01	.02
23	.23	.29	12	11	41	32	355	109	3.7	.27	.01	.02
24	.23	.35	6.4	21	36	35	357	132	3.1	.26	.01	.02
25	.24	.33	3.7	11	29	49	263	164	2.8	.24	.01	.29
26	.36	.31	4.8	8.9	26	51	206	172	2.4	.47	.01	.13
27	.30	.29	7.5	8.8	24	36	129	154	2.2	.65	.01	.07
28	.27	.28	5.7	7.6	23	35	233	137	1.9	.22	.01	.05
29	.24	.28	5.0	12	---	57	395	134	1.7	.21	.01	.05
30	.23	.33	4.4	17	---	40	390	121	1.5	.19	.01	.04
31	.21	---	3.7	19	---	38	---	103	---	.19	0	---
TOTAL	7.41	8.61	109.74	208.1	870.9	940	4820	4546	730.0	16.93	2.32	1.47
MEAN	.24	.29	3.54	6.71	31.1	30.3	161	147	24.3	.55	.075	.049
MAX	.40	.61	22	21	121	57	395	338	93	1.3	.36	.29
MIN	.17	.20	.45	1.8	7.8	17	29	76	1.5	.19	0	0
AC-FT	15	17	218	413	1730	1860	9560	9020	1450	34	4.6	2.9
CAL YR 1980	TOTAL	31890.49	MEAN	87.1	MAX	2620	MIN	.17	AC-FT	63250		
WTR YR 1981	TOTAL	12261.48	MEAN	33.6	MAX	395	MIN	0	AC-FT	24320		

SAN JOAQUIN RIVER BASIN

11316000 BEAR RIVER NEAR SALT SPRINGS DAM, CA¹

LOCATION.--Lat 38°29'37", long 120°17'18", in NE¼NW¼ sec.2, T.7 N., R.15 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank 200 ft (61 m) upstream from diversion to Tiger Creek powerhouse conduit and highway bridge, 1.5 mi (2.4 km) upstream from mouth, and 4 mi (6 km) west of Salt Springs Dam.

DRAINAGE AREA.--48.0 mi² (124.3 km²).

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder and broad-crested weir. Altitude of gage is 3,727 ft (1,136 m), from photogrammetric map.

REMARKS.--Flow regulated since 1900 by Bear River Reservoir, capacity, 6,760 acre-ft (8.34 hm³), and since December 1952 by Lower Bear River Reservoir 4 mi (6 km) upstream, capacity, 49,100 acre-ft (60.5 hm³). Water diverted for power since December 1952 from Lower Bear River Reservoir through tunnel to Salt Springs powerhouse on North Fork Mokelumne River. Water diverted occasionally from Cole Creek into Lower Bear River Reservoir. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--30 years, 51.6 ft³/s (1.461 m³/s), 37,380 acre-ft/yr (46.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Dec. 24, 1964, gage height, 10.11 ft (3.082 m) in gage well, 11.8 ft (3.60 m), from flood profile, from rating curve extended above 560 ft³/s (15.9 m³/s) on basis of slope-area measurements of maximum flow; minimum daily, 0.53 ft³/s (0.015 m³/s) Sept. 7, 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1950 reached a stage of 11.2 ft (3.41 m), from floodmarks, discharge, 10,000 ft³/s (283 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 149 ft³/s (4.22 m³/s) Mar. 25, gage height, 1.79 ft (0.546 m); minimum daily, 2.8 ft³/s (0.079 m³/s) Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	3.1	3.8	3.2	7.2	11	34	18	12	5.6	4.5	4.3
2	4.7	2.9	3.7	3.2	6.9	11	29	17	11	5.6	4.5	4.5
3	4.7	2.9	7.7	6.1	6.5	10	26	16	8.2	5.5	4.5	4.3
4	4.6	2.9	21	4.7	6.7	10	26	15	8.0	5.5	4.5	4.2
5	4.6	2.9	5.5	3.7	6.5	9.8	29	14	7.7	5.5	4.4	4.2
6	4.6	2.8	4.3	3.5	6.2	9.8	32	13	7.7	5.5	4.4	4.2
7	4.5	2.9	3.8	3.4	6.2	10	33	13	7.4	5.4	4.3	4.2
8	4.5	4.0	3.6	3.4	6.4	11	32	12	7.3	5.3	4.3	4.2
9	4.5	3.1	3.6	3.3	8.9	12	33	11	6.9	5.3	4.2	4.2
10	4.5	3.1	3.5	3.3	7.0	13	33	11	6.6	5.2	4.2	4.2
11	4.6	5.2	3.5	3.3	8.6	14	31	11	6.6	5.2	4.5	4.2
12	5.7	4.0	3.5	3.3	8.4	13	29	10	6.5	5.2	4.6	4.2
13	4.9	3.3	3.4	3.3	13	15	29	9.9	6.5	5.2	4.6	7.1
14	5.8	3.2	3.3	3.3	33	12	30	9.7	6.7	5.1	4.5	4.8
15	5.3	3.1	3.4	4.0	18	12	30	9.7	6.9	5.0	4.5	4.4
16	5.1	3.1	3.3	5.3	16	14	29	9.8	6.5	5.0	4.5	4.4
17	5.0	3.1	3.3	3.8	21	13	28	9.4	6.4	5.0	4.5	4.4
18	4.9	3.1	3.3	3.5	18	12	33	15	6.3	4.9	4.5	4.3
19	4.8	3.1	3.3	3.5	21	21	37	14	6.3	4.9	4.4	4.3
20	4.8	3.1	3.3	3.4	21	19	31	11	6.2	4.8	4.5	4.3
21	4.7	3.1	3.9	3.4	16	23	32	10	6.1	4.8	4.4	4.2
22	4.7	3.1	4.9	5.6	15	28	32	9.9	6.1	4.7	4.4	4.2
23	4.7	3.6	3.6	7.7	15	25	32	9.3	6.0	4.7	4.4	4.2
24	4.6	3.4	3.4	6.1	18	24	31	9.8	6.0	4.7	4.5	4.2
25	5.3	3.1	3.4	5.4	15	67	28	12	5.9	4.6	4.4	7.0
26	5.1	3.1	3.3	21	13	65	29	15	5.8	4.8	4.4	4.7
27	4.8	3.1	3.3	31	12	46	24	12	5.8	4.9	4.4	4.5
28	4.7	3.0	3.3	11	11	41	22	11	6.5	4.6	4.3	4.5
29	4.7	2.9	3.2	8.3	---	40	20	11	5.7	4.5	4.7	4.5
30	4.6	3.7	3.2	6.5	---	35	19	10	5.7	4.5	4.7	4.3
31	4.6	---	3.2	6.8	---	32	---	11	---	4.6	4.3	---
TOTAL	149.3	97.0	132.8	187.3	361.5	678.6	883	370.5	207.3	156.1	137.8	135.2
MEAN	4.82	3.23	4.28	6.04	12.9	21.9	29.4	12.0	6.91	5.04	4.45	4.51
MAX	5.8	5.2	21	31	33	67	37	18	12	5.6	4.7	7.1
MIN	4.5	2.8	3.2	3.2	6.2	9.8	19	9.3	5.7	4.5	4.2	4.2
AC-FT	296	192	263	372	717	1350	1750	735	411	310	273	268
CAL YR 1980	TOTAL	30094.2	MEAN	82.2	MAX	786	MIN	2.8	AC-FT	59690		
WTR YR 1981	TOTAL	3496.4	MEAN	9.58	MAX	67	MIN	2.8	AC-FT	6940		

11316800 FOREST CREEK NEAR WILSEYVILLE, CA

LOCATION.--Lat 38°24'12", long 120°26'45", in SW¼NW¼ sec.4, T.6 N., R.14 E., Calaveras County, Hydrologic Unit 18040012, on left bank 1.0 mi (1.6 km) downstream from Lion Creek, 1.8 mi (2.9 km) upstream from mouth, and 4 mi (6 km) northeast of Wilseyville.

DRAINAGE AREA.--20.8 mi² (53.9 km²).

PERIOD OF RECORD.--July 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,950 ft (899 m), from topographic map.

REMARKS.--Records fair. No regulation. Minor diversions above station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--21 years, 22.3 ft³/s (0.632 m³/s), 16,160 acre-ft/yr (19.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) Dec. 24, 1964, gage height, 7.68 ft (2.341 m), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement at gage height 7.41 ft (2.259 m); minimum daily, 0.11 ft³/s (0.003 m³/s) Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 112 ft³/s (3.17 m³/s) Jan. 27, gage height, 4.29 ft (1.308 m), no peak above base of 120 ft³/s (3.40 m³/s); minimum daily, 0.84 ft³/s (0.024 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.5	4.9	6.9	13	11	31	17	7.0	3.6	1.5	1.2
2	3.5	3.5	4.3	6.9	13	11	30	16	6.7	3.0	1.5	1.4
3	3.0	3.4	6.3	7.2	12	10	28	15	6.6	3.3	2.2	1.4
4	2.1	3.4	11	11	10	11	26	14	6.3	3.1	2.1	1.1
5	2.4	3.3	3.6	8.2	9.5	11	25	14	6.0	3.1	2.0	1.4
6	2.5	3.3	3.4	7.6	8.7	9.7	25	13	5.8	3.2	1.7	1.3
7	2.5	3.4	3.7	7.4	8.1	9.5	25	13	5.6	3.5	1.7	1.3
8	2.6	3.4	3.5	7.2	8.0	9.5	24	12	5.4	3.1	1.7	1.0
9	3.0	3.1	3.3	7.0	12	9.6	24	12	4.8	3.0	1.7	1.2
10	3.4	3.8	3.3	6.9	11	9.6	23	11	4.9	2.7	1.7	1.3
11	3.4	4.5	3.4	6.7	10	12	23	10	5.2	2.9	1.6	1.5
12	4.9	4.8	3.2	6.7	10	12	22	9.5	5.0	2.7	1.5	1.4
13	4.8	4.2	3.3	6.7	10	13	21	7.9	4.5	2.6	1.5	1.4
14	4.7	3.9	4.1	6.7	21	12	21	7.8	4.2	2.4	1.2	1.5
15	5.3	3.9	4.2	6.8	18	11	21	8.4	3.9	2.2	1.3	1.5
16	5.1	3.8	4.2	9.9	15	16	21	9.1	3.8	2.9	1.6	1.4
17	4.6	3.7	4.5	8.3	16	13	20	8.5	3.9	2.5	1.3	1.6
18	4.3	3.7	4.8	7.6	14	12	21	14	3.6	2.8	1.3	1.4
19	4.3	3.7	4.7	7.2	14	25	26	14	3.8	2.2	1.5	1.4
20	4.1	3.7	4.7	7.1	15	30	23	11	3.8	2.3	1.5	1.5
21	4.0	3.7	4.8	6.9	13	36	21	10	4.0	1.9	1.5	1.4
22	3.8	3.8	5.5	7.0	12	44	21	9.7	4.0	1.8	1.5	1.4
23	3.6	4.1	5.2	21	11	35	21	9.1	4.1	2.5	1.4	1.5
24	3.5	4.4	5.0	18	14	28	20	8.6	3.9	2.8	1.2	1.5
25	4.0	4.0	5.1	12	14	51	20	9.1	3.7	2.5	1.3	2.1
26	4.6	4.0	5.2	12	12	70	22	11	3.8	2.0	1.8	2.5
27	4.0	3.9	5.6	38	11	48	20	9.9	3.6	1.9	1.5	1.9
28	3.7	3.8	7.1	50	11	41	18	8.5	2.9	1.7	1.1	2.0
29	3.7	3.7	7.2	30	---	38	18	7.9	3.5	2.0	1.2	2.4
30	3.6	5.0	7.1	17	---	35	17	7.4	3.7	1.9	.84	2.3
31	3.6	---	7.0	13	---	32	---	7.2	---	1.5	1.2	---
TOTAL	116.5	114.4	153.2	374.9	346.3	715.9	678	335.6	138.0	79.6	46.64	46.2
MEAN	3.76	3.81	4.94	12.1	12.4	23.1	22.6	10.8	4.60	2.57	1.50	1.54
MAX	5.3	5.0	11	50	21	70	31	17	7.0	3.6	2.2	2.5
MIN	2.1	3.1	3.2	6.7	8.0	9.5	17	7.2	2.9	1.5	.84	1.0
AC-FT	231	227	304	744	687	1420	1340	666	274	158	93	92

CAL YR 1980 TOTAL 14029.90 MEAN 38.3 MAX 669 MIN 2.1 AC-FT 27830
WTR YR 1981 TOTAL 3145.24 MEAN 8.62 MAX 70 MIN .84 AC-FT 6240

SAN JOAQUIN RIVER BASIN

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA

LOCATION.--Lat 38°23'23", long 120°31'32", in SE4NE4 sec.10, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank 200 ft (61 m) downstream from highway bridge, 0.6 mi (1.0 km) south of West Point, and 4.5 mi (7.2 km) upstream from South Fork Mokelumne River.

DRAINAGE AREA.--68.4 mi² (177.2 km²).

PERIOD OF RECORD.--October 1911 to current year. Monthly discharge only for October 1911, published in WSP 1315-A.

REVISED RECORDS.--WSP 1515: 1919-20, 1927-28(M), 1936(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,450 ft (747 m), from topographic map. Prior to Oct. 6, 1926, nonrecording gage at site 1,200 ft (366 m) upstream at different datum. Oct. 6, 1926, to Aug. 18, 1928, non-recording gage at present site and datum.

REMARKS.--Records good prior to June, poor thereafter. Flow slightly regulated by Middle Fork Reservoir, capacity, 1,740 acre-ft (2.15 hm³), 6 mi (10 km) above station, since January 1940. Several small diversions above station. At times water diverted 4 mi (6 km) above station to South Fork Mokelumne River via Middle Fork ditch, capacity, 10 ft³/s (0.28 m³/s) and Licking Fork Mokelumne River. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--70 years, 60.8 ft³/s (1.722 m³/s), 44,050 acre-ft/yr (54.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,320 ft³/s (122 m³/s) Dec. 23, 1955, gage height, 8.98 ft (2.737 m); no flow many days in 1931, and Sept. 9, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 407 ft³/s (11.5 m³/s) Mar. 26 (0200 hrs), gage height, 3.27 ft (0.997 m), no other peak above base of 400 ft³/s (11.3 m³/s); minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	9.1	13	9.8	43	34	88	67	19	10	5.8	4.1
2	9.0	9.2	12	9.7	39	34	84	63	19	9.8	5.8	3.9
3	9.8	9.1	19	10	36	33	77	55	19	9.5	5.7	3.9
4	8.6	9.3	80	16	33	34	71	50	18	9.2	5.7	3.7
5	7.9	9.4	33	14	30	34	69	47	17	9.2	5.6	3.8
6	7.9	9.4	20	12	28	32	68	44	16	9.6	5.6	3.7
7	7.7	9.1	15	11	26	31	67	41	16	9.8	5.5	3.6
8	7.5	10	12	11	26	31	64	39	15	9.5	5.4	3.7
9	7.6	9.3	12	10	32	31	63	36	14	8.8	5.3	3.6
10	8.1	9.8	11	10	32	31	62	36	14	8.4	5.2	3.6
11	8.1	11	11	10	30	33	61	35	15	8.4	5.2	3.6
12	9.5	12	11	9.9	31	37	59	34	15	8.2	5.2	3.5
13	9.7	11	11	9.8	31	37	57	31	14	7.8	5.1	3.5
14	9.6	10	10	9.8	55	35	57	30	13	7.6	5.1	3.6
15	10	9.9	11	11	56	34	56	30	12	7.7	5.0	3.7
16	10	9.7	10	14	46	44	56	32	12	7.6	5.0	3.6
17	10	9.5	11	13	46	39	56	28	12	7.4	5.0	3.5
18	9.8	9.5	10	12	43	36	60	38	11	7.3	4.7	3.7
19	9.7	9.5	10	11	41	66	78	46	11	7.0	5.0	3.7
20	9.1	9.5	10	10	43	104	68	36	11	6.8	5.1	3.6
21	9.0	9.6	11	10	39	104	60	32	11	6.7	4.9	3.4
22	9.1	9.7	13	11	36	129	60	30	12	6.6	4.8	3.4
23	9.1	10	12	45	34	103	62	28	12	6.5	4.7	3.5
24	8.8	11	11	40	42	84	67	27	12	6.3	4.8	3.5
25	9.3	10	11	24	42	157	67	27	11	6.3	4.6	3.6
26	10	10	11	20	37	294	71	32	11	6.2	4.6	4.0
27	9.7	10	10	150	35	169	64	32	10	6.2	4.5	4.0
28	9.5	9.8	10	214	34	133	59	29	9.5	6.1	4.4	3.1
29	9.1	9.8	10	152	---	117	61	25	10	6.0	4.4	3.3
30	9.1	12	10	78	---	104	66	23	10	5.9	4.3	3.3
31	9.1	---	10	51	---	92	---	22	---	5.9	4.2	---
TOTAL	280.9	297.2	451	1019.0	1046	2276	1958	1125	401.5	238.3	156.2	108.7
MEAN	9.06	9.91	14.5	32.9	37.4	73.4	65.3	36.3	13.4	7.69	5.04	3.62
MAX	10	12	80	214	56	294	88	67	19	10	5.8	4.1
MIN	7.5	9.1	10	9.7	26	31	56	22	9.5	5.9	4.2	3.1
AC-FT	557	589	895	2020	2070	4510	3880	2230	796	473	310	216
CAL YR 1980	TOTAL	41371.6	MEAN	113	MAX	1950	MIN	6.0	AC-FT	82060		
WTR YR 1981	TOTAL	9357.8	MEAN	25.6	MAX	294	MIN	3.1	AC-FT	18560		

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA

LOCATION.--Lat 38°22'06", long 120°32'40", in SE4SE4 sec.16, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank 500 ft (152 m) upstream from highway bridge, 2.4 mi (3.9 km) southwest of West Point, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--75.1 mi² (194.5 km²).

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1315-A: 1934(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,950 ft (594 m), from topographic map. October 1933 to Sept. 19, 1957, at site 1,100 ft (335 m) downstream at different datum.

REMARKS.--Records good. Several small diversions above station for domestic use and for irrigation of about 100 acres (405,000 m²). Diversions into South Fork Mokelumne River basin above station at times from North Fork Calaveras River and from Middle Fork Mokelumne River for use below station. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--48 years, 81.4 ft³/s (2.305 m³/s), 58,970 acre-ft/yr (72.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft³/s (196 m³/s) Dec. 23, 1955, gage height, 14.8 ft (4.51 m) from floodmarks, site and datum then in use, from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of slope-area measurement of peak flow; no flow Aug. 6, 7, Aug. 12 to Sept. 26, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 27	1530	593 16.8	5.05 1.539
Mar. 26	0130	*637 18.0	5.15 1.570

Minimum daily, 1.4 ft³/s (0.040 m³/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	14	11	65	38	110	50	17	2.8	2.7	1.8
2	11	11	13	11	50	38	102	47	16	3.4	2.7	1.7
3	11	11	19	11	45	35	92	44	15	4.1	2.8	1.6
4	10	11	84	18	38	36	84	41	15	2.8	2.9	1.6
5	11	11	31	14	35	43	82	37	15	3.3	3.0	1.8
6	9.9	11	21	13	33	37	83	36	13	4.4	2.9	1.9
7	9.9	11	18	12	32	33	82	35	14	5.2	2.9	1.9
8	10	11	17	12	32	33	78	33	15	3.9	2.8	1.8
9	10	11	16	11	39	33	76	31	15	3.7	2.7	1.8
10	10	11	16	11	36	33	75	30	14	3.9	2.7	1.6
11	10	12	16	11	35	33	72	28	13	3.2	2.4	1.6
12	11	14	16	11	36	36	67	26	13	3.2	2.4	1.6
13	13	13	16	11	36	38	65	23	13	3.3	2.3	1.8
14	12	12	15	11	60	38	65	23	12	2.9	2.4	2.0
15	12	12	15	11	58	37	67	24	12	2.7	2.2	2.1
16	13	12	15	14	48	48	66	26	11	2.9	2.2	2.2
17	13	12	15	13	50	40	63	25	10	2.5	2.4	2.1
18	12	12	15	12	46	37	65	32	13	2.2	2.2	2.1
19	13	12	15	12	45	102	104	43	12	1.8	2.2	2.2
20	12	12	15	11	46	150	86	34	8.6	2.2	2.3	2.0
21	12	12	16	11	42	139	75	31	5.8	2.2	2.1	2.1
22	11	12	18	12	40	191	73	28	6.0	2.2	2.0	2.1
23	11	12	16	74	38	141	73	23	6.2	2.5	2.2	2.2
24	11	12	15	46	48	107	72	22	6.5	2.6	2.3	2.3
25	11	12	15	30	47	249	69	22	6.6	2.2	2.2	2.8
26	13	12	15	28	41	458	72	25	6.3	2.5	2.1	3.6
27	13	12	15	289	38	262	63	27	5.4	3.2	1.9	3.1
28	12	12	14	250	38	195	58	23	5.0	1.6	1.7	3.1
29	12	11	13	140	---	165	55	21	4.6	1.4	1.7	3.4
30	12	13	11	95	---	139	52	20	4.4	1.7	1.7	3.4
31	12	---	11	80	---	119	---	18	---	2.8	1.8	---
TOTAL	354.8	353	561	1296	1197	3083	2246	928	323.4	89.3	72.8	65.3
MEAN	11.4	11.8	18.1	41.8	42.8	99.5	74.9	29.9	10.8	2.88	2.35	2.18
MAX	13	14	84	289	65	458	110	50	17	5.2	3.0	3.6
MIN	9.9	11	11	11	32	33	52	18	4.4	1.4	1.7	1.6
AC-FT	704	700	1110	2570	2370	6120	4450	1840	641	177	144	130
CAL YR 1980	TOTAL	49926.9	MEAN	136	MAX	2770	MIN	8.5	AC-FT	99030		
WTR YR 1981	TOTAL	10569.6	MEAN	29.0	MAX	458	MIN	1.4	AC-FT	20960		

SAN JOAQUIN RIVER BASIN

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA

LOCATION.--Lat 38°18'46", long 120°43'09", in SW¼SW¼ sec.1, T.5 N., R.11 E., Calaveras County, Hydrologic Unit 18040012, on downstream side of bridge 1.2 mi (1.9 km) northwest of Mokelumne Hill, and 8 mi (13 km) downstream from confluence of North and South Forks of Mokelumne River.

DRAINAGE AREA.--544 mi² (1,409 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to June 1901, May 1903 to December 1904, October 1927 to current year. Yearly estimate only for water year 1928 (incomplete), published in WSP 1315-A. Published as "at Electra" 1901, 1903-4.

REVISED RECORDS.--WSP 1445: 1903-4, 1928(M), 1936(M), 1938(M), 1940(M), 1943(M), 1945(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.88 ft (178.271 m) National Geodetic Vertical Datum of 1929 (levels by California Division of Highways). Jan. 1 to June 30, 1901, and May 11, 1903, to Dec. 31, 1904, nonrecording gage at site 3 mi (5 km) upstream at different datum. Nov. 10, 1927, to Aug. 26, 1952, water-stage recorder at site 40 ft (12 m) upstream at datum 5.00 ft (1.524 m) higher. Aug. 27, 1952, to Oct. 14, 1977, at present site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good. Flow regulated by Salt Springs Reservoir (station 11313500) beginning in 1931, several smaller reservoirs, and four powerplants. Diversion above station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--55 years (water years 1904, 1928-81), 963 ft³/s (27.27 m³/s), 697,700 acre-ft/yr (860 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,700 ft³/s (954 m³/s) Dec. 3, 1950, gage height, 23.5 ft (7.16 m), present datum; minimum observed, 5 ft³/s (0.14 m³/s) Aug. 13-15, 17, 18, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Mar. 26, gage height, 10.19 ft (3.106 m); minimum daily, 37 ft³/s (1.05 m³/s) Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	599	613	619	652	725	409	568	905	676	578	279	449
2	529	510	614	534	644	371	621	853	592	597	232	594
3	561	679	536	656	714	451	623	542	640	648	390	473
4	567	592	841	632	630	523	494	470	577	466	527	383
5	562	526	785	548	707	524	625	187	611	622	487	70
6	567	639	663	579	637	401	507	285	677	526	517	166
7	572	499	575	613	559	227	824	241	591	532	516	577
8	540	554	564	557	601	197	793	538	646	562	418	542
9	536	571	585	691	529	325	551	825	693	647	515	564
10	613	568	599	446	598	370	647	673	616	479	436	525
11	642	612	583	633	587	368	447	647	647	511	437	519
12	556	348	600	636	622	336	208	421	501	479	454	466
13	517	579	617	540	478	376	299	102	78	611	489	560
14	702	597	614	579	642	219	300	171	114	554	409	513
15	609	581	588	596	639	233	382	195	319	452	90	517
16	669	587	594	612	540	341	270	637	571	610	37	648
17	403	525	525	572	642	256	269	661	526	483	392	492
18	508	454	554	586	670	503	599	622	602	665	556	516
19	603	531	649	581	569	455	684	576	629	421	548	194
20	596	531	447	643	681	638	728	677	230	601	468	542
21	602	282	658	531	482	663	893	610	190	609	573	499
22	693	477	637	619	592	913	969	600	352	507	482	527
23	651	478	547	671	491	675	1040	138	619	488	453	559
24	679	670	700	753	681	595	1090	99	625	486	578	513
25	241	607	574	712	701	929	958	97	637	461	532	595
26	269	593	554	667	703	1760	1030	303	562	556	598	566
27	588	579	642	917	680	1050	1030	735	555	490	533	536
28	533	571	614	1470	522	831	1030	816	493	559	523	566
29	638	528	599	1110	---	819	1010	711	617	527	498	595
30	576	597	587	770	---	835	1040	669	536	579	487	504
31	515	---	574	711	---	584	---	673	---	476	483	---
TOTAL	17436	16478	18838	20817	17266	17177	20529	15679	15722	16782	13937	14770
MEAN	562	549	608	672	617	554	684	506	524	541	450	492
MAX	702	679	841	1470	725	1760	1090	905	693	665	598	648
MIN	241	282	447	466	478	197	208	97	78	421	37	70
AC-FT	34580	32680	37370	41290	34250	34070	40720	31100	31180	33290	27640	29300
CAL YR 1980	TOTAL	541679	MEAN	1480	MAX	13600	MIN	241	AC-FT	1074000		
WTR YR 1981	TOTAL	205431	MEAN	563	MAX	1760	MIN	37	AC-FT	407500		

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

CHEMICAL ANALYSES: October 1979 to current year. Water years 1971-79 in files of California Department of Water Resources.

WATER TEMPERATURES: Water years 1961-79.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1961 to January 1979.

COOPERATION.--Chemical-quality records furnished by California Department of Water Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM FLOW, INST-CFS	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM CA, DISS (MG/L)	MAGNESIUM MG, DISS (MG/L)
80/12/10	14 45	703	33	7.3	9.0	11.4			12	3	1
81/04/29	09 45	1160	31	7.5	11.5	11.1	6.0	1.2	12	3	1
81/06/26	08 20	308	32	7.3	15.0	9.6			12	3	1

DATE	TIME	SODIUM NA, DISS (MG/L)	POTASSIUM K, DISS (MG/L)	ALKA- LINITY (MG/L)	SULFATE SO4-DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO2+NO3 N-DISS (MG/L)	AMMONIA N DISS (MG/L)
80/12/10	14 45	2	0.6	10	1	2	25		0.00	0.00
81/04/29	09 45	2	0.5	10	0	1	26	2	0.00	0.00
81/06/26	08 20	2	0.5	11	0	1	31		0.01	0.00

DATE	TIME	AMMONIA+ ORG TOT N(MG/L)	PHOS-TOT AS P (MG/L)	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)
80/12/10	14 45	0.10	0.01	0.00	
81/04/29	09 45	0.10	0.01	0.00	2.1
81/06/26	08 20	0.10	0.01	0.00	

DATE	TIME	ARSENIC AS, DISS (UG/L)	BARIUM BA, DISS (UG/L)	BORON B, DISS (UG/L)	CADMIUM CD, DISS (UG/L)	CHROMIUM CR, DISS (UG/L)	COPPER CU, DISS (UG/L)	IRON FE, DISS (UG/L)	LEAD PB, DISS (UG/L)	MANGANESE MN, DISS (UG/L)	MERCURY HG, TOTAL (UG/L)
80/12/10	14 45	0	0	0	0	0	0	20	0	0	0.0
81/04/29	09 45	0	0	0	0	0	10	20	0	0	0.0
81/06/26	08 20	0	0	0	0	0	10	30	0	0	0.0

DATE	TIME	SELENIUM SE, DISS (UG/L)
80/12/10	14 45	10
81/04/29	09 45	0
81/06/26	08 20	10

11320000 PARDEE RESERVOIR NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°15'25", long 120°50'59", in NW¼SW¼ sec.26, T.5 N., R.10 E., Amador County, Hydrologic Unit 18040012, at Pardee Dam on the Mokelumne River, 4.5 mi (7.2 km) north of Valley Springs.

DRAINAGE AREA.--578 mi² (1,497 km²).

PERIOD OF RECORD.--October 1961 to current year. March 1929 to September 1930 (lake elevation only), October 1930 to September 1933, published in reports of the Geological Survey. October 1933 to September 1961 in files of East Bay Municipal Utility District.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District).

REMARKS.--Reservoir is formed by a curved concrete gravity dam, completed in 1929. Storage began Mar. 9, 1929. Usable capacity, 194,100 acre-ft (239 hm³) between elevations 393.50 ft (119,939 m) diversion tunnel invert, and 567.65 ft (173,020 m) spillway crest. Dead storage, 15,800 acre-ft (19.5 hm³). Water is released from reservoir for municipal use in the area on the east side of San Francisco Bay. Small intermittent diversions are made to Jackson Valley Irrigation District. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records furnished by East Bay Municipal Utility District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 219,300 acre-ft (270 hm³) Dec. 23, 1955, elevation, 571.72 ft (174.260 m); minimum, 47,000 acre-ft (58.0 hm³) Mar. 25, 1977, elevation, 454.98 ft (138.678 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 203,600 acre-ft (251 hm³) June 12, elevation, 564.83 ft (172.160 m); minimum, 170,100 acre-ft (210 hm³) Aug. 21, elevation, 548.70 ft (167.244 m).

CORRECTIONS.--The monthly diversions for water year 1980 are as follows. The previously published data were incorrect.

‡‡Corrected Data, 1980 Water Year

Month	Ac-ft	Month	Ac-ft
May	18681	July	20273
June	19091	August	19198

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

450	43,400	520	120,400
460	50,900	530	136,500
470	59,500	540	153,800
480	69,200	550	172,700
490	80,100	560	193,200
500	92,900	570	215,300
510	105,700	580	239,100

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176700	181900	174800	186800	193200	196600	190400	199600	199200	196200	181000	171800
2	176100	181800	174900	187200	193900	195700	190900	200600	199600	195600	180800	172400
3	176000	182100	175100	187900	194700	195000	191600	201000	199900	195100	179700	172700
4	176200	182300	175900	188500	195200	194700	192000	200800	200100	195400	179100	172800
5	176400	182300	176500	188100	196000	194200	192600	200900	200500	196000	178500	172400
6	176400	182500	177200	187800	196500	193400	192900	199300	201100	195300	178000	172100
7	176300	181900	177800	187400	197100	192200	193300	198700	201600	194500	177400	172600
8	176200	181100	178000	187000	197700	192000	193400	198500	202000	193900	176600	173200
9	176000	181300	178100	186800	197800	191100	193300	199500	202700	193400	177000	173700
10	176200	180900	178300	187100	198000	190200	193300	200200	203200	192700	176400	174100
11	176500	180600	178500	187700	197900	189300	193600	200200	203500	192200	175600	174600
12	176700	179700	178600	187400	197500	188300	193400	199900	203600	192400	174900	174900
13	176800	179400	179400	187000	196800	187600	192600	198800	203000	191900	174200	175400
14	177100	179000	180000	186700	197500	186400	191700	197900	202500	191200	173400	175900
15	177100	178700	180300	186300	198200	186500	191100	197100	202200	190300	172000	176300
16	177200	178900	180500	186000	198600	185600	190200	197600	202500	189800	171500	176900
17	176800	178500	180600	186500	198300	184500	189100	198200	202700	189000	170800	177300
18	176800	177700	180700	187000	198000	184000	189700	198300	202600	188800	170700	177700
19	177100	177200	181000	186500	197300	184200	190600	198300	202200	189100	170400	177500
20	177100	176600	181300	186100	197000	184000	190000	198400	202000	188500	170200	178000
21	177100	175500	182100	185600	196600	183900	191200	198500	201700	187900	170100	178400
22	177200	174900	182800	185200	196800	185300	192500	198500	200500	187100	170500	178800
23	177800	174800	182500	185100	196300	185100	193900	198100	199900	186300	170700	179300
24	178500	174500	183200	185500	196400	184700	194500	197600	199300	185500	170700	179700
25	178600	174100	183700	185900	196200	185300	195800	197100	198600	185000	170600	180300
26	178700	173600	184200	186200	196100	187500	197200	196400	197900	185500	170600	180800
27	179300	174100	184800	187400	195900	188100	197600	196700	198000	184700	170500	181300
28	179300	174700	185400	189500	196400	189200	198000	197200	198300	184000	170400	181800
29	180200	174200	185600	191000	---	190300	198500	197400	197700	183200	170800	182400
30	180800	174300	185700	191500	---	190400	198900	198000	196800	182600	171100	182800
31	181200	---	186200	192400	---	190000	---	198700	---	181800	171500	---
MAX	181200	182500	186200	192400	198600	196600	198900	201000	203600	196200	181000	182800
MIN	176000	173600	174800	185100	193200	183900	189100	196400	196800	181800	170100	171800
†	554.26	550.81	556.64	559.62	561.49	558.51	562.67	562.58	561.70	554.53	549.39	555.05
†	+3900	-6900	+11900	+6200	+4000	-6400	+8900	-200	-1900	-15000	-10300	+11300
††	553	260	106	163	184	280	618	1086	1606	1615	1204	814
††	23068	15721	18269	18448	16520	16009	17287	19847	19690	18604	18276	17732

CAL YR 1980 † -9400

WTR YR 1981 † +5500

† Elevation, in feet NGVD, at end of month.

† Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

†† Diversion, in acre-feet, from Pardee Reservoir to East Bay Municipal Utility District and to Jackson Valley Irrigation District.

11322300 CAMANCHE RESERVOIR NEAR CLEMENTS, CA

LOCATION.--Lat 38°13'31", long 121°01'17", in NE¼Sec. 6, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, at Camanche Dam on the Mokelumne River, 4.3 mi (6.9 km) northeast of Clements.

DRAINAGE AREA.--621 mi² (1,608 km²).

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District).

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 18, 1963. Usable capacity, 430,300 acre-ft (531 hm³) between elevations 104.00 ft (31,699 m) invert of emergency valve release, and 235.50 ft (71,780 m) spillway crest. Dead storage, 534 acre-ft (658,000 m³). Camanche Reservoir provides holdover storage to meet downstream water requirements and flood control on the Mokelumne River. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records furnished by East Bay Municipal Utility District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 430,300 acre-ft (531 hm³) June 6, 1979, elevation, 235.42 ft (71.756 m); minimum since reservoir first filled, 256,300 acre-ft (316 hm³) Sept. 30, 1981, elevation, 209.58 ft (63.880 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 326,300 acre-ft (402 hm³) Apr. 30, elevation, 220.82 ft (67.305 m); minimum, 256,300 acre-ft (316 hm³) Sept. 30, elevation, 209.58 ft (63.880 m).

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

120	4,970	170	82,600
130	13,600	190	156,200
140	25,000	220	320,900
150	38,900	235.5	430,900
160	57,100		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323700	297500	284700	276800	292500	300900	324500	326100	313500	295900	288600	277100
2	323400	296900	284300	276400	292400	301300	324400	325500	312500	296100	287400	276100
3	322600	296400	284500	276200	292300	302200	324300	324800	311800	296000	287700	275100
4	321500	295100	284200	276100	291900	303000	324100	324500	311200	295100	287700	274200
5	320600	293600	283900	276500	291900	305400	323900	324300	310900	294600	287600	273600
6	319700	292200	283400	277100	291900	305200	323900	323900	310000	293700	287500	272700
7	319000	291200	282800	277600	291600	306600	324000	323700	309000	293500	287500	272000
8	318400	290600	282400	278400	291400	307000	324400	323400	308200	293500	287400	271200
9	317500	289300	282200	278900	291700	307000	324500	322700	307300	293400	286200	270500
10	316400	288400	282000	279000	292000	307700	324700	322000	306200	293200	286000	269800
11	315200	287900	281700	278800	292200	308600	324500	321700	305300	292900	286000	269000
12	314200	287500	281500	281600	292200	309500	324300	321600	304500	291900	286000	268200
13	313200	287500	281400	281800	292200	310000	324400	321400	304500	291700	286000	267400
14	312400	287500	280700	281900	293900	310500	324700	321100	302100	291700	286000	266600
15	311500	287500	280600	282000	293900	310600	324900	320900	301300	291600	286000	265800
16	310900	286900	280400	282100	293900	310700	325000	320500	300400	291600	284900	265100
17	310000	286800	280400	282100	294100	311800	325500	319800	299700	291500	284400	264500
18	308900	286800	280200	282100	294300	312500	325100	319600	299200	291200	284200	263800
19	307800	286800	280100	282600	295700	314100	325000	319300	299300	290100	284100	263100
20	307100	286800	279800	283100	296100	315900	325900	319100	298600	289900	283700	262400
21	306700	286900	279400	284500	296500	317600	325800	318900	297600	289900	283600	261700
22	305800	286900	279000	286200	296900	318300	325500	318800	297400	289900	282500	261000
23	305000	286500	279200	287600	297700	317900	325100	318100	297500	289900	281500	260300
24	304100	286200	278900	287800	298300	318800	325500	317400	297500	290100	281300	259500
25	303000	286400	278500	288100	300100	320200	325100	316800	297500	289800	280900	259100
26	302200	286800	278200	288800	299700	321700	324700	316500	297900	288800	280700	258500
27	301400	286100	277900	290700	300600	322400	325200	316400	297300	288600	280600	257900
28	301000	285600	277500	291600	301200	323600	325800	316100	296200	288800	280400	257400
29	300100	285400	277300	292400	---	323600	325900	315700	296000	288700	279500	256800
30	299200	285000	277400	292600	---	323500	326300	315200	296100	288800	278600	256300
31	298400	---	277100	292600	---	323700	---	314600	---	288900	277700	---
MAX	323700	297500	284700	292600	301200	323700	326300	326100	313500	296100	288600	277100
MIN	298400	285000	277100	276100	291400	300900	323900	314600	296000	288600	277700	256300
†	216.51	214.37	213.08	215.59	216.95	220.43	220.82	219.03	216.15	214.99	213.17	209.58
‡	-25471	-13370	-7900	+15482	+8577	+22549	+2580	-11754	-18436	-7196	-11254	-21374
††	2913	1386	692	767	939	1487	2758	3791	5916	5950	4551	3717

CAL YR 1980 † -19900
WTR YR 1981 ‡ -67600

† Elevation, in feet NGVD, at end of month.
‡ Change in contents, in acre-feet.
†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA

LOCATION.--Lat 38°13'14", long 121°02'19", in NW¼NW¼ sec.7, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, on left bank 0.7 mi (1.1 km) downstream from Murphy Creek, 1.0 mi (1.6 km) downstream from Camanche Dam, and 3.4 mi (5.5 km) northeast of Clements.

DRAINAGE AREA.--627 mi² (1,624 km²).

PERIOD OF RECORD.--October 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A, and 1735. Prior to October 1961, published as "near Clements."

REVISED RECORDS.--WSP 751: Drainage area. WSP 881: 1905-9 (yearly summaries only). WSP 1445: 1911, 1917(M), 1925(M).

GAGE.--Water-stage recorder. Datum of gage is 82.71 ft (25.210 m) National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1961.

REMARKS.--Records good. Flow regulated by Camanche Reservoir (station 11322300) 1 mi (2 km) upstream beginning December 1963, Salt Springs Reservoir (station 11313500) beginning March 1931, Pardee Reservoir (station 11320000) beginning March 1929, several small reservoirs, and four powerplants. East Bay Municipal Utility District aqueducts are the largest of several diversions above the station. Maximum capacity is 511 ft³/s (14.5 m³/s) with Pardee Reservoir full. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--24 years (water years 1905-28), 1,111 ft³/s (31.47 m³/s), 804,300 acre-ft/yr (992 hm³/yr); 53 years (water years 1929-81), 788 ft³/s (22.32 m³/s), 570,900 acre-ft/yr (704 hm³/yr), adjusted for change in contents in and evaporation from Camanche Reservoir since 1963. Storage and diversion by East Bay Municipal Utility District began in March 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft³/s (816 m³/s) Nov. 21, 1950, gage height, 24.40 ft (7.437 m) site and datum then in use; no flow on several days in 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Nov. 10, gage height 5.25 ft (1.600 m); minimum daily, 84 ft³/s (2.38 m³/s) Mar. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	625	492	399	227	107	109	105	339	384	525	456	326
2	621	492	399	205	107	107	126	339	391	526	455	329
3	546	629	403	162	108	108	126	339	388	525	455	326
4	503	953	355	162	107	112	125	339	389	524	461	326
5	507	1040	322	162	107	113	124	337	396	524	477	324
6	505	1040	321	151	107	109	126	338	409	524	483	322
7	503	1040	321	137	107	109	126	338	409	525	486	319
8	504	1040	321	136	107	109	151	338	439	524	486	317
9	503	1040	309	121	107	110	172	339	482	535	477	317
10	501	893	305	102	109	109	172	339	513	542	466	317
11	502	763	288	100	109	109	175	339	515	542	451	319
12	497	617	271	108	109	217	175	339	506	542	450	313
13	497	482	271	96	109	344	239	335	485	542	452	311
14	498	481	268	97	109	344	286	336	466	542	451	311
15	499	482	261	98	109	274	286	337	468	542	445	306
16	497	482	260	98	109	157	286	339	444	542	445	301
17	498	486	268	97	108	107	288	339	427	539	446	301
18	497	487	268	98	109	95	289	338	430	536	439	294
19	497	484	268	98	109	145	235	336	451	536	430	289
20	497	482	264	98	110	102	177	337	466	539	421	289
21	497	483	264	98	112	91	178	337	465	529	405	289
22	500	486	264	101	112	87	179	335	477	517	399	285
23	503	491	264	105	111	86	179	334	500	514	399	283
24	502	492	245	100	110	84	179	339	503	505	398	276
25	503	444	228	100	111	110	179	339	503	492	396	264
26	502	393	228	100	111	99	179	338	506	492	385	257
27	500	394	228	172	111	89	216	355	503	488	366	256
28	497	397	228	156	108	86	263	373	503	486	353	241
29	497	398	228	172	---	86	307	374	511	486	344	228
30	497	399	228	117	---	86	337	377	527	487	339	221
31	495	---	228	108	---	86	---	378	---	473	334	---
TOTAL	15790	18282	8775	3882	3049	3979	5985	10639	13856	16145	13250	8857
MEAN	509	609	283	125	109	128	200	343	462	521	427	295
MAX	625	1040	403	227	112	344	337	378	527	542	486	329
MIN	495	393	228	96	107	84	105	334	384	473	334	221
AC-FT	31320	36260	17410	7700	6050	7890	11870	21100	27480	32020	26280	17570

CAL YR 1980 TOTAL 457171 MEAN 1249 MAX 4020 MIN 228 AC-FT 906800 MEAN ‡ 1267 AC-FT ‡ 920000
WTR YR 1981 TOTAL 122489 MEAN 336 MAX 1040 MIN 84 AC-FT 243000 MEAN ‡ 290 AC-FT ‡ 210300

‡ Adjusted for change in contents and evaporation from Camanche Reservoir.

365

LOCATION.--Lat 38°09'07", long 121°18'00", in NE¼SE¼ sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, at point of diversion from Woodbridge Reservoir.

GAGE.--Water-stage recorder. Datum of gage is 32.18 ft (9.808 m) National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). Prior to Mar. 15, 1931, water-stage recorder at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good. Discharge computed from records of gate openings and effective head as shown by differential recorder. Canal diverts from Woodbridge Reservoir on Mokelumne River for irrigation south and west of Woodbridge. See schematic diagram of Mokelumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 482 ft³/s (13.6 m³/s) July 8, 1953; no flow at times in each year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129					0	0	187	181	287	285	208
2	119					0	0	187	191	287	279	218
3	122					0	25	186	197	282	282	237
4	115					0	35	195	202	276	283	235
5	107					0	33	205	215	268	281	231
6	105					0	32	193	226	273	279	216
7	116					0	35	188	232	279	278	214
8	116					0	43	184	236	287	284	195
9	116					0	61	179	249	286	275	184
10	124					0	70	176	250	295	287	180
11	124					0	77	176	263	291	302	177
12	105					0	89	185	256	291	306	179
13	91					0	90	204	244	292	305	168
14	75					0	122	226	234	297	301	178
15	64					0	157	220	234	295	295	180
16	60					16	172	208	236	290	286	195
17	72					7.0	184	195	242	293	283	192
18	75					0	169	190	247	292	283	175
19	75					0	71	194	259	290	280	160
20	76					2.2	55	185	263	289	276	164
21	78					0	57	166	255	291	271	147
22	78					0	61	164	249	291	282	154
23	72					0	63	163	269	286	282	164
24	68					0	83	155	275	279	270	154
25	81					0	92	154	271	274	257	124
26	91					0	82	159	265	263	252	117
27	86					0	92	173	265	263	245	132
28	81					0	117	183	267	271	246	127
29	35				---	0	134	180	280	277	216	124
30	0				---	0	160	184	283	289	172	114
31	0	---			---	0	---	184	---	288	197	---
TOTAL	2656	0	0	0	0	25.2	2461	5728	7336	8812	8420	5243
MEAN	85.7	0	0	0	0	.81	82.0	185	245	284	272	175
MAX	129	0	0	0	0	16	184	226	283	297	306	237
MIN	0	0	0	0	0	0	0	154	181	263	172	114
AC-FT	5270	0	0	0	0	50	4880	11360	14550	17480	16700	10400
CAL YR 1980	TOTAL	37848.00	MEAN 103	MAX 315	MIN 0	AC-FT	75070					
WTR YR 1981	TOTAL	40681.20	MEAN 111	MAX 306	MIN 0	AC-FT	80690					

SAN JOAQUIN RIVER BASIN

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°09'31", long 121°18'09", in NW¼NE¼ sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, 0.4 mi (0.6 km) downstream from county highway bridge, and 0.5 mi (0.8 km) downstream from dam and canal intake of Woodbridge Irrigation District.

DRAINAGE AREA.--661 mi² (1,712 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to current year (low-water records only 1924-25).

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.9 ft (4.54 m) National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). See WSP 2130 for history of changes prior to July 26, 1968.

REMARKS.--Records good. Concerning regulation and diversions see REMARKS for Mokelumne River below Camanche Dam (station 11323500). Between Woodbridge and Camanche Dam there are many additional diversions for irrigation, including Woodbridge Canal (station 11325000). Nearest diversion is 0.5 mi (0.8 km) upstream. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE (since start of diversion through East Bay Municipal Utility District aqueduct)--52 years (water years 1929-81), 580 ft³/s (16.43 m³/s), 420,200 acre-ft/yr (518 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Nov. 22, 1950, gage height, 29.58 ft (9.016 m), from rating curve extended above 6,200 ft³/s (176 m³/s) on basis of contracted-opening measurement of maximum flow; minimum daily, 0.23 ft³/s (0.007 m³/s) Nov. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) Oct. 29, gage height, 12.60 ft (3.840 m); minimum daily, 9.4 ft³/s (0.27 m³/s) Mar. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	366	444	346	150	65	49	15	22	55	52	38	34
2	394	432	343	150	60	29	22	25	58	53	37	34
3	379	434	368	132	55	42	32	28	53	59	35	33
4	318	613	381	109	53	59	27	30	40	64	31	31
5	300	828	291	104	52	59	28	28	42	96	31	30
6	300	866	262	102	52	48	29	25	41	71	31	30
7	290	873	257	92	51	45	30	28	37	51	32	30
8	285	882	258	81	51	45	28	34	37	65	35	30
9	283	887	260	74	54	22	20	34	63	55	49	30
10	278	903	260	68	54	9.4	13	36	63	47	72	30
11	277	745	260	64	54	12	12	35	62	55	44	30
12	287	683	229	60	54	12	12	29	94	64	34	31
13	303	516	214	58	54	16	13	29	94	68	34	48
14	319	467	210	57	54	21	13	22	86	60	35	46
15	329	457	207	55	53	20	15	18	94	51	55	36
16	329	457	191	54	52	54	15	17	97	48	76	36
17	322	459	196	51	52	35	15	18	51	53	77	36
18	322	454	204	50	51	23	30	19	35	61	69	36
19	325	451	204	50	50	82	167	20	33	72	63	52
20	325	488	204	49	50	90	72	35	33	87	60	56
21	320	446	208	49	50	52	24	64	32	79	40	57
22	316	446	210	61	50	32	26	72	33	67	37	61
23	319	444	203	79	50	25	26	63	41	60	41	54
24	322	444	202	57	50	21	20	64	46	72	40	51
25	346	443	171	50	54	28	13	68	44	71	46	55
26	331	378	159	51	52	39	12	54	60	69	67	59
27	322	353	156	105	51	34	12	42	65	74	65	56
28	313	350	153	160	49	27	13	44	63	59	65	55
29	808	346	157	154	---	21	12	53	57	53	80	58
30	603	346	152	120	---	19	14	57	49	44	75	45
31	471	---	151	77	---	20	---	61	---	39	50	---
TOTAL	10802	16335	7067	2573	1477	1090.4	780	1174	1658	1919	1544	1270
MEAN	348	545	228	83.0	52.8	35.2	26.0	37.9	55.3	61.9	49.8	42.3
MAX	808	903	381	160	65	90	167	72	97	96	80	61
MIN	277	346	151	49	49	9.4	12	17	32	39	31	30
AC-FT	21430	32400	14020	5100	2930	2160	1550	2330	3290	3810	3060	2520
CAL YR 1980 TOTAL	378036.0	MEAN	1033	MAX	3860	MIN	151	AC-FT	749800			
WTH YR 1981 TOTAL	47689.4	MEAN	131	MAX	903	MIN	9.4	AC-FT	94590			

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
 CHEMICAL ANALYSES: Water years 1951 to current year.
 BIOLOGICAL DATA: Water years 1975 to current year.
 SPECIFIC CONDUCTANCE: Water years 1952-58, 1975-77.
 WATER TEMPERATURES: Water years 1951-58, 1961 to current year.
 SEDIMENT RECORDS: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
 CHEMICAL ANALYSES: March 1951 to September 1958.
 SPECIFIC CONDUCTANCE: March 1951 to September 1958, October 1974 to September 1977.
 WATER TEMPERATURES: March 1951 to September 1958, November 1960 to current year.

INSTRUMENTATION.--Temperature recorder since November 1960.

REMARKS.--Unpublished records of specific conductance of daily samples available in files of district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C July 17, 1951; minimum recorded, 1.5°C Jan. 29, 30, 1954.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 25.5°C Aug. 6-9; minimum recorded, 8.5°C Jan. 9, Feb. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 21...	1045	320	36	7.9	17.0	1.2	9.6	64	35	14	0	3.7	
NOV 26...	1115	371	28	7.8	14.0	2.5	10.7	54	39	14	0	3.7	
DEC 17...	1100	198	39	6.8	10.5	1.6	11.3	32	K10	14	0	3.9	
JAN 13...	1020	58	40	7.6	8.0	1.2	12.1	--	21	17	0	4.5	
FEB 24...	1030	48	42	7.5	13.0	1.9	10.7	370	110	16	0	4.3	
MAR 24...	1045	21	41	7.9	14.5	2.4	10.5	K26	K24	16	0	4.1	
APR 29...	1005	12	42	7.3	18.5	2.4	9.1	K32	150	16	0	4.7	
MAY 19...	0915	20	39	7.4	17.0	1.2	9.2	120	81	15	0	4.1	
JUN 24...	1000	51	41	7.8	20.0	2.7	9.1	66	41	15	0	4.1	
JUL 22...	1015	70	40	7.6	23.0	--	8.6	K34	K10	15	0	4.0	
AUG 25...	1115	46	37	7.6	22.5	2.2	8.7	63	37	17	1	4.5	
SEP 22...	1030	65	40	7.4	21.0	2.0	8.6	--	--	19	2	5.5	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 21...	1.1	2.1	24	.2	.8	16	.7	1.6	.1	9.9	34	30	
NOV 26...	1.2	2.1	23	.2	.8	16	1.5	2.9	.1	9.4	35	31	
DEC 17...	1.1	2.2	24	.3	.8	17	1.2	1.4	.1	10	32	31	
JAN 13...	1.3	2.5	24	.3	.8	17	2.4	1.4	.0	9.2	32	33	
FEB 24...	1.2	2.5	25	.3	.8	18	2.9	1.7	.1	7.7	34	32	
MAR 24...	1.4	2.5	24	.3	1.0	18	2.5	1.2	.1	7.6	32	29	
APR 29...	1.1	2.6	25	.3	.9	18	1.0	1.5	.1	8.5	41	32	
MAY 19...	1.2	2.5	25	.3	.7	18	1.1	1.6	.0	8.5	32	30	
JUN 24...	1.2	2.3	24	.3	.6	16	.9	1.6	.0	8.9	32	28	
JUL 22...	1.2	2.1	22	.2	.7	15	<5.0	1.1	.0	7.8	31	--	
AUG 25...	1.4	2.3	22	.3	.9	16	<5.0	1.4	.1	8.1	31	--	
SEP 22...	1.3	2.3	20	.2	1.1	17	<5.0	1.4	.0	8.8	29	--	

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 21...	.00	.00	.250	.010	1.2	1.5	1.40	1.5	.020	.020	--
NOV 26...	.00	.03	.070	.090	.20	.17	.27	.26	.060	.040	1.4
DEC 17...	.07	.09	.060	.070	.29	.28	.35	.35	--	.040	3.6
JAN 13...	.05	.06	.070	.060	.42	.42	.49	.48	.040	.050	--
FEB 24...	.00	.02	.010	.020	--	--	--	.49	.010	.000	2.0
MAR 24...	.00	.00	.020	.000	.72	.47	.74	.47	.040	.020	2.9
APR 29...	.03	.00	--	.090	--	--	--	1.2	.040	.010	--
MAY 19...	.03	.04	.130	.100	.53	.46	.66	.56	.060	.040	2.5
JUN 24...	.19	--	.030	--	.68	--	.71	.45	.010	.010	1.9
JUL 22...	.27	.20	.090	.100	.33	.05	.42	.15	.020	.010	--
AUG 25...	.02	.02	--	.100	--	--	.58	.40	.040	.030	1.8
SEP 22...	.02	.00	.090	.090	.55	.46	.64	.55	.010	.010	2.4

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 21...	1045	1	1	100	30	0	<1	0	0	0	<3
JAN 13...	1020	1	1	0	30	0	2	10	0	0	<3
APR 29...	1005	1	1	0	20	0	<1	20	10	0	<3
JUL 22...	1015	1	2	0	30	0	<1	10	0	2	<3

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 21...	6	2	200	20	3	0	30	3	.1	.0
JAN 13...	7	.2	150	30	2	2	10	6	.1	.0
APR 29...	7	2	330	120	2	4	30	30	.1	.0
JUL 22...	5	3	170	40	0	0	20	8	.1	.2

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 21...	3	0	0	0	1	0	20	5	2.1	.2
JAN 13...	0	0	0	0	0	0	10	10	1.6	.1
APR 29...	3	0	0	0	0	0	20	20	1.8	1.1
JUL 22...	9	1	0	0	0	0	40	30	1.3	.2

K Results based on colony count outside the acceptable range (non-ideal colony count).
 < Actual value is known to be less than the value shown.

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	NOV 26,80 1030	MAR 24,81 1045	MAY 28,81 1300	JUN 24,81 1000				
TOTAL CELLS/ML	230	5100	1100	180				
DIVERSITY: DIVISION	0.7	0.9	1.0	1.0				
..CLASS	0.7	0.9	1.0	1.0				
..ORDER	1.1	1.3	2.1	2.0				
...FAMILY	1.1	1.9	2.1	2.0				
....GENUS	1.1	2.5	2.5	2.3				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...BACILLARIALES								
...NITZSCHIAEAE								
....NITZSCHIA	13	6	210	4	210#	19	26	14
...EUPODISCALES								
...COSCINODISCAEAE								
....CYCLOTELLA	--	-	2100#	41	160	14	--	-
....MELOSIRA	180#	78	980#	19	350#	32	--	-
...FRAGILARIALES								
...FRAGILARIAEAE								
....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	13	1	26	14
....TABELLARIA	--	-	--	-	52	5	26	14
...NAVICULALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	--	-	--	-	26	2	13	7
...SURIRELLALES								
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	13	7
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHLOROCOCCACEAE								
....TETRAEDRON	--	-	--	-	--	-	--	-
...DICTYOSPHAERIACEAE								
....DICTYOSPHAERIUM	--	-	700	14	--	-	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	--	-	280	5	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	280	5	13	1	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	26	11	350	7	--	-	77#	43
...VOLVOCAL								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	13	6	210	4	39	4	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	230#	21	--	-
...OSCILLATORIALES								
...OSCILLATORIAEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
...OSCILLATORIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...TRACHELOMONAS	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...DINOKONTAE								
...PERIDINIACEAE								
....PERIDINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	JUL 22,81 1015	AUG 25,81 1115	SEP 22,81 1030			
TOTAL CELLS/ML	4100	1100	2600			
DIVERSITY: DIVISION	1.4	1.6	1.4			
..CLASS	1.4	1.6	1.4			
..ORDER	1.9	2.5	2.2			
...FAMILY	2.2	2.8	2.4			
....GENUS	2.4	3.3	2.5			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...BACILLARIALES						
....NITZSCHIAEAE						
.....NITZSCHIA	98	2	55	5	56	2
...EUPODISCALES						
....COSCINODISCACEAE						
.....CYCLOTELLA	380	9	--	--	520#	20
.....MELOSIRA	250	6	69	6	14	1
...FRAGILARIALES						
....FRAGILARIAEAE						
.....FRAGILARIA	--	--	55	5	--	--
.....SYNEDRA	28	1	69	6	--	--
....TABELLARIA	--	--	--	--	--	--
...NAVICULALES						
....CYMBELLACEAE						
.....CYMBELLA	56	1	55	5	28	1
....GOMPHONEMACEAE						
.....GOMPHONEMA	*	0	--	--	--	--
....NAVICULACEAE						
.....NAVICULA	84	2	41	4	42	2
...SURIARELLALES						
....SURIARELLACEAE						
.....SURIARELLA	*	0	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHLOROCOCCACEAE						
.....TETRAEDRON	*	0	--	--	14	1
....DICTYOSPHAERIAEAE						
.....DICTYOSPHAERIUM	*	0	55	5	28	1
....MICRACTINIACEAE						
.....MICRACTINIUM	--	--	--	--	--	--
...OOCYSTACEAE						
....ANKISTRODESMUS	140	3	14	1	42	2
....OOCYSTIS	--	--	--	--	56	2
...SCENEDESMACEAE						
....CRUCIGENIA	170	4	--	--	56	2
....SCENEDESMUS	450	11	110	10	140	5
...VOLVOCALES						
....CHLAMYDOMONADACEAE						
.....CHLAMYDOMONAS	28	1	--	--	70	3
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....ANACYSTIS	2300#	55	83	7	1200#	47
...OSCILLATORIALES						
....OSCILLATORIAEAE						
.....LYNGBYA	--	--	250#	22	--	--
....OSCILLATORIA	98	2	250#	22	290	11
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....TRACHELOMONAS	--	--	14	1	14	1
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...DINOKONTAE						
....PERIDINIACEAE						
.....PERIDINIUM	*	0	28	2	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.5	20.0					---	---	10.0	8.5	11.5	10.5
2	20.5	20.5					---	---	10.5	9.0	11.5	10.5
3	20.5	20.5					---	---	11.0	9.0	12.0	10.5
4	20.5	20.5					---	---	11.0	9.0	11.5	10.0
5	21.0	20.5					10.5	9.5	11.5	9.5	12.0	9.5
6	21.0	21.0					10.0	9.5	12.0	10.0	13.0	10.0
7	21.0	20.0					9.5	9.0	11.5	10.5	14.0	11.0
8	20.0	20.0					9.5	9.0	11.0	10.5	15.0	12.0
9	20.0	20.0					9.0	8.5	12.0	10.5	16.0	12.0
10	20.0	20.0					---	---	12.0	10.5	16.5	12.0
11	19.5	18.5					---	---	13.5	12.0	17.0	13.0
12	19.0	18.5					---	---	14.0	12.5	15.5	13.0
13	18.5	18.5					---	---	14.0	13.0	15.5	12.0
14	18.5	17.5					---	---	15.0	13.5	14.5	12.5
15	17.5	17.0					---	---	15.5	13.0	12.5	11.5
16	17.0	16.5					10.5	10.0	15.5	13.0	12.5	11.0
17	17.0	16.0					11.5	10.5	16.0	14.5	12.5	10.0
18	17.0	16.0					12.0	11.0	16.0	13.0	12.5	11.0
19	17.5	16.5					12.5	11.5	16.0	14.0	13.0	12.0
20	17.5	17.0					12.5	12.0	14.0	11.0	12.5	11.0
21	17.5	17.0					12.5	12.0	13.5	10.0	13.0	11.5
22	17.0	17.0					12.5	12.0	14.0	10.5	14.0	12.0
23	17.0	16.5					12.5	11.0	14.0	11.5	---	---
24	16.5	16.0					12.0	10.0	13.5	11.5	---	---
25	16.0	15.5					11.0	9.0	13.5	11.0	---	---
26	16.0	15.5					10.0	9.5	13.0	10.5	---	---
27	16.0	15.5					10.0	9.5	13.0	10.0	15.5	12.5
28	16.0	15.5					11.0	10.0	12.0	10.0	17.5	13.5
29	16.0	15.5					11.0	10.0	---	---	18.0	14.5
30	16.0	15.5					11.0	10.0	---	---	17.5	13.0
31	---	---					10.5	9.0	---	---	18.5	14.0
MONTH	21.0	15.5					---	---	16.0	8.5	18.5	9.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	15.5	24.5	20.0	22.0	19.0	24.5	23.0	24.0	22.0	25.0	23.0
2	18.5	14.5	23.0	18.5	21.0	19.0	24.5	22.5	24.0	22.0	25.0	23.0
3	19.0	15.0	22.0	18.0	21.0	19.0	24.5	22.5	24.5	22.0	25.0	23.0
4	19.5	15.0	21.0	17.5	22.0	19.0	24.5	23.0	24.5	22.0	25.0	22.5
5	21.0	16.0	20.5	17.0	22.5	20.0	24.5	23.0	25.0	22.0	25.0	22.5
6	20.0	16.5	20.0	16.5	23.0	20.5	24.5	23.0	25.5	22.5	25.0	23.0
7	20.0	16.5	20.0	16.0	22.5	20.0	24.0	22.5	25.5	23.0	24.5	22.5
8	20.5	16.5	20.5	17.0	22.5	20.0	24.0	22.0	25.5	23.5	24.5	22.5
9	21.5	16.5	21.0	18.0	22.0	19.5	24.5	22.5	25.5	23.5	24.5	22.5
10	21.5	15.5	21.5	18.0	21.0	19.0	24.5	22.0	25.0	23.5	24.5	22.5
11	21.0	15.0	21.5	19.0	20.5	18.5	24.0	22.0	24.5	23.0	24.5	22.5
12	21.0	14.5	22.0	19.0	19.0	18.0	23.5	21.5	24.5	22.5	24.5	22.5
13	21.5	15.0	22.5	18.5	18.5	17.5	23.0	21.5	24.5	22.5	24.0	22.5
14	22.0	15.5	22.5	18.5	18.0	17.0	23.5	21.5	24.0	22.0	24.0	22.5
15	21.0	15.5	21.5	17.5	19.0	17.0	24.5	22.0	24.0	22.5	23.5	22.0
16	21.0	15.5	21.0	16.0	21.0	18.0	24.5	22.0	24.0	22.5	23.0	21.5
17	20.5	17.0	21.0	16.0	20.0	18.5	24.0	22.0	24.5	22.5	23.0	21.0
18	17.5	16.0	19.0	17.5	20.5	18.5	23.5	22.0	24.0	22.5	23.0	21.0
19	17.0	16.0	18.5	16.0	21.5	19.5	24.0	22.0	23.0	22.0	22.5	21.0
20	17.5	15.0	20.0	15.0	22.5	20.0	24.0	22.0	23.0	21.5	23.0	21.5
21	18.5	15.0	19.5	16.0	22.5	20.5	24.5	22.5	23.5	21.5	22.0	21.0
22	20.0	16.5	19.0	16.5	22.5	20.5	24.5	22.5	24.0	21.5	21.5	20.5
23	23.0	18.5	20.5	18.0	22.0	20.5	25.0	22.5	23.5	21.5	21.0	20.0
24	22.0	18.0	21.5	19.0	22.0	20.0	25.0	23.0	23.5	21.5	20.0	19.5
25	20.0	17.0	21.0	19.5	22.0	19.5	24.5	23.0	23.5	21.5	19.5	19.0
26	20.5	15.5	22.0	19.0	24.0	21.0	25.0	23.0	23.0	21.5	20.5	19.0
27	22.5	16.0	22.0	19.0	24.5	23.0	24.5	23.0	23.5	22.0	21.0	19.5
28	23.5	17.0	23.0	19.0	25.0	23.5	25.0	23.0	24.0	22.5	20.5	20.0
29	24.0	19.0	23.0	19.0	25.0	23.5	25.0	23.0	24.5	23.0	20.5	19.5
30	24.0	19.5	22.5	19.5	25.0	23.0	24.5	22.5	24.5	23.0	20.5	19.5
31	---	---	21.5	19.0	---	---	24.5	22.5	25.0	23.0	---	---
MONTH	24.0	14.5	24.5	15.0	25.0	17.0	25.0	21.5	25.5	21.5	25.0	19.0

SAN JOAQUIN RIVER BASIN

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT					
21...	1045	320	17.0	5	4.3
NOV					
26...	1115	371	14.0	10	10
DEC					
17...	1100	198	10.5	5	2.7
JAN					
13...	1020	58	8.0	6	.94
FEB					
24...	1030	48	13.0	5	.65
MAR					
24...	1045	21	14.5	3	.17
APR					
29...	1005	12	18.5	6	.19
MAY					
19...	0915	20	17.0	5	.27
JUN					
24...	1000	51	20.0	5	.69
JUL					
22...	1015	70	23.0	2	.38
AUG					
25...	1115	46	22.5	6	.75
SEP					
22...	1030	65	21.0	6	1.1

11329500 DRY CREEK NEAR GALT, CA

LOCATION.--Lat 38°14'53", long 121°13'33", in NE¼NE¼ sec.32, T.5 N., R.7 E., San Joaquin County, Hydrologic Unit 18040005, on left bank of main channel 35 ft (11 m) downstream from county road bridge, 2 mi (3 km) downstream from Coyote Creek, and 4 mi (6 km) east of Galt.

DRAINAGE AREA.--324 mi² (839 km²).

PERIOD OF RECORD.--October 1926 to September 1933, October 1944 to current year. Monthly figures only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 42.83 ft (13.055 m) National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). Dec. 4, 1926, to Sept. 30, 1933, at site 4 mi (6 km) downstream at different datum. Oct. 1, 1944, to Sept. 30, 1945, on left bank at datum 13.00 ft (3.962 m) higher. Oct. 1, 1945, to June 14, 1966, on right bank and June 15, 1966, to Dec. 4, 1978, on left bank both at datum 10.00 ft (3.048 m) higher.

REMARKS.--Records fair. Many small diversions above station for irrigation. Total storage of many small reservoirs, 1,000 acre-ft (1.23 hm³) and approximately a total of 500 acres (202 hm²) irrigated.

AVERAGE DISCHARGE.--44 years, 114 ft³/s (3.228 m³/s), 82,590 acre-ft/yr (102 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft³/s (680 m³/s) Apr. 3, 1958, gage height, 15.28 ft (4.657 m); no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	0430	*4,130 117	23.22 7.077
Mar. 25	2300	2,680 75.9	21.37 6.514

Minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20			0	127	21	155	6.8	0	0	0	0
2	.24			0	93	20	135	8.1	0	0	0	6.5
3	.60			0	72	15	117	6.8	2.3	0	0	2.2
4	.60			0	57	16	95	3.6	2.2	0	0	0
5	.16			0	48	157	81	7.4	.21	0	0	0
6	0			0	38	135	80	5.2	0	0	0	1.0
7	0			0	32	89	81	.82	0	0	0	1.0
8	0			0	30	70	74	.72	0	0	0	0
9	0			0	30	58	69	3.2	0	3.0	0	0
10	0			0	33	50	60	1.4	0	.31	3.6	0
11	0			0	29	37	54	1.4	0	3.6	0	0
12	0			0	25	40	41	4.2	0	.82	0	0
13	0			0	23	34	40	.41	0	0	0	0
14	0			0	24	30	33	0	0	0	0	0
15	0			0	28	26	25	0	0	0	0	0
16	0			0	28	124	25	0	0	0	0	0
17	0			0	23	110	25	0	0	0	0	0
18	0			0	21	71	20	0	0	0	0	0
19	0			0	19	1040	31	4.7	0	0	0	0
20	0			0	17	2400	117	13	0	0	0	0
21	0			0	16	798	88	11	0	0	0	0
22	0			0	16	475	64	8.4	0	0	0	0
23	0			4.8	14	340	48	5.7	0	0	0	0
24	0			15	11	219	41	1.5	0	0	0	0
25	0			20	29	787	37	.51	2.8	0	0	0
26	0			6.7	43	1700	34	2.2	0	0	0	0
27	0			315	34	712	31	2.2	0	0	0	0
28	0			1220	23	397	27	0	0	0	0	0
29	0			1310	---	295	25	.31	0	0	0	0
30	0			592	---	216	18	0	0	0	0	0
31	0	---		235	---	178	---	0	---	0	---	---
TOTAL	1.80	0	0	3718.5	983	10660	1771	99.57	7.51	0	7.73	13.40
MEAN	.058	0	0	120	35.1	344	59.0	3.21	.25	0	.25	.45
MAX	.60	0	0	1310	127	2400	155	13	2.8	0	3.6	6.5
MIN	0	0	0	0	11	15	18	0	0	0	0	0
AC-FT	3.6	0	0	7380	1950	21140	3510	197	15	0	15	27
CAL YR 1980 TOTAL	79236.83			MEAN 216	MAX 8310	MIN 0	AC-FT 157200					
WTR YR 1981 TOTAL	17262.51			MEAN 47.3	MAX 2400	MIN 0	AC-FT 34240					

11333000 CAMP CREEK NEAR SOMERSET, CA

LOCATION.--Lat 38°39'26", long 120°39'46", in SW¼SW¼ sec.4, T.9 N., R.12 E., E1 Dorado County, Hydrologic Unit 18040013, on right bank 0.2 mi (0.3 km) upstream from mouth, 1.3 mi (2.1 km) northeast of Somerset, and 5.6 mi (9.0 km) south of Camino.

DRAINAGE AREA.--62.6 mi² (162.1 km²).

PERIOD OF RECORD.--February to May 1924 (published as "near Pleasant Valley"), October 1954 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,820 ft (555 m), from topographic map. Feb. 1 to May 31, 1924, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum.

REMARKS.--Records excellent. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft (50.0 hm³). Water is released from Jenkinson Lake through Camino conduit for irrigation and domestic supply in North Fork Cosumnes and South Fork American river basins. Some water is released from Jenkinson Lake for irrigation downstream from station.

AVERAGE DISCHARGE (adjusted for change in contents, evaporation, and diversion from Jenkinson Lake).--27 years (water years 1955-81), 77.7 ft³/s (2.200 m³/s), 56,290 acre-ft/yr (69.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,040 ft³/s (171 m³/s) Dec. 23, 1964, gage height, 12.50 ft (3.810 m); no flow Aug. 7-18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 109 ft³/s (3.09 m³/s) Mar. 26, gage height, 3.20 ft (0.975 m); minimum daily, 1.4 ft³/s (0.040 m³/s) on several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.7	6.2	8.3	5.4	13	12	16	7.6	6.2	4.4	18	1.5		
2	4.7	6.2	6.0	5.4	11	13	14	7.4	6.2	4.6	18	1.4		
3	4.6	6.0	8.7	5.4	10	12	12	7.3	6.2	4.5	18	1.4		
4	4.5	6.0	19	7.4	9.5	12	11	7.3	6.0	4.4	18	1.4		
5	4.3	5.8	8.2	5.9	9.0	13	10	7.1	6.0	4.5	18	1.4		
6	4.2	5.8	6.4	5.6	8.8	11	9.4	7.1	5.8	4.4	18	1.4		
7	4.2	6.0	6.0	5.4	8.6	9.7	8.9	7.1	5.6	4.4	18	1.4		
8	4.1	9.0	5.8	5.4	8.4	9.2	8.5	6.9	5.4	4.1	18	1.4		
9	4.1	7.6	5.7	5.4	9.9	8.7	8.1	6.9	5.6	4.1	18	1.4		
10	4.1	6.8	5.6	5.4	8.6	8.4	8.8	6.8	5.5	3.9	17	1.5		
11	4.1	7.0	5.7	5.4	8.4	9.1	9.4	6.6	5.4	3.9	14	1.5		
12	6.1	6.5	5.7	5.4	8.2	9.4	9.2	6.6	5.4	6.6	14	1.4		
13	6.3	7.5	5.6	5.4	8.4	9.1	8.9	6.5	5.4	17	14	1.5		
14	6.1	7.8	5.4	5.4	13	8.6	8.8	6.4	5.4	18	14	1.6		
15	7.2	7.4	5.4	5.4	10	8.4	8.6	6.5	5.4	19	14	1.6		
16	6.6	7.0	5.4	6.5	9.2	12	8.8	6.7	5.2	19	14	1.6		
17	6.3	6.3	5.4	5.8	9.5	9.3	9.9	6.4	5.2	19	14	1.6		
18	6.2	5.8	5.4	5.5	8.5	8.7	11	9.9	5.1	15	14	1.5		
19	6.1	5.8	5.4	5.4	8.3	29	15	12	4.9	3.9	11	1.5		
20	6.0	5.8	5.4	5.4	9.0	51	12	8.4	4.9	3.3	2.4	1.5		
21	5.9	5.8	5.6	5.4	7.9	38	9.7	7.3	4.8	3.1	1.9	1.5		
22	5.7	5.8	6.5	5.7	7.7	35	11	7.0	4.7	2.9	1.8	1.5		
23	5.6	6.0	5.7	18	7.5	26	11	6.7	4.6	2.8	1.7	1.6		
24	5.5	6.2	5.6	14	14	21	10	6.6	4.5	2.7	1.7	1.6		
25	5.8	5.8	5.4	8.1	15	55	11	6.6	4.4	2.7	1.7	2.6		
26	7.9	5.6	5.4	7.2	14	89	13	8.1	4.4	2.6	1.7	3.3		
27	6.6	5.6	5.4	43	12	52	10	8.0	4.3	2.6	1.7	3.1		
28	6.4	5.4	5.4	60	12	34	8.2	6.9	4.2	2.5	1.6	2.9		
29	6.5	5.4	5.4	46	---	25	7.8	6.6	4.2	5.6	1.6	2.7		
30	6.4	8.1	5.4	26	---	21	7.8	6.6	4.2	17	1.4	2.6		
31	6.2	---	5.4	17	---	17	---	6.4	---	18	1.4	---		
TOTAL	173.0	192.0	195.7	362.7	279.4	676.6	307.8	224.3	155.1	230.5	322.6	52.9		
MEAN	5.58	6.40	6.31	11.7	9.98	21.8	10.3	7.24	5.17	7.44	10.4	1.76		
MAX	7.9	9.0	19	60	15	89	16	12	6.2	19	18	3.3		
MIN	4.1	5.4	5.4	5.4	7.5	8.4	7.8	6.4	4.2	2.5	1.4	1.4		
AC-FT	343	381	388	719	554	1340	611	445	308	457	640	105		
†	-2323	-1130	-331	+861	+1780	+5476	+4915	+1449	-3248	-4622	-3920	-3290		
‡	2391	1366	964	589	134	260	346	1434	3485	4409	4436	3195		
††	97	37	21	31	31	38	141	198	304	324	280	183		
CAL YR 1980	TOTAL	34461.2	MEAN	94.2	MAX	1800	MIN	4.1	AC-FT	68350	MEAN	‡‡ 125	AC-FT	‡‡ 91060
WTR YR 1981	TOTAL	3172.6	MEAN	8.69	MAX	89	MIN	1.4	AC-FT	6290	MEAN	‡‡ 36.7	AC-FT	‡‡ 26600

† Change in contents, in acre-feet, in Jenkinson Lake, furnished by Bureau of Reclamation.

‡ Diversion, in acre-feet, from Jenkinson Lake, furnished by Bureau of Reclamation.

†† Evaporation, in acre-feet, from Jenkinson Lake, furnished by Bureau of Reclamation.

‡‡ Adjusted for change in contents, evaporation, and diversion from Jenkinson Lake.

11333500 NORTH FORK COSUMNES RIVER NEAR EL DORADO, CA

LOCATION.--Lat 38°35'20", long 120°50'38", in NE¼SW¼ sec.35, T.9 N., R.10 E., El Dorado County, Hydrologic Unit 18040013, on downstream side of left abutment of county road bridge, 0.8 mi (1.3 km) north of Nashville, 2.6 mi (4.2 km) upstream from mouth, and 6 mi (10 km) south of El Dorado.

DRAINAGE AREA.--205 mi² (531 km²).

PERIOD OF RECORD.--August 1911 to December 1941, October 1948 to current year.

REVISED RECORDS.--WSP 1315-A: 1914(M), 1925(M), 1928(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 840 ft (256 m), from topographic map. Prior to October 1933, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum. October 1933 to December 1941, water-stage recorder at site 1,000 ft (305 m) upstream at different datum.

REMARKS.--Records good. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft (50.0 hm³). Camino conduit above the station diverts water out of the basin. See REMARKS for Camp Creek near Somerset (station 11333000). Numerous small diversions above station for irrigation and domestic use.

AVERAGE DISCHARGE.--63 years, 197 ft³/s (5,579 m³/s), 142,700 acre-ft/yr (176 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Dec. 23, 1955, gage height, 14.8 ft (4.51 m), from rating curve extended above 7,500 ft³/s (212 m³/s) on basis of slope-area measurement of peak flow; no flow for part of 1924, 1926, 1931, 1933-34, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) Mar. 25 (1800 hrs), gage height, 7.47 ft (2.27 m), no other peak above base of 1,800 ft³/s (51.0 m³/s); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	43	24	100	84	200	111	39	11	16	1.2
2	16	19	26	24	82	83	186	108	36	10	16	1.1
3	17	19	29	23	74	80	167	99	34	8.9	16	1.1
4	17	18	135	25	67	85	151	91	33	8.5	16	1.1
5	16	18	110	38	61	119	141	85	32	8.2	16	1.2
6	15	18	53	30	57	90	137	78	30	7.7	16	1.2
7	16	18	39	26	54	80	136	72	29	7.5	16	1.8
8	16	26	33	25	51	77	131	67	30	7.2	16	1.4
9	16	31	30	25	57	74	127	65	26	7.1	16	1.3
10	16	26	28	25	60	72	124	66	24	6.7	16	1.4
11	17	25	26	24	56	72	119	65	23	6.4	15	2.2
12	20	28	26	23	56	97	116	63	22	6.2	12	2.0
13	22	26	26	23	56	84	112	61	21	10	12	1.8
14	15	28	26	23	77	81	110	61	20	20	12	1.7
15	15	26	25	21	116	78	110	58	20	20	12	1.7
16	18	25	24	23	93	105	107	55	19	20	12	1.8
17	17	24	24	26	88	95	104	51	17	19	12	2.0
18	16	22	24	25	91	81	106	57	17	19	12	2.0
19	16	20	25	25	85	344	146	129	17	16	12	2.0
20	15	20	25	25	91	535	145	92	18	7.4	12	2.0
21	15	21	26	26	90	293	120	73	17	5.7	5.7	2.0
22	16	22	30	26	80	283	113	66	16	5.8	3.0	2.0
23	17	25	33	76	75	240	114	62	17	4.1	2.0	2.1
24	15	26	30	93	95	202	120	60	14	3.4	1.7	2.3
25	15	28	28	58	135	879	124	58	15	3.1	1.6	3.3
26	19	26	27	41	108	920	127	65	14	3.0	1.6	3.9
27	23	26	26	258	91	487	116	77	14	2.8	1.9	4.7
28	21	26	26	477	86	352	106	55	13	3.0	1.5	5.3
29	21	25	25	410	---	288	107	48	13	3.2	1.4	4.9
30	21	29	24	221	---	255	109	44	12	2.6	1.3	5.0
31	21	---	26	140	---	219	---	41	---	13	1.2	---
TOTAL	536	711	1078	2329	2232	6834	3831	2183	652	276.5	305.9	67.5
MEAN	17.3	23.7	34.8	75.1	79.7	220	128	70.4	21.7	8.92	9.87	2.25
MAX	23	31	135	477	135	920	200	129	39	20	16	5.3
MIN	15	18	24	21	51	72	104	41	12	2.6	1.2	1.1
AC-FT	1060	1410	2140	4620	4430	13560	7600	4330	1290	548	607	134
CAL YR 1980 TOTAL	108482.0			MEAN 296	MAX 5870	MIN 14	AC-FT 215200					
WTR YR 1981 TOTAL	21035.9			MEAN 57.6	MAX 920	MIN 1.1	AC-FT 41720					

SAN JOAQUIN RIVER BASIN

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA

LOCATION.--Lat 38°30'01", long 121°02'39", in NW¼SE¼ sec.36, T.8 N., R.8 E., Sacramento County, Hydrologic Unit 18040013, on downstream side of midstream pier of highway bridge at Michigan Bar, 5.5 mi (8.8 km) southwest of Latrobe, and 12 mi (19 km) downstream from confluence of North and Middle Forks of Cosumnes River.

DRAINAGE AREA.--536 mi² (1,388 km²).

PERIOD OF RECORD.--October 1907 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 331: 1911-12. WSP 1315-A: 1908-9, 1911(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 168.09 ft (51.234 m) National Geodetic Vertical Datum of 1929. Prior to July 10, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft (50.0 hm³). Camino conduit above the station diverts water out of the basin. See REMARKS for Camp Creek near Somerset (station 11333000). Numerous small diversions above station for irrigation and domestic use.

AVERAGE DISCHARGE.--74 years, 476 ft³/s (13.48 m³/s), 344,900 acre-ft/yr (425 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft³/s (1,190 m³/s) Dec. 23, 1955, gage height, 14.59 ft (4.47 m); no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1907 reached a stage of 16.3 ft (4.97 m), discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,890 ft³/s (167 m³/s) Mar. 25 (1900 hrs), gage height, 7.18 ft (2.188 m), no other peak above base of 4,000 ft³/s (113 m³/s); no flow for many days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	37	49	55	306	200	608	325	102	20	1.5	.74
2	23	36	69	54	237	192	577	325	94	18	9.2	.78
3	23	35	67	53	199	188	514	310	88	16	15	0
4	23	34	119	52	175	226	460	281	82	14	15	0
5	23	34	263	65	156	431	420	256	77	15	16	0
6	22	34	125	73	144	291	402	235	70	14	15	0
7	23	34	84	63	136	232	396	218	64	13	16	0
8	22	37	69	58	129	208	386	204	62	14	15	0
9	20	42	59	57	130	193	369	193	61	14	16	0
10	21	47	55	56	143	185	359	188	55	12	17	0
11	20	45	54	55	137	181	351	187	52	11	16	0
12	22	43	52	54	131	209	331	180	50	8.3	17	0
13	26	48	52	53	135	205	319	172	47	9.4	13	0
14	35	48	51	53	150	197	309	168	42	8.9	14	0
15	35	45	50	53	279	210	308	165	42	19	13	0
16	33	42	49	53	240	357	305	158	41	24	12	0
17	37	41	51	57	211	280	302	149	39	25	13	0
18	36	41	52	63	228	234	301	144	37	22	13	.84
19	35	40	53	59	210	2200	376	218	34	21	12	0
20	34	39	53	56	216	2250	475	272	32	20	12	0
21	33	39	54	54	226	1020	383	211	30	13	12	1.1
22	33	40	58	57	196	893	341	176	28	9.4	9.0	1.3
23	33	41	65	123	183	743	332	157	27	7.1	5.8	1.2
24	33	43	66	209	196	616	347	145	27	7.5	5.2	0
25	33	44	61	168	320	2610	367	138	27	5.9	4.3	1.6
26	34	46	58	122	272	3010	371	139	24	4.8	3.3	2.5
27	36	45	58	870	225	1610	370	162	23	4.6	1.4	3.3
28	41	43	58	1720	204	1210	324	165	21	3.4	1.8	4.4
29	38	43	56	1760	---	880	304	138	18	2.2	0	5.7
30	38	44	55	786	---	769	315	123	20	2.1	0	6.6
31	37	---	55	481	---	663	---	111	---	2.8	.71	---
TOTAL	927	1230	2120	7492	5514	22693	11322	6013	1416	381.4	314.21	30.06
MEAN	29.9	41.0	68.4	242	197	732	377	194	47.2	12.3	10.1	1.00
MAX	41	48	263	1760	320	3010	608	325	102	25	17	6.6
MIN	20	34	49	52	129	181	301	111	18	2.1	0	0
AC-FT	1840	2440	4210	14860	10940	45010	22460	11930	2810	757	623	60
CAL YR 1980 TOTAL	280142.00			MEAN 765	MAX 19000	MIN	20	AC-FT 555700				
WTR YR 1981 TOTAL	59452.67			MEAN 163	MAX 3010	MIN	.00	AC-FT 117900				

11336000 COSUMNES RIVER AT McCONNELL, CA

LOCATION.--Lat 38°21'29", long 121°20'34", in NE¼NE¼ sec.20, T.6 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, on downstream side of bridge on U.S. Highway 99, 0.2 mi (0.3 km) south of McConnell, 1 mi (2 km) downstream from Deer Creek, and 7 mi (11 km) north of Galt.

DRAINAGE AREA.--724 mi² (1,875 km²).

PERIOD OF RECORD.--October 1941 to current year. Monthly figures only for some periods, published in WSP 1315-A. Gage heights only during high-water periods 1931-40, in reports of California Department of Water Resources.

REVISED RECORDS.--WSP 1315-A: 1947(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.34 ft (1.018 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for November and June, which are poor. Diversions for irrigation of about 2,100 acres (8.50 km²) between stations at Michigan Bar and at McConnell.

AVERAGE DISCHARGE.--40 years, 523 ft³/s (14.81 m³/s), 378,900 acre-ft/yr (467 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1944-81).--Maximum discharge, 54,000 ft³/s (1,530 m³/s) Dec. 23, 1955, gage height, 46.26 ft (14.100 m), from rating curve extended above 36,000 ft³/s (1,020 m³/s); no flow for parts of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 23, 24, 1936, reached a stage of 45.94 ft (14.003 m), discharge unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (102 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	1030	3,970 112	40.22 12.259
Mar. 26	0800	5,270 149	41.57 12.671

Minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	10	22	384	179	638	267	66			
2		0	23	22	254	175	578	278	50			
3		0	35	22	194	171	500	273	40			
4		0	39	20	164	173	443	247	30			
5		0	137	18	140	326	398	225	20			
6		0	122	28	124	391	371	195	10			
7		0	65	31	122	264	355	184	0			
8		0	43	25	110	216	349	165	0			
9		0	32	22	107	191	328	154	0			
10		0	26	21	110	178	317	140	0			
11		13	24	21	115	170	307	144	0			
12		12	22	19	110	166	293	137	0			
13		13	20	18	108	192	282	135	0			
14		14	21	18	112	176	266	132	0			
15		13	22	18	158	177	252	132	0			
16		10	20	18	201	301	251	121	0			
17		10	19	18	170	428	252	118	0			
18		8.0	19	20	167	277	251	112	0			
19		7.0	20	24	166	1160	292	137	0			
20		6.0	20	37	161	3660	411	230	0			
21		5.0	23	28	178	2040	342	170	0			
22		6.0	25	30	167	1240	298	147	0			
23		7.0	25	70	155	950	292	127	0			
24		7.0	30	117	163	733	299	115	0			
25		9.0	30	127	214	935	311	109	0			
26		11	27	84	246	4320	318	103	0			
27		13	24	145	209	2250	320	107	0			
28		12	25	1770	186	1310	281	116	0			
29		12	23	2440	---	1010	252	95	0			
30		10	22	1660	---	850	262	82	0			
31		---	21	756	---	733	---	73	---			---
TOTAL	0	198.0	1014	7669	4695	25342	10109	4770	216	0	0	0
MEAN	0	6.60	32.7	247	168	817	337	154	7.20	0	0	0
MAX	0	14	137	2440	384	4320	638	278	66	0	0	0
MIN	0	0	10	18	107	166	251	73	0	0	0	0
AC-FT	0	393	2010	15210	9310	50270	20050	9460	428	0	0	0

CAL YR 1980	TOTAL	276481.00	MEAN 755	MAX 19600	MIN 0	AC-FT 548400
WTR YR 1981	TOTAL	54013.00	MEAN 148	MAX 4320	MIN 0	AC-FT 107100

SAN JOAQUIN RIVER BASIN

11336580 MORRISON CREEK NEAR SACRAMENTO, CA

LOCATION.--Lat 38°29'55", long 121°27'06", in SW¼Sec.32, T.8 N., R.5 E., Sacramento County, Hydrologic Unit 18020109, on right bank 750 ft (229 m) upstream from Florin Road, 1.6 mi (2.6 km) upstream from Elder Creek, and 3.8 mi (6.1 km) south of State Capitol Building in Sacramento.

DRAINAGE AREA. -- 53.4 mi² (138.3 km²).

PERIOD OF RECORD.--July 1959 to current year.

REVISED RECORDS, --WDR CA-72-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.60 ft (2.316 m) National Geodetic Vertical Datum of 1929.

Prior to June 29, 1960, at site 650 ft (198 m) downstream at datum 1.55 ft (0.472 m) higher. June 29, 1960, to Sept. 12, 1965, at site 475 ft (144.8 m) upstream at datum 2.71 ft (0.826 m) higher.

REMARKS.--Records good. No regulation or diversion above station. Summer flow is sustained by waste water from domestic and industrial use.

AVERAGE DISCHARGE.--22 years, 18.3 ft³/s (0.518 m³/s), 13,260 acre-ft/yr (16.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft³/s (45.6 m³/s) Jan. 26, 1969, gage height, 8.53 ft (2.600 m); no flow at times in 1960, 1962, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 603 ft³/s (17.1 m³/s) Jan. 27 (1530 hrs), gage height, 4.66 ft (1.420 m); no other peak above base of 400 ft³/s (11.3 m³/s); minimum daily, 0.86 ft³/s (0.024 m³/s) Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	2.3	2.2	2.1	11	2.4	5.5	5.3	4.0	7.9	1.8	14
2	6.0	1.6	5.2	1.8	9.6	4.3	4.9	2.2	5.7	8.2	1.5	25
3	6.2	3.8	87	6.2	9.3	4.9	4.7	2.2	5.3	5.2	2.1	26
4	3.4	5.3	66	2.5	8.1	75	2.6	5.3	5.4	3.5	2.4	26
5	2.9	5.0	15	3.7	7.2	47	2.2	6.0	6.6	3.9	2.4	19
6	6.2	4.3	5.4	5.3	6.9	14	3.8	5.6	3.8	7.2	2.4	19
7	6.7	4.8	2.1	4.9	3.5	5.9	4.3	4.2	2.8	8.0	2.8	15
8	7.2	2.0	3.7	5.0	3.1	4.5	4.8	2.7	5.5	7.4	2.8	22
9	7.2	1.4	4.6	5.2	6.6	5.7	4.6	3.0	7.4	6.8	2.8	27
10	6.3	2.9	4.8	2.1	6.0	6.9	4.5	6.0	6.9	7.4	2.6	29
11	2.7	4.4	5.3	1.3	8.4	6.5	3.2	5.4	7.8	6.9	2.5	28
12	2.0	4.4	5.0	4.0	5.7	6.1	2.3	6.2	7.5	6.6	2.9	17
13	4.8	4.8	1.9	5.1	18	5.6	2.1	5.8	6.4	6.3	2.9	12
14	4.4	5.8	1.6	5.6	8.5	2.2	2.1	6.2	4.4	7.2	1.9	19
15	5.8	1.8	3.9	5.9	3.9	75	2.1	5.0	6.0	7.2	1.9	25
16	5.8	1.3	4.9	7.5	4.1	50	4.6	4.5	7.2	5.2	2.1	30
17	5.7	3.7	5.2	2.8	5.7	18	4.1	4.0	6.2	4.0	3.1	33
18	2.1	4.0	5.2	3.0	5.9	36	3.6	45	6.4	1.8	7.2	34
19	1.4	4.8	5.2	6.0	5.9	214	59	20	7.7	1.2	11	24
20	3.9	5.7	5.1	7.2	5.0	119	25	9.2	3.8	3.2	11	22
21	5.7	5.6	47	7.1	2.1	56	11	5.8	2.3	4.5	8.8	29
22	5.0	13	13	93	1.5	29	7.9	5.0	4.7	5.1	4.1	39
23	5.2	1.5	9.8	94	4.3	17	6.9	3.0	6.8	4.6	1.9	31
24	5.2	3.2	3.8	17	14	12	6.5	2.7	6.0	4.7	3.7	44
25	2.3	4.3	2.3	7.2	12	57	3.0	3.9	7.0	4.6	6.2	20
26	.97	3.9	2.4	21	14	50	2.5	4.2	8.1	3.9	7.4	5.1
27	2.5	1.4	3.0	295	6.6	19	4.3	5.2	7.1	4.8	7.6	3.3
28	4.6	1.0	2.1	221	3.1	9.1	4.6	5.0	6.6	5.2	8.2	6.3
29	5.9	.86	2.9	216	---	5.9	5.3	5.3	6.8	5.7	3.1	7.0
30	5.8	.95	3.1	47	---	6.4	5.2	5.0	7.9	5.5	.97	7.6
31	6.0	---	2.6	18	---	6.4	---	2.8	---	5.2	4.9	---
TOTAL	145.77	109.81	331.3	1123.5	200.0	970.8	207.2	201.7	180.1	168.9	126.97	658.3
MEAN	4.70	3.66	10.7	36.2	7.14	31.3	6.91	6.51	6.00	5.45	4.10	21.9
MAX	7.2	13	87	295	18	214	59	45	8.1	8.2	11	44
MIN	.97	.86	1.6	1.3	1.5	2.2	2.1	2.2	2.3	1.2	.97	3.3
AC-FT	289	218	657	2230	397	1930	411	400	357	335	252	1310
CAL YR 1980	TOTAL	10255.28	MEAN	28.0	MAX	824	MIN	.86	AC-FT	20340		
WTR YR 1981	TOTAL	4424.35	MEAN	12.1	MAX	295	MIN	.86	AC-FT	8780		

11337000 CONTRA COSTA CANAL NEAR OAKLEY, CA

LOCATION.--Lat 37°59'44", long 121°42'03", in NW¼NE¼ sec.25, T.2 N., R.2 E., Contra Costa County, Hydrologic Unit 18040003, at pumping plant No. 1, 0.7 mi (1.1 km) east of Oakley, and 2.6 mi (4.2 km) northwest of Knightsen.

PERIOD OF RECORD.--February 1950 to current year.

GAGE.--Recording flowmeters on pumps. Prior to Jan. 1, 1953, water-stage recorder at site 3.2 mi (5.1 km) downstream at datum 121.72 ft (37.100 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Water is diverted from Sacramento-San Joaquin Delta by way of Old River, Rock Slough, and a dredged channel. A series of four pumps lift the water 115 ft (35.1 m) into the canal. Water is used for municipal, agricultural, and industrial purposes. The canal is a part of the Central Valley Project.

COOPERATION.--Records of daily discharge furnished by Bureau of Reclamation and reviewed by Geological Survey.

AVERAGE DISCHARGE.--31 years, 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 281 ft³/s (7.96 m³/s) June 20, 21, 1981; minimum daily, 4.0 ft³/s (0.11 m³/s) Jan. 20, 1970.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	135	111	90	90	74	81	211	211	256	223	173
2	176	134	100	84	88	80	80	206	198	250	227	172
3	208	142	96	82	87	79	79	204	205	237	224	169
4	214	143	90	80	84	77	79	208	215	222	222	164
5	213	142	94	85	73	76	77	217	222	225	222	161
6	219	135	90	86	76	76	86	223	225	226	225	165
7	212	130	93	75	69	76	90	226	224	223	227	166
8	204	116	85	78	67	74	90	228	218	228	222	171
9	206	119	85	78	79	83	88	227	225	230	221	173
10	203	120	88	75	80	83	70	221	228	233	216	177
11	198	119	87	72	78	87	65	232	230	231	215	182
12	195	113	79	81	78	87	67	233	240	230	219	175
13	180	104	79	83	79	84	75	237	234	235	218	173
14	175	107	73	79	74	83	74	236	232	244	208	171
15	152	105	79	74	75	78	80	236	251	245	195	178
16	160	103	82	73	75	80	73	236	254	265	192	177
17	141	117	77	71	71	81	69	232	254	263	197	174
18	128	114	67	67	72	84	73	246	265	257	188	175
19	135	124	56	81	74	79	70	237	275	253	191	174
20	142	120	55	99	75	80	104	225	281	263	193	174
21	137	116	55	103	70	76	114	214	281	262	191	183
22	137	107	58	97	72	75	132	190	280	245	190	180
23	139	109	57	98	85	81	134	161	277	239	196	180
24	132	113	53	97	82	80	138	164	274	238	191	180
25	131	115	53	101	82	83	133	163	266	232	190	175
26	122	117	54	108	86	80	137	170	272	228	192	171
27	134	111	53	103	80	78	165	171	270	232	190	169
28	130	107	52	104	76	79	206	183	266	228	185	168
29	130	107	79	102	---	80	213	205	258	225	175	164
30	137	106	98	90	---	80	216	211	256	227	178	162
31	143	---	93	90	---	76	---	205	---	227	170	---
TOTAL	5098	3550	2371	2686	2177	2469	3158	6558	7387	7399	6293	5176
MEAN	164	118	76.5	86.6	77.8	79.6	105	212	246	239	203	173
MAX	219	143	111	108	90	87	216	246	281	265	227	183
MIN	122	103	52	67	67	74	65	161	198	222	170	161
AC-FT	10110	7040	4700	5330	4320	4900	6260	13010	14650	14680	12480	10270
CAL YR 1980 TOTAL	44410		MEAN 121	MAX 219	MIN 39	AC-FT 88090						
WTR YR 1981 TOTAL	54322		MEAN 149	MAX 281	MIN 52	AC-FT 107700						

SAN JOAQUIN RIVER BASIN

11337500 MARSH CREEK NEAR BYRON, CA

LOCATION.--Lat 37°52'24", long 121°43'34", in Los Meganos Grant, Contra Costa County, Hydrologic Unit 18040003, on right bank 40 ft (12 m) downstream from highway bridge on Marsh Creek Road, 1.2 mi (1.9 km) upstream from Marsh Creek Dam, and 5.0 mi (8.0 km) west of Byron.

DRAINAGE AREA.--42.6 mi² (110.3 km²).

PERIOD OF RECORD.--February 1953 to current year.

REVISED RECORDS.--WSP 1635: 1955.

GAGE.--Water-stage recorder and concrete control (control ineffective since 1972 due to gravel fill). Datum of gage is 177.87 ft (54.215 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--28 years, 8.42 ft³/s (0.238 m³/s), 6,100 acre-ft/yr (7.52 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,880 ft³/s (110 m³/s) Jan. 31, 1963, gage height, 11.62 ft (3.542 m), from rating curve extended above 880 ft³/s (24.9 m³/s) on basis of slope-area measurement at gage height 10.90 ft (3.322 m); maximum gage height, 12.98 ft (3.956 m) Dec. 23, 1955; no flow for long periods in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 117 ft³/s (3.31 m³/s) Jan. 29, gage height 4.29 ft (1.308 m), no peak above base of 140 ft³/s (4.0 m³/s); minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.36	10	3.1	6.9	.09				
2			0	.36	7.6	3.0	6.2	.07				
3			.06	.37	6.0	2.6	5.4	.05				
4			2.3	.36	4.9	2.9	4.7	.03				
5			.58	.36	4.1	3.4	4.3	.01				
6			.16	.34	3.7	3.0	3.8	0				
7			.06	.36	3.3	2.7	3.7	0				
8			0	.36	3.3	2.6	3.0	0				
9			0	.34	3.8	2.6	2.8	0				
10			.05	.33	3.1	2.5	2.5	0				
11			.11	.34	2.8	2.5	2.2	0				
12			.11	.34	2.7	2.4	2.0	0				
13			.11	.34	2.7	5.9	1.8	0				
14			.11	.34	2.9	6.3	1.5	0				
15			.12	.36	2.8	7.0	1.3	0				
16			.12	.36	2.6	14	1.2	0				
17			.16	.36	2.4	11	1.3	0				
18			.15	.36	2.2	10	1.3	0				
19			.12	.36	2.2	14	1.6	0				
20			.13	.40	2.0	27	1.4	0				
21			.29	.40	1.8	50	1.1	0				
22			.90	.49	1.8	36	1.1	0				
23			.55	1.1	1.9	25	.88	0				
24			.38	.76	2.8	19	.51	0				
25			.33	.47	3.5	22	.28	0				
26			.34	.54	2.9	26	.38	0				
27			.34	25	2.3	17	.31	0				
28			.35	39	2.4	13	.22	0				
29			.33	67	---	11	.13	0				
30			.36	24	---	9.6	.12	0				
31		---	.37	14	---	7.9	---	0	---			---
TOTAL	0	0	8.99	179.86	94.5	365.0	63.93	.25	0	0	0	0
MEAN	0	0	.29	5.80	3.38	11.8	2.13	.008	0	0	0	0
MAX	0	0	2.3	67	10	50	6.9	.09	0	0	0	0
MIN	0	0	0	.33	1.8	2.4	.12	0	0	0	0	0
AC-FT	0	0	18	357	187	724	127	.5	0	0	0	0
CAL YR 1980	TOTAL	8143.52	MEAN	22.3	MAX	892	MIN	0	AC-FT	16150		
WTR YR 1981	TOTAL	712.53	MEAN	1.95	MAX	67	MIN	0	AC-FT	1410		

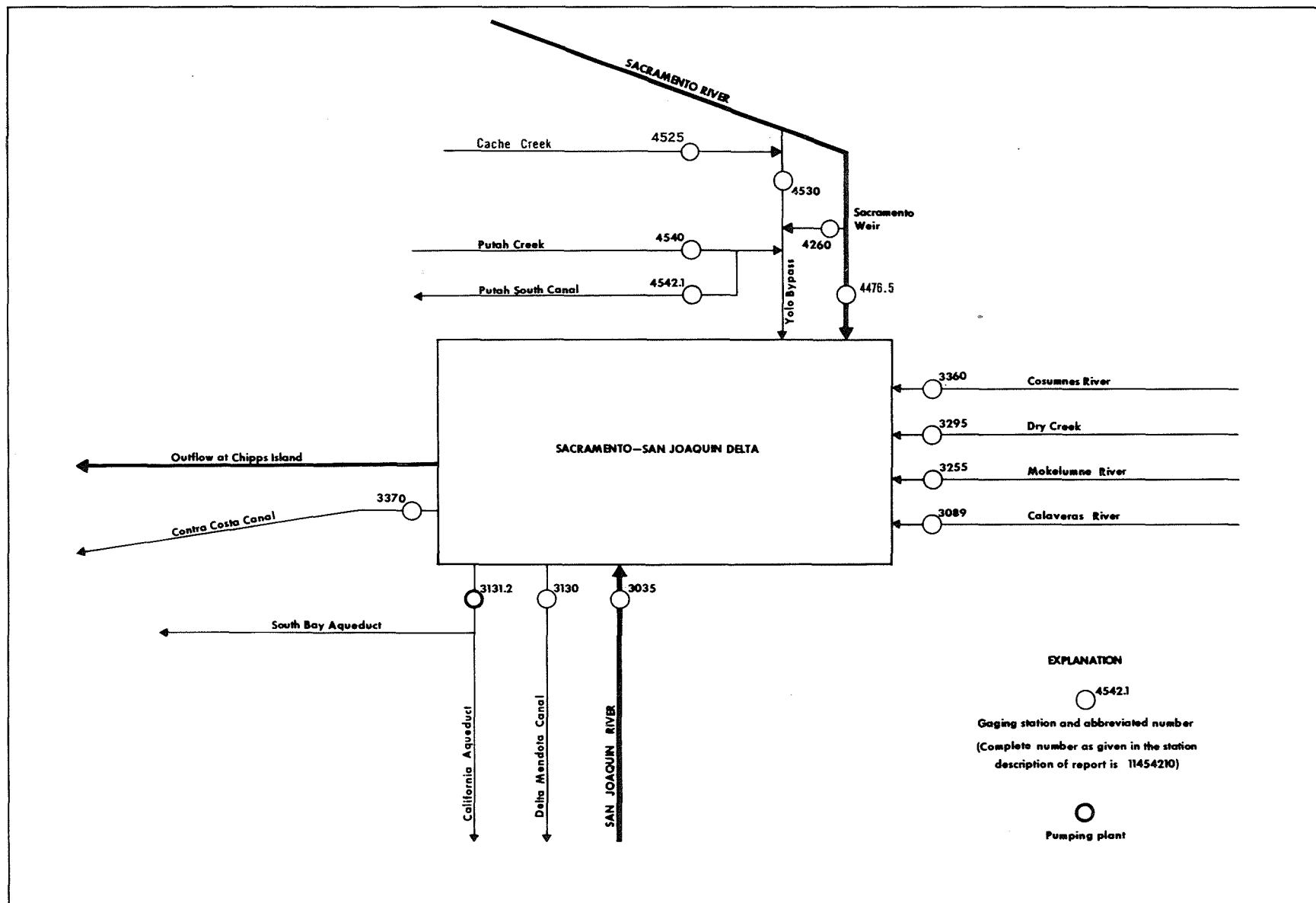


FIGURE 12.--Schematic diagram showing principal inflows and diversions, Sacramento-San Joaquin Delta.

SACRAMENTO-SAN JOAQUIN DELTA, INFLOWS AND DIVERSIONS

LOCATION.--See schematic diagram of inflows and diversions, Sacramento-San Joaquin Delta.

DRAINAGE AREA.--Total drainage area of inflow streams tabulated below is 39,699 mi² (102,820 km²).

PERIOD OF RECORD.--October 1971 to current year. Data for periods prior to October 1971, can be obtained from published records for stations tabulated below.

COOPERATION.--Records for Delta-Mendota, Contra Costa, and Putah South Canals furnished by Bureau of Reclamation, California Aqueduct by California Department of Water Resources.

SUMMARY OF PRINCIPAL INFLOWS AND DIVERSIONS IN THE
SACRAMENTO-SAN JOAQUIN DELTA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Inflows, in thousands of acre-feet												
Month												Water year
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
11303500 SAN JOAQUIN RIVER NEAR VERNALIS												
250.4	195.0	181.3	199.9	159.9	192.0	150.7	120.9	89.18	77.79	78.05	70.29	1765
11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM												
5.71	3.36	2.88	2.58	1.99	2.10	4.88	12.67	16.15	16.86	15.87	11.19	96.25
11325500 MOKELUMNE RIVER AT WOODBRIDGE												
21.43	32.40	14.02	5.10	2.93	2.16	1.55	2.33	3.29	3.81	3.06	2.52	94.59
11329500 DRY CREEK NEAR GALT												
0	0	0	7.38	1.95	21.14	3.51	.20	.02	0	.02	.03	34.24
11336000 COSUMNES RIVER AT MCCONNELL												
0	.39	2.01	15.21	9.31	50.27	20.05	9.46	.43	0	0	0	107.1
11426000 SACRAMENTO WEIR SPILL												
0	0	0	0	0	0	0	0	0	0	0	0	0
11447650 SACRAMENTO RIVER AT FREEPORT												
697.5	646.9	1026	1138	1346	1507	1025	847.4	638.4	941.0	913.2	761.9	11490
114530000 YOLO BYPASS NEAR WOODLAND ^{1/}												
--	--	--	28.87	19.76	7.25	--	--	--	--	--	--	55.88
11454000 PUTAH CREEK NEAR WINTERS												
16.07	7.01	4.66	4.37	3.74	4.49	22.38	43.16	46.01	46.59	41.72	30.61	270.8
Total	991.1	885.1	1231	1401	1546	1786	1228	1036	793.5	1086	1052	13914

Diversions, in thousands of acre-feet													
Month													Water year
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
11313000 DELTA-MENDOTA CANAL													
219.1	229.1	232.9	251.1	203.1	119.1	220.1	192.8	211.4	267.5	252.7	197.2	2596	
11313120 CALIFORNIA AQUEDUCT (DELTA PUMPING PLANT)													
184.0	147.1	181.1	252.5	196.0	174.7	250.2	56.94	15.77	14.18	302.2	188.8	1963	
11337000 CONTRA COSTA CANAL													
10.11	7.04	4.70	5.33	4.32	4.90	6.26	13.01	14.65	14.68	12.48	10.27	107.8	
11454210 PUTAH SOUTH CANAL													
14.45	5.27	2.94	2.07	2.52	2.56	19.40	38.94	40.54	40.65	36.34	27.52	233.2	
Total	427.7	388.5	421.6	511.0	405.9	301.3	496.0	301.7	282.4	337.0	603.7	423.8	4900

1. Flow not computed below 1000 ft³/s.

NOTE.--Minor inflow streams and diversions are not included.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1981

					Annual maximum		
Station No.	Station name	Location	Drain- age area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
Tulare Lake basin							
11205680	Frazier Creek near Strathmore, CA	Lat 36°08'33", long 118°57'17", in NE¼SE¼ sec.32, T.20 S., R.28 E., Tulare County, Hydrologic Unit 18030012, at culvert on county road No. J28, 5.9 mi (9.5 km) east of Strathmore.	3.05	1974-81	2-9-81	5.90	20d
11205690	Lewis Creek near Lindsay, CA	Lat 36°11'11", long 118°59'46", in NW¼NE¼ sec.13, T.20 S., R.27 E., Tulare County, Hydrologic Unit 18030012, at culvert on Road 258, 0.2 mi (0.4 km) downstream from unnamed tributary, and 7.0 mi (11.3 km) southeast of Lindsay.	21.5	1969a, 1974-81	2-9-81	21.33	227
11210970	Antelope Creek at Woodlake, CA	Lat 36°25'42", long 119°06'22", in SE¼SE¼ sec.24, T.17 S., R.26 E., Tulare County, Hydrologic Unit 18030012, at culverts on two separate channels at Cajon Avenue, and 1.1 mi (1.8 km) northwest of town of Woodlake.	19.2	1969a, 1974-81	2-9-81	8.93	0.2d
San Joaquin River basin							
11336030	Badger Creek at Riley Road, near Galt, CA	Lat 38°20'21", long 121°17'48", in San Jon de Los Moquelumnes Land Grant, T.6 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, at bridge on Riley Road, 2.3 mi (3.7 km) upstream from U.S. Highway 99, and 5.9 mi (9.5 km) north of Galt.	13.0	1972-81	--	37.79	13
11336040	North Fork Badger Creek at Riley Road, near Galt, CA	Lat 38°21'06", long 121°17'48", in San Jon de Los Moquelumnes Land Grant, T.6 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, at bridge on Riley Road, 2.4 mi (3.9 km) upstream from U.S. Highway 99, and 6.8 mi (10.9 km) north of Galt.	12.6	1972-81	--	<38.36	--
11336050	Willow Creek at McKenzie Road, near Galt, CA	Lat 39°19'08", long 121°18'01", in San Jon de Los Moquelumnes Land Grant, T.5 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, at bridge on McKenzie Road, 1.5 mi (2.4 km) upstream from U.S. Highway 99, and 4.5 mi (7.2 km) north of Galt.	2.95	1972-81	--	37.40	4
11336070	Cosumnes River at State Highway 104, near Galt, CA	Lat 38°17'27", long 121°22'45", in San Jon de Los Moquelemnes Land Grant, T.5 N., R.5 E., Sacramento County, Hydrologic Unit 18040005, at State Highway 104 crossing and 5.0 mi (8.0 km) northwest of Galt.	Not deter- mined	1972-81	--	<12.64	--

See footnotes at end of table.

Annual maximum discharge at crest-stage partial-record stations during water year 1981--Continued

			Annual maximum				
Station No.	Station name	Location	Drain- age area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
San Joaquin River basin--Continued							
11336530	Laguna Creek at McKenzie Road, near Galt, CA	Lat 38°18'46", long 121°18'01", in San Jon de Los Moquelumnes Land Grant, T.5 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, at bridge on McKenzie Road, 1.2 mi (1.9 km) upstream from U.S. Highway 99, and 4.1 mi (6.6 km) north of Galt.	11.7	1972-81	--	<36.98	--
11336550	Skunk Creek at McKenzie Road, near Galt, CA	Lat 38°17'57", long 121°18'01", in San Jon de Los Moquelumnes Land Grant, T.5 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, at bridge on McKenzie Road, 1.6 mi (2.6 km) upstream from U.S. Highway 99, and 3.1 mi (5.0 km) north of Galt.	11.7	1972-81	--	<35.92	--
11336555	Laguna Creek at State Highway 104, near Galt, CA	Lat 38°17'27", long 121°22'29", in San Jon de Los Moquelumnes Land Grant, T.5 N., R.5 E., Sacramento County, Hydrologic Unit 18040005, at bridge on Christenson Road, 2.6 mi State Highway 104, 4.8 mi (7.7 km) northwest of Galt.	Not deter- mined	1972-81	--	<14.51	--
11336560	Deadman Gulch at Christen- son Road, near Galt, CA	Lat 38°16'44", long 121°21'11", in San Jon de Los Moquelumnes Land Grant, T.5 N., R.6 E., Sacramento County, Hydrologic Unit 18040005, at bridge on Christenson Road, 2.6 mi (4.2 km) downstream from U.S. Highway 99, and 2.6 mi (4.2 km) northwest of Galt.	8.82	1972-81	--	<23.71	--

d Estimated.

a Published as a miscellaneous measurement.

< Actual value is known to be less than the value shown.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

CARSON RIVER BASIN
10305500 EAST FORK CARSON RIVER NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°41'20", long 119°45'52", in NW¼NE¼ sec.27, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1959 to current year. Published as 10308200 in water years 1966-68, 1970.
COOPERATION.--Chemical-quality records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981*

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (FT ³ /S)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH, FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO ₃)
APR 28...	1025	E588	74	7.6	6.5	2.0	10.5	26
SEP 16...	1000	E41	129	7.9	14.5	1.0	8.8	42

DATE	TIME	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT FIELD (MG/L AS CACO ₃)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 28...	7.2	2.0	4.4	.4	1.0	29	1.5	50	
SEP 16...	12	3.2	8.8	.6	1.6	58	4.0	77	

* Data from Calif. Dept. of Water Resources.
E: ESTIMATED.

TULARE LAKE BASIN

11222700 KINGS RIVER AT PEOPLES WEIR, NEAR KINGSBURG, CA

LOCATION.--Lat 36°29'06", long 119°32'22", in NW¼NE¼ sec.1, T.17 S., R.22 E., Kings County, Hydrologic Unit 18030012.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1951 to current year.

COOPERATION.--Chemical-quality records furnished by California Department of Water Resources.

DATE	TIME	SPECIFIC COND MICROMHO	PH FIELD (UNITS)	TEMP WATER (DEG C)	OXYGEN DISS (MG/L)	COD LOWLEVEL (MG/L)	BOD 5 DAY (MG/L)	HARDNESS (MG/L AS CACO ₃)	CALCIUM CA DISS (MG/L)	MAGNESIUM MG DISS (MG/L)	SODIUM NA DISS (MG/L)
80/11/24	10 30	49	7.0	10.0	9.4			14	4	1	3
81/01/27	14 50	123	7.2	13.0	9.9			46	12	4	8
81/03/24	10 15	174	7.2	17.0	8.9			69	16	7	10
81/04/21	11 00	108	7.6	16.0	9.6	7.0	1.0				
81/05/26	13 15		7.4	19.0	9.2						
81/06/24	08 45	40	7.1	14.5	10.0						
81/09/22	08 15	45	7.2	21.0	7.8			23	6	2	4

DATE	TIME	PTISSIUM K DISS (MG/L)	ALKA- LINIT (MG/L)	SULFATE SO ₄ -DISS (MG/L)	CHLORIDE CL DISS (MG/L)	ROE DISS 180 C (MG/L)	RESIDUE TOT NFLT (MG/L)	NO ₂ +NO ₃ N-DISS (MG/L)	AMMONIA N DISS (MG/L)	AMMONIA+ ORG TOT N (MG/L)	PHOS-TOT AS P (MG/L)
80/11/24	10 30	0.9	16	2	2	37		0.15	0.02	0.20	0.04
81/01/27	14 50	1.5	45	6	5	81					
81/03/24	10 15	2.3	71	10	7	142					
81/04/21	11 00						6	0.49	0.03	0.20	0.05
81/05/26	13 15							0.14	0.02	0.20	0.05
81/06/24	08 45							0.04	0.00	0.10	0.02
81/09/22	08 15	1.2	24	0	2	47					

DATE	TIME	PHOS-DIS ORTHO P (MG/L)	ORGANIC CARBON T (MG/L)	BORON B DISS (UG/L)
80/11/24	10 30	0.02		0
81/01/27	14 50			0
81/03/24	10 15			0
81/04/21	11 00	0.03	2.5	
81/05/26	13 15	0.02		
81/06/24	08 45	0.00		
81/09/22	08 15			0

GROUND WATER

FRESNO COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 365325120391504 LOCAL NUMBER 012S012E16H05M

4.4 MI SOUTHWEST OF SOUTH DOS PALOS. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 4 IN, DEPTH 720 FT, PERFORATED 670-712 FT. ALTITUDE OF LSD 165 FT. RECORDS AVAILABLE 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 113.1 FEET BELOW LAND SURFACE DATUM Sept. 14, 1981.

LOWEST WATER LEVEL 133.4 FEET BELOW LAND SURFACE DATUM OCT 23, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17, 1980	116.2	MAR 16, 1981	114.7	JUL 14, 1981	113.2	SEP 14, 1981	113.1
JAN 19, 1981	115.5	MAY 11	113.8				

SITE NUMBER 365325120391505 LOCAL NUMBER 012S012E16H06M

4.4 MI SOUTHWEST OF SOUTH DOS PALOS. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 8 IN, DEPTH 926 FT, PERFORATED 770-926 FT. ALTITUDE OF LSD 165 FT. RECORDS AVAILABLE 1960 TO CURRENT YEAR.

HIGHEST WATER LEVEL 137.2 FEET BELOW LAND SURFACE DATUM JUL 14, 1981.

LOWEST WATER LEVEL 207.5 FEET BELOW LAND SURFACE DATUM SEP 13, 1960.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17, 1980	141.9	MAR 16, 1981	138.8	JUL 14, 1981	137.2	SEP 14, 1981	139.7
JAN 19, 1981	140.1	MAY 11	137.3				

SITE NUMBER 364734120060101 LOCAL NUMBER 013S017E22B01M

1.1 MI WEST OF BIOLA. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 90 FT. ALTITUDE OF LSD 221 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1944 TO CURRENT YEAR.

HIGHEST WATER LEVEL 16.6 FEET BELOW LAND SURFACE DATUM APR 15, 1947.

LOWEST WATER LEVEL 56.5 FEET BELOW LAND SURFACE DATUM DEC 03, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	40.3	FEB 03, 1981	38.9

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 364536120184301 LOCAL NUMBER 013S015E35D05M

4.4 MI EAST OF MENDOTA. OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 4 IN. DEPTH 433 FT. PERFORATED 373-433 FT. ALTITUDE OF LSD 165 FT. RECORDS AVAILABLE AUG. 1960 TO CURRENT YEAR. RECORDER INSTALLED 1970.

HIGHEST WATER LEVEL 29. FEET BELOW LAND SURFACE DATUM FEB 11, 1970.

LOWEST WATER LEVEL 100.1 FEET BELOW LAND SURFACE DATUM SEP 01, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17, 1980	39.0	JAN 25, 1981	46.5	MAR 19, 1981	46.6	MAY 06, 1981	63.0
18	39.1	26	47.2	20	46.5	07	63.6
19	38.7	27	48.4	22	46.4	08	63.8
20	38.6	28	48.6	23	46.3	09	64.9
26	38.5	29	49.9	24	45.9	10	65.3
28	38.4	30	50.9	25	45.6	11	65.2
DEC 02	37.9	31	51.8	26	44.8	12	65.9
05	37.8	FEB 01	52.4	27	44.2	13	66.8
07	37.7	03	52.5	28	42.6	14	66.7
08	37.5	04	52.9	29	42.5	15	66.3
11	37.4	05	53.0	30	42.0	16	64.7
12	37.2	06	53.2	31	41.3	17	62.7
15	37.1	10	53.3	APR 01	40.6	18	61.1
20	37.0	11	53.2	02	40.5	19	59.9
22	37.1	14	53.1	06	40.4	20	60.0
28	37.2	15	52.9	07	41.2	21	60.7
29	37.1	16	52.7	08	42.8	22	60.9
30	36.8	19	52.8	09	45.4	23	61.0
31	36.5	20	53.8	10	48.4	24	61.2
JAN 01, 1981	36.2	21	54.7	11	51.0	25	61.3
02	36.0	22	55.4	12	53.1	26	61.1
03	35.8	25	55.3	13	55.5	27	61.8
05	35.9	26	54.3	14	57.5	28	62.0
06	36.1	27	53.5	15	58.7	29	62.5
07	37.3	28	53.4	16	59.0	30	63.0
08	38.5	MAR 01	53.3	18	58.9	31	63.2
09	39.6	02	53.0	19	57.8	JUN 01	62.9
10	40.9	04	52.7	20	56.3	02	62.8
11	41.6	05	52.6	21	55.3	03	62.4
12	41.6	06	52.3	22	54.2	04	61.7
13	42.1	07	52.3	23	53.1	05	61.3
14	42.5	08	52.5	27	53.0	06	61.1
17	42.6	09	52.6	28	52.6	07	61.1
18	43.2	10	52.7	29	52.7	08	61.3
19	44.2	13	52.6	30	53.7	09	61.4
20	44.3	14	52.3	MAY 01	55.7	10	61.4
21	44.4	15	51.2	02	56.4	11	61.6
22	44.9	16	47.7	03	57.9	12	61.8
23	45.4	17	47.3	04	60.2	13	61.9
24	45.6	18	46.7	05	61.5	14	62.5
JUN 15, 1981	62.7	JUN 24, 1981	80.2	JUL 02, 1981	86.8	JUL 10, 1981	90.8
16	63.9	25	80.4	03	87.7	11	90.7
17	65.3	26	81.5	04	88.4	12	90.5
18	67.3	27	81.7	05	89.1	13	90.4
19	69.5	28	81.8	06	90.1	14	89.3
21	75.7	29	82.3	07	90.4	SEP 15	69.7
22	77.7	30	84.1	08	90.4	20	72.8
23	79.6	JUL 01	86.2	09	90.6		

SITE NUMBER 364535120184701 LOCAL NUMBER 013S015E35D03M

1.2 MI EAST OF MENDOTA. UNUSED ARTESIAN WELL IN ALLUVIUM BELOW THE CONCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 1 IN. DEPTH 735 FT. PERFORATED 460-735 FT. ALTITUDE OF LSD 166 FT. RECORDS AVAILABLE 1951 TO CURRENT YEAR.

HIGHEST WATER LEVEL 53.3 FEET BELOW LAND SURFACE DATUM FEB 04, 1981.

LOWEST WATER LEVEL 129.2 FEET BELOW LAND SURFACE DATUM OCT 16, 1962.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1980	107.3	FEB 04, 1981	53.3	SEP 16, 1981	103.3

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 364358120314906 LOCAL NUMBER 014S013E11D06M

7.6 MI WEST OF MENDOTA. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 8 IN. DEPTH 1358 FT, PERFORATED 1133-1196 FT. ALTITUDE OF LSD 284 FT. RECORDS AVAILABLE 1961 TO CURRENT YEAR. RECORDER INSTALLED 1961.

HIGHEST WATER LEVEL 308.7 FEET BELOW LAND SURFACE DATUM July 2, 1981.

LOWEST WATER LEVEL 514.4 FEET BELOW LAND SURFACE DATUM AUG 01, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	325.3	NOV 21, 1980	316.2	APR 21, 1981	315.7	JUN 20, 1981	310.0
08	325.2	22	316.0	22	315.5	21	310.0
12	325.1	23	315.9	26	315.4	22	309.8
13	324.9	24	315.5	27	315.2	23	309.6
14	324.4	25	315.6	28	315.1	24	309.3
15	324.1	27	315.5	29	314.8	25	309.2
16	324.1	28	315.4	30	314.5	26	308.9
17	323.7	29	315.3	MAY 01	314.7	30	308.8
18	323.7	30	315.1	02	314.8	JUL 02	308.7
19	323.1	DEC 01	314.8	05	314.9	03	308.8
20	322.7	02	314.7	06	314.8	04	308.9
21	322.3	03	314.6	07	314.6	06	309.0
22	322.0	06	314.5	08	314.4	07	309.3
23	321.7	07	314.3	09	314.3	08	309.3
24	321.3	08	314.4	10	314.2	09	309.6
25	321.2	09	314.3	11	315.4	10	310.0
26	321.0	10	314.2	17	315.3	11	310.4
27	320.7	11	314.1	21	315.2	12	310.8
28	320.2	12	314.0	22	315.1	13	311.2
29	319.9	13	313.8	23	314.8	14	312.4
30	319.6	14	313.7	26	314.9	15	312.5
NOV 01	319.3	JAN 19, 1981	311.7	27	314.5	16	313.3
02	319.2	MAR 16	319.2	29	314.4	17	313.5
03	319.1	APR 01	319.0	31	314.3	18	314.0
04	318.6	03	318.1	JUN 03	314.2	19	314.1
05	318.3	04	318.1	04	313.9	20	314.3
06	318.2	05	317.5	05	313.6	21	314.5
07	318.1	07	317.4	06	313.5	22	314.9
08	317.9	08	317.2	07	313.4	23	315.4
09	317.5	09	317.1	08	313.3	24	315.5
10	317.4	10	316.9	09	313.1	25	316.1
11	317.2	11	316.9	10	312.5	26	316.3
12	317.2	12	316.6	11	312.1	27	316.4
13	317.0	13	316.2	13	312.0	28	316.8
14	316.7	14	316.1	14	311.4	29	316.8
15	316.2	15	316.0	15	311.0	30	317.2
16	316.2	16	315.8	16	310.7	31	317.4
17	316.3	17	315.7	17	310.8	AUG 01	317.4
18	316.5	18	316.1	18	310.5	02	317.5
20	316.4	20	316.0	19	310.3	05	317.6
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 06, 1981	317.4	AUG 28, 1981	316.4	SEP 13, 1981	313.8	SEP 23, 1981	312.1
10	314.5	31	316.3	14	313.7	24	311.6
13	317.3	SEP 04	316.2	15	313.5	25	311.6
20	317.4	05	315.8	16	313.5	26	311.3
21	317.3	06	315.5	17	313.2	27	311.0
22	317.1	07	315.5	18	312.9	28	311.4
23	317.3	08	315.2	19	312.8	29	311.2
25	317.2	09	314.8	20	312.6	30	310.7
26	316.9	11	314.2	21	312.5		
27	316.7	12	313.9	22	312.2		

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 364340120361201 LOCAL NUMBER 0145012E12H01M

12.8 MI WEST OF MENDOTA. OBSERVATION ARTESIAN WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 936 FT,
PERFORATED 740-936 FT. ALTITUDE OF LSD 338 FT. RECORDS AVAILABLE 1965 TO CURRENT YEAR. RECORDER
INSTALLED OCT. 1964.

HIGHEST WATER LEVEL 377.2 FEET BELOW LAND SURFACE DATUM June 26, 1981.

LOWEST WATER LEVEL 609.9 FEET BELOW LAND SURFACE DATUM JUL 29, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	388.8	NOV 30, 1980	385.3	MAR 25, 1981	381.8	JUN 01, 1981	378.8
02	389.0	JAN 02, 1981	383.6	26	381.6	03	378.9
03	388.8	03	383.5	27	381.5	04	378.8
04	388.8	04	383.3	28	381.3	06	378.7
05	389.1	13	383.2	30	381.2	07	378.9
06	388.9	14	382.9	APR 02	381.1	08	379.1
07	388.7	15	382.8	03	380.9	09	379.0
08	388.4	18	382.7	04	380.8	10	378.8
16	388.3	19	382.5	05	380.4	11	378.5
17	388.2	23	382.6	06	380.5	13	378.4
18	387.9	26	382.7	08	380.4	14	378.3
20	387.8	27	382.5	10	380.3	15	378.2
21	387.6	28	382.6	12	380.2	16	378.0
24	387.5	FEB 02	382.7	13	380.1	20	378.1
25	387.7	08	382.8	16	380.0	21	378.0
26	387.4	15	382.7	17	379.9	22	377.7
28	387.4	18	382.5	18	380.2	23	377.7
29	387.0	19	382.4	21	380.1	24	377.5
30	387.0	22	382.3	22	379.9	25	377.4
31	386.8	23	381.8	23	379.6	26	377.2
NOV 01	386.8	24	381.9	27	379.7	27	377.9
02	387.1	25	382.2	28	379.3	28	378.2
03	386.8	26	382.1	MAY 01	379.2	29	378.3
04	386.7	27	382.0	06	379.3	JUL 02	378.2
05	386.9	MAR 01	381.9	08	379.2	03	378.3
06	386.8	02	381.8	09	379.1	04	378.4
08	386.7	06	381.7	10	379.0	05	378.7
09	386.5	09	381.6	11	379.7	06	379.0
13	386.4	10	381.5	12	379.7	07	379.3
16	386.3	11	381.4	15	379.8	08	379.5
17	386.3	12	381.1	17	379.7	09	379.4
19	386.2	13	381.7	18	379.8	11	379.3
20	386.1	14	381.8	21	379.9	14	380.4
21	386.0	15	382.0	22	379.7	15	379.8
22	386.2	16	382.7	23	379.5	16	379.7
23	386.0	17	382.5	24	379.4	17	380.0
24	385.8	18	382.2	25	379.5	18	380.1
25	385.7	21	382.1	26	379.3	19	379.7
27	385.6	23	382.0	29	379.2	22	379.6
29	385.5	24	381.5	31	379.1	25	379.7
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 27, 1981	379.6	AUG 18, 1981	378.8	SEP 05, 1981	378.3	SEP 19, 1981	380.0
30	379.5	19	379.1	06	378.6	20	380.7
AUG 02	379.6	21	379.0	07	379.6	21	380.9
03	379.5	22	378.7	08	380.0	22	381.3
05	379.4	23	379.1	09	380.1	23	381.4
06	379.0	24	379.0	10	380.3	24	381.7
07	379.2	25	378.8	11	380.2	25	381.7
08	379.0	26	378.7	12	379.9	26	382.0
09	379.1	27	378.5	13	380.0	27	382.2
10	378.8	28	378.0	14	379.7	28	382.5
11	378.9	29	378.3	15	379.3	29	382.3
12	378.8	31	378.2	16	379.2	30	381.8
16	378.7	SEP 02	378.1	17	379.3		
17	378.6	03	378.4	18	379.7		

PRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 363851120313901 LOCAL NUMBER 015S013E11D02M

10.4 MI SOUTHWEST OF MENDOTA, HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 6 IN. DEPTH 960 FT. PERFORATED 900-960 FT. ALTITUDE OF LSD 346 FT. RECORDS AVAILABLE NOV. 1964 TO CURRENT YEAR. RECORDER INSTALLED NOV. 1964.

HIGHEST WATER LEVEL 372.6 FEET BELOW LAND SURFACE DATUM SEP 28, 1981.

LOWEST WATER LEVEL 652.3 FEET BELOW LAND SURFACE DATUM AUG 02, 1966.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	389.1	NOV 25, 1980	383.0	JAN 19, 1981	382.7	MAR 04, 1981	385.1
05	389.0	26	382.8	20	382.6	05	385.5
06	388.9	27	382.6	21	382.5	06	385.4
07	388.8	28	382.2	22	382.2	07	385.5
09	388.3	30	382.3	23	382.2	08	385.7
10	388.2	DEC 01	382.0	24	382.0	09	385.8
11	388.0	02	382.3	26	382.1	10	385.4
14	387.9	05	382.4	27	381.9	11	384.8
15	387.8	06	383.1	28	382.0	12	384.5
16	387.4	07	383.6	29	382.1	13	384.6
17	387.3	08	384.0	31	382.2	14	374.1
18	387.1	09	384.1	FEB 02	382.1	15	383.7
20	387.0	10	384.4	03	382.0	16	384.1
21	386.8	11	384.9	04	382.1	17	383.9
22	386.6	14	385.0	05	382.2	18	383.6
23	386.3	15	385.1	06	382.3	19	383.5
25	386.2	16	384.9	07	382.4	20	383.3
26	386.0	21	384.0	09	382.5	21	383.1
27	385.9	22	374.2	11	382.4	22	383.0
28	385.8	23	384.0	12	382.2	23	382.9
29	385.5	24	383.9	13	382.4	24	382.4
30	385.3	25	384.0	14	382.2	25	382.5
31	385.2	26	384.5	15	382.3	26	382.7
NOV 02	385.1	27	384.6	16	382.1	27	382.5
03	384.9	28	384.8	17	382.3	28	382.2
06	384.8	29	384.9	18	382.1	29	382.1
07	384.6	JAN 03, 1981	385.0	19	382.0	31	382.0
08	384.6	04	384.7	20	382.1	APR 01	381.8
09	384.2	06	384.6	21	382.0	02	381.1
11	384.1	08	384.7	22	381.9	03	381.3
12	384.0	09	384.9	23	382.1	04	381.6
14	383.9	11	385.0	24	382.7	05	381.6
16	383.8	12	384.8	25	383.3	06	381.8
17	384.1	13	374.3	26	383.6	07	381.9
18	383.6	14	384.1	27	383.8	10	382.0
19	383.5	15	384.3	28	384.2	11	382.2
21	383.4	16	383.9	MAR 01	384.4	13	382.2
23	383.3	17	383.9	02	384.6	14	382.1
24	383.1	18	383.0	03	384.8	15	382.2
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 17, 1981	382.4	MAY 28, 1981	375.4	JUL 16, 1981	376.9	AUG 21, 1981	378.6
18	382.8	29	375.3	17	377.1	22	378.2
21	382.7	30	375.2	18	377.3	23	378.1
22	382.5	31	374.9	19	377.5	24	377.7
24	382.4	JUN 03	374.8	20	377.6	25	377.6
25	382.1	04	374.4	21	377.7	26	377.0
26	382.0	08	374.3	22	377.9	27	376.7
27	381.9	09	374.4	23	378.1	28	376.3
28	381.5	10	374.3	24	378.2	29	376.2
29	381.4	11	374.6	25	378.3	30	376.1
30	381.3	12	375.1	26	378.5	31	376.0
MAY 01	381.0	13	375.6	27	378.6	SEP 01	375.8
02	380.8	14	375.8	28	378.8	02	375.3
03	381.1	15	375.9	29	379.1	04	375.1
04	380.8	16	375.9	30	378.6	05	375.0
05	380.5	17	376.3	31	378.3	06	374.9
06	380.1	18	376.5	AUG 01	378.1	07	374.7
07	379.8	20	376.6	02	377.6	08	374.3
08	379.4	21	376.7	03	377.4	09	374.2
09	379.0	24	376.8	04	377.6	10	374.0
10	378.7	25	376.9	05	377.7	11	373.8
11	378.4	26	376.8	06	377.8	12	373.6
12	378.3	29	376.7	07	378.1	13	373.6
13	378.0	JUL 02	376.6	08	378.1	14	374.2
14	377.8	03	376.7	09	378.5	15	374.1
15	377.8	04	376.8	10	378.6	17	374.0
16	377.5	05	376.9	11	378.8	18	373.8
17	377.2	06	377.1	12	379.1	20	373.7
19	377.1	07	377.4	13	379.1	22	373.6
20	376.9	08	377.6	14	379.5	23	373.5
21	376.8	10	377.7	15	379.5	24	373.2
22	376.5	11	377.4	16	379.7	25	373.1
23	376.3	12	377.1	17	379.7	26	373.0
24	376.1	13	376.7	18	379.5	27	372.8
26	375.9	14	376.3	19	379.3	28	372.6
27	375.7	15	376.5	20	379.1		

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 36380119321701 LOCAL NUMBER 0155022E14A01M

0.7 MI SOUTHEAST OF DEL REY. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 63.3 FT.
 ALTITUDE OF LSD 348 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
 RECORDS AVAILABLE 1946 TO CURRENT YEAR.

HIGHEST WATER LEVEL 21.2 FEET BELOW LAND SURFACE DATUM JUN 01, 1946.

LOWEST WATER LEVEL 57.9 FEET BELOW LAND SURFACE DATUM OCT 01, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 01, 1980	24.2

SITE NUMBER 363425120164202 LOCAL NUMBER 0155016E31N03M

4.8 MI SOUTHWEST OF SAN JOAQUIN. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM
 6 IN. DEPTH 595 FT. PERFORATED 497-537 FT. ALTITUDE OF LSD 188 FT. RECORDS AVAILABLE MAR. 1967
 TO CURRENT YEAR. RECORDER INSTALLED 1967.

HIGHEST WATER LEVEL 82.8 FEET BELOW LAND SURFACE DATUM Apr. 15, 1981.

LOWEST WATER LEVEL 159.3 FEET BELOW LAND SURFACE DATUM AUG 27, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1980	87.7	JAN 22, 1981	84.6	APR 02, 1981	83.4	JUL 05, 1981	85.1
04	87.6	23	84.8	03	83.3	08	85.3
17	86.7	24	85.0	06	83.2	10	85.4
18	86.6	25	85.2	07	83.1	14	85.5
19	86.5	26	85.4	09	83.0	16	85.4
20	86.4	27	85.5	12	82.9	18	85.3
21	86.3	30	85.6	15	82.8	28	85.4
23	86.2	FEB 02	85.5	19	82.9	31	85.5
24	86.1	03	85.4	25	83.0	AUG 04	85.6
26	86.0	04	85.3	27	83.1	06	85.2
NOV 02	85.9	05	85.1	29	83.2	13	85.6
04	85.8	06	85.0	MAY 01	83.3	15	85.7
05	85.7	07	84.9	06	83.4	16	85.8
07	85.6	08	84.8	10	83.3	17	86.0
09	85.5	09	84.7	12	83.4	18	86.1
10	85.4	10	84.6	13	83.6	19	86.2
12	85.3	13	84.5	14	83.7	20	86.4
14	85.2	15	84.4	15	83.9	21	86.5
18	85.1	18	84.3	16	84.1	22	86.6
20	85.0	22	84.2	27	84.2	25	86.7
22	84.9	24	84.1	29	84.1	28	86.6
26	84.8	28	84.0	31	84.0	SEP 07	86.7
28	84.7	MAR 02	83.9	JUN 01	83.9	10	86.8
30	84.6	04	83.8	03	83.8	13	86.7
DEC 02	84.5	05	83.7	04	83.7	15	86.6
04	84.4	11	83.6	11	83.6	17	86.5
07	84.3	13	83.7	16	83.7	18	86.4
09	84.4	14	83.8	22	83.6	19	86.2
10	84.5	15	83.9	24	83.7	20	86.1
15	84.6	16	84.0	25	83.8	21	86.0
17	84.5	17	84.1	26	83.9	22	85.9
18	84.4	22	84.2	27	84.0	23	85.8
21	84.3	24	84.1	28	84.1	24	85.7
24	84.4	25	84.0	29	84.3	26	85.6
31	84.5	26	83.9	30	84.5	27	85.5
JAN 13, 1981	84.5	27	83.8	JUL 01	84.6	29	85.4
15	84.4	29	83.7	02	84.8	30	85.3
20	84.3	30	83.6	03	84.9		
21	84.5	31	83.5	04	85.0		

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 362913120195701 LOCAL NUMBER 016S015E34N04M

1.2 MI SOUTHWEST OF CANTUA CREEK. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 8 IN, DEPTH 1130 FT. PERFORATED 1052-1112 FT. ALTITUDE OF LSD 334 FT. RECORDS AVAILABLE AUG. 1960 TO CURRENT YEAR. RECORDER INSTALLED 1960.

HIGHEST WATER LEVEL 320.3 FEET BELOW LAND SURFACE DATUM Sept. 30, 1981.

LOWEST WATER LEVEL 617.7 FEET BELOW LAND SURFACE DATUM AUG 29, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	337.9	NOV 16, 1980	331.3	JAN 07, 1981	325.8	FEB 20, 1981	331.5
02	337.8	17	331.1	08	325.7	21	330.6
03	337.4	18	329.8	10	325.6	22	329.9
04	337.3	19	329.5	11	325.5	23	329.3
06	337.2	21	329.4	13	325.4	24	329.1
07	336.8	23	329.3	14	328.9	25	329.0
08	336.3	25	329.2	15	330.2	26	328.8
10	331.2	26	329.0	16	330.7	27	328.1
11	336.0	27	328.9	17	331.2	MAR 01	328.0
12	335.9	28	328.8	18	331.5	02	327.6
13	335.6	30	328.7	19	331.1	03	337.4
14	335.5	DEC 02	328.6	20	328.0	04	327.1
15	335.2	03	328.4	21	327.4	05	326.7
16	335.1	04	328.4	22	326.8	06	326.5
17	334.9	05	328.9	23	326.7	07	326.4
18	334.5	06	328.8	24	326.6	08	326.3
19	334.3	07	328.5	25	326.5	09	325.9
20	334.1	08	328.4	26	326.6	10	325.8
21	333.8	09	328.3	27	330.0	11	325.5
22	333.7	10	328.1	28	331.0	12	325.4
23	333.5	11	328.0	29	331.5	13	325.3
26	333.6	12	327.9	30	332.0	14	325.2
27	333.4	13	327.8	31	332.3	15	325.1
28	333.3	14	327.3	FEB 01	332.6	17	324.2
29	333.2	17	327.2	02	332.8	18	324.1
30	333.1	18	326.9	03	332.9	20	324.0
31	332.9	19	326.8	05	333.0	21	323.8
NOV 02	332.9	21	326.7	06	333.4	23	323.7
03	332.7	22	326.6	07	334.2	24	323.4
04	332.6	23	326.4	08	335.0	25	323.3
05	332.5	24	326.5	09	335.5	26	323.2
06	332.4	26	326.6	10	335.7	27	323.0
08	332.3	27	326.4	11	336.4	28	322.9
09	332.2	28	326.5	12	336.6	29	322.7
11	332.1	29	326.6	15	336.5	30	322.5
12	332.0	JAN 01, 1981	326.5	16	336.3	APR 10	322.6
13	331.9	02	326.4	17	336.2	13	322.5
14	331.6	03	326.2	18	335.9	17	322.4
15	331.3	04	325.9	19	334.9	18	322.6
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 20, 1981	322.5	MAY 24, 1981	322.4	JUL 27, 1981	326.2	AUG 31, 1981	325.5
21	322.3	26	322.3	28	325.8	01	325.3
22	322.0	27	322.0	29	326.1	02	325.2
23	321.5	28	321.6	30	325.7	03	325.4
26	321.5	29	321.5	31	326.0	04	325.2
27	321.1	JUN 01	321.4	AUG 01	335.9	05	324.8
28	321.3	02	321.6	05	326.0	06	324.6
30	321.5	03	321.6	07	325.9	07	324.4
MAY 01	321.8	04	322.0	08	326.0	08	324.3
02	322.5	05	322.4	09	366.1	09	324.0
03	322.5	06	322.5	11	326.2	10	323.7
04	322.7	07	322.8	14	326.3	11	323.5
05	323.1	08	323.0	16	326.2	12	323.3
08	323.0	10	323.3	17	326.4	15	322.0
10	322.9	JUL 15	325.4	18	326.6	16	322.3
11	322.6	16	326.2	19	326.2	17	322.2
12	322.5	17	326.4	20	326.0	18	321.8
13	322.7	18	326.6	21	325.8	21	321.7
14	322.7	19	327.1	22	325.6	22	321.6
15	322.9	20	326.9	23	325.6	23	321.4
17	322.9	21	326.6	24	325.4	24	321.1
18	323.2	22	326.3	26	325.3	25	321.1
20	323.1	23	326.5	27	325.4	26	320.8
21	322.9	24	326.6	28	325.5	29	320.7
22	322.7	25	326.4	29	325.3	30	320.3
23	322.6	26	326.2	30	325.7		

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 362913120195601 LOCAL NUMBER 016S015E34N05M

1.2 MI SOUTHWEST OF CANTUA CREEK. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM.
DIAM 4 IN, DEPTH 300 FT, PERFORATED 240-300 FT. ALTITUDE OF LSD 334 FT. RECORDS AVAILABLE 1960
TO CURRENT YEAR.

HIGHEST WATER LEVEL 163.9 FEET BELOW LAND SURFACE DATUM Sept. 15, 1981.

LOWEST WATER LEVEL 196.3 FEET BELOW LAND SURFACE DATUM JUN 03, 1969.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 1980	165.9	MAR 17, 1981	164.9	JUL 15, 1981	164.2	SEP 15, 1981	163.9
JAN 20, 1981	165.4	MAY 12	164.6				

SITE NUMBER 362645120183401 LOCAL NUMBER 017S015E14Q01M

3.8 MI SOUTH OF CANTUA CREEK. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM
10 IN, DEPTH 2315 FT, PERFORATED 1064-1094 FT. ALTITUDE OF LSD 342 FT. RECORDS AVAILABLE 1969 TO
CURRENT YEAR. RECORDER INSTALLED 1969.

HIGHEST WATER LEVEL 325.1 FEET BELOW LAND SURFACE DATUM SEP 30, 1981.

LOWEST WATER LEVEL 605.3 FEET BELOW LAND SURFACE DATUM JUL 01, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	346.2	DEC 09, 1980	337.0	FEB 13, 1981	349.1	MAR 27, 1981	331.6
02	345.9	10	336.9	14	349.5	28	331.5
04	345.8	11	336.7	15	346.0	29	331.2
05	345.4	12	336.4	16	343.9	30	331.2
06	345.3	15	336.3	17	343.4	31	332.0
11	344.1	16	336.1	18	342.8	APR 01	332.8
12	344.0	17	335.9	19	341.8	02	333.5
13	343.9	18	335.7	20	341.9	03	333.9
14	343.8	21	335.8	21	341.5	04	334.1
15	343.6	22	335.6	22	341.2	05	334.4
16	343.4	23	335.5	23	340.8	06	334.6
18	343.0	24	335.4	24	340.7	07	334.7
20	342.5	29	335.3	25	340.2	08	334.8
21	342.2	31	335.2	26	338.8	09	334.9
25	342.0	JAN 01, 1981	335.0	27	337.8	15	335.0
27	341.9	10	334.1	28	337.5	16	334.9
30	341.5	12	340.6	MAR 01	337.0	17	334.6
NOV 01	341.4	13	341.0	02	336.4	18	335.0
02	341.2	14	337.3	03	336.0	19	334.1
03	341.1	15	336.1	04	335.7	20	333.1
04	341.0	16	335.4	05	335.5	21	332.4
06	340.9	17	335.3	06	335.1	22	331.9
08	340.8	18	335.2	07	334.8	23	331.1
09	340.7	19	335.0	08	334.4	24	330.9
10	340.4	20	334.4	09	334.2	27	330.8
13	340.4	21	334.5	10	334.0	28	331.8
14	340.2	28	334.6	11	333.8	29	333.0
15	340.1	29	334.8	12	333.7	30	339.1
16	340.0	30	335.0	13	333.9	MAY 01	342.0
18	338.0	31	335.2	14	333.7	02	339.1
19	338.1	FEB 03	335.1	15	333.5	03	338.0
20	338.2	04	335.4	16	333.4	04	337.7
21	337.9	05	335.5	17	332.5	05	337.7
24	337.8	06	336.7	18	332.6	06	341.2
25	337.7	07	337.9	20	332.5	07	337.5
28	337.6	08	338.9	21	332.4	08	340.6
29	337.4	09	345.5	22	332.3	09	342.1
30	337.3	10	348.1	23	332.2	10	342.7
DEC 03	337.2	11	348.8	24	331.8	11	342.8
06	337.1	12	348.8	26	331.7	12	342.8

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 13, 1981	343.2	JUN 08, 1981	331.1	AUG 09, 1981	349.0	SEP 05, 1981	333.1
14	343.2	09	331.0	10	349.4	06	332.8
15	343.7	10	330.7	12	349.5	07	332.2
16	344.2	11	330.3	13	349.6	08	332.0
17	341.3	12	330.5	14	349.7	09	331.4
18	338.6	13	330.2	15	350.0	10	331.1
19	338.2	14	330.2	16	349.8	11	330.5
20	341.5	15	330.7	17	349.9	12	330.3
21	342.5	16	335.7	18	350.1	13	330.1
22	342.0	17	338.7	19	350.5	14	330.0
23	341.0	18	340.5	20	349.6	15	331.2
24	336.7	JUL 15	347.9	21	348.8	16	331.1
25	335.1	16	347.4	22	348.1	17	330.8
26	334.0	17	347.8	23	347.9	18	330.5
27	333.1	18	348.0	24	347.5	19	330.2
28	332.5	19	348.1	25	346.4	20	328.9
29	332.4	21	348.2	26	345.8	21	328.1
30	332.3	22	348.1	27	345.8	22	327.7
31	332.8	23	348.7	28	345.3	23	327.5
JUN 01	333.1	24	348.6	29	345.2	24	327.2
02	333.6	25	348.7	30	343.8	25	327.0
03	333.2	26	348.5	31	339.0	26	326.8
04	332.4	29	348.5	SEP 01	336.6	27	326.0
05	331.8	30	348.6	02	335.5	28	325.7
06	331.6	AUG 01	348.7	03	334.9	29	325.3
07	331.3	02	348.9	04	334.2	30	325.1

SITE NUMBER 361935120134501 LOCAL NUMBER 018S016E33A01M

7.2 MI NORTHEAST OF OILFIELD. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 8 IN, DEPTH 1070 FT, PERFORATED 858-1070 FT. ALTITUDE OF LSD 320 FT. RECORDS AVAILABLE 1964 TO CURRENT YEAR.

HIGHEST WATER LEVEL 319.4 FEET BELOW LAND SURFACE DATUM May 12, 1981.

LOWEST WATER LEVEL 466.1 FEET BELOW LAND SURFACE DATUM JUL 30, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 1980	327.4	MAR 17, 1981	327.1	JUL 15, 1981	323.1	SEP 15, 1981	319.6
JAN 20, 1981	325.5	MAY 12	319.4				

FRESNO COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 361334120035101 LOCAL NUMBER 020S018E06D01M

2.8 MI NORTHEAST OF HURON. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 6 IN, DEPTH 1007 FT, PERFORATED 720-1007 FT. ALTITUDE OF LSD 324 FT. RECORDS AVAILABLE DEC. 1964 TO CURRENT YEAR. RECORDER INSTALLED 1964.

HIGHEST WATER LEVEL 305.8 FEET BELOW LAND SURFACE DATUM JAN 03, 1981; JAN 05, 1981.

LOWEST WATER LEVEL 596.3 FEET BELOW LAND SURFACE DATUM FEB 13, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	345.2	NOV 10, 1980	322.7	DEC 28, 1980	307.8	FEB 19, 1981	326.7
02	343.7	11	322.7	31	307.8	20	327.2
03	341.7	12	320.7	JAN 01, 1981	307.3	22	327.2
04	340.7	13	319.7	02	307.3	23	327.7
05	341.2	14	319.2	03	305.8	24	333.2
06	340.2	15	318.7	05	305.8	25	340.2
07	339.2	16	318.7	06	306.3	26	345.2
08	336.7	17	317.2	07	306.3	27	347.7
09	335.2	18	315.8	08	306.8	28	351.2
10	334.7	19	316.3	09	306.8	MAR 01	354.2
11	333.2	20	314.8	10	307.3	02	357.2
12	334.2	21	314.3	11	307.8	03	359.7
13	333.7	22	313.8	12	308.3	04	363.2
14	333.2	24	313.8	13	308.8	06	366.7
15	332.2	25	313.3	14	309.8	07	368.2
16	331.2	26	312.8	15	310.3	08	369.2
17	331.7	27	312.3	16	311.8	09	370.7
18	331.2	28	311.8	17	313.3	10	372.2
19	332.7	29	311.8	18	314.3	11	374.2
20	332.7	30	311.3	19	315.8	12	375.2
21	331.2	DEC 01	310.8	20	316.7	13	374.2
22	329.2	02	310.8	21	318.7	14	365.7
23	328.2	03	310.3	22	319.2	15	359.2
24	327.7	05	310.3	23	320.7	16	354.2
25	327.2	06	309.8	24	321.2	17	355.3
26	326.7	08	309.8	25	322.2	18	353.3
27	326.7	09	309.3	26	322.2	19	352.3
28	327.7	12	309.3	27	322.7	20	350.8
29	326.7	13	308.8	28	323.2	21	349.3
30	326.2	14	308.8	29	323.7	22	347.8
31	324.7	15	308.3	30	324.2	23	346.8
NOV 01	328.7	16	307.8	FEB 05	324.2	24	345.3
02	328.2	17	307.8	06	324.7	25	343.8
03	326.2	18	307.3	07	324.7	26	343.3
04	324.7	19	306.8	08	325.2	27	342.8
05	328.7	22	306.8	09	325.2	28	342.3
06	328.7	23	306.3	10	325.2	30	342.3
07	327.2	24	306.8	11	325.7	31	341.8
08	327.2	25	307.3	12	326.2	APR 02	341.8
09	324.7	27	307.3	18	326.2	03	341.3

FRESNO COUNTY--Continued

San Joaquin Valley (S-22)

Site Number 361334120035101 Local Number 020S018E06D01M--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 04, 1981	341.3	MAY 28, 1981	317.4	JUL 07, 1981	348.1	AUG 16, 1981	350.6
05	339.3	29	316.4	08	350.1	17	350.1
06	339.3	30	315.4	09	354.6	20	350.6
07	338.8	31	314.9	10	360.1	21	353.6
08	337.8	JUN 01	313.9	11	365.6	22	360.6
09	337.3	02	313.9	12	370.1	23	365.6
10	336.3	03	313.4	13	373.6	24	369.6
11	335.8	04	312.4	14	376.6	25	373.6
12	335.3	05	311.4	15	379.6	26	377.1
13	334.8	06	310.9	16	380.6	27	379.6
14	333.8	07	316.4	17	372.1	28	374.6
15	333.3	08	321.9	18	374.1	29	368.1
16	333.3	09	327.4	19	385.6	30	362.6
17	332.8	10	331.9	20	386.6	31	357.1
18	333.8	11	337.6	21	387.6	SEP 01	353.1
19	333.3	12	340.6	22	389.1	02	350.1
20	332.3	13	344.6	23	389.6	03	342.6
21	331.3	14	347.6	24	390.6	04	345.6
22	330.3	15	350.6	25	391.6	05	343.1
23	329.3	16	353.1	26	392.1	06	341.1
26	329.3	17	356.6	27	393.1	07	339.6
27	328.8	18	359.6	28	393.6	08	337.6
28	328.3	19	361.6	29	374.1	09	336.6
29	327.3	20	364.1	30	387.6	10	335.1
MAY 12	323.9	21	365.6	31	380.1	11	333.6
13	324.9	22	367.6	AUG 01	374.1	12	332.6
14	324.9	23	369.6	02	369.6	13	331.6
15	325.9	24	372.1	03	366.6	15	328.4
16	326.4	25	374.1	04	363.6	16	329.4
17	325.4	26	375.6	05	361.6	17	328.4
18	325.9	27	377.1	06	359.1	18	327.9
19	325.4	28	378.1	07	357.1	19	327.4
20	324.9	29	379.1	08	355.6	20	326.4
21	324.9	30	379.6	09	354.6	21	325.9
22	322.9	JUL 01	371.6	10	354.1	23	325.4
23	321.9	02	364.1	11	353.1	24	324.4
24	320.9	03	358.6	12	352.6	25	323.9
25	320.9	04	359.1	13	352.1	26	323.4
26	319.9	05	352.1	14	351.6	28	322.4
27	318.9	06	349.6	15	351.1	30	321.9

SITE NUMBER 361156119585501 LOCAL NUMBER 020S018E11Q01M

2.0 MI SOUTHEAST OF WESTHAVEN. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 4 IN, DEPTH 710 FT, PERFORATED 650-710 FT. ALTITUDE OF LSD 268 FT. RECORDS AVAILABLE SEPT. 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 227.9 FEET BELOW LAND SURFACE DATUM Jan. 20, 1981.

LOWEST WATER LEVEL 494.8 FEET BELOW LAND SURFACE DATUM JUL 31, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 1980	234.6	MAR 17, 1981	235.3	JUL 15, 1981	231.1	SEP 15, 1981	236.9
JAN 20, 1981	227.9	MAY 12	229.0				

SITE NUMBER 361156119585503 LOCAL NUMBER 020S018E11Q03M

2.0 MI SOUTHEAST OF WESTHAVEN. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 4 IN, DEPTH 1930 FT, PERFORATED 1885-1925 FT. ALTITUDE OF LSD 268 FT. RECORDS AVAILABLE APR. 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 175.7 FEET BELOW LAND SURFACE DATUM July 15, 1981.

LOWEST WATER LEVEL 461. FEET BELOW LAND SURFACE DATUM SEP 24, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18, 1980	218.4	MAR 17, 1981	207.8	JUL 15, 1981	175.7	SEP 15, 1981	186.5
JAN 20, 1981	208.2	MAY 12	183.5				

KERN COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 350436119061901 LOCAL NUMBER 011N021W03B01S

9.6 MI NORTHWEST OF WHEELER RIDGE. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 8 IN, DEPTH 1477 FT, PERFORATED 1037-1237 FT. ALTITUDE OF LSD 435 FT. RECORDS AVAILABLE APR. 1963 TO CURRENT YEAR. RECORDER INSTALLED 1963.

HIGHEST WATER LEVEL 351.0 FEET BELOW LAND SURFACE DATUM MAR 05, 1981.

LOWEST WATER LEVEL 539.5 FEET BELOW LAND SURFACE DATUM JUN 29, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	361.1	MAR 01, 1981	357.0	MAY 28, 1981	353.9	JUL 30, 1981	353.9
11	361.2	02	356.8	29	353.7	31	354.0
12	361.4	03	356.9	30	353.6	AUG 01	354.1
13	361.5	04	356.7	31	353.5	05	354.2
14	361.9	05	351.0	JUN 01	353.3	06	353.2
18	362.0	06	356.6	02	353.5	07	353.2
19	361.9	08	356.5	07	353.4	08	353.0
23	361.8	10	356.4	08	353.3	09	353.2
24	361.6	13	356.3	11	353.2	13	353.3
25	361.9	18	356.0	13	353.3	14	353.5
NOV 19	360.2	19	356.2	14	353.5	16	353.6
22	360.1	25	356.1	15	353.2	17	354.3
24	360.2	31	356.0	16	353.1	19	354.2
25	360.1	APR 03	355.9	17	353.4	22	354.1
27	360.0	04	355.7	18	352.4	23	354.0
28	359.8	05	355.7	19	352.6	24	354.2
JAN 01, 1981	358.9	06	355.5	20	352.9	25	354.1
02	358.8	11	355.4	22	353.0	26	353.8
04	358.7	12	355.3	23	353.4	27	353.6
07	358.6	13	355.1	24	353.3	28	353.2
11	358.7	16	355.0	25	353.2	29	353.2
12	358.5	17	354.9	26	352.9	30	353.5
13	358.4	18	355.2	28	353.0	31	353.8
14	358.2	21	355.1	30	352.9	SEP 01	353.6
15	358.1	22	355.0	JUL 02	353.0	02	353.7
17	358.0	24	354.9	05	352.9	03	354.2
22	357.9	25	354.8	06	353.2	11	354.1
24	358.0	27	354.9	07	353.4	12	354.0
26	358.1	28	354.8	08	353.2	15	354.3
FEB 01	358.0	29	354.7	09	353.1	16	354.1
02	357.9	30	354.5	10	352.9	21	353.2
03	357.7	MAY 12	354.2	15	352.8	25	353.1
15	357.6	13	354.0	16	352.9	27	353.2
16	357.5	18	353.9	17	353.3	29	353.3
17	357.4	19	354.2	18	353.3	30	353.4
19	357.3	21	354.1	24	354.2		
21	357.2	22	354.0	28	354.1		
26	357.1	25	353.9	29	353.8		

SITE NUMBER 352935119294701 LOCAL NUMBER 028S023E16K01M

2 MI NORTHWEST OF BUTTONWILLOW. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 550 FT, PERFORATED 200-350 FT. ALTITUDE OF LSD 285 FT. RECORDS AVAILABLE 1971 TO CURRENT YEAR.

HIGHEST WATER LEVEL 227.0 FEET BELOW LAND SURFACE DATUM Feb. 3, 1972.

LOWEST WATER LEVEL 270.0 FEET BELOW LAND SURFACE DATUM OCT 09, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
SEP 29, 1981	268.0

KERN COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 352841119101301 LOCAL NUMBER 028S026E21H01M

0.4 MI NORTHEAST OF DOW. HYDRAULIC ROTARY UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN. DEPTH 580 FT. ALTITUDE OF LSD 391 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 111.7 FEET BELOW LAND SURFACE DATUM MAR 31, 1954.

LOWEST WATER LEVEL 241.5 FEET BELOW LAND SURFACE DATUM AUG 22, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 28, 1981	150.5	SEP 23, 1981	177.5

SITE NUMBER 352841119101303 LOCAL NUMBER 028S026E21H03M

0.4 MI NORTHEAST OF DOW. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 1 IN. DEPTH 800 FT. OPEN END. ALTITUDE OF LSD 391 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 106.8 FEET BELOW LAND SURFACE DATUM MAR 02, 1953.

LOWEST WATER LEVEL 327. FEET BELOW LAND SURFACE DATUM AUG 16, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 28, 1981	238.5	SEP 23, 1981	252.5

SITE NUMBER 352228119295201 LOCAL NUMBER 029S023E27M01M

0.4 MI SOUTHWEST OF BUTTOWILLOW. IRRIGATION WELL IN ALLUVIUM. DIAM 16 IN. DEPTH 300 FT. PERFORATED 108-162, 168-300 FT. ALTITUDE OF LSD 270 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1953 TO CURRENT YEAR.

HIGHEST WATER LEVEL 18.2 FEET BELOW LAND SURFACE DATUM FEB 01, 1953.

LOWEST WATER LEVEL 72.5 FEET BELOW LAND SURFACE DATUM OCT 12, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 19, 1981	61.0	SEP 28, 1981	58.0

SITE NUMBER 352511119145701 LOCAL NUMBER 029S025E12M03M

1.4 MI NORTHEAST OF ROSEDALE. HYDRAULIC ROTARY OBSERVATION WELL IN ALLUVIUM. DIAM 1 IN. DEPTH 670 FT. PERFORATED 480-670 FT. ALTITUDE OF LSD 331 FT. RECORDS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1961 TO CURRENT YEAR.

HIGHEST WATER LEVEL 87.5 FEET BELOW LAND SURFACE DATUM FEB 05, 1976.

LOWEST WATER LEVEL 212.5 FEET BELOW LAND SURFACE DATUM AUG 23, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 06, 1981	199.5	SEP 24, 1981	208.5

KERN COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 351653118593301 LOCAL NUMBER 030S028E32B01M

1.3 MI WEST OF LAMONT. IRRIGATION WELL IN ALLUVIUM. DIAM 14 IN. DEPTH 441 FT. PERFORATED 108-116, 300-308, 346-352 FT. ALTITUDE OF LSD 354 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1940 TO CURRENT YEAR.

HIGHEST WATER LEVEL 6.3 FEET BELOW LAND SURFACE DATUM OCT 16, 1945.

LOWEST WATER LEVEL 178.00 FEET BELOW LAND SURFACE DATUM JAN 23, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 28, 1981	139.0	SEP 23, 1981	141.0

SITE NUMBER 351237119151501 LOCAL NUMBER 031S025E26A01M

3 MI NORTHEAST OF FORD CITY. HYDRAULIC ROTARY IRRIGATION WELL IN ALLUVIUM. DIAM 16-12 IN. DEPTH 1474 FT. 16-IN CSG 0-206 FT. 14-IN CSG 206-606 FT. 12-IN CSG 606-1474 FT. PERFORATED 206-1474 FT. ALTITUDE OF LSD 289 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1965 TO CURRENT YEAR.

HIGHEST WATER LEVEL 38.5 FEET BELOW LAND SURFACE DATUM JAN 23, 1968.

LOWEST WATER LEVEL 129.5 FEET BELOW LAND SURFACE DATUM OCT 17, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1980	81.0	FEB 11, 1981	76.0

SITE NUMBER 350720118532401 LOCAL NUMBER 032S028E23R01M

1.7 MI SOUTH OF WEED PATCH. HYDRAULIC ROTARY IRRIGATION WELL IN ALLUVIUM. DIAM UNKNOWN. DEPTH 815 FT. ALTITUDE OF LSD 387 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1945 TO CURRENT YEAR.

HIGHEST WATER LEVEL 58.1 FEET BELOW LAND SURFACE DATUM DEC 07, 1945.

LOWEST WATER LEVEL 305. FEET BELOW LAND SURFACE DATUM OCT 01, 1962.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	242.5	FEB 06, 1981	219.5

KINGS COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 362036119555301 LOCAL NUMBER 0185019E20P01M

6 MI SOUTH OF LANARE. HYDRAULIC ROTARY OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 6 IN, DEPTH 695 FT, PERFORATED 647-687 FT. ALTITUDE OF LSD 222 FT. RECORDS AVAILABLE MAR. 1967 TO CURRENT YEAR. RECORDER INSTALLED MAR. 1967.

HIGHEST WATER LEVEL 126.0 FEET BELOW LAND SURFACE DATUM NOV 24, 1980.

LOWEST WATER LEVEL 218.9 FEET BELOW LAND SURFACE DATUM SEP 24, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	131.0	NOV 15, 1980	126.7	DEC 29, 1980	130.6	MAR 19, 1981	127.4
02	130.9	16	126.6	30	130.7	22	127.3
03	130.8	17	126.5	JAN 02, 1981	130.6	24	127.2
04	130.7	18	126.5	03	130.3	25	127.1
05	130.6	20	126.4	04	130.1	26	127.0
06	130.5	21	126.3	05	129.9	28	126.9
07	130.4	22	126.1	06	129.7	29	126.8
08	130.3	24	126.0	07	129.5	30	126.7
09	130.1	25	126.1	08	129.3	31	126.6
10	130.0	26	126.4	09	129.3	APR 01	126.5
11	129.9	27	126.6	10	129.1	02	126.5
12	129.8	28	126.7	11	129.0	03	126.8
13	129.7	29	126.6	15	128.9	04	127.0
14	129.6	30	126.9	16	128.8	05	127.1
15	129.5	DEC 01	127.2	17	128.7	06	127.3
16	129.4	02	127.5	18	128.6	07	127.5
17	129.3	03	127.8	19	128.5	09	127.4
18	129.2	04	128.0	20	128.2	10	127.6
19	129.1	05	128.3	23	128.1	11	127.6
20	129.0	06	128.5	27	128.0	12	127.5
21	128.8	07	128.6	29	128.1	13	127.4
23	128.7	08	128.9	30	128.2	15	127.3
24	128.6	10	129.4	FEB 01	128.3	16	127.2
25	128.5	11	129.6	03	128.4	17	127.1
26	128.4	12	129.8	06	128.5	18	127.0
28	128.3	13	130.0	08	128.6	22	126.9
29	128.2	14	130.2	10	128.7	23	127.0
30	128.1	15	130.4	12	128.8	24	127.3
31	128.0	16	130.5	22	128.7	25	127.7
NOV 01	127.9	17	130.6	23	128.6	26	127.9
03	127.8	18	130.8	26	128.5	27	128.1
04	127.7	19	130.9	28	128.4	28	128.2
05	127.5	20	131.0	MAR 02	128.3	29	128.3
07	127.4	21	131.1	04	128.2	30	128.5
08	127.3	22	131.0	05	128.1	MAY 01	128.5
09	127.2	23	131.1	11	128.0	02	128.3
10	127.1	24	131.3	13	127.9	03	128.4
11	127.0	25	131.2	15	127.8	04	128.3
13	126.9	26	130.9	17	127.7	06	128.2
14	126.8	27	130.5	18	127.6	08	128.1

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 09, 1981	128.0	JUN 21, 1981	130.9	JUL 15, 1981	131.3	AUG 13, 1981	134.1
12	127.9	22	131.2	16	131.7	14	134.2
19	128.0	23	131.5	17	132.0	16	134.1
21	128.1	24	131.6	18	132.1	17	134.0
22	128.0	25	131.5	20	132.2	18	134.1
25	135.1	26	131.3	21	132.3	19	134.3
26	127.9	27	131.1	25	132.2	20	134.7
30	128.0	28	131.0	26	132.5	21	135.0
JUN 02	127.9	29	131.0	27	132.8	27	135.0
05	127.8	30	130.9	28	133.0	28	134.9
08	127.7	JUL 01	130.7	29	133.3	SEP 04	134.8
11	127.6	02	130.6	30	133.5	15	134.7
12	127.7	03	130.5	AUG 01	133.4	22	134.6
13	127.9	04	130.4	02	133.2	23	134.7
14	128.3	05	130.2	03	133.1	24	134.8
15	128.8	06	130.1	05	133.0	25	134.9
16	129.2	08	130.0	06	133.1	26	135.0
17	129.6	11	129.9	07	133.2	30	135.1
18	130.0	12	130.2	08	133.6		
19	130.2	13	130.6	09	133.9		
20	130.6	14	130.9	10	134.2		

KINGS COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 36203611955302 LOCAL NUMBER 0185019E20P02M

6 MI SOUTH OF LANARE. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM, DIAM 6 IN, DEPTH 577 FT. PERFORATED 497-537 FT. ALTITUDE OF LSD 222 FT. RECORDS AVAILABLE MAR. 1967 TO CURRENT YEAR. RECORDER INSTALLED MAR. 1967.

HIGHEST WATER LEVEL 121.8 FEET BELOW LAND SURFACE DATUM NOV 20, 1980.

LOWEST WATER LEVEL 229.5 FEET BELOW LAND SURFACE DATUM AUG 25, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	127.9	NOV 14, 1980	122.6	FEB 03, 1981	138.3	MAR 30, 1981	130.1
02	127.6	15	122.4	04	138.1	31	130.9
03	127.3	16	122.3	05	137.9	APR 01	131.6
04	127.0	17	122.1	06	137.6	02	132.0
05	126.7	18	121.9	07	137.2	03	132.8
06	126.5	20	121.8	08	137.1	04	136.6
07	126.3	21	122.4	09	136.7	05	140.7
08	126.0	22	125.3	10	136.2	06	142.1
09	125.7	23	126.1	11	135.5	07	144.8
10	125.6	24	127.2	12	135.0	08	147.1
11	125.4	25	127.9	13	134.4	09	148.5
12	125.2	26	128.1	15	133.3	10	143.9
13	125.0	27	125.9	16	132.8	11	141.4
14	124.9	28	127.1	17	132.3	12	139.4
15	124.7	29	128.2	18	131.9	13	138.4
18	124.7	30	129.0	19	131.6	14	137.9
19	124.9	DEC 01	129.6	20	131.3	15	137.6
20	125.1	02	129.9	21	131.2	16	137.6
21	125.4	03	128.9	22	131.0	17	138.2
22	125.6	04	128.7	23	130.9	18	139.1
23	125.7	05	129.2	26	130.8	19	139.4
24	125.8	06	130.4	27	130.7	20	139.6
25	125.9	07	131.7	MAR 01	130.6	21	140.4
26	126.0	08	132.4	03	130.7	22	141.5
29	126.0	09	132.9	06	130.8	23	142.2
30	125.9	10	133.5	09	130.9	24	142.8
31	125.8	JAN 20, 1981	142.1	13	130.8	25	144.8
NOV 01	125.6	21	141.6	15	130.9	26	149.4
02	125.5	22	141.3	17	131.0	27	153.1
03	125.4	23	141.1	19	130.9	28	154.8
04	125.2	24	140.9	20	130.8	29	155.7
05	125.0	25	140.8	21	130.7	30	152.2
06	124.7	26	140.7	22	130.4	MAY 01	149.6
07	124.3	27	140.5	23	130.0	02	149.5
08	124.0	28	140.3	24	129.7	03	146.7
09	123.7	29	140.1	25	129.4	04	145.2
10	123.4	30	139.7	26	129.1	05	144.6
11	123.1	31	139.3	27	129.0	06	144.0
12	123.0	FEB 01	138.9	28	128.9	07	143.5
13	122.8	02	138.5	29	129.3	08	143.6

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 09, 1981	144.3	JUN 07, 1981	139.4	JUL 06, 1981	145.6	AUG 06, 1981	148.3
10	144.9	08	139.7	07	145.1	07	150.1
11	145.4	09	140.0	08	144.2	08	152.0
12	145.9	10	140.1	09	143.6	09	153.2
13	146.2	11	142.0	10	143.3	10	154.2
14	146.2	12	143.9	11	144.9	11	155.3
15	146.5	13	144.7	12	147.0	12	154.2
16	147.4	14	145.8	13	148.4	13	153.0
17	147.8	15	146.8	14	149.5	14	152.8
18	147.9	16	147.2	15	154.2	15	151.8
19	147.1	17	147.7	16	157.0	16	150.2
20	146.1	18	148.3	17	159.3	17	148.8
21	145.8	19	151.3	18	161.0	18	147.8
22	146.1	20	153.8	19	162.4	19	147.0
23	146.4	21	155.9	20	163.8	20	148.7
24	146.7	22	155.6	21	164.2	21	150.4
25	146.8	23	154.6	23	156.9	22	152.3
26	146.5	24	154.2	24	154.7	23	153.8
27	146.2	25	154.8	25	155.2	24	152.3
28	144.1	26	155.2	26	155.9	25	150.6
29	143.2	27	155.6	28	156.4	26	149.9
30	142.3	28	155.9	29	154.9	27	149.4
31	141.4	29	153.3	30	153.1	28	149.1
JUN 01	140.8	30	151.3	31	151.9	29	148.5
02	140.1	JUL 01	149.6	AUG 01	151.2	30	147.7
03	139.6	02	147.8	02	150.5	31	147.0
04	139.1	03	147.1	03	149.8		
05	138.7	04	146.6	04	149.2		
06	139.0	05	146.2	05	148.6		

GROUND WATER

KINGS COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 36203511955203 LOCAL NUMBER 0185019E20P03M

6 MI SOUTH OF LANARE. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 4 IN, DEPTH 222 FT, PERFORATED 200-222 FT. ALTITUDE OF LSD 222 FT. RECORDS AVAILABLE OCT. 1972 TO CURRENT YEAR. RECORDER INSTALLED SEPT. 1972.

HIGHEST WATER LEVEL 114.7 FEET BELOW LAND SURFACE DATUM Nov. 21, 1980.

LOWEST WATER LEVEL 155.3 FEET BELOW LAND SURFACE DATUM SEP 29, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1980	116.6	DEC 09, 1980	116.0	FEB 04, 1981	118.6	APR 07, 1981	117.1
03	116.5	10	116.4	05	118.7	08	117.4
04	116.4	11	116.6	06	118.8	09	117.7
05	116.3	12	116.8	08	118.9	10	117.4
07	116.2	13	117.0	09	118.8	11	117.2
08	116.1	14	117.1	10	118.7	12	117.1
09	116.0	16	117.0	11	118.5	13	117.0
10	115.9	21	116.9	12	118.2	15	116.9
14	115.8	22	117.4	13	118.0	18	117.0
15	115.6	23	117.8	14	117.8	19	117.1
27	115.7	24	117.7	15	117.5	20	117.3
29	115.8	25	117.5	16	117.3	21	117.4
NOV 01	115.7	26	117.4	17	117.1	22	117.5
03	115.6	27	117.6	18	117.0	24	117.6
04	115.5	28	117.8	19	116.8	25	117.8
06	115.4	29	118.0	20	116.7	26	118.3
08	115.3	30	118.1	21	116.6	27	118.7
10	115.2	31	118.2	22	116.5	28	119.0
11	115.1	JAN 01, 1981	118.4	23	116.3	29	119.2
15	115.0	02	118.2	24	116.2	30	118.9
17	114.9	03	118.4	26	116.1	MAY 01	118.9
18	114.8	04	118.6	MAR 02	116.0	02	119.0
21	114.7	07	118.7	05	115.9	03	118.7
22	115.0	09	118.8	06	116.0	05	118.6
23	115.2	10	119.0	08	116.1	08	118.7
24	115.4	11	119.3	10	116.0	12	118.8
25	115.5	12	119.5	13	115.9	25	118.8
26	115.6	13	119.7	17	116.0	27	118.7
27	115.3	14	119.8	18	115.9	28	118.5
28	115.2	15	119.5	19	115.7	29	118.4
29	115.5	16	119.3	23	115.6	30	118.2
30	115.6	20	119.4	25	115.5	31	118.1
DEC 01	115.7	23	119.3	26	115.3	JUN 02	118.0
02	115.8	24	119.4	29	115.2	04	117.5
03	115.6	26	119.3	31	115.3	11	117.4
04	115.3	27	119.2	APR 02	115.4	13	117.5
05	115.1	30	119.1	03	115.5	14	117.6
06	115.1	FEB 01	119.0	04	115.9	16	117.7
07	115.2	02	118.8	05	116.4	18	117.8
08	115.6	03	118.6	06	116.8	19	118.4

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 20, 1981	118.9	JUL 10, 1981	118.4	AUG 03, 1981	119.7	SEP 07, 1981	118.8
21	119.3	12	118.3	05	119.6	09	118.7
22	119.5	14	118.4	09	119.5	10	118.6
23	119.7	15	119.1	11	119.6	11	118.5
24	119.8	16	119.5	15	119.7	12	118.4
25	119.9	17	119.9	17	119.6	14	118.3
26	120.1	18	120.3	20	119.5	15	118.2
27	120.3	19	120.6	22	119.6	19	118.1
28	120.4	20	120.9	23	119.8	20	117.9
29	120.1	21	121.1	25	119.9	24	118.0
30	119.8	22	120.7	27	119.8	25	118.1
JUL 01	119.6	23	120.7	28	119.7	26	118.2
02	119.4	24	120.5	29	119.5	27	118.4
03	119.2	25	120.4	30	119.4	28	118.5
05	119.1	26	120.2	31	119.3	29	118.6
06	119.0	28	120.1	SEP 01	119.2	30	118.7
07	118.8	30	120.0	03	119.1		
08	118.6	AUG 01	119.9	04	119.0		
09	118.5	02	119.8	06	118.9		

KINGS COUNTY--Continued

San Joaquin Valley (S-22)

SITE NUMBER 361847119352401 LOCAL NUMBER 019S022E04B01M

0.7 MI SOUTHEAST OF HANFORD. HYDRAULIC ROTARY IRRIGATION WELL IN ALLUVIUM. DIAM 12 IN, DEPTH 173 FT. ALTITUDE OF LSD 245 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1961 TO CURRENT YEAR.

HIGHEST WATER LEVEL 72.2 FEET BELOW LAND SURFACE DATUM APR 03, 1961.

LOWEST WATER LEVEL 144.6 FEET BELOW LAND SURFACE DATUM JUL 22, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 23, 1981	87.2	SEP 29, 1981	91.8

SITE NUMBER 361610119370501 LOCAL NUMBER 019S022E19A01M

0.9 MI NORTHEAST OF GUERNSEY. HYDRAULIC ROTARY OBSERVATION WELL IN ALLUVIUM. DIAM 1 IN, DEPTH 699 FT, PERFORATED 429-699 FT. ALTITUDE OF LSD 235 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1959 TO PRESENT.

HIGHEST WATER LEVEL 69.2 FEET BELOW LAND SURFACE DATUM FEB 14, 1970.

LOWEST WATER LEVEL 140.3 FEET BELOW LAND SURFACE DATUM AUG 31, 1961.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04, 1980	79.0	JAN 23, 1981	72.6

SITE NUMBER 360027119574201 LOCAL NUMBER 022S019E18P02M

IN KETTLEMAN CITY, NEAR INTERSECTION OF SIXTH STREET AND GEN. PET STREET. HYDRAULIC ROTARY PUBLIC SUPPLY WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 410 FT, PERFORATED 309-329, 356-377 FT. ALTITUDE OF LSD 255 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1950 TO CURRENT YEAR.

HIGHEST WATER LEVEL 110.2 FEET BELOW LAND SURFACE DATUM JAN 15, 1950.

LOWEST WATER LEVEL 210. FEET BELOW LAND SURFACE DATUM JUL 03, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 16, 1981	168.0	AUG 28, 1981	172.0

MERCED COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 372020120383501 LOCAL NUMBER 0075012E10F02M

0.1 MI SOUTHWEST OF ATWATER. CABLE TOOL IRRIGATION WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 55 FT. ALTITUDE OF LSD 145 FT. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 25.3 FEET BELOW LAND SURFACE DATUM DEC 01, 1980.

LOWEST WATER LEVEL 48.4 FEET BELOW LAND SURFACE DATUM JUN 01, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20, 1980	25.50	JAN 02, 1981	25.75	APR 29, 1981	27.12	JUL 01, 1981	26.95
DEC	25.3	FEB 10	26.41	MAY 21	26.75	AUG 21	27.35

SITE NUMBER 372030120371301 LOCAL NUMBER 0075012E11G01M

0.4 MI SOUTHWEST OF ATWATER. CABLE TOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16-14 IN, DEPTH 220 FT, 16-IN CSG 4-100 FT, 14-IN CSG 100-220 FT, PERFORATED 177-217 FT. ALTITUDE OF LSD 146 FT. RECORDS AVAILABLE 1977 TO APRIL 1981.

HIGHEST WATER LEVEL 27.5 FEET BELOW LAND SURFACE DATUM DEC 27, 1979.

LOWEST WATER LEVEL 99.3 FEET BELOW LAND SURFACE DATUM AUG 29, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20, 1980	28.02	JAN 02, 1981	30.10	FEB 10, 1981	27.52	APR 29, 1981	30.02

SITE NUMBER 371523121002801 LOCAL NUMBER 0085009E08E01M

0.2 MI SOUTH OF GUSTINE. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 60 FT. ALTITUDE OF LSD 105 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1971 TO CURRENT YEAR.

HIGHEST WATER LEVEL 11. FEET BELOW LAND SURFACE DATUM APR 11, 1974.

LOWEST WATER LEVEL 17.5 FEET BELOW LAND SURFACE DATUM MAR 17, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1980	11.5	APR 03, 1981	12.0

SITE NUMBER 371047120570901 LOCAL NUMBER 0095009E14N01M

1 MI NORTHWEST OF VOLTA. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN, DEPTH 500 FT, PERFORATED 100-220, 360-500 FT. ALTITUDE OF LSD 96 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 4.4 FEET BELOW LAND SURFACE DATUM OCT 13, 1976.

LOWEST WATER LEVEL 158.3 FEET BELOW LAND SURFACE DATUM NOV 07, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 21, 1980	65.3

SAN JOAQUIN COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 375003121121901 LOCAL NUMBER 001S007E21G01M

1 MI SOUTH OF TURNER. HYDRAULIC ROTARY DOMESTIC WATER-TABLE WELL IN ALLUVIUM.
 DIAM 5 IN, DEPTH 85 FT, CASED TO 85 FT. ALTITUDE OF LSD 44 FT.
 MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1972 TO
 CURRENT YEAR.

HIGHEST WATER LEVEL 18. FEET BELOW LAND SURFACE DATUM OCT 03, 1973.

LOWEST WATER LEVEL 43.2 FEET BELOW LAND SURFACE DATUM OCT 04, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1980	26.9	MAR 18, 1981	31.3	SEP 23, 1981	28.2

SITE NUMBER 374335121253301 LOCAL NUMBER 002S005E28P01M

0.3 MI WEST OF TRACY. HYDRAULIC ROTARY DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 6.5 IN, DEPTH
 119 FT, PERFORATED 109-119 FT. ALTITUDE OF LSD 72 FT. MEASUREMENTS FURNISHED BY CALIFORNIA
 DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 17. FEET BELOW LAND SURFACE DATUM OCT 03, 1974.

LOWEST WATER LEVEL 25.5 FEET BELOW LAND SURFACE DATUM MAR 22, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1980	20.5	MAR 31, 1981	21.5

SITE NUMBER 380717121114501 LOCAL NUMBER 003N007E10L04M

0.8 MI SOUTHEAST OF VICTOR. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 12-10 IN, DEPTH 190 FT,
 12-IN CSG 0-121 FT, 10-IN CSG 121-190 FT. ALTITUDE OF LSD 73 FT. MEASUREMENTS FURNISHED BY
 CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1935 TO CURRENT YEAR.

HIGHEST WATER LEVEL 35.51 FEET BELOW LAND SURFACE DATUM JAN 11, 1943.

LOWEST WATER LEVEL 98.74 FEET BELOW LAND SURFACE DATUM AUG 01, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	87.5	JAN 14, 1981	83.9	APR 02, 1981	81.8	AUG 04, 1981	96.2
NOV 14	86.6	FEB 04	83.4	MAY 01	85.3	SEP 10	91.6
DEC 04	85.5	MAR 06	82.6	JUN 03	89.6		

SITE NUMBER 374223121250601 LOCAL NUMBER 003S005E04M01M

2 MI NORTHWEST OF CARBONA. HYDRAULIC ROTARY DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM
 6 IN, DEPTH 140 FT, SCREENED 120-140 FT. ALTITUDE OF LSD 118 FT. MEASUREMENTS FURNISHED BY
 CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1972 TO CURRENT YEAR.

HIGHEST WATER LEVEL 45.5 FEET BELOW LAND SURFACE DATUM OCT 03, 1974.

LOWEST WATER LEVEL 55.5 FEET BELOW LAND SURFACE DATUM MAR 31, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1980	51.0	MAR 31, 1981	55.5

STANISLAUS COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 374040121083701 LOCAL NUMBER 003S007E13A01M

4.4 MI SOUTHWEST OF RIPON. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN. DEPTH 198 FT.
 ALTITUDE OF LSD 41 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
 RECORDS AVAILABLE 1937 TO CURRENT YEAR.

HIGHEST WATER LEVEL 1.2 FEET BELOW LAND SURFACE DATUM MAR 03, 1969.

LOWEST WATER LEVEL 8.6 FEET BELOW LAND SURFACE DATUM Nov. 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 1980	8.6	MAR 1981	6.0

SITE NUMBER 372040121024501 LOCAL NUMBER 007S008E12D01M

0.4 MI NORTHWEST OF NEWMAN. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM
 16 IN. DEPTH 425 FT. ALTITUDE OF LSD 106 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF
 WATER RESOURCES. RECORDS AVAILABLE 1974 TO CURRENT YEAR.

HIGHEST WATER LEVEL 34.00 FEET BELOW LAND SURFACE DATUM MAR 20, 1980.

LOWEST WATER LEVEL 67. FEET BELOW LAND SURFACE DATUM OCT 17, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	35.0	OCT 29, 1980	35.0	APR 02, 1981	41.0

TULARE COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 362215119124001 LOCAL NUMBER 018S025E12Q01M

1 MI SOUTH OF IVANHOE. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN. DEPTH UNKNOWN.
 ALTITUDE OF LSD 363 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
 RECORDS AVAILABLE 1924 TO CURRENT YEAR.

HIGHEST WATER LEVEL 20. FEET BELOW LAND SURFACE DATUM APR 09, 1925.

LOWEST WATER LEVEL 134.6 FEET BELOW LAND SURFACE DATUM OCT 11, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 03, 1981	43.5	SEP 22, 1981	53.5

TULARE COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 361002119212601 LOCAL NUMBER 020S024E27C01M

0.7 MI NORTHWEST OF OCTOL. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH UNKNOWN.
ALTITUDE OF LSD 265 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
RECORDS AVAILABLE 1974 TO CURRENT YEAR.

HIGHEST WATER LEVEL 58.0 FEET BELOW LAND SURFACE DATUM JAN 26, 1981.

LOWEST WATER LEVEL 108.5 FEET BELOW LAND SURFACE DATUM OCT 06, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 26, 1981	58.0	SEP 23, 1981	68.0

SITE NUMBER 360931119223401 LOCAL NUMBER 020S024E28L01M

0.8 MI NORTHWEST OF OCTOL. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH UNKNOWN.
ALTITUDE OF LSD 257.5 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES.
RECORDS AVAILABLE 1973 TO CURRENT YEAR.

HIGHEST WATER LEVEL 64.00 FEET BELOW LAND SURFACE DATUM SEP 23, 1980.

LOWEST WATER LEVEL 112.5 FEET BELOW LAND SURFACE DATUM OCT 08, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 26, 1981	64.5	SEP 23, 1981	66.0

TULARE COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 355933119062001 LOCAL NUMBER 022S027E30D02M

3.6 MI NORTHWEST OF TERRA BELLA. HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM.
 DIAM 10.75 IN. DEPTH 1246 FT. PERFORATED 1083-1207 FT. ALTITUDE OF LSD 407 FT. RECORDS AVAILABLE
 1970 TO CURRENT YEAR. RECORDER INSTALLED 1970.

HIGHEST WATER LEVEL 210.3 FEET BELOW LAND SURFACE DATUM MAR 09, 1971.

LOWEST WATER LEVEL 357.5 FEET BELOW LAND SURFACE DATUM JUL 31, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	296.6	FEB 01, 1981	235.7	MAR 19, 1981	226.4	APR 28, 1981	252.0
02	298.0	02	235.6	20	226.6	29	256.4
03	298.9	03	235.7	21	226.8	30	261.3
04	299.4	04	236.0	22	226.9	MAY 01	265.3
05	294.0	05	236.2	23	227.2	02	268.4
06	291.8	07	236.2	24	227.5	03	269.4
07	295.0	08	235.9	25	227.7	04	266.5
08	299.1	09	235.6	26	228.0	05	268.5
09	301.4	10	235.5	27	228.1	06	271.3
10	302.8	11	235.3	28	228.3	13	287.2
11	304.3	12	235.1	29	228.3	14	289.9
NOV 19	251.4	13	235.0	30	228.2	15	292.2
JAN 01, 1981	242.7	14	234.8	31	228.4	16	289.7
02	242.4	15	234.6	APR 01	229.0	17	287.8
03	242.2	16	234.5	02	229.7	18	288.7
04	241.9	17	234.3	03	233.0	19	291.3
05	241.6	18	234.2	04	237.6	20	289.8
06	241.3	19	233.7	05	236.0	21	286.5
07	240.9	21	232.6	06	234.5	22	284.3
08	240.6	22	232.0	07	237.2	23	282.0
09	240.2	23	231.2	08	240.5	24	279.9
10	239.8	24	230.7	09	240.2	25	277.8
11	239.5	25	230.2	10	239.8	26	275.8
12	239.1	26	229.7	11	240.0	27	274.5
13	238.7	27	229.3	12	240.5	28	274.0
14	238.4	28	228.9	13	240.9	29	273.9
15	238.0	MAR 01	228.4	14	243.1	30	273.5
16	237.7	02	228.0	15	244.9	31	273.3
17	237.4	03	227.7	16	245.6	JUN 01	275.1
18	237.3	04	227.3	17	247.5	02	278.5
19	237.4	05	226.9	18	249.2	03	280.8
20	237.6	06	226.7	19	248.4	04	284.6
21	237.7	07	226.4	20	246.8	05	290.2
25	237.6	08	226.1	21	245.4	06	295.0
26	237.5	09	225.8	22	244.7	07	298.3
27	237.3	10	225.4	23	244.2	08	301.1
28	237.2	11	225.2	24	243.9	09	303.9
29	236.8	16	225.3	25	244.0	10	305.9
30	236.3	17	225.5	26	244.3	11	306.2
31	236.0	18	225.9	27	245.5	12	309.7

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 13, 1981	311.5	JUL 30, 1981	334.9	AUG 21, 1981	335.7	SEP 12, 1981	316.0
14	306.5	31	336.6	22	331.0	13	315.8
15	304.0	AUG 01	337.1	23	327.8	14	314.3
16	308.3	02	333.6	24	325.1	15	315.6
17	310.8	03	329.2	25	322.2	16	317.3
18	312.7	04	330.0	26	320.6	17	317.7
19	312.9	05	330.6	27	319.9	18	317.9
20	313.8	06	331.1	28	320.0	19	318.5
JUL 16	328.0	07	333.8	29	320.3	20	316.3
17	325.0	08	335.6	30	319.9	21	314.3
18	322.6	09	333.3	31	318.9	22	318.2
19	320.6	10	329.0	SEP 01	323.1	23	319.9
20	319.0	11	331.2	02	327.0	24	319.3
21	323.3	12	332.8	03	330.7	25	316.9
22	326.6	13	333.4	04	329.8	26	314.6
23	328.4	14	333.8	05	327.5	27	312.8
24	331.8	15	334.6	06	324.7	28	311.1
25	331.4	16	332.6	07	322.0	29	309.6
26	329.5	17	328.2	08	319.5	30	308.2
27	326.8	18	330.6	09	317.8		
28	330.6	19	333.0	10	317.1		
29	333.0	20	334.9	11	316.4		

TULARE COUNTY--Continued

San Joaquin Valley (S-22)

SITE NUMBER 355523119170602 LOCAL NUMBER 023S025E16N03M

2.4 MI SOUTH OF PIXLEY. OBSERVATION ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 8 IN, DEPTH 430 FT, PERFORATED 360-420 FT. ALTITUDE OF LSD 267 FT. RECORDS AVAILABLE JUNE 1959 TO CURRENT YEAR. RECORDER INSTALLED 1959.

HIGHEST WATER LEVEL 125.6 FEET BELOW LAND SURFACE DATUM FEB 29, 1980.

LOWEST WATER LEVEL 288.5 FEET BELOW LAND SURFACE DATUM JUL 31, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	167.1	NOV 11, 1980	147.4	DEC 26, 1980	133.2	FEB 05, 1981	131.6
02	166.4	12	146.4	27	133.0	06	131.3
03	165.5	13	146.3	28	132.9	07	131.1
04	164.9	14	146.1	29	132.8	11	131.0
05	164.3	15	146.0	30	133.0	12	131.2
06	163.4	16	145.7	31	136.4	16	131.1
07	162.5	17	145.5	JAN 01, 1981	136.1	17	130.9
08	162.0	19	144.4	02	135.9	18	130.7
09	161.3	20	143.9	03	136.9	19	130.6
10	160.8	21	143.8	04	133.9	20	130.5
11	160.3	22	143.4	05	132.9	21	130.1
12	159.9	24	143.3	06	132.9	22	129.8
13	159.5	25	143.0	07	133.4	23	129.1
14	159.4	26	142.8	08	133.4	24	129.5
15	158.6	27	142.2	09	132.9	25	129.5
16	158.3	28	141.7	10	132.8	26	129.1
17	157.6	29	140.9	11	132.5	27	128.4
18	157.4	30	140.9	12	131.9	28	128.1
19	156.7	DEC 01	140.0	13	132.1	MAR 02	128.0
20	156.4	02	139.5	14	132.4	03	127.7
21	155.5	03	139.1	15	132.8	04	127.3
22	155.4	04	138.8	16	132.9	05	127.2
23	154.6	05	138.6	17	133.2	06	126.6
24	154.1	06	138.1	18	133.1	07	126.5
25	153.9	07	137.7	19	133.0	08	126.2
26	153.4	08	137.4	20	133.4	10	126.1
27	152.7	09	137.0	21	134.2	11	126.4
28	152.4	10	136.8	22	135.0	12	126.6
29	152.2	11	136.2	23	135.2	13	127.1
30	151.8	12	136.1	24	135.6	17	127.0
31	151.4	14	136.0	25	135.1	18	127.7
NOV 02	151.4	15	135.9	26	135.0	19	128.5
03	150.8	16	135.1	27	134.3	20	129.1
04	150.4	17	135.3	28	134.0	21	129.7
05	150.4	18	134.9	29	134.0	22	130.3
06	150.0	21	134.8	30	133.1	23	130.8
07	149.5	22	134.3	FEB 01	133.0	24	130.6
08	149.4	23	133.9	02	132.3	25	131.3
09	148.5	24	133.7	03	132.1	26	132.3
10	147.5	25	133.7	04	131.9	27	133.4

GROUND WATER

TULARE COUNTY--Continued

San Joaquin Valley (5-22)

Site Number 355523119170602 Local Number 0235025E16N03M--Continued

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 28, 1981	133.9	MAY 14, 1981	189.6	JUN 30, 1981	252.4	AUG 17, 1981	254.4
29	134.5	15	191.8	JUL 01	251.7	18	269.9
30	135.7	16	192.8	02	252.1	19	275.9
31	136.1	17	171.1	03	230.1	20	275.7
APR 01	138.2	18	212.9	04	229.4	21	275.0
02	141.2	19	213.6	05	236.9	22	261.5
03	142.2	20	196.2	06	242.0	23	254.2
04	143.4	21	191.5	07	242.2	24	255.9
05	144.2	22	188.8	08	241.0	25	270.9
06	145.8	23	187.1	09	232.4	26	270.7
07	159.1	24	183.6	10	232.6	27	270.9
08	163.5	25	181.6	11	230.6	28	276.7
09	166.8	26	180.6	12	229.8	29	259.4
10	173.2	27	179.9	13	238.0	30	258.0
11	168.3	28	179.6	14	260.0	31	255.9
12	171.0	29	178.6	15	266.7	SEP 01	253.3
13	172.2	30	178.6	16	244.5	02	257.3
14	172.6	31	177.8	17	249.5	03	268.5
15	173.8	JUN 01	177.6	18	251.1	04	269.9
16	174.7	02	177.6	19	253.6	05	268.3
17	201.0	03	177.2	20	253.0	06	253.1
18	206.5	04	177.3	21	271.5	07	242.7
19	181.8	05	177.9	22	273.4	08	242.0
20	172.2	06	179.4	23	274.4	09	237.5
21	173.1	07	183.6	24	274.3	10	233.0
22	171.4	08	186.4	25	274.0	11	232.6
23	172.2	09	188.6	26	266.2	12	230.1
24	170.8	10	214.4	27	274.0	13	226.5
25	171.8	11	224.5	28	257.2	14	223.7
26	173.2	12	233.1	29	260.4	15	221.1
27	171.3	13	237.6	30	256.0	16	220.2
28	172.1	14	241.8	31	275.4	17	219.0
29	199.4	15	223.6	AUG 01	275.9	18	217.8
30	204.5	16	223.5	02	270.1	19	216.2
MAY 01	186.0	17	225.0	03	258.0	20	215.6
02	186.6	18	226.6	05	261.0	21	216.3
03	187.6	19	229.0	06	275.1	22	214.5
04	186.7	20	233.7	07	276.2	23	212.6
05	185.4	21	235.6	08	277.0	24	214.7
06	185.2	22	228.8	09	276.9	25	215.7
07	187.5	23	231.0	10	261.9	26	212.0
08	187.9	24	231.5	11	263.0	27	209.5
09	209.2	25	231.1	12	276.5	28	208.3
10	209.5	26	251.0	13	277.4	29	208.8
11	185.2	27	251.3	14	277.0	30	210.7
12	188.6	28	250.7	15	275.4		
13	190.2	29	252.6	16	253.5		

TULARE COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 355523119170603 LOCAL NUMBER 0235025E16N04M

2.4 MI SOUTH OF PIXLEY. ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN. DEPTH 250 FT. PERFORATED 200-240 FT. RECORDS AVAILABLE JUNE 1959 TO CURRENT YEAR. RECORDER INSTALLED 1959.

HIGHEST WATER LEVEL 73.4 FEET BELOW LAND SURFACE DATUM MAR 19, 1981.

LOWEST WATER LEVEL 122.9 FEET BELOW LAND SURFACE DATUM AUG 17, 1961.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	77.8	DEC 08, 1980	74.8	FEB 15, 1981	73.9	APR 15, 1981	77.3
03	77.7	10	74.7	17	73.8	16	77.4
04	77.5	11	74.6	18	73.9	17	78.0
07	77.4	12	74.4	19	73.8	18	78.1
08	77.3	13	74.5	22	73.9	19	77.5
09	77.1	14	74.6	23	73.5	20	77.0
11	77.2	15	74.5	25	73.7	21	76.9
12	77.3	16	74.3	26	73.9	25	76.8
13	77.1	19	74.4	27	73.8	26	77.0
14	77.0	21	74.3	28	73.6	28	77.0
15	76.8	25	74.4	MAR 01	73.5	29	77.6
18	76.9	26	74.2	02	73.6	30	78.0
19	76.7	30	74.1	05	73.5	MAY 01	77.4
20	76.6	JAN 01, 1981	74.2	06	73.6	02	77.5
21	76.5	02	74.3	07	73.8	03	77.6
24	76.4	03	74.4	10	73.7	06	77.5
25	76.2	04	74.2	11	73.6	07	77.6
28	76.3	07	74.1	16	73.7	08	77.6
29	76.2	09	74.2	17	73.6	09	78.2
30	76.0	10	74.1	18	73.5	10	78.3
31	75.8	15	74.0	19	73.4	11	77.7
NOV 02	75.9	17	74.1	20	73.5	12	77.8
03	75.8	18	74.2	21	73.7	13	77.9
04	75.6	19	74.1	22	73.8	15	78.0
08	75.5	21	74.0	25	73.7	16	78.2
09	75.4	23	74.2	26	73.6	17	78.5
10	75.3	26	74.0	29	73.7	18	78.6
12	75.4	27	73.8	30	73.8	19	78.8
19	75.2	29	74.0	APR 02	73.7	21	78.4
21	75.1	30	74.1	03	73.9	22	78.2
22	75.0	31	74.2	04	74.1	24	78.1
25	75.1	FEB 01	74.1	05	74.3	25	78.2
27	75.0	02	74.0	06	74.6	26	78.1
28	74.8	03	73.9	07	75.1	29	78.2
30	74.7	04	74.0	08	75.5	30	78.3
DEC 01	74.8	06	73.9	09	75.7	JUN 01	78.2
03	74.7	07	74.0	10	75.8	05	78.3
04	74.5	08	73.8	11	76.9	06	78.4
06	74.7	09	73.7	12	77.1	07	78.6
07	74.6	10	74.0	14	77.2	08	78.6

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 09, 1981	79.1	JUL 05, 1981	82.8	JUL 30, 1981	84.5	AUG 27, 1981	86.5
10	80.0	06	82.9	31	85.3	28	86.5
11	80.3	07	83.1	AUG 01	85.6	29	86.1
12	80.8	08	82.8	02	85.2	30	86.9
13	80.0	09	82.5	03	85.5	31	86.4
14	81.2	10	82.5	04	85.4	SEP 01	86.8
15	80.9	11	83.0	05	84.9	02	86.8
16	80.8	12	82.9	06	84.9	03	87.0
17	81.0	13	82.7	07	85.5	04	86.5
18	80.7	14	83.5	08	85.2	05	86.4
19	81.2	15	83.7	09	85.8	06	86.7
20	81.4	16	83.7	12	85.9	07	86.4
21	81.3	17	83.9	13	86.1	08	86.2
22	81.1	18	83.7	14	85.8	09	86.0
23	81.0	19	84.2	15	86.3	10	85.8
25	81.1	20	84.3	16	86.5	13	85.7
26	81.5	21	84.5	17	86.2	16	85.6
27	81.5	22	84.5	18	86.4	17	85.5
28	81.8	23	84.7	19	86.0	18	85.4
29	82.2	24	84.3	20	85.9	20	85.3
30	82.4	25	84.6	22	85.8	25	85.4
JUL 01	82.6	26	84.8	23	86.1	26	85.2
02	82.7	27	84.9	24	86.4	27	85.1
03	82.2	28	85.0	25	86.4		
04	82.6	29	85.0	26	86.1		

TULARE COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 355228119284301 LOCAL NUMBER 024S023E03D01M

0.4 MI SOUTHEAST OF ALPAUGH. HYDRAULIC ROTARY ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 14 IN, DEPTH 1240 FT, PERFORATED 796-1240 FT. ALTITUDE OF LSD 210 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1973 TO CURRENT YEAR.

HIGHEST WATER LEVEL 187.0 FEET BELOW LAND SURFACE DATUM OCT 06, 1978.

LOWEST WATER LEVEL 293. FEET BELOW LAND SURFACE DATUM SEP 28, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 02, 1980	225.5

SITE NUMBER 355003119173901 LOCAL NUMBER 024S025E17P01M

0.8 MI SOUTHWEST OF EARLIMART. HYDRAULIC ROTARY WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 500 FT, PERFORATED 240-500 FT. ALTITUDE OF LSD 268 FT. MEASUREMENTS FURNISHED BY U.S. BUREAU OF RECLAMATION. RECORDS AVAILABLE 1957 TO CURRENT YEAR.

HIGHEST WATER LEVEL 75.4 FEET BELOW LAND SURFACE DATUM Jan. 15, 1981.

LOWEST WATER LEVEL 153.3 FEET BELOW LAND SURFACE DATUM AUG 23, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 15, 1981	75.4	SEP 14, 1981	101.9

SITE NUMBER 354805119105701 LOCAL NUMBER 024S026E32G01M

0.3 MI WEST OF JOVISTA. CABLE TOOL UNUSED ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULARE FORMATION. DIAM 16 IN, DEPTH 470 FT. ALTITUDE OF LSD 397 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES. RECORDS AVAILABLE 1932 TO CURRENT YEAR.

HIGHEST WATER LEVEL 104. FEET BELOW LAND SURFACE DATUM JAN 27, 1972.

LOWEST WATER LEVEL 329.7 FEET BELOW LAND SURFACE DATUM OCT 15, 1946.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 02, 1981	128.0	SEP 28, 1981	140.0

TULARE COUNTY--Continued

San Joaquin Valley (5-22)

SITE NUMBER 354800119090501 LOCAL NUMBER 024S026E34F01M

0.8 MI EAST OF JOVISTA, HYDRAULIC ROTARY OBSERVATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN,
 DEPTH 1522 FT, PERFORATED 400-1522 FT. ALTITUDE OF LSD 445 FT.
 RECORDS AVAILABLE OCTOBER 1957 TO CURRENT YEAR. RECORDER INSTALLED 1957.

HIGHEST WATER LEVEL 185.4 FEET BELOW LAND SURFACE DATUM FEB 26, 1981.

LOWEST WATER LEVEL 327.5 FEET BELOW LAND SURFACE DATUM JUL 20, 1961.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1980	199.0	NOV 12, 1980	193.9	DEC 22, 1980	190.0	JAN 31, 1981	187.7
02	198.0	13	193.8	23	189.8	FEB 01	187.4
03	198.1	14	193.6	24	189.8	02	187.6
04	197.9	15	193.4	25	189.4	03	187.7
05	197.6	16	193.0	26	189.4	04	187.6
06	197.7	17	193.0	27	189.1	05	187.6
07	198.0	18	193.0	28	189.0	06	187.8
08	197.8	19	193.2	29	189.0	07	187.4
09	197.8	20	192.3	30	188.8	08	187.4
10	198.0	21	192.2	31	188.6	09	187.0
11	197.4	22	191.8	JAN 01, 1981	188.6	10	187.2
12	197.2	23	192.0	02	188.3	11	187.3
13	197.4	24	191.8	03	188.3	12	187.2
14	197.6	25	191.9	04	188.0	13	187.2
17	197.0	26	191.9	05	188.0	14	187.0
18	197.2	27	191.4	06	188.2	15	186.6
19	196.8	28	191.4	07	188.2	16	186.4
20	197.0	29	190.9	08	188.2	17	186.6
21	197.0	30	190.9	09	188.0	18	186.6
22	197.2	DEC 01	191.0	10	187.8	19	186.6
23	197.3	02	191.0	11	187.6	20	186.5
24	197.3	03	190.6	12	187.8	21	186.2
25	197.4	04	190.6	13	188.0	22	185.9
26	197.0	05	190.6	14	187.8	23	185.8
27	197.7	06	190.6	15	187.4	24	185.8
28	198.4	07	190.2	16	187.4	25	185.6
29	198.2	08	190.5	17	187.4	26	185.4
30	197.7	09	190.6	18	187.2	MAR 18	186.2
31	197.4	10	190.5	19	187.2	19	186.2
NOV 01	197.8	11	190.6	20	187.3	20	186.1
02	197.4	12	190.4	21	188.4	21	186.0
03	197.0	13	190.4	22	187.6	MAY 13	206.1
04	196.9	14	190.1	23	187.8	14	205.8
05	197.2	15	190.4	24	187.7	15	205.8
06	196.9	16	190.3	25	187.4	16	205.3
07	196.7	17	190.3	26	187.4	17	205.7
08	196.4	18	190.1	27	187.4	18	206.5
09	194.7	19	190.2	28	187.4	19	206.7
10	194.4	20	190.2	29	187.4	20	207.3
11	193.9	21	190.0	30	187.5	21	207.9

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 22, 1981	208.6	JUN 22, 1981	229.8	AUG 02, 1981	228.4	SEP 02, 1981	219.7
23	209.5	23	230.7	03	228.2	03	219.6
24	210.4	24	231.2	04	228.8	04	219.0
25	211.5	25	231.8	05	228.1	05	218.6
26	212.4	26	232.2	06	226.6	06	217.8
27	213.6	27	232.8	07	226.2	07	216.6
28	215.1	28	233.2	08	226.4	08	215.9
29	216.3	29	233.8	09	226.0	09	216.4
30	217.0	30	234.6	10	225.4	10	216.0
31	217.8	JUL 01	234.9	11	225.9	11	215.0
JUN 01	218.6	02	235.5	12	226.9	12	214.3
02	219.4	03	236.5	13	228.0	13	214.1
03	220.6	04	236.6	14	230.6	14	212.7
04	211.7	05	237.0	15	231.7	15	213.6
05	222.5	16	228.4	16	231.0	16	213.7
06	223.2	17	229.2	17	230.6	17	213.4
07	223.7	18	229.7	18	231.0	18	213.2
08	224.1	19	231.6	19	229.0	19	212.6
09	224.2	20	231.6	20	227.4	20	212.1
10	224.4	21	231.4	21	226.8	21	212.0
11	224.8	22	230.4	22	226.1	22	211.8
12	225.2	23	229.6	23	224.7	23	211.9
13	225.0	24	229.2	24	221.3	24	211.9
14	226.2	25	228.7	25	223.0	25	211.9
15	226.4	26	228.0	26	223.5	26	211.8
16	226.9	27	227.7	27	224.3	27	211.2
17	226.4	28	227.6	28	225.4	28	210.9
18	226.4	29	227.4	29	226.4	29	210.9
19	226.9	30	228.0	30	224.8	30	210.4
20	228.1	31	228.9	31	222.8		
21	229.0	AUG 01	228.8	SEP 01	222.0		

GROUND WATER

TUOLUMNE COUNTY

San Joaquin Valley (5-22)

SITE NUMBER 365926120422201 LOCAL NUMBER 0115012E07E02M

1 MI WEST OF OOS PALOS. HYDRAULIC ROTARY INDUSTRIAL ARTESIAN WELL IN ALLUVIUM BELOW THE CORCORAN CLAY MEMBER OF THE TULAKE FORMATION. DIAM 10 IN, DEPTH 488 FT, PERFORATED 388-488 FT. ALTITUDE OF LSD 109 FT. MEASUREMENTS FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES, U.S. BUREAU OF RECLAMATION. RECORDS AVAILABLE 1960 TO CURRENT YEAR.

HIGHEST WATER LEVEL 0.2 FEET ABOVE LAND SURFACE DATUM MAR 13, 1964.

LOWEST WATER LEVEL 5.1 FEET BELOW LAND SURFACE DATUM JUN 21, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	0.9	APR 01, 1981	0.6

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION NUMBER	LOCAL IDENTIFIER	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM DIS-SOLVED (MG/L AS MG)
FRESNO COUNTY									
360815120052901	021S017E01D01M	81-08-05	0955	1424	7.7	25.0	430	77	58
361439120133901	019S016E27M01M	81-08-05	0840	1524	8.2	31.5	160	41	13
361846120134201	018S016E34M01M	81-08-05	1610	1048	8.2	31.0	120	36	6.7
362455120061201	017S017E27R01M	81-08-05	1400	1371	7.7	25.5	300	80	24
362940120222201	016S014E36E01M	81-08-04	1310	1394	7.9	31.0	280	62	31
363727120340101	015S013E16M01M	81-08-04	0925	1243	8.4	34.5	69	26	1.0
SAN JOAQUIN COUNTY									
375003121121901	001S007E21G01M	81-06-25	0800	366	7.7	19.0	120	30	10

DATE OF SAMPLE	SODIUM DIS-SOLVED (MG/L AS NA)	POTASSIUM DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE DIS-SOLVED (MG/L AS CL)	FLUORIDE DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)
FRESNO COUNTY											
81-08-05	150	2.2	120	480	70	.5	26	10	--	24	7
81-08-05	270	2.2	88	530	100	.6	20	.36	--	<10	68
81-08-05	180	1.2	82	350	42	.5	33	.18	--	20	36
81-08-05	190	2.1	96	530	50	.5	27	.16	--	15	84
81-08-04	200	2.8	98	530	64	.6	19	.16	--	<10	64
81-08-04	250	2.6	1	440	41	.5	39	.13	--	51	33
SAN JOAQUIN COUNTY											
81-06-25	29	3.9	92	--	6.0	--	--	--	--	--	--

< Actual value is known to be less than the value shown.

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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