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Water Resources Data for California

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

*Water Resources Data for California
Volume 3. Southern Central Valley Basins
and The Great Basin from Walker River
to Truckee River. This report contains
data for the following basins: Walker
River, Yuba River, Feather River,
Sacramento River, San Joaquin River,
Delta, Central Valley, and the Great
Basin. The data is presented in a
tabular format, with columns for
basin name, location, and data type.
The data is organized by basin, with
each basin having its own section of
data. The data is presented in a
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basin name, location, and data type.
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each basin having its own section of
data.*

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-80.

WATER YEAR 1980

Prepared in cooperation with the California
Department of Water Resources and
with other agencies

CALENDAR FOR WATER YEAR 1980

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Water Resources Data for California

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

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-80-3

WATER YEAR 1980

Prepared in cooperation with the California
Department of Water Resources and
with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

DOYLE G. FREDERICK, Acting Director

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1981

PREFACE

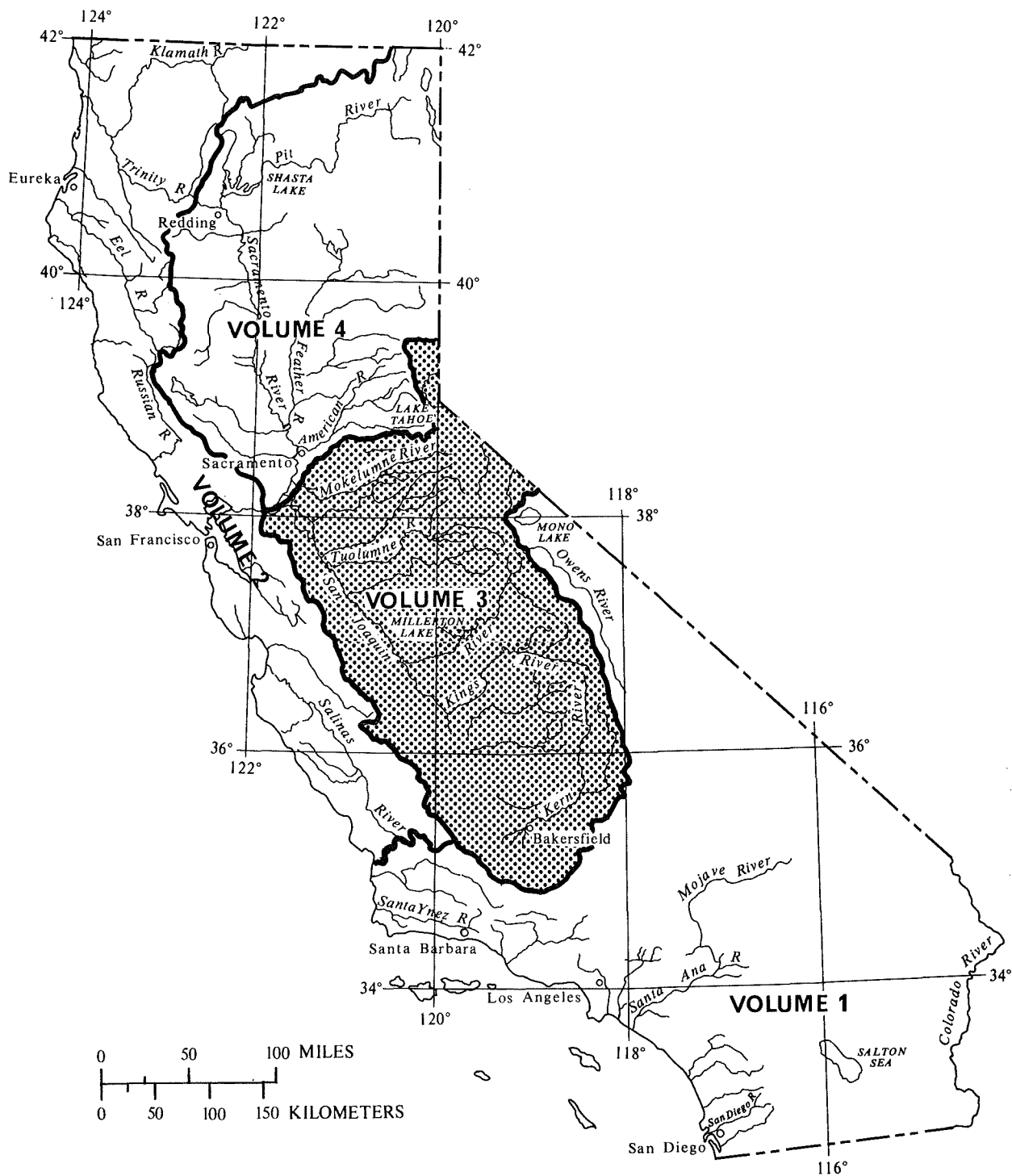
This report was prepared by personnel of the California District, Water Resources Division, U.S. Geological Survey, under the supervision of Richard M. Bloyd, District Chief, and J. D. Bredehoeft, Regional Hydrologist, Western Region. It was done in cooperation with the California Department of Water Resources and with 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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SURFACE-WATER AND WATER-QUALITY STATIONS,
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

IX

[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, 1980

Volume 3

INTRODUCTION

Water-resources data for the 1980 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-80-3." 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 (415) 323-8111, extension 2328.

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, J. S. Harnett, General Manager.
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, O. L. Moore, 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; Water and Power Resources Service 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.

HYDROLOGIC CONDITIONS

Precipitation for the first quarter of the 1980 water year, remained below normal. A series of tropical storms in January through March caused some flooding and raised the normal runoff to excessive. The January 13 storm was warm with heavy rain up to 9,000 feet elevation. This melted snow on the lower slopes and increased the magnitude of some flood peaks. The February and March storms were colder which brought the snowpack to above normal. The unimpaired snowmelt ranged from 121 percent on the Cosumnes River basin to 220 percent on the Kern River basin. A cold spring delayed the snowmelt so that streamflow remained above normal for the remainder of the year.

In the area covered by this volume, runoff during the water year ranged from 157 percent of median for Mokelumne River near Mokelumne Hill to 251 percent of median for Kern River near Kernville. Runoff at selected sites, as shown in figure 1, was above normal for the water year.

Ground-water levels continued to rise, and most areas are recovering from the effects of the drought during the 1976-77 water years. The quality of the surface water remained good because of the above normal runoff.

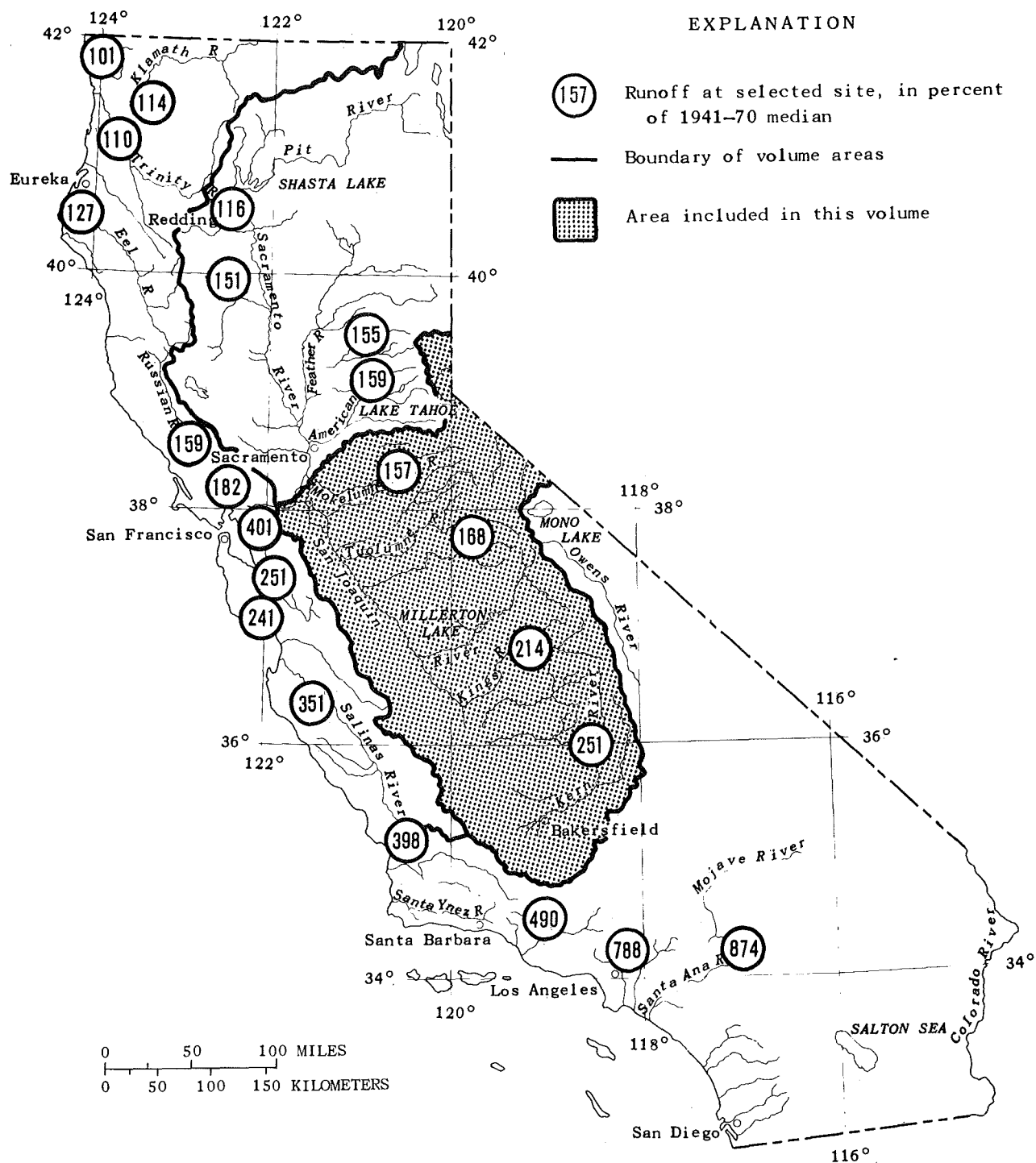


FIGURE 1. -- Runoff for the current water year.

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 [mg C/(m².time) for periphyton and macrophytes and mg C/(m³.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 [mg O₂/(m².time) for periphyton and macrophytes and mg O₂/(m³.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 "stream-flow" 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.

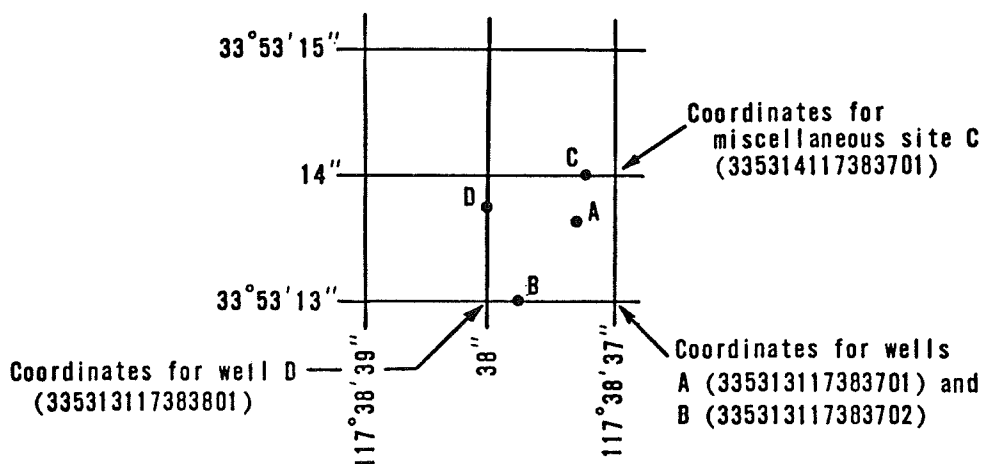


FIGURE 2.--System for numbering wells and miscellaneous sites (latitude and longitude).

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.

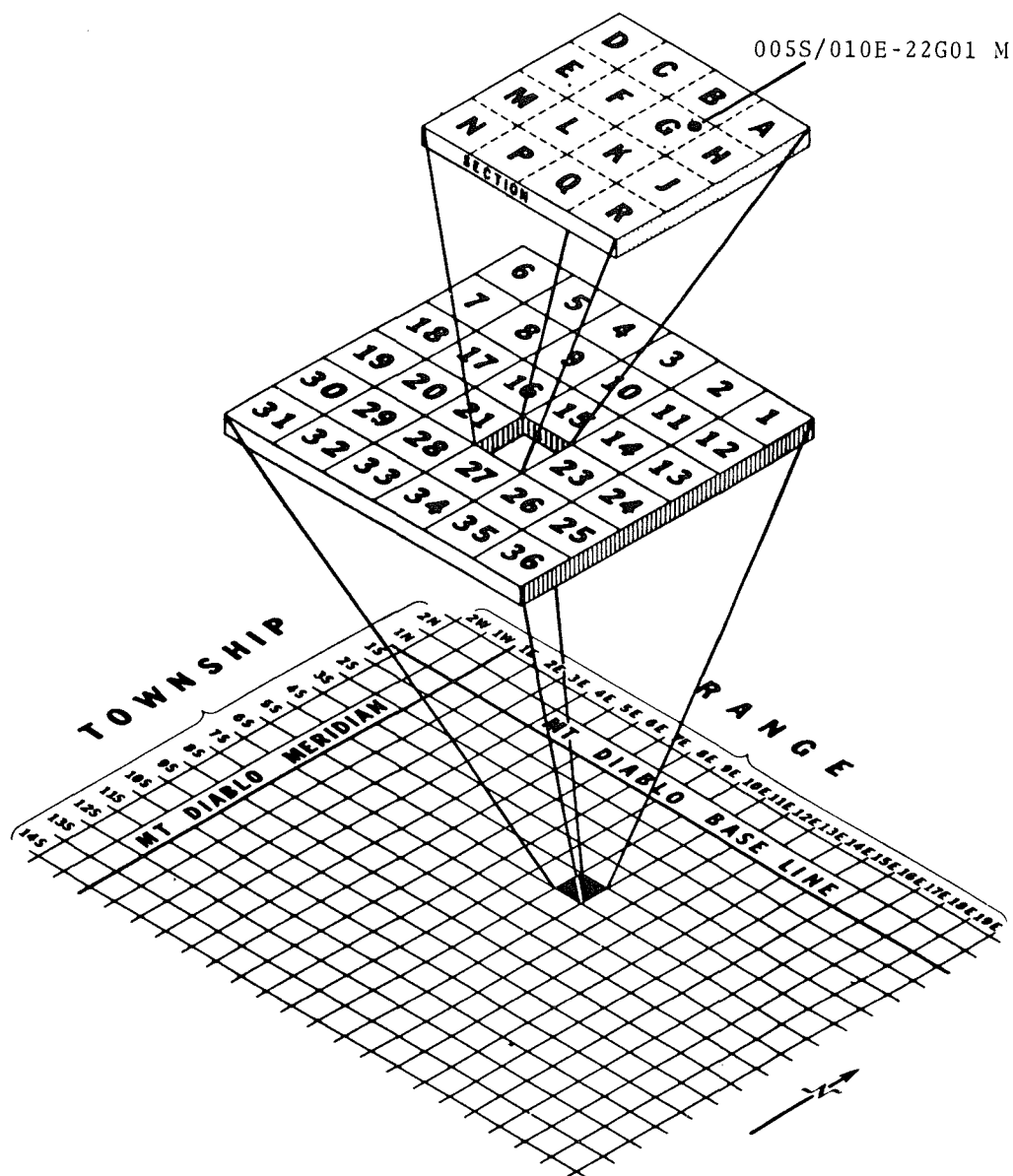


FIGURE 3.--California well-numbering system.

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.

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.
- 3-A11. Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. Aquifer-test design, observation, and data analyses, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-C1. Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages.
- 3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

- 4-A2. Frequency curves, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 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.
- 4-B3. Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
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- 5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
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- 7-C1. Finite-difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 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.
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WALKER LAKE BASIN

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, 2,920 acre-ft (3.60 hm³) July 2, elevation, 7,209.65 ft (2,197.501 m); minimum, 1,410 acre-ft (1.74 hm³) Oct. 25, elevation, 7,204.91 ft (2,196.057 m).

ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	7,206.68	1,970	--
Oct. 31.....	7,205.02	1,450	-520
Nov. 30.....	7,207.55	2,250	+800
Dec. 31.....	7,207.53	2,240	-10
CAL YR 1979.....	--	--	+100
Jan. 31.....	--	g2,250	+10
Feb. 29.....	--	g2,260	+10
Mar. 31.....	--	g2,270	+10
Apr. 30.....	7,208.14	2,430	+160
May 31.....	7,208.38	2,510	+80
June 30.....	7,209.58	2,900	+390
July 31.....	7,208.85	2,660	-240
Aug. 31.....	7,207.75	2,310	-350
Sept. 30.....	7,207.52	2,240	-70
WTR YR 1980.....	--	--	+270

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, and 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, 5,290 acre-ft (6.52 hm³) July 2, elevation, 7,202.97 ft (2,195.465 m); minimum, 932 acre-ft (1.15 hm³) Oct. 11-15, elevation, 7,192.33 ft (2,192.222 m).

ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	7,192.37	948	--
Oct. 31.....	7,193.97	1,590	+642
Nov. 30.....	7,194.16	1,660	+70
Dec. 31.....	7,197.12	2,850	+1,190
CAL YR 1979.....	--	--	-940
Jan. 31.....	7,200.64	4,280	+1,430
Feb. 29.....	7,200.66	4,290	+10
Mar. 31.....	7,200.54	4,240	-50
Apr. 30.....	7,199.65	3,870	-370
May 31.....	7,200.52	4,230	+360
June 30.....	7,202.40	5,040	+810
July 31.....	7,201.75	4,760	-280
Aug. 31.....	7,197.36	2,940	-1,820
Sept. 30.....	7,196.99	2,800	-140
WTR YR 1980.....	--	--	+1,852

10292500 BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'30", long 119°12'40", in SE¼NE¼ 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, 41,730 acre-ft (51.5 hm³) July 27, elevation, 6,459.75 ft (1,968.932 m); minimum, 10,260 acre-ft (12.7 hm³), elevation, 6,444.05 ft (1,964.146 m) Oct. 8.

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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10370	11630	15630	19330	32620	35540	32820	30850	33300	41410	41380	29260
2	10340	11780	15770	19480	32890	35880	32870	30950	33500	41440	41380	28720
3	10320	11940	15890	19650	33140	36200	32940	30990	33780	41120	41290	28240
4	10330	12100	16030	19810	33350	36530	32970	31160	33960	40830	41200	27760
5	10320	12250	16130	19940	33680	36790	33090	31430	34220	40740	41090	27320
6	10310	12380	16260	20090	33810	36470	33120	31430	34540	40390	40910	26880
7	10300	12530	16340	20230	34060	35910	33170	31450	34850	40060	40680	26510
8	10260	12660	16480	20360	34300	35310	33220	31520	35140	39950	40420	26310
9	10270	12780	16640	20550	34510	34690	33250	31040	35470	40030	40090	26070
10	10280	12910	16660	20700	34690	34140	33250	31040	35860	40270	39740	26000
11	10270	13050	16760	20930	34930	33430	33300	30990	36280	40480	39320	25850
12	10280	13130	16850	21990	35170	32920	33300	30850	36680	40480	38820	25720
13	10280	13270	16960	24320	35330	32770	33220	30710	37040	40420	38230	25650
14	10310	13420	17130	26380	35620	32970	33140	30680	37540	40570	37540	25340
15	10280	13530	17250	27270	35960	32970	33040	30630	38040	40650	36930	25190
16	10320	13710	17380	27960	36340	33120	32940	30360	38570	40590	36340	25080
17	10360	13800	17490	28520	37100	33140	32790	30340	38900	40570	35830	24950
18	10370	13910	17600	28880	38460	33020	32670	30100	39010	40570	35310	24840
19	10370	13980	17720	29260	38820	32920	32410	30100	39320	40620	34770	24580
20	10540	14080	17840	29570	38370	32690	32210	30240	39800	40740	34330	24390
21	10620	14160	17950	29880	37810	32640	31870	30610	40240	40880	33830	24240
22	10730	14300	18010	30190	37070	32770	31650	31090	40480	40970	33070	24100
23	10800	14450	18140	30440	36310	32820	31400	31500	40680	41170	32770	23960
24	10910	14660	18330	30730	35470	32820	31160	31850	40710	41380	32510	23890
25	10960	14820	18390	31020	34590	32840	30970	32260	40650	41490	32130	23810
26	11050	14910	18440	31280	34300	32840	30800	32590	40650	41490	31700	23750
27	11160	15060	18530	31470	34670	32790	30970	32790	40620	41730	31260	23640
28	11160	15190	18610	31750	34950	32870	30920	32990	40680	41580	30800	23580
29	11280	15370	18730	31850	35220	32890	30830	33170	40830	41440	30410	23430
30	11390	15460	18920	32160	---	32840	30800	33350	41090	41350	30100	23330
31	11500	---	19190	32380	---	32790	---	33320	---	41380	29660	---
MAX	11500	15460	19190	32380	38820	36790	33300	33350	41090	41730	41380	29260
MIN	10260	11630	15630	19330	32620	32640	30800	30100	33300	39950	29660	23330
†	6445.10	6447.99	6450.22	6456.32	6457.42	6456.48	6455.68	6456.69	6459.53	6459.63	6455.21	6452.36
‡	+1100	+3960	+3730	+13190	+2840	-2430	-1990	+2520	+7770	+290	-11720	-6330

CAL YR 1979 ‡ -16880
WTR YR 1980 ‡ +12930

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

WALKER LAKE BASIN

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 160S0301, 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. Diversions for irrigation of pasture lands near Bridgeport. Flow regulated by Bridgeport Reservoir (station 10292500).

AVERAGE DISCHARGE (unadjusted).--57 years (water years 1923-24, 1926-80), 139 ft³/s (3.936 m³/s), 100,700 acre-ft/yr (124 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1922-80).--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, 1,380 ft³/s (39.1 m³/s) July 2, gage height, 4.55 ft (1.387 m); minimum daily, 13 ft³/s (0.37 m³/s) on many days during December and January.

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	89	15	17	13	14	24	116	437	349	1080	520	397
2	81	15	17	13	14	20	115	450	264	1180	480	400
3	76	15	15	13	14	14	115	473	247	1280	463	388
4	66	15	13	13	14	14	115	480	248	1120	436	370
5	66	15	13	13	14	34	115	503	238	947	391	355
6	66	15	13	13	14	361	116	542	231	947	403	349
7	66	15	13	13	14	419	115	560	232	813	416	335
8	66	15	13	13	14	417	122	567	232	609	400	319
9	66	15	13	13	14	416	137	578	253	504	412	289
10	66	15	13	13	14	414	147	578	268	442	440	266
11	66	15	13	13	14	412	187	552	271	474	450	249
12	66	15	13	13	14	412	210	507	251	536	470	235
13	66	16	13	14	14	201	236	486	238	561	496	228
14	66	17	13	15	14	113	262	444	239	523	514	228
15	66	17	13	14	14	113	286	431	238	532	500	224
16	66	17	13	14	14	134	297	424	280	551	470	212
17	66	17	13	14	14	177	328	424	417	511	470	212
18	66	17	13	14	15	214	374	421	469	492	463	212
19	63	17	13	14	167	215	428	409	444	493	447	212
20	54	17	13	14	489	203	456	391	454	493	450	210
21	45	17	13	14	487	141	473	394	498	478	470	212
22	44	17	13	14	586	115	470	394	590	456	466	212
23	44	17	13	14	583	115	456	397	625	464	421	203
24	44	17	13	14	578	115	428	394	665	486	384	184
25	40	17	13	14	575	116	403	394	668	528	384	180
26	34	17	13	14	316	115	370	397	663	549	384	170
27	34	17	13	14	24	115	370	376	624	553	382	170
28	34	17	13	14	24	115	387	364	600	641	384	170
29	34	17	13	14	24	115	431	364	601	656	364	178
30	21	17	13	14	---	115	437	364	707	584	352	197
31	15	---	13	14	---	116	---	365	---	545	384	---
TOTAL	1742	485	413	423	4106	5620	8502	13860	12104	20028	13466	7566
MEAN	56.2	16.2	13.3	13.6	142	181	283	447	403	646	434	252
MAX	89	17	17	15	586	419	473	578	707	1280	520	400
MIN	15	15	13	13	14	14	115	364	231	442	352	170
AC-FT	3460	962	819	839	8140	11150	16860	27490	24010	39730	26710	15010
CAL YR 1979	TOTAL	65563	MEAN 180	MAX	622	MIN 13	AC-FT	130000				
WTR YR 1980	TOTAL	88315	MEAN 241	MAX	1280	MIN 13	AC-FT	175200				

WALKER LAKE BASIN

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10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1959 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT				
30...	0920	16	164	9.0
NOV				
27...	1000	17	167	4.0
DEC				
27...	1020	13	179	4.0
JAN				
29...	1010	14	288	4.5
FEB				
27...	1040	24	185	4.0
MAR				
26...	0935	115	208	5.5
APR				
28...	1825	418	211	10.0
JUL				
01...	1310	1050	122	17.5
AUG				
06...	1230	426	101	17.0
SEP				
29...	1500	169	120	12.5

WALKER LAKE BASIN

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 current year.

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

REMARKS.--Records fair. Diversions for irrigation above station. Flow regulated by Bridgeport Reservoir (station 10292500).

AVERAGE DISCHARGE.--6 years (water years 1975-80), 156 ft³/s (4.418 m³/s), 113,020 acre-ft/yr (139 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, 1,420 ft³/s (40.2 m³/s) July 3, gage height, 7.90 ft (2.408 m); minimum daily, 18 ft³/s (0.51 m³/s) Dec. 27-30.

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	100	26	29	20	28	46	133	444	399	1040	500	390
2	90	26	28	20	28	43	133	448	290	1290	470	395
3	90	26	28	20	28	40	133	463	256	1340	450	385
4	75	26	24	20	28	40	133	463	253	1190	420	370
5	78	26	22	20	28	40	137	482	241	1010	380	350
6	79	26	22	20	29	329	135	523	226	1000	418	340
7	79	27	23	21	28	453	137	555	223	920	425	330
8	79	28	23	23	28	472	139	560	220	720	408	320
9	79	28	23	24	29	472	155	550	241	604	408	290
10	78	28	23	26	29	467	159	544	263	525	439	270
11	77	29	19	28	29	472	178	528	260	532	446	250
12	75	30	19	51	28	463	209	523	247	581	460	240
13	74	29	19	184	28	291	232	518	229	540	474	225
14	74	29	19	134	28	135	247	492	232	515	499	225
15	74	29	20	47	30	129	253	472	247	520	496	225
16	73	29	21	40	30	133	263	467	286	530	467	215
17	71	29	22	36	39	185	283	467	439	500	464	212
18	71	29	23	35	104	220	341	463	560	480	460	212
19	70	28	24	32	144	226	386	448	544	480	442	210
20	60	28	24	31	566	226	416	444	544	480	446	210
21	47	28	24	34	555	183	421	453	588	460	456	210
22	50	28	23	34	640	133	434	448	690	440	470	210
23	50	32	22	34	635	129	421	444	700	455	435	200
24	48	32	21	34	625	127	390	448	725	470	391	185
25	47	32	20	32	620	137	390	448	730	510	391	180
26	40	32	19	32	340	131	390	453	720	535	387	170
27	40	30	18	30	59	129	386	430	714	535	384	170
28	40	29	18	29	51	129	394	412	672	620	384	170
29	40	30	18	28	48	131	448	407	696	635	368	196
30	37	28	18	29	---	133	458	407	795	570	355	216
31	26	---	19	28	---	133	---	412	---	540	384	---
TOTAL	2011	857	675	1176	4882	6377	8334	14616	13230	20567	13377	7571
MEAN	64.9	28.6	21.8	37.9	168	206	278	471	441	663	432	252
MAX	100	32	29	184	640	472	458	560	795	1340	500	395
MIN	26	26	18	20	28	40	133	407	220	440	355	170
AC-FT	3990	1700	1340	2330	9680	12650	16530	28990	26240	40790	26530	15020
CAL YR 1979	TOTAL	66934	MEAN 183	MAX	672	MIN 18	AC-FT 132800					
WTR YR 1980	TOTAL	93673	MEAN 256	MAX	1340	MIN 18	AC-FT 185800					

10293500 EAST WALKER RIVER ABOVE STROSNIDER DITCH, NEAR MASON, NV

LOCATION.--Lat 38°48'45", long 119°02'50", in NW¼SW¼ sec.14, T.11 N., R.26 E., Lyon County, Hydrologic Unit 16050303, on right bank 0.9 mi (1.4 km) upstream from head of Strosnider ditch, 12 mi (19 km) southeast of Mason, and 13.5 mi (21.7 km) southeast of Yerington.

DRAINAGE AREA.--1,100 mi² (2,850 km²), approximately.

PERIOD OF RECORD.--January 1947 to current year (no winter records since 1978).

GAGE.--Water-stage recorder. Datum of gage is 4,574.10 ft (1,394.186 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1957, near present site at datum 0.56 ft (0.171 m) higher. Oct. 24, 1957, to Apr. 3, 1974, at site 400 ft (120 m) downstream at same datum.

REMARKS.--Records poor. Diversions for irrigation above station. Flow regulated by Bridgeport Reservoir (station 10292500).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft³/s (67.4 m³/s) Feb. 1, 1963, gage height, 7.60 ft (2.316 m); minimum daily, 2.3 ft³/s (0.065 m³/s) Mar. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 1,890 ft³/s (53.5 m³/s) July 4, gage height, 7.23 ft (2.204 m); minimum daily recorded, 116 ft³/s (3.29 m³/s) Apr. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							126	503	410	947	620	355
2							126	503	347	1260	556	371
3							116	515	330	1600	488	373
4							118	560	313	1770	462	361
5							118	582	285	1590	423	342
6							120	604	283	1310	355	328
7							118	648	285	1290	373	326
8							120	675	299	1130	357	325
9							125	696	299	795	342	306
10							132	708	283	611	361	317
11							135	716	275	506	376	277
12							158	687	257	563	380	252
13							179	601	285	604	385	226
14							198	614	295	637	422	214
15							212	539	300	576	434	220
16							229	509	330	620	413	205
17							239	497	400	620	406	185
18							283	503	510	557	403	187
19							344	500	536	536	372	183
20							423	482	539	539	375	183
21							485	497	551	539	392	183
22							509	506	617	509	433	190
23							521	509	755	503	430	190
24							494	533	775	503	380	177
25							462	527	855	530	360	173
26							429	527	863	554	348	167
27							399	480	863	570	347	162
28							404	480	855	579	352	156
29							437	503	807	791	346	152
30							491	494	836	783	332	171
31							---	494	---	660	313	---
TOTAL							8250	17192	14638	24582	12336	7257
MEAN							275	555	488	793	398	242
MAX							521	716	863	1770	620	373
MIN							116	480	257	503	313	152
AC-FT							16360	34100	29030	48760	24470	14390

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).

WATER-DISCHARGE RECORDS

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, which are fair. Small diversions above station.

AVERAGE DISCHARGE.--36 years (water years 1945-80), 50.9 ft³/s (1.441 m³/s), 36,880 acre-ft/yr (45.5 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.--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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2200	346 9.80	2.08 0.634	June 10	2200	232 6.57	1.81 .552
May 4	2000	246 6.97	1.85 .564	July 1	2200	*512 14.5	2.41 .735
May 22	2100	283 8.01	1.95 .594				

Minimum daily, 13 ft³/s (0.37 m³/s) on several days during October and January.

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	14	18	20	24	22	30	24	139	128	454	148	40
2	14	17	16	20	22	25	25	151	131	440	139	38
3	14	18	16	19	23	25	26	172	128	381	126	37
4	14	18	16	18	22	25	28	190	125	337	116	36
5	13	23	16	16	24	24	30	203	122	305	105	39
6	13	21	18	15	23	26	28	197	121	280	98	35
7	13	19	18	14	23	25	29	186	129	263	90	40
8	14	18	17	14	22	27	32	169	152	251	90	45
9	14	18	17	13	22	28	44	159	181	236	87	53
10	13	20	15	13	22	27	50	157	203	232	82	52
11	13	20	14	23	22	23	51	133	214	228	82	45
12	14	21	14	118	22	25	54	114	204	228	78	41
13	14	20	14	234	22	23	67	108	190	225	73	38
14	14	20	14	136	21	23	76	109	183	228	66	36
15	14	19	14	78	19	22	73	107	196	225	63	36
16	14	17	14	62	20	24	84	113	216	232	61	36
17	15	18	14	47	30	24	98	127	246	246	61	35
18	14	16	14	39	66	24	121	142	275	239	58	35
19	25	15	14	35	38	23	134	171	290	215	56	34
20	27	15	14	33	37	23	138	212	311	202	53	33
21	19	14	14	31	28	23	113	244	314	205	52	32
22	18	15	14	30	35	22	91	255	309	209	58	32
23	18	16	15	30	37	23	89	237	279	215	73	31
24	18	17	16	29	33	22	82	192	278	215	57	31
25	20	18	16	28	31	24	92	160	288	193	56	30
26	19	18	15	28	29	24	104	142	288	190	51	29
27	17	21	17	27	30	21	106	131	275	185	46	28
28	16	22	20	26	29	22	114	128	293	174	42	28
29	16	19	23	24	32	23	122	126	356	168	41	27
30	18	18	25	23	---	25	132	133	419	160	40	27
31	18	---	27	22	---	26	---	133	---	153	41	---
TOTAL	497	549	511	1269	806	751	2257	4940	6844	7514	2289	1079
MEAN	16.0	18.3	16.5	40.9	27.8	24.2	75.2	159	228	242	73.8	36.0
MAX	27	23	27	234	66	30	138	255	419	454	148	53
MIN	13	14	14	13	19	21	24	107	121	153	40	27
AC-FT	986	1090	1010	2520	1600	1490	4480	9800	13580	14900	4540	2140
CAL YR 1979	TOTAL	19126	MEAN 52.4	MAX 351	MIN 12	AC-FT 37940						
WTR YR 1980	TOTAL	29306	MEAN 80.1	MAX 454	MIN 13	AC-FT 58130						

WALKER LAKE BASIN

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10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA--Continued

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 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT				
29...	1400	15	258	8.0
NOV				
26...	1410	16	259	5.5
DEC				
27...	1405	18	264	.5
JAN				
28...	1500	26	224	1.5
FEB				
26...	1445	30	236	6.5
MAR				
25...	1330	38	200	2.5
APR				
28...	1415	106	132	8.0
MAY				
28...	1350	130	106	9.5
JUN				
25...	1520	240	61	12.5
JUL				
28...	1545	161	71	15.0
AUG				
25...	1155	52	141	13.0
SEP				
29...	1130	28	183	6.5

WALKER LAKE BASIN

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).

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. 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.--42 years, 257 ft³/s (7.278 m³/s), 186,200 acre-ft/yr (230 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.--Peak discharges above base of 1,120 ft³/s (31.7 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)
Jan. 13	2100	1,180 33.4	4.10 1.250	June 11	0200	1,400 39.6	4.20 1.280
May 5	0100	1,360 38.5	4.26 1.298	July 1	2400	*2,780 78.7	5.55 1.692
May 21	0100	1,700 48.1	4.61 1.405				

Minimum daily, 37 ft³/s (1.05 m³/s) on several days during October.

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	40	49	51	79	101	114	120	786	730	2380	668	132
2	39	49	52	66	100	114	121	865	754	2200	634	130
3	38	52	51	64	100	112	122	1000	721	1740	563	128
4	38	50	49	64	99	108	129	1080	660	1500	488	125
5	37	55	49	60	104	112	135	1200	600	1300	444	126
6	37	54	49	59	105	112	128	1140	595	1210	414	121
7	37	55	50	58	100	107	127	1110	677	1140	381	137
8	38	56	51	54	100	102	139	972	882	1120	387	156
9	39	50	51	56	94	102	170	919	1110	1070	374	150
10	37	49	52	42	96	101	194	768	1220	1060	350	156
11	37	50	44	70	94	104	209	642	1280	1060	352	139
12	37	48	44	321	94	100	224	546	1190	1060	336	137
13	37	49	44	728	92	105	272	498	1070	1060	315	125
14	38	49	45	631	97	106	331	472	992	1040	275	118
15	37	49	45	386	94	105	349	477	1100	1070	255	113
16	38	51	45	303	97	103	388	557	1260	1080	245	109
17	39	53	45	250	119	105	464	688	1440	1160	238	103
18	38	47	45	207	222	107	556	842	1590	1110	234	103
19	61	41	45	175	172	106	637	1040	1600	969	229	106
20	104	40	45	160	164	106	688	1330	1710	899	210	103
21	71	39	45	150	143	105	580	1490	1680	945	204	98
22	65	42	47	139	142	104	469	1510	1580	965	205	97
23	61	46	49	131	140	104	423	1340	1420	1010	229	92
24	61	52	51	128	134	104	386	945	1360	1020	198	90
25	64	57	50	122	127	99	427	753	1550	894	185	87
26	66	59	47	118	124	99	508	646	1540	859	175	82
27	61	53	47	108	123	101	565	598	1380	942	164	79
28	58	55	52	118	123	102	618	589	1440	885	154	78
29	54	54	60	110	115	107	639	590	1840	797	146	77
30	50	52	77	100	---	117	717	683	2190	745	139	75
31	51	---	88	105	---	118	---	738	---	703	137	---
TOTAL	1508	1505	1565	5162	3415	3291	10835	26814	37161	34993	9328	3372
MEAN	48.6	50.2	50.5	167	118	106	361	865	1239	1129	301	112
MAX	104	59	88	728	222	118	717	1510	2190	2380	668	156
MIN	37	39	44	42	92	99	120	472	595	703	137	75
AC-FT	2990	2990	3100	10240	6770	6530	21490	53190	73710	69410	18500	6690
CAL YR 1979 TOTAL	88208			242	1670	37	175000					
WTR YR 1980 TOTAL	138949			380	2380	37	275600					

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA

LOCATION.--Lat 38°30'55", 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.

DRAINAGE AREA.--250 mi² (648 km²).

WATER-DISCHARGE RECORDS

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.

REVISED RECORDS.--WSP 880: 1917 (runoff in acre-feet). WSP 1514: 1918, 1923. WDR CA-79-3: Drainage area.

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.

REMARKS.--Records good. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poor Lake Reservoir (capacity unknown) 17 mi (27 km) upstream.

AVERAGE DISCHARGE.--51 years (water years 1903-7, 1910, 1916-37, 1958-80), 273 ft³/s (7.731 m³/s), 197,800 acre-ft/yr (244 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Dec. 11, 1937, from slope-area measurement of peak flow; minimum, 5 ft³/s (0.14 m³/s) Dec. 3, 1924, Aug. 27, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,120 ft³/s (31.7 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)	
Jan. 14	0100	1,470	41.6	3.31	1.009	May 22	0400	1,860	52.7	3.70	1.128
May 5	0200	1,570	44.5	3.39	1.033	July 1	0300	*2,650	75.0	4.28	1.304

Minimum daily, 44 ft³/s (1.25 m³/s) Oct. 18.

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	55	60	59	91	119	134	126	892	762	2310	624	150
2	52	60	61	79	121	128	126	963	800	2180	596	146
3	51	62	60	76	120	127	126	1160	757	1790	530	142
4	50	61	60	76	121	124	131	1260	673	1590	468	137
5	50	64	60	74	120	126	144	1420	595	1370	430	137
6	49	65	59	74	125	128	137	1360	579	1260	404	137
7	47	66	60	71	122	125	135	1360	669	1180	374	143
8	47	67	61	69	117	118	140	1150	917	1150	376	180
9	50	60	62	70	102	116	173	1100	1200	1100	369	170
10	48	58	63	57	107	117	202	906	1320	1060	342	184
11	47	60	54	76	108	119	218	721	1350	1070	345	161
12	46	58	52	279	110	112	228	605	1270	1070	330	162
13	46	60	52	672	106	119	270	534	1120	1070	315	149
14	47	59	53	909	114	121	343	503	1020	1030	280	137
15	46	59	53	448	115	121	368	499	1130	1060	261	131
16	46	62	54	343	121	117	412	577	1320	1070	253	126
17	46	65	53	273	129	119	495	728	1470	1150	244	120
18	44	59	52	235	231	120	615	929	1650	1130	239	117
19	54	47	51	201	201	119	724	1140	1630	973	234	116
20	121	45	51	178	181	119	819	1490	1740	877	220	115
21	88	45	50	165	165	115	676	1690	1690	933	216	110
22	78	48	51	155	155	116	530	1710	1590	953	212	105
23	72	52	50	147	154	114	462	1590	1430	999	234	102
24	71	58	65	144	150	116	426	1090	1350	1020	216	100
25	73	66	48	139	143	107	463	847	1460	889	199	96
26	78	68	59	134	139	106	550	693	1530	820	194	93
27	73	59	61	129	140	114	634	615	1350	938	182	91
28	69	63	69	134	146	114	691	601	1360	898	172	87
29	64	63	78	129	137	117	714	592	1820	772	164	86
30	59	61	84	114	---	120	802	701	2220	720	158	85
31	62	---	101	123	---	123	---	778	---	667	154	---
TOTAL	1829	1780	1846	5864	3919	3691	11888	30204	37772	35099	9335	3815
MEAN	59.0	59.3	59.5	189	135	119	396	974	1259	1132	301	127
MAX	121	68	101	909	231	134	819	1710	2220	2310	624	184
MIN	44	45	48	57	102	106	126	499	579	667	154	85
AC-FT	3630	3530	3660	11630	7770	7320	23580	59910	74920	69620	18520	7570

CAL YR 1979 TOTAL 100820 MEAN 276 MAX 1940 MIN 44 AC-FT 200000
WTR YR 1980 TOTAL 147042 MEAN 402 MAX 2310 MIN 44 AC-FT 291700

WALKER LAKE BASIN

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA--Continued

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 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT				
29...	1130	66	141	6.0
NOV				
26...	1100	71	143	4.5
DEC				
26...	1140	53	173	1.5
JAN				
28...	1245	129	126	2.0
FEB				
26...	1210	126	130	5.0
MAR				
25...	1100	82	149	1.5
APR				
28...	1110	694	81	6.5
MAY				
28...	1115	598	77	6.5
JUN				
25...	2000	1320	43	12.5
JUL				
28...	1120	899	40	11.5
AUG				
25...	0950	201	90	11.0
SEP				
29...	0730	86	126	6.0

WALKER LAKE BASIN

37

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, 60,680 acre-ft (74.8 hm³) July 3, elevation, 5,000.92 ft (1,524.280 m); minimum contents observed, 7,380 acre-ft (9.10 hm³) Oct. 20.

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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9780	8470	12940	17950	33670	45490	51680	46120	44570	58960	58770	37360
2	9740	8620	13090	18160	33960	45780	51700	46010	44880	60010	58870	36630
3	9570	8690	13240	18370	34200	46160	51700	46040	45220	60680	58940	35840
4	9410	9010	13400	18550	34490	46560	51720	46440	45530	60640	58870	34970
5	9250	9100	13510	18720	34750	46980	51790	47010	45760	60380	58620	34380
6	9140	9220	13680	18880	35020	47180	51810	47490	45910	60010	58390	33650
7	8990	9380	13820	19030	35320	47580	51810	47810	46040	59620	57820	32930
8	8830	9460	13970	19220	35600	47860	51810	48000	46350	59320	57200	32210
9	8680	9540	14120	19350	35860	48110	51790	47980	47050	59300	56620	31830
10	8520	9860	14270	19600	36080	48410	51770	47750	47940	59460	55920	31570
11	8370	9950	14410	19800	36350	48730	51740	47050	48900	59480	55220	31150
12	8280	10110	14530	20210	36560	48920	51660	46250	49920	59350	54440	30870
13	8160	10260	14630	21420	36770	49200	51550	45180	50890	59350	53550	30690
14	8020	10400	14740	23940	37010	49610	51550	44260	51740	58980	52540	30270
15	7890	10560	14890	25670	37340	49740	51460	43890	52540	58960	51390	29920
16	7770	10710	15040	26800	37570	49920	51460	43520	53220	59000	50260	29650
17	7650	10900	15220	27650	37960	50200	51240	43290	54040	59000	49180	29320
18	7580	11040	15330	28450	38560	50410	51130	43350	54800	59070	48090	28990
19	7480	11180	15450	28970	39550	50670	51090	43700	55670	59120	47030	28590
20	7380	11290	15600	29550	40710	50910	51040	44660	56480	58750	46250	28200
21	7500	11420	15700	29990	41450	51180	50810	45490	57230	58550	45550	27800
22	7620	11530	15780	30390	42140	51460	50370	46330	57520	58620	44680	27380
23	7640	11680	15940	30770	42690	51680	49640	47090	57590	58840	43760	26990
24	7770	11950	16340	31140	43120	51940	48900	47470	57480	59030	43680	26640
25	7850	12060	16500	31510	43540	52010	47940	47180	57660	59050	42490	26290
26	7930	12180	16650	31960	43990	51960	47500	46750	57840	58960	41800	25980
27	8020	12340	16790	32220	44320	51900	47050	46140	57890	59050	41090	25690
28	8110	12490	16900	32480	44760	51830	46710	45300	57730	59210	40360	25400
29	8200	12650	17030	32820	44900	51770	46540	44720	57750	59160	39610	25070
30	8290	12780	17220	33118	---	51770	46310	44360	58160	58910	38900	24780
31	8340	---	17530	33360	---	51680	---	44340	---	58750	38110	---
MAX	9780	12780	17530	33360	44900	52010	51810	48000	58160	60680	58940	37360
MIN	7380	8470	12940	17950	33670	45490	46310	43290	44570	58550	38110	24780
†	4973.02	4975.78	4978.67	4989.85	4993.75	4996.92	4999.42	4993.48	4999.82	5000.08	4990.39	4982.96
‡	-1550	+4440	+4750	+15830	+11540	+6780	-5370	-1970	+13820	+590	-20640	-13330

CAL YR 1979 ‡ -15870

WTR YR 1980 ‡ +14890

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

‡ Change in contents, in acre-feet.

WALKER LAKE BASIN

10297500 WEST WALKER RIVER AT HOYE BRIDGE, NEAR WELLINGTON, NV

LOCATION.--Lat 38°43'40", long 119°25'40", in NE¼SE¼ sec.17, T.10 N., R.23 E., Douglas County, Hydrologic Unit 16050302, on left bank 20 ft (6 m) upstream from Hoyer bridge, 2 mi (3 km) upstream from head of Saroni Canal, and 4 mi (6 km) southwest of Wellington.

DRAINAGE AREA.--497 mi² (1,287 km²).

PERIOD OF RECORD.--May to August 1910 (published as West Walker River near Wellington), July 1920 to September 1923, March 1924 to August 1925, October 1925 to September 1932, October 1957 to current year. Monthly discharge only for some periods published in WSP 1314.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,980 ft (1,518 m), from topographic map. May to August 1910, nonrecording gage at same site at different datum. July 1, 1920, to Sept. 30, 1923, water-stage recorder at site 3 mi (5 km) downstream, 1 mi (2 km) downstream from Saroni Canal, at different datum, and supplemental nonrecording gage on Saroni Canal 1 mi (2 km) downstream from head. Mar. 1, 1924, to Sept. 30, 1932, water-stage recorder at same site at different datum.

REMARKS.--Records good. Flow regulated by off-channel storage in Topaz Lake (station 10297000) since Jan. 30, 1922. Diversions for irrigation of about 10,500 acres (42.5 km²) above station. Records include releases from Topaz Lake and all return flow from Antelope Valley.

AVERAGE DISCHARGE (unadjusted).--33 years (water years 1921-23, 1926-32, 1958-80), 235 ft³/s (6.655 m³/s), 170,300 acre-ft/yr (210 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,180 ft³/s (61.7 m³/s) June 6, 1922; minimum observed, 4.8 ft³/s (0.14 m³/s) Jan. 5, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) July 3, gage height, 8.00 ft (2.438 m); minimum daily, 11 ft³/s (0.31 m³/s) Nov. 14.

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	103	28	26	39	23	34	170	943	649	1730	557	426
2	91	26	26	34	23	32	169	969	595	1800	501	423
3	79	26	27	33	23	31	169	954	580	1850	485	417
4	77	26	27	32	23	30	169	940	548	1780	471	401
5	78	26	27	31	22	30	170	1080	519	1620	441	388
6	86	25	23	30	22	31	168	1160	502	1500	475	384
7	84	22	23	30	23	30	170	1230	507	1360	535	378
8	80	22	23	30	23	30	172	1240	506	1120	501	350
9	89	22	24	31	22	29	196	1230	560	962	523	300
10	116	22	24	30	23	29	208	1230	660	929	557	289
11	115	22	25	54	22	28	269	1200	764	1020	563	283
12	113	22	25	487	22	28	288	1160	702	1110	607	262
13	115	22	25	1250	23	28	288	1080	632	1040	645	247
14	123	20	24	261	23	27	333	918	619	954	663	249
15	119	21	25	87	26	27	402	756	642	928	659	244
16	105	23	25	65	26	28	445	735	717	943	648	236
17	84	23	25	55	28	28	523	721	918	958	624	249
18	81	23	25	48	35	28	598	715	1110	977	614	254
19	73	24	25	42	60	28	696	742	1160	979	541	253
20	74	24	25	39	130	27	812	865	1230	921	484	258
21	71	24	25	36	100	28	914	1180	1440	816	487	266
22	55	24	25	33	110	29	925	1300	1550	729	494	264
23	49	24	25	31	90	28	911	1330	1490	753	470	254
24	49	24	30	30	70	37	857	1250	1350	821	457	239
25	47	24	31	28	60	133	826	1140	1180	816	459	238
26	42	25	29	27	50	165	792	1060	1350	692	451	222
27	42	25	29	26	43	168	785	1030	1460	653	440	222
28	35	25	28	26	40	169	809	963	1400	770	439	220
29	35	26	27	25	38	168	850	827	1440	790	406	219
30	45	26	29	25	---	169	896	732	1570	744	416	219
31	46	---	33	24	---	169	---	707	---	639	421	---
TOTAL	2401	716	810	3019	1223	1846	14980	31387	28350	32701	16034	8654
MEAN	77.5	23.9	26.1	97.4	42.2	59.5	499	1012	945	1055	517	288
MAX	123	28	33	1250	130	169	925	1330	1570	1850	663	426
MIN	35	20	23	24	22	27	168	707	502	639	406	219
AC-FT	4760	1420	1610	5990	2430	3660	29710	62260	56230	64860	31800	17170
CAL YR 1979	TOTAL	98450	MEAN 270	MAX 1470	MIN 20	AC-FT 195300						
WTR YR 1980	TOTAL	142121	MEAN 388	MAX 1850	MIN 20	AC-FT 281900						

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).

WATER-DISCHARGE RECORDS

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 period of no gage-height record and those for winter months, which are poor. 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.--20 years, 350 ft³/s (9.912 m³/s), 253,600 acre-ft/yr (313 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2200	*8,000 227	8.68 2.646	May 22	unknown	unknown --	unknown --
May 6	2200	2,660 75.3	5.53 1.686	June 20	unknown	unknown --	unknown --

Minimum daily, 48 ft³/s (1.36 m³/s) Oct. 6, 7.

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	62	72	77	215	219	326	255	1250	1090	1720	386	141
2	60	75	79	137	215	317	251	1400	1080	1790	364	135
3	58	84	76	115	211	317	238	1710	1020	1700	335	129
4	58	82	74	104	211	308	245	2030	968	1400	311	131
5	55	79	73	102	219	308	292	2060	857	1290	291	138
6	48	76	74	102	242	289	272	2140	830	1150	276	138
7	48	77	76	99	219	280	250	1920	924	1090	262	156
8	50	81	75	97	211	271	266	1660	1180	1000	251	185
9	53	74	73	109	204	268	317	1550	1430	950	240	178
10	51	72	75	115	204	271	357	1250	1540	900	230	171
11	51	74	61	192	196	280	373	1030	1560	870	225	165
12	51	73	51	2010	192	255	387	889	1480	850	210	166
13	51	74	52	4180	189	263	488	821	1340	840	195	139
14	51	73	51	2680	204	276	609	826	1300	820	188	131
15	51	72	52	956	230	272	638	863	1400	810	186	131
16	53	75	54	712	223	255	712	1050	1530	780	184	126
17	53	81	58	594	500	263	814	1240	1620	790	186	121
18	53	74	64	500	1050	268	949	1450	1780	780	185	118
19	104	62	70	419	771	255	1090	1860	1790	720	179	117
20	182	80	68	382	512	259	1170	2100	1800	650	176	117
21	97	103	68	366	425	251	1000	2250	1780	630	185	113
22	92	99	66	326	387	242	814	2300	1700	620	181	113
23	85	84	102	303	366	242	682	2100	1550	620	198	111
24	87	82	102	289	351	242	650	1750	1400	600	198	107
25	94	98	72	280	331	219	744	1400	1430	570	192	105
26	112	112	68	272	341	215	888	1200	1480	510	192	101
27	92	84	76	259	376	218	1030	1100	1400	520	176	99
28	85	87	88	251	397	218	1160	960	1380	480	170	94
29	81	87	100	246	346	234	1250	950	1580	446	165	92
30	72	79	165	230	---	259	1270	960	1690	436	149	88
31	78	---	268	242	---	251	---	1060	---	409	149	---
TOTAL	2218	2425	2508	16884	9542	8192	19461	45129	41909	26741	6815	3856
MEAN	71.5	80.8	80.9	545	329	264	649	1456	1397	863	220	129
MAX	182	112	268	4180	1050	326	1270	2300	1800	1790	386	185
MIN	48	62	51	97	189	215	238	821	830	409	149	88
AC-FT	4400	4810	4970	33490	18930	16250	38600	89510	83130	53040	13520	7650
CAL YR 1979 TOTAL	121605			MEAN 333	MAX 2370	MIN 48	AC-FT 241200					
WTR YR 1980 TOTAL	185680			MEAN 507	MAX 4180	MIN 48	AC-FT 368300					

NOTE.--No gage-height record June 13 to July 29.

CARSON RIVER BASIN

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

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 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
NOV 08...	1215	81	117	5.5
FEB 06...	1030	233	133	3.5
APR 03...	0945	229	150	6.0
JUN 03...	1415	1010	72	8.5
JUL 28...	1125	475	67	12.5
AUG 28...	0930	176	98	9.5
SEP 24...	0945	110	109	7.5

10309000 EAST FORK CARSON RIVER NEAR GARDNERVILLE, NV

LOCATION.--Lat 38°50'50", long 119°42'10", in SW¼NE¼ sec.2, T.11 N., R.20 E., Douglas County, Hydrologic Unit 16050201, on left bank 0.1 mi (0.2 km) downstream from Horseshoe Bend, 2 mi (3 km) east of Mud Lake Reservoir, 4.5 mi (7.2 km) downstream from Bryant Creek, and 7 mi (11 km) southeast of Gardnerville.

DRAINAGE AREA.--356 mi² (922 km²).

PERIOD OF RECORD.--January 1890 to December 1893, October 1900 to December 1906 (gage heights only August to December 1904, and July 1905 to December 1906), January 1908 to December 1910, June to October 1917, December 1924 to September 1928, June to September 1929, October 1935 to December 1937, May 1939 to current year. Monthly discharge only for some periods published in WSP 1314.

REVISED RECORDS.--WSP 1214: 1938(M), 1942-43(M), 1945(M). WSP 1514: 1909-10. WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,985.11 ft (1,519.462 m) National Geodetic Vertical Datum of 1929 (levels by Water and Power Resources Service). Prior to May 19, 1939, nonrecording gages at several sites within 2 mi (3 km) of present site at various datums.

REMARKS.--Records good. Station is above all diversions in Carson Valley. Diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft (6.16 hm³).

AVERAGE DISCHARGE.--54 years (water years 1891-93, 1901-3, 1909-10, 1926-28, 1936-37, 1940-80), 384 ft³/s (10.87 m³/s), 278,200 acre-ft/yr (343 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s (498 m³/s) Dec. 23, 1955, gage height, 11.88 ft (3.621 m), from rating curve extended above 6,000 ft³/s (170 m³/s), on basis of slope-area measurements at gage heights 9.66 ft (2.944 m) and 11.88 ft (3.621 m); minimum observed, 7.8 ft³/s (0.221 m³/s) Nov. 20, 1977, result of freezeup.

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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2300	*7,910 224	7.78 2.371	May 6	2400	2,470 70.0	4.24 1.292
Feb. 18	1500	1,560 44.2	3.47 1.058	May 22	2400	2,550 72.2	4.35 1.326
Apr. 19	2400	1,600 45.3	3.43 1.045	June 20	0400	1,980 56.1	3.91 1.192

Minimum daily, 52 ft³/s (1.473 m³/s) Oct. 7.

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	66	81	85	233	228	384	306	1490	1090	1690	381	135
2	65	79	92	155	220	367	301	1590	1170	1740	359	129
3	63	88	88	134	216	370	284	1860	1110	1480	334	121
4	62	95	83	124	215	358	294	2090	1010	1350	308	119
5	60	88	83	116	217	358	342	2090	893	1200	285	131
6	54	83	81	116	243	344	337	2100	840	1100	268	128
7	52	83	83	116	228	329	315	2080	920	1010	252	141
8	53	88	85	111	214	318	321	1820	1170	961	238	185
9	57	81	83	116	201	314	382	1730	1400	908	226	178
10	56	79	85	139	211	317	441	1450	1510	870	215	170
11	53	79	75	136	203	329	464	1210	1540	847	209	163
12	54	77	58	1290	198	293	470	1070	1480	829	198	162
13	56	79	58	3390	191	296	588	960	1350	819	185	135
14	57	77	59	3330	201	315	765	960	1220	790	178	127
15	57	77	59	1290	234	309	824	980	1340	785	175	126
16	58	81	61	913	248	291	900	1010	1470	760	173	122
17	59	86	65	717	476	295	1030	1100	1590	782	177	118
18	57	85	73	608	1340	315	1170	1170	1730	758	174	112
19	81	67	81	500	1110	285	1300	1300	1720	689	168	113
20	210	65	77	426	662	289	1430	1540	1770	634	162	112
21	120	112	79	403	544	288	1300	2230	1700	623	173	111
22	106	117	63	367	477	279	1070	2250	1570	611	169	110
23	98	100	69	340	442	270	928	1990	1420	611	189	109
24	98	88	129	320	417	276	865	1600	1340	594	195	104
25	100	103	85	316	386	250	973	1350	1390	545	181	101
26	128	125	75	296	389	243	1160	1200	1430	496	189	98
27	106	95	81	276	424	250	1290	1080	1340	502	169	97
28	97	94	92	272	477	250	1420	950	1270	491	162	93
29	90	95	116	264	403	260	1480	944	1480	447	159	91
30	81	92	129	232	---	305	1540	1040	1650	433	139	88
31	85	---	219	231	---	292	---	1120	---	403	137	---
TOTAL	2439	2639	2651	17277	11015	9439	24290	45354	40913	25758	6527	3729
MEAN	78.7	88.0	85.5	557	380	304	810	1463	1364	831	211	124
MAX	210	125	219	3390	1340	384	1540	2250	1770	1740	381	185
MIN	52	65	58	111	191	243	284	944	840	403	137	88
AC-FT	4840	5230	5260	34270	21850	18720	48180	89960	81150	51090	12950	7400

CAL YR 1979	TOTAL	123079	MEAN 337	MAX 2190	MIN 52	AC-FT 244100
WTR YR 1980	TOTAL	192031	MEAN 525	MAX 3390	MIN 52	AC-FT 380900

CARSON RIVER BASIN

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

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.

DRAINAGE AREA.--65.4 mi² (169.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1900 to May 1907, 1910-11 (fragmentary), October 1938 to current year. Monthly discharge only for some periods, published in WSP 1314. January 1890 to March 1892, June 1907 to September 1920 (except portions of 1910-11), at site 0.7 mi (1.1 km) downstream; records not equivalent owing to diversions for irrigation.

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

GAGE.--Water-stage recorder. Datum of gage is 5,754.5 ft (1,753.97 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, nonrecording gage at same site at different datum. Oct. 1, 1938, to Nov. 11, 1958, water-stage recorder at same site at datum 1.02 ft (0.311 m) lower. Nov. 13, 1958, to Jan. 30, 1963, water-stage recorder at site 150 ft (46 m) downstream at datum 3.06 ft (0.933 m) lower.

REMARKS.--Records fair. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs, total capacity, about 1,500 acre-ft (1.85 hm³).

AVERAGE DISCHARGE.--49 years (water years 1901-7, 1939-80), 111 ft³/s (3.144 m³/s), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,890 ft³/s (138 m³/s) Feb. 1, 1963, gage height, 9.0 ft (2.74 m), on basis of slope-area measurement of peak flow; minimum, about 5 ft³/s (0.14 m³/s) Dec. 23, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 11, 1937, reached a stage of 8.0 ft (2.44 m) present datum, from floodmarks, discharge, 3,500 ft³/s (99.1 m³/s) by slope-area measurement.

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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2000	1,060 30.0	3.87 1.180	May 4	2200	*1,100 31.2	3.87 1.180
Apr. 19	2200	565 16.0	3.09 0.942	May 20	2300	934 26.4	3.64 1.109

Minimum daily, 11 ft³/s (0.312 m³/s) Dec. 26.

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	13	18	22	29	65	80	71	596	304	358	91	29
2	13	18	22	26	63	79	67	641	320	367	86	28
3	13	18	21	25	62	75	64	653	302	339	77	27
4	17	18	20	23	63	69	65	746	308	296	71	26
5	17	18	20	23	67	65	67	720	270	257	66	26
6	17	19	20	23	72	72	64	696	254	240	61	26
7	17	19	19	23	64	68	62	620	267	229	58	27
8	17	21	18	22	65	64	64	534	308	224	56	53
9	15	20	17	22	62	63	78	466	348	207	53	64
10	14	19	16	14	60	64	97	360	372	200	50	64
11	13	19	14	23	57	67	111	296	373	196	50	65
12	13	18	13	131	57	64	123	267	355	192	50	64
13	13	18	14	531	56	64	164	256	331	191	50	59
14	13	18	14	615	58	67	214	266	306	187	51	39
15	13	18	13	276	56	65	234	297	319	182	52	29
16	13	19	14	221	55	62	257	358	341	176	52	33
17	13	21	15	188	68	64	305	429	364	178	52	34
18	14	20	16	157	140	66	361	472	391	174	52	34
19	21	16	17	134	126	61	415	567	385	162	52	34
20	41	17	17	123	116	62	431	677	383	153	52	34
21	25	18	16	118	100	63	370	721	362	154	56	33
22	23	21	15	109	90	58	278	729	335	146	56	34
23	22	22	19	105	86	57	257	585	311	142	54	47
24	22	32	14	96	85	58	318	410	297	135	66	47
25	25	42	12	92	82	56	393	338	304	126	69	47
26	28	42	11	86	82	53	458	305	308	114	68	46
27	22	26	13	78	85	53	525	286	284	111	71	45
28	21	26	15	76	88	55	560	296	272	116	58	33
29	18	24	19	72	81	60	623	299	310	110	58	25
30	18	23	24	72	---	72	635	316	351	105	54	24
31	18	---	29	68	---	73	---	327	---	97	36	---
TOTAL	562	648	529	3601	2211	1999	7731	14529	9735	5864	1828	1176
MEAN	18.1	21.6	17.1	116	76.2	64.5	258	469	325	189	59.0	39.2
MAX	41	42	29	615	140	80	635	746	391	367	91	65
MIN	13	16	11	14	55	53	62	256	254	97	36	24
AC-FT	1110	1290	1050	7140	4390	3970	15330	28820	19310	11630	3630	2330

CAL YR 1979 TOTAL 32035 MEAN 87.8 MAX 625 MIN 11 AC-FT 63540
WTR YR 1980 TOTAL 50413 MEAN 138 MAX 746 MIN 11 AC-FT 99990

CARSON RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1959 to current year.

SEDIMENT RECORDS: Water year 1980.

COOPERATION.--The letter "A" following a date indicates chemical-quality data furnished by the California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	ALKA- LINITY (MG/L AS CAC03)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT										
16...	0950	13	79	7.8	7.0	--	9.5	--	--	58
29... A	1130	18	78	--	4.0	--	--	--	--	--
NOV										
18...	1030	20	87	7.7	1.5	--	11.0	--	36	59
DEC										
11...	0915	9.6	79	7.5	.0	620	12.0	101	39	53
27... A	1100	13	81	--	.5	--	--	--	--	--
JAN										
12...	1055	153	53	7.4	1.5	--	10.8	--	23	47
16...	0900	219	46	7.7	1.5	--	--	--	21	41
FEB										
06... A	1320	69	68	--	2.5	--	--	--	--	--
11...	1315	57	71	--	1.5	--	11.6	--	--	58
MAR										
05... A	1015	42	70	--	1.5	--	--	--	--	--
10...	0840	46	73	7.7	.5	--	11.5	--	--	57
26... A	1100	41	74	--	2.0	--	--	--	--	--
APR										
14...	0900	205	53	--	3.0	--	11.0	--	--	47
21...	0920	364	47	--	1.5	--	11.4	--	--	42
28... A	1100	478	47	--	3.0	--	--	--	--	--
30...	0925	529	44	7.6	2.0	616	11.3	101	19	29
MAY										
06...	0920	676	42	7.0	4.5	618	10.8	103	9	38
20...	0805	603	42	7.8	4.5	618	10.0	95	20	37
27... A	0945	282	49	--	3.0	--	--	--	--	--
JUN										
02...	0930	315	46	7.6	4.5	612	9.8	94	30	47
17...	1110	352	42	7.6	7.5	618	9.4	96	20	34
24... A	1100	302	42	--	6.5	--	--	--	--	--
JUL										
01...	1000	367	38	7.3	9.0	--	9.7	--	25	33
15...	1000	189	43	7.5	11.0	622	9.0	100	18	37
28... A	0900	114	53	--	13.0	--	--	--	--	--
AUG										
07...	1040	61	56	7.7	12.5	619	8.5	98	28	45
26... A	1015	71	65	--	11.0	--	--	--	--	--
SEP										
11...	0855	65	59	7.5	10.0	621	9.1	99	29	39
24... A	1330	48	67	--	9.5	--	--	--	--	--

Mark Quinn
PO Box 1108
U Kern Co 25980

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (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)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)
OCT										
16...	.55	.64	.08	.56	.65	.01	--	.01	1.6	.2
29... A	--	--	--	--	--	--	--	--	--	--
NOV										
18...	.17	.29	.07	.22	.36	--	--	.04	3.9	.2
DEC										
11...	.39	.81	.38	.43	.88	.02	--	.03	1.7	.1
27... A	--	--	--	--	--	--	--	--	--	--
JAN										
12...	.39	1.7	1.3	.40	1.8	.23	--	.02	8.4	--
16...	.85	1.0	.15	.85	1.1	.02	--	.01	5.5	--
FEB										
06... A	--	--	--	--	--	--	--	--	--	--
11...	.36	.32	.00	.42	--	.01	.01	.04	2.3	.3
MAR										
05... A	--	--	--	--	--	--	--	--	--	--
10...	.11	.31	.16	.15	--	.02	.01	.03	2.0	.1
26... A	--	--	--	--	--	--	--	--	--	--
APR										
14...	.29	.43	.12	.31	--	.05	.02	.05	6.7	.7
21...	.34	.56	.22	.34	--	.05	.02	.02	7.7	.7
28... A	--	--	--	--	--	--	--	--	--	--
30...	.52	.62	.10	.52	--	.050	.02	.01	3.4	.5
MAY										
06...	.63	.91	.25	.66	--	.05	.01	.04	3.2	.4
20...	.34	.32	.00	.37	--	.07	.01	.03	2.3	.2
27... A	--	--	--	--	--	--	--	--	--	--
JUN										
02...	.30	.37	.03	.34	--	.22	.10	.06	3.1	.2
17...	.52	.87	.34	.53	--	.03	.04	.01	2.5	--
24... A	--	--	--	--	--	--	--	--	--	--
JUL										
01...	.76	1.0	.24	.76	--	.03	.01	.00	3.6	.4
15...	--	--	--	--	--	.03	.02	.00	1.9	.5
28... A	--	--	--	--	--	--	--	--	--	--
AUG										
07...	.43	.45	.02	.43	--	.04	.03	.01	--	.1
26... A	--	--	--	--	--	--	--	--	--	--
SEP										
11...	.11	.27	.16	.11	--	.02	.03	.01	2.3	.6
24... A	--	--	--	--	--	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY						
20...	0805	603	4.5	140	228	28

PYRAMID AND WINNEMUCCA LAKES BASIN

10336500 PYRAMID LAKE NEAR NIXON, NV

LOCATION.--Lat 39°59'05", long 119°30'00", in NE¼NW¼ sec.3, T.24 N., R.22 E., Washoe County, Hydrologic Unit 16050103, Pyramid Lake Indian Reservation, 0.2 mi (0.3 km) north of the Pyramid, 1.6 mi (2.6 km) northeast of Anaho Island, and 13 mi (21 km) northwest of Nixon.

DRAINAGE AREA.--2,720 mi² (7,040 km²).

PERIOD OF RECORD.--1867-1925 (occasional elevations in some years), June 1926 to current year (occasional elevations in each year).

REVISED RECORDS.--WSP 880: 1934-38 (bench mark). WSP 1090: 1926(M). WDR NV-67-1: 1966.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Coast and Geodetic Survey Bench Mark N 21). See WSP 1927 for history of changes prior to Aug. 6, 1968.

REMARKS.--Truckee Canal (station 10351400) diverts water out of the basin to Lahontan Reservoir (station 10312100). Elevations are given to the nearest 0.1 ft (0.03 m) and contents to four significant figures in order to reflect trends of change. Any single observation, however, may be affected by wind and seiche movements on the lake surface. Elevations published for 1867 and 1871 may have been 9 ft (2.7 m) lower because of uncertainty of date of photograph on which they were based.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 3,884.9 ft (1,184.12 m) in 1871 (see REMARKS); minimum observed, 3,783.9 ft (1,153.33 m) Feb. 6, Mar. 6, 1967.

MONTHEND ELEVATION NGVD AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,788.5	20,460,000	--
Oct. 31.....	3,788.6	20,470,000	+10,000
Nov. 30.....	3,787.6	20,370,000	-100,000
Dec. 31.....	3,787.8	20,390,000	+20,000
CAL YR 1979.....	--	--	-240,000
Jan. 31.....	3,788.4	20,450,000	+60,000
Feb. 29.....	3,788.7	20,480,000	+30,000
Mar. 31.....	3,789.0	20,510,000	+30,000
Apr. 30.....	3,789.1	20,520,000	+10,000
May 31.....	3,789.2	20,530,000	+10,000
June 30.....	3,790.4	20,660,000	+130,000
July 31.....	3,790.2	20,640,000	-20,000
Aug. 31.....	3,789.5	20,570,000	-70,000
Sept. 30.....	3,789.2	20,530,000	-40,000
WTR YR 1980.....	--	--	+70,000

NOTE.--Monthend elevations are interpolated from readings made during the month.

PYRAMID AND WINNEMUCCA LAKES BASIN

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10336600 UPPER TRUCKEE RIVER NEAR MEYERS, CA

LOCATION.--Lat 38°50'35", long 120°01'25", in NE¼SE¼ 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.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,325 ft (1,928 m), from topographic map.

REMARKS.--Records good. No regulation. Some small diversions above station for domestic use.

AVERAGE DISCHARGE.--20 years, 63.2 ft³/s (1.790 m³/s), 45,790 acre-ft/yr (56.5 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, 1977.

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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2115	*1,600 45.3	10.38 3.164	June 1	2345	252 7.14	6.38 1.945
Apr. 19	2230	264 7.48	6.43 1.960	June 10	2230	383 10.8	7.10 2.164
May 4	2045	497 14.1	7.70 2.347	June 17	2330	448 12.7	7.42 2.262
May 21	2115	554 15.7	7.99 2.435	July 3	0230	349 9.88	6.93 2.112

Minimum daily, 3.1 ft³/s (0.088 m³/s) Oct. 6-10.

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	3.3	7.1	12	25	44	44	39	273	213	308	41	13
2	3.3	6.9	12	17	42	43	37	307	225	288	37	13
3	3.2	7.5	11	15	41	42	36	352	191	291	33	12
4	3.2	8.0	11	13	40	41	36	399	195	228	31	12
5	3.2	7.6	11	13	40	42	38	390	162	193	29	12
6	3.1	7.6	10	12	43	48	36	400	149	171	28	11
7	3.1	7.7	11	12	42	38	35	372	172	158	26	11
8	3.1	7.7	10	12	39	37	36	352	236	144	25	12
9	3.1	7.4	10	13	38	37	43	328	287	133	24	11
10	3.1	7.1	11	15	37	38	52	245	310	130	23	11
11	3.2	7.2	9.0	22	36	38	56	195	308	125	22	10
12	3.2	7.0	9.2	271	35	36	58	171	281	121	22	10
13	3.3	6.9	9.5	850	34	36	80	162	245	116	20	9.8
14	3.4	6.9	9.1	530	36	36	109	162	225	112	19	9.6
15	3.4	7.0	9.0	216	39	36	115	177	270	108	19	9.4
16	3.5	7.0	9.1	160	40	34	129	220	311	102	20	9.2
17	3.4	8.8	8.9	122	66	35	159	263	341	100	19	9.0
18	3.8	8.5	8.5	100	152	36	181	297	355	94	20	8.8
19	13	7.3	8.3	84	98	35	202	369	346	83	19	8.6
20	17	7.3	8.3	76	75	35	208	424	343	78	18	8.4
21	9.8	7.3	8.5	71	62	35	174	455	323	78	17	8.3
22	8.6	7.9	8.7	66	58	34	134	449	296	73	17	8.2
23	8.2	8.8	9.0	63	52	34	116	360	270	69	18	8.1
24	8.7	13	9.3	61	49	34	122	242	263	64	19	8.0
25	12	37	9.3	59	46	33	161	194	273	58	18	7.9
26	14	27	9.2	57	46	32	198	170	265	53	17	7.8
27	10	17	9.0	54	49	32	231	163	236	51	17	7.7
28	9.0	15	8.9	53	50	32	259	166	241	49	16	7.7
29	8.3	13	8.7	51	46	35	292	181	272	47	15	7.6
30	7.6	13	13	47	---	40	292	211	284	45	14	7.6
31	7.7	---	22	46	---	40	---	214	---	42	14	---
TOTAL	192.8	307.5	313.5	3206	1475	1139	3664	8663	7888	3705	677	289.7
MEAN	6.22	10.3	10.1	103	50.9	36.7	122	279	263	120	21.8	9.66
MAX	17	37	22	850	152	44	292	455	355	302	41	13
MIN	3.1	6.9	8.3	12	34	32	35	162	149	42	14	7.6
AC-FT	382	610	622	6360	2930	2260	7270	17180	15650	7350	1340	575
CAL YR 1979 TOTAL	20272.0			MEAN 55.5	MAX 428	MIN 3.1	AC-FT 40210					
WTR YR 1980 TOTAL	31520.5			MEAN 86.1	MAX 850	MIN 3.1	AC-FT 62520					

PYRAMID AND WINNEMUCCA LAKES BASIN

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), revised.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records good. 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 (1.81 m); minimum daily, 1.9 ft³/s (0.05 m³/s) Oct. 11, 12, 1977.

EXTREMES FOR PERIOD.--Maximum discharge, 697 ft³/s (19.7 m³/s) May 22, gage height, 4.78 ft (1.457 m); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						100	88	410	271	372	61	14
2						96	84	405	304	389	56	15
3						94	83	470	262	408	50	15
4						93	84	520	243	355	45	14
5						94	84	550	221	293	41	14
6						92	85	570	204	257	37	14
7						87	82	555	207	223	33	14
8						84	85	525	245	194	31	19
9						85	95	470	304	181	29	19
10						86	110	417	341	172	27	17
11						88	122	335	370	157	26	16
12						85	132	290	362	169	23	17
13						83	145	274	334	172	22	15
14						82	157	267	296	161	22	14
15						81	172	260	316	154	21	14
16						78	190	292	343	149	22	14
17						79	215	335	389	149	21	13
18						81	255	367	428	142	22	13
19						81	280	431	431	128	21	13
20						80	305	529	448	119	20	13
21						79	295	588	446	117	20	13
22						79	230	611	413	109	20	12
23						79	210	563	374	103	21	12
24						77	205	398	355	96	22	12
25						75	222	318	358	88	21	12
26						74	265	274	360	82	20	11
27						74	305	253	328	77	18	11
28						76	345	246	311	75	16	11
29						79	390	251	347	72	15	11
30						83	435	277	362	69	15	10
31						89	---	265	---	65	15	---
TOTAL						2593	5755	12316	9973	5297	833	412
MEAN						83.6	192	397	332	171	26.9	13.7
MAX						100	435	611	448	408	61	19
MIN						74	82	246	204	65	15	10
AC-FT						5140	11420	24430	19780	10510	1650	817

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

WATER-QUALITY RECORDS

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

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

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

PERIOD OF DAILY RECORD.--

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

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.

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.

EXTREMES FOR PERIOD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 100 mg/L Apr. 30, May 3; minimum daily mean, 1 mg/L Apr. 1-5. SEDIMENT DISCHARGE: Maximum daily, 127 tons (115 metric tons) May 3; minimum daily, 0.06 ton (0.05 metric ton) Sept. 22-25.

TEMPERATURE (DEG. C) OF WATER, MARCH TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	---	5.0	8.5	---	---	---
2						---	---	9.0	5.5	10.0	---	---
3						---	---	6.0	10.0	---	---	---
4						---	5.5	4.5	7.5	---	---	---
5						---	---	5.5	7.0	---	---	---
6						---	---	5.0	---	9.5	---	---
7						---	---	4.5	---	---	14.0	---
8						---	9.0	---	---	---	---	13.0
9						---	---	4.5	8.5	---	---	---
10						0.5	---	4.5	6.0	16.0	---	---
11						---	6.5	4.0	5.5	---	---	---
12						---	---	5.0	5.0	---	---	---
13						---	---	5.0	5.0	---	---	---
14						3.5	7.0	4.5	---	17.0	15.5	10.0
15						---	---	4.0	12.0	---	---	---
16						---	---	10.0	12.5	---	---	---
17						---	8.0	5.0	13.0	---	---	---
18						---	5.0	10.5	13.0	---	---	---
19						---	4.0	6.5	6.5	---	---	---
20						---	5.5	---	8.0	---	---	---
21						---	2.0	9.5	---	---	---	---
22						---	4.0	4.0	---	---	---	---
23						---	2.5	5.0	9.0	---	15.5	15.0
24						---	---	5.5	12.0	19.5	---	---
25						1.5	4.0	4.0	12.5	---	---	---
26						---	6.0	---	13.0	---	14.0	---
27						---	6.0	5.5	10.0	---	---	---
28						---	5.0	6.5	9.0	---	---	---
29						---	5.0	7.0	14.0	---	---	---
30						---	5.0	9.0	10.5	---	14.0	---
31						---	---	10.0	---	---	---	---
MONTH						---	---	6.0	9.5	---	---	---

PYRAMID AND WINNEMUCCA LAKES BASIN

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), MARCH TO SEPTEMBER 1980

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							100	6	1.6
2							96	5	1.3
3							94	5	1.3
4							93	4	1.0
5							94	4	1.0
6							92	4	.99
7							87	4	.94
8							84	4	.91
9							85	4	.92
10							86	4	.93
11							88	4	.95
12							85	4	.92
13							83	3	.67
14							82	3	.66
15							81	3	.66
16							78	4	.84
17							79	4	.85
18							81	4	.87
19							81	5	1.1
20							80	5	1.1
21							79	5	1.1
22							79	5	1.1
23							79	4	.85
24							77	4	.83
25							75	4	.81
26							74	3	.60
27							74	3	.60
28							76	2	.41
29							79	2	.43
30							83	2	.45
31							89	2	.48
TOTAL							2593	---	27.17
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	88	1	.24	410	70	77	271	33	24
2	84	1	.23	405	50	55	304	37	30
3	83	1	.22	470	100	127	262	28	20
4	84	1	.23	520	90	126	243	22	14
5	84	1	.23	560	70	104	221	19	11
6	85	2	.46	570	55	85	204	18	9.9
7	82	3	.66	555	50	75	207	19	11
8	85	4	.92	525	42	60	245	31	21
9	95	5	1.3	470	36	46	304	42	34
10	110	7	2.1	417	42	47	341	50	46
11	122	8	2.6	335	32	29	370	52	52
12	132	9	3.2	290	27	21	362	48	47
13	145	11	4.3	274	30	22	334	39	35
14	157	13	5.5	267	30	22	296	31	25
15	172	17	7.9	260	21	15	316	45	38
16	190	21	11	292	30	24	343	47	44
17	215	28	16	335	34	31	389	56	59
18	255	43	30	367	39	39	428	57	66
19	280	50	38	431	47	55	431	56	65
20	305	57	47	529	57	81	448	50	60
21	295	50	40	588	60	95	446	49	59
22	230	40	25	611	40	66	413	46	51
23	210	36	20	563	40	61	374	38	38
24	205	43	24	398	40	43	355	36	35
25	222	52	31	318	35	30	358	38	37
26	265	65	47	274	28	21	360	39	38
27	305	82	68	253	25	17	328	31	27
28	345	90	84	246	25	17	311	25	21
29	390	97	102	251	30	20	347	30	28
30	435	100	117	277	30	22	362	29	28
31	---	---	---	265	30	21	---	---	---
TOTAL	5755	---	730.09	12316	---	1554	9973	---	1073.9

PYRAMID AND WINNEMUCCA LAKES BASIN

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), MARCH TO SEPTEMBER 1980

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	372	32	32	61	7	1.2	14	2	.08
2	389	42	44	56	6	.91	15	2	.08
3	408	47	52	50	5	.68	15	2	.08
4	355	40	38	45	4	.49	14	2	.08
5	293	35	28	41	3	.33	14	2	.08
6	257	32	22	37	3	.30	14	2	.08
7	223	28	17	33	3	.27	14	4	.15
8	194	25	13	31	3	.25	19	3	.15
9	181	20	9.8	29	3	.23	19	3	.15
10	172	19	8.8	27	3	.22	17	3	.14
11	157	18	7.6	26	4	.28	16	3	.13
12	169	18	8.2	23	4	.25	17	2	.09
13	172	17	7.9	22	4	.24	15	2	.08
14	161	17	7.4	22	4	.24	14	2	.08
15	154	17	7.1	21	4	.23	14	2	.08
16	149	17	6.8	22	4	.24	14	2	.08
17	149	16	6.4	21	4	.23	13	2	.07
18	142	16	6.1	22	4	.24	13	2	.07
19	128	16	5.5	21	3	.17	13	2	.07
20	119	16	5.1	20	3	.16	13	2	.07
21	117	15	4.7	20	3	.16	13	2	.07
22	109	15	4.4	20	3	.16	12	2	.06
23	103	15	4.2	21	3	.17	12	2	.06
24	96	15	3.9	22	3	.18	12	2	.06
25	88	14	3.3	21	3	.17	12	2	.06
26	82	13	2.9	20	3	.16	11	3	.09
27	77	12	2.5	18	2	.10	11	3	.09
28	75	11	2.2	16	2	.09	11	3	.09
29	72	10	1.9	15	2	.08	11	3	.09
30	69	9	1.7	15	2	.08	10	3	.08
31	65	8	1.4	15	2	.08	---	---	---
TOTAL	5297	---	365.8	833	---	8.59	412	---	2.64
PERIOD	37179.0		3762.19						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MARCH TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (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
APR										
21...	0935	307	2.0	50	41	22	--	--	--	--
25...	0955	230	4.0	24	15	26	46	60	90	100
30...	0020	448	5.0	104	126	51	--	--	--	--
MAY										
03...	0030	461	6.0	99	123	21	--	--	--	--
07...	0105	589	4.5	58	92	40	--	--	--	--
09...	1350	497	4.5	30	40	36	44	64	91	100
11...	1405	319	4.0	31	27	29	--	--	--	--
20...	1700	497	9.5	50	67	29	--	--	--	--
21...	2335	575	7.0	49	76	59	--	--	--	--
JUN										
10...	0055	377	6.0	68	69	37	--	--	--	--
11...	1020	381	5.5	40	41	26	--	--	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

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, 5.85 ft (1.783 m) Jan. 13; minimum, 2.38 ft (0.725 m) Mar. 30.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.69	3.10	3.44	3.17	2.58	2.67	2.42	3.32	3.08	3.49	4.30	3.93
2	2.68	3.09	3.43	3.09	2.55	2.65	2.42	3.32	3.10	3.84	4.28	3.92
3	2.68	3.15	3.42	3.01	2.51	2.66	2.40	3.39	3.07	4.12	4.27	3.91
4	2.67	3.14	3.39	2.92	2.50	2.63	2.40	3.47	3.09	4.23	4.25	3.89
5	2.67	3.14	3.39	2.84	2.48	2.67	2.50	3.53	3.03	4.27	4.23	3.88
6	2.66	3.14	3.38	2.77	2.48	2.66	2.50	3.57	2.98	4.29	4.20	3.88
7	2.65	3.13	3.37	2.70	2.47	2.63	2.49	3.60	2.97	4.35	4.19	3.88
8	2.64	3.12	3.37	2.66	2.47	2.61	2.48	3.52	3.02	4.39	4.18	3.88
9	2.63	3.11	3.36	2.71	2.46	2.58	2.47	3.48	3.12	4.42	4.17	3.87
10	2.63	3.10	3.35	2.69	2.45	2.56	2.48	3.35	3.18	4.42	4.16	3.86
11	2.62	3.08	3.32	3.00	2.45	2.59	2.48	3.25	3.23	4.41	4.16	3.85
12	2.60	3.06	3.29	4.38	2.45	2.56	2.50	3.15	3.23	4.40	4.15	3.83
13	2.57	3.04	3.27	5.85	2.44	2.53	2.54	3.10	3.20	4.40	4.14	3.77
14	2.55	3.03	3.24	5.29	2.52	2.50	2.60	3.05	3.17	4.39	4.13	3.75
15	2.54	3.02	3.21	4.73	2.58	2.49	2.66	3.00	3.18	4.38	4.13	3.74
16	2.53	3.02	3.19	4.35	2.63	2.47	2.73	3.00	3.24	4.38	4.14	3.74
17	2.49	3.06	3.17	4.03	2.85	2.47	2.82	3.06	3.33	4.40	4.13	3.73
18	2.51	3.06	3.11	3.72	3.11	2.46	2.91	3.15	3.38	4.40	4.10	3.69
19	2.84	3.04	3.04	3.48	3.17	2.46	3.01	3.27	3.41	4.38	4.10	3.68
20	2.96	3.04	2.99	3.29	3.12	2.45	3.13	3.40	3.42	4.36	4.08	3.66
21	2.98	3.03	3.03	3.14	3.13	2.46	3.14	3.51	3.41	4.36	4.08	3.65
22	2.98	3.06	2.99	3.03	3.03	2.46	3.11	3.60	3.36	4.36	4.08	3.64
23	2.98	3.05	3.05	2.95	2.95	2.45	3.05	3.47	3.32	4.36	4.08	3.64
24	2.97	3.15	3.18	2.87	2.88	2.44	3.02	3.33	3.28	4.36	4.08	3.62
25	3.06	3.34	3.17	2.82	2.82	2.42	3.03	3.20	3.28	4.36	4.07	3.60
26	3.08	3.40	3.12	2.75	2.77	2.41	3.08	3.11	3.28	4.35	4.06	3.59
27	3.09	3.43	3.08	2.70	2.73	2.41	3.14	3.05	3.27	4.33	4.04	3.56
28	3.10	3.44	3.03	2.69	2.72	2.40	3.21	3.00	3.25	4.32	4.02	3.55
29	3.10	3.45	2.99	2.66	2.69	2.39	3.28	2.99	3.30	4.30	3.98	3.54
30	3.10	3.45	3.10	2.63	---	2.38	3.32	3.02	3.35	4.30	3.96	3.53
31	3.10	---	3.20	2.60	---	2.39	---	3.05	---	4.30	3.95	---
MEAN	2.79	3.15	3.22	3.27	2.69	2.51	2.78	3.27	3.22	4.30	4.13	3.74
MAX	3.10	3.45	3.44	5.85	3.17	2.67	3.32	3.60	3.42	4.42	4.30	3.93
MIN	2.49	3.02	2.99	2.60	2.44	2.38	2.40	2.99	2.97	3.49	3.95	3.53

CAL YR 1979 MAX 3.92 MIN 2.10
WTR YR 1980 MAX 5.85 MIN 2.38

10336626 TAYLOR CREEK NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°55'18", long 120°03'37", in NE¼NW¼ 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 except those for periods of no gage-height record, which are fair. Flow regulated by Fallen Leaf Lake Dam (station 10336625).

AVERAGE DISCHARGE (unadjusted).--12 years, 44.4 ft³/s (1.257 m³/s), 32,170 acre-ft/yr (39.7 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, 1,530 ft³/s (43.3 m³/s) Jan. 14, gage height, 6.33 ft (1.929 m); minimum daily, 0.63 ft³/s (0.018 m³/s) Oct. 7.

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	.88	4.5	17	63	40	47	21	180	107	91	23	4.2
2	.84	4.5	16	63	39	45	23	180	117	21	22	3.9
3	.84	4.5	16	60	36	45	24	195	118	46	21	3.9
4	.78	4.5	16	59	34	44	23	224	113	83	19	3.7
5	.70	4.5	17	56	33	47	27	250	107	89	17	3.5
6	.68	4.5	17	56	32	46	32	262	94	98	12	3.6
7	.63	6.6	17	56	30	43	28	271	85	47	8.9	3.7
8	.64	8.8	17	56	30	40	26	258	88	54	7.0	3.5
9	5.0	14	17	60	29	37	27	246	108	63	4.9	3.5
10	10	18	17	61	28	35	25	222	134	79	4.7	4.2
11	10	18	21	65	27	36	25	179	154	78	4.4	4.7
12	10	18	28	280	27	36	25	140	158	78	4.4	4.5
13	10	18	27	850	25	35	28	117	153	77	4.7	3.4
14	10	15	25	1220	25	33	33	104	139	77	4.9	2.6
15	10	11	24	698	31	32	38	93	136	74	4.9	2.7
16	10	11	23	489	36	29	44	90	149	57	6.8	2.7
17	10	9.5	22	397	53	28	54	97	172	50	21	2.7
18	10	9.5	29	320	105	27	67	110	197	57	8.0	2.9
19	10	9.5	36	251	138	26	85	135	211	64	5.4	2.9
20	10	9.5	33	194	136	27	116	181	218	62	6.3	3.1
21	10	11	33	150	119	26	138	223	218	52	1.8	3.2
22	10	13	32	120	94	26	124	253	208	44	1.6	3.3
23	12	13	32	98	79	25	109	251	189	45	2.1	3.1
24	12	13	40	83	69	25	98	215	175	44	3.0	3.0
25	15	13	44	73	61	24	96	171	172	44	2.9	2.7
26	20	13	41	66	57	24	102	133	173	42	2.7	2.7
27	15	13	38	61	55	23	114	109	167	40	2.6	2.8
28	12	15	34	53	54	22	134	95	159	36	3.1	2.7
29	12	16	32	50	50	22	156	89	167	31	4.2	2.7
30	12	16	33	46	---	22	179	92	187	28	4.2	2.9
31	7.2	---	51	43	---	21	---	101	---	25	4.2	---
TOTAL	258.19	339.4	845	6197	1572	998	2013	5266	4573	1770	242.7	99.0
MEAN	8.33	11.3	27.3	200	54.2	32.2	67.1	170	152	57.1	7.83	3.30
MAX	20	18	51	1220	138	47	179	271	218	92	23	4.7
MIN	.63	4.5	16	43	25	21	21	89	85	21	1.6	2.6
AC-FT	512	673	1680	12290	3120	1980	3990	10450	9070	3510	481	196
CAL YR 1979	TOTAL	12568.18	MEAN	34.4	MAX	278	MIN	.63	AC-FT	24930		
WTR YR 1980	TOTAL	24173.29	MEAN	66.0	MAX	1220	MIN	.63	AC-FT	47950		

NOTE.--No gage-height record Oct. 9 to Nov. 15, Jan. 6-14.

PYRAMID AND WINNEMUCCA LAKES BASIN

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).

PERIOD OF RECORD.--July to September 1980.

GAGE.--Water-stage recorder. Altitude of gage is 6,238 ft (1,901 m), from topographic map.

REMARKS.--Records good except those for period of no gage height record, which are poor. No known diversion or regulation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12 ft³/s (0.34 m³/s) July 7, gage height, 1.06 ft (0.323 m); minimum daily, 1.1 ft³/s (0.31 m³/s) Sept. 9-30.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	1.6	1.2
2										---	1.6	1.2
3										---	1.5	1.2
4										---	1.5	1.2
5										---	1.5	1.2
6										---	1.5	1.2
7										11	1.5	1.2
8										10	1.4	1.2
9										8.6	1.4	1.1
10										7.5	1.4	1.1
11										6.6	1.3	1.1
12										5.9	1.3	1.1
13										5.4	1.3	1.1
14										5.0	1.3	1.1
15										4.6	1.3	1.1
16										4.4	1.3	1.1
17										3.9	1.3	1.1
18										3.7	1.3	1.1
19										3.3	1.2	1.1
20										2.9	1.2	1.1
21										2.7	1.2	1.1
22										2.4	1.2	1.1
23										2.2	1.2	1.1
24										2.1	1.2	1.1
25										1.9	1.2	1.1
26										1.8	1.2	1.1
27										1.8	1.2	1.1
28										1.8	1.2	1.1
29										1.8	1.2	1.1
30										1.7	1.2	1.1
31										1.6	1.2	---
TOTAL										---	40.9	33.8
MEAN										---	1.32	1.13
MAX										---	1.6	1.2
MIN										---	1.2	1.1
AC-FT										---	81	67

NOTE.--No gage-height record Aug. 12 to Sept. 30.

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.--20 years, 36.2 ft³/s (1.025 m³/s), 26,230 acre-ft/yr (32.3 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.--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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2100	*1,100 31.2	a8.65 2.637	May 21	1945	341 9.66	3.05 .930
Feb. 18	0115	234 6.63	2.66 0.811	June 17	2000	218 6.17	2.48 .756

a Backwater from debris.

Minimum daily, 2.0 ft³/s (0.057 m³/s) Oct. 1.

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	2.0	4.8	8.9	23	26	30	20	150	121	115	16	3.9
2	2.3	4.6	8.5	20	25	30	19	170	137	140	14	3.8
3	2.2	5.2	8.1	18	25	29	18	190	118	132	13	3.8
4	2.1	5.2	7.9	16	24	27	19	220	109	111	11	3.6
5	2.2	4.9	7.6	15	23	27	20	210	100	96	11	3.5
6	2.3	4.5	7.4	14	24	26	18	215	93	87	10	3.5
7	2.3	4.3	7.2	13	23	24	17	205	100	82	9.4	3.5
8	2.4	4.3	7.1	13	23	24	18	190	121	76	8.9	3.6
9	2.4	4.5	7.1	14	22	23	19	165	143	68	8.6	3.4
10	2.3	4.3	7.1	22	22	23	21	140	157	63	8.1	3.4
11	2.3	4.3	6.1	45	21	23	22	110	161	60	7.6	3.4
12	2.4	4.3	6.1	500	21	24	23	97	154	58	7.3	3.4
13	2.4	4.3	6.1	800	20	22	32	90	133	55	6.9	3.3
14	2.5	4.3	5.8	400	21	21	50	90	127	53	6.6	3.3
15	2.9	4.3	5.7	173	22	21	65	105	140	50	6.4	3.3
16	2.7	4.3	5.5	133	23	20	72	125	159	48	6.1	3.2
17	2.7	5.3	5.4	109	61	20	80	150	172	45	6.1	3.1
18	3.0	5.2	5.3	83	161	21	95	175	177	44	5.7	3.1
19	29	4.5	5.4	68	85	20	110	205	171	41	5.6	3.1
20	20	4.4	5.4	57	58	20	112	235	160	38	5.3	3.1
21	7.0	4.5	5.9	50	52	22	90	250	153	37	5.1	2.9
22	5.7	4.8	6.1	46	44	20	75	245	139	35	5.0	2.9
23	5.5	5.6	6.5	42	40	19	65	185	128	32	4.9	2.9
24	5.5	15	7.0	40	38	19	70	134	125	30	4.6	2.8
25	10	28	7.5	38	36	18	95	110	119	27	4.5	2.8
26	11	20	7.4	36	34	18	110	96	119	25	4.4	2.8
27	7.7	14	7.4	34	34	18	125	90	110	22	4.2	2.7
28	6.4	12	7.3	32	34	17	140	93	114	22	4.2	2.7
29	5.6	10	7.2	30	31	18	155	102	124	20	4.2	2.7
30	5.2	9.5	9.0	28	---	20	155	109	119	19	4.0	2.7
31	5.0	---	25	27	---	20	---	114	---	17	4.0	---
TOTAL	167.0	215.2	230.0	2939	1073	684	1930	4765	4003	1748	222.7	96.2
MEAN	5.39	7.17	7.42	94.8	37.0	22.1	64.3	154	133	56.4	7.18	3.21
MAX	29	28	25	800	161	30	155	250	177	140	16	3.9
MIN	2.0	4.3	5.3	13	20	17	17	90	93	17	4.0	2.7
AC-FT	331	427	456	5830	2130	1360	3830	9450	7940	3470	442	191
CAL YR 1979 TOTAL	10429.8			MEAN 28.6	MAX 245	MIN 1.8	AC-FT 20690					
WTR YR 1980 TOTAL	18073.1			MEAN 49.4	MAX 800	MIN 2.0	AC-FT 35850					

PYRAMID AND WINNEMUCCA LAKES BASIN

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-78, October 1979 to September 1980.

WATER TEMPERATURES: Water years 1975-78, October 1979 to September 1980.

SEDIMENT RECORDS: Water years 1975-78, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1974 to June 1978 (1977-78 storm season only), October 1979 to September 1980.

SEDIMENT RECORDS: October 1974 to June 1978 (1977-78 storm season only), October 1979 to September 1980.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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.--

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

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	8.0	5.5	---	---	---
2	---	---	---	---	---	---	4.5	6.5	6.5	6.5	---	---
3	---	---	---	---	---	3.5	---	5.5	7.5	10.0	---	---
4	---	---	---	---	---	---	---	6.5	5.0	---	---	---
5	---	---	---	---	---	---	2.5	6.5	7.0	11.0	---	---
6	---	---	---	---	---	---	---	8.0	4.0	---	---	---
7	---	---	---	---	---	1.0	---	6.5	11.0	12.0	13.0	---
8	---	---	---	---	2.5	---	---	7.0	6.5	---	---	---
9	---	---	---	1.5	---	4.5	7.5	4.0	8.5	9.0	---	14.5
10	---	---	3.0	---	---	---	---	4.5	6.0	---	---	---
11	---	---	---	---	---	---	6.0	5.5	6.0	11.0	---	9.0
12	---	---	---	0.0	---	---	---	6.5	5.5	---	---	---
13	---	---	---	0.0	---	5.0	---	6.5	5.5	11.0	---	---
14	---	---	---	1.0	---	---	---	7.0	10.0	---	---	---
15	---	---	---	1.5	1.0	---	---	4.0	9.5	13.5	---	---
16	---	---	---	---	---	4.5	6.5	10.0	6.5	---	---	---
17	---	---	---	---	0.5	1.0	7.5	9.5	5.0	---	---	---
18	---	---	---	---	0.5	---	7.0	9.5	10.5	13.0	---	13.0
19	---	---	---	---	---	---	6.0	9.0	9.0	---	15.5	---
20	---	---	3.0	1.0	1.5	4.0	4.0	9.0	11.0	---	---	---
21	---	---	---	---	---	---	5.5	8.5	8.5	15.0	---	---
22	6.0	---	---	---	---	---	4.0	8.5	10.5	---	---	---
23	---	---	---	---	---	4.0	6.5	5.5	6.0	---	---	11.0
24	---	---	---	---	---	---	4.0	6.0	9.5	---	---	---
25	---	1.5	---	---	---	---	8.0	5.5	---	---	---	---
26	---	---	---	---	3.0	6.0	7.0	7.5	8.5	---	---	---
27	---	---	---	---	---	---	7.0	5.5	---	---	---	---
28	---	---	---	---	---	---	3.5	6.5	12.5	---	14.0	---
29	---	---	---	---	---	---	7.0	9.0	---	---	---	---
30	---	---	---	---	---	6.5	6.0	6.0	---	---	---	9.5
31	---	---	---	4.0	---	---	---	6.0	---	16.0	---	---
MONTH	---	---	---	---	---	---	---	7.0	8.0	---	---	---

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	2.0	1	0	4.8	1	.01	8.9	1	.02
2	2.3	1	0	4.6	1	.01	8.5	1	.02
3	2.2	1	0	5.2	1	.01	8.1	1	.02
4	2.1	1	0	5.2	1	.01	7.9	1	.02
5	2.2	1	0	4.9	1	.01	7.6	1	.02
6	2.3	1	0	4.5	1	.01	7.4	1	.02
7	2.3	1	0	4.3	1	.01	7.2	1	.02
8	2.4	1	0	4.3	1	.01	7.1	1	.02
9	2.4	1	0	4.5	1	.01	7.1	1	.02
10	2.3	1	0	4.3	1	.01	7.1	1	.02
11	2.3	1	0	4.3	1	.01	6.1	1	.02
12	2.4	1	0	4.3	1	.01	6.1	1	.02
13	2.4	1	0	4.3	1	.01	6.1	1	.02
14	2.5	1	0	4.3	1	.01	5.8	1	.02
15	2.9	1	0	4.3	1	.01	5.7	1	.02
16	2.7	1	0	4.3	1	.01	5.5	1	.01
17	2.7	1	0	5.3	1	.01	5.4	1	.01
18	3.0	1	0	5.2	1	.01	5.3	1	.01
19	29	8	.63	4.5	1	.01	5.4	1	.01
20	20	4	.22	4.4	1	.01	5.4	1	.01
21	7.0	1	.02	4.5	1	.01	5.9	1	.02
22	5.7	1	.02	4.8	1	.01	6.1	1	.02
23	5.5	1	.01	5.6	1	.02	6.5	1	.02
24	5.5	1	.01	15	4	.16	7.0	1	.02
25	10	5	.14	28	3	.23	7.5	1	.02
26	11	3	.09	20	1	.05	7.4	1	.02
27	7.7	2	.04	14	1	.04	7.4	1	.02
28	6.4	1	.02	12	1	.03	7.3	1	.02
29	5.6	1	.02	10	1	.03	7.2	1	.02
30	5.2	1	.01	9.5	1	.03	9.0	3	.07
31	5.0	1	.01	---	---	---	25	5	.34
TOTAL	167.0	---	1.24	215.2	---	.81	230.0	---	.94

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	23	3	.19	26	1	.07	30	0	0
2	20	2	.11	25	1	.07	30	0	0
3	18	1	.05	25	1	.07	29	0	0
4	16	0	0	24	1	.06	27	0	0
5	15	0	0	23	1	.06	27	0	0
6	14	0	0	24	1	.06	26	0	0
7	13	0	0	23	1	.06	24	0	0
8	13	0	0	23	1	.06	24	0	0
9	14	1	.04	22	1	.06	23	1	.06
10	22	15	.89	22	1	.06	23	1	.06
11	45	140	17	21	1	.06	23	1	.06
12	500	1000	1350	21	1	.06	24	1	.06
13	800	1200	2590	20	2	.11	22	1	.06
14	400	420	454	21	2	.11	21	1	.06
15	173	100	47	22	2	.12	21	1	.06
16	133	90	32	23	2	.12	20	1	.05
17	109	40	12	61	220	36	20	1	.05
18	83	25	5.6	161	200	87	21	0	0
19	68	8	1.5	85	15	3.4	20	0	0
20	57	3	.46	58	3	.47	20	0	0
21	50	2	.27	52	2	.28	22	1	.06
22	46	1	.12	44	1	.12	20	0	0
23	42	1	.11	40	1	.11	19	0	0
24	40	1	.11	38	1	.10	19	0	0
25	38	1	.10	36	1	.10	18	1	.05
26	36	1	.10	34	1	.09	18	1	.05
27	34	1	.09	34	1	.09	18	1	.05
28	32	1	.09	34	1	.09	17	0	0
29	30	1	.08	31	1	.08	18	0	0
30	28	1	.08	---	---	---	20	0	0
31	27	1	.07	---	---	---	20	0	0
TOTAL	2939	---	4512.06	1073	---	129.14	684	---	.73

PYRAMID AND WINNEMUCCA LAKES BASIN

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	20	0	0	150	270	109	121	50	16
2	19	0	0	170	280	129	137	25	9.2
3	18	0	0	190	320	164	118	15	4.8
4	19	0	0	220	340	202	109	25	7.4
5	20	0	0	210	300	170	100	25	6.8
6	18	0	0	215	240	139	93	20	5.0
7	17	0	0	205	210	116	100	30	8.1
8	18	2	.10	190	200	103	121	50	16
9	19	4	.21	165	190	85	143	60	23
10	21	2	.11	140	90	34	157	50	21
11	22	2	.12	110	40	12	161	45	20
12	23	3	.19	97	20	5.2	154	25	10
13	32	18	1.6	90	20	4.9	133	22	7.9
14	50	22	3.0	90	20	4.9	127	20	6.9
15	65	25	4.4	105	25	7.1	140	25	9.5
16	72	37	7.2	125	50	17	159	25	11
17	80	50	11	150	90	36	172	30	14
18	95	80	21	175	115	54	177	25	12
19	110	130	39	205	160	89	171	24	11
20	112	130	39	235	200	127	160	22	9.5
21	90	90	22	250	250	169	153	21	8.7
22	75	70	14	245	240	159	139	20	7.5
23	65	50	8.8	185	170	85	128	18	6.2
24	70	80	15	134	50	18	125	15	5.1
25	95	110	28	110	30	8.9	119	12	3.9
26	110	140	42	96	20	5.2	119	11	3.5
27	125	200	67	90	20	4.9	110	12	3.6
28	140	180	68	93	40	10	114	12	3.7
29	155	330	138	102	35	9.6	124	10	3.3
30	155	310	130	109	35	10	119	10	3.2
31	---	---	---	114	45	14	---	---	---
TOTAL	1930	---	659.73	4765	---	2101.7	4003	---	277.8
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	115	9	2.8	16	2	.09	3.9	2	.02
2	140	25	9.5	14	2	.08	3.8	2	.02
3	132	12	4.3	13	2	.07	3.8	1	.01
4	111	8	2.4	11	2	.06	3.6	1	0
5	96	8	2.1	11	2	.06	3.5	1	0
6	87	7	1.6	10	2	.05	3.5	1	0
7	82	7	1.5	9.4	2	.05	3.5	1	0
8	76	6	1.2	8.9	2	.05	3.6	1	0
9	68	6	1.1	8.6	2	.05	3.4	1	0
10	63	6	1.0	8.1	2	.04	3.4	1	0
11	60	6	.97	7.6	2	.04	3.4	1	0
12	58	6	.94	7.3	2	.04	3.4	1	0
13	55	6	.89	6.9	1	.02	3.3	1	0
14	53	5	.72	6.6	1	.02	3.3	0	0
15	50	5	.68	6.4	1	.02	3.3	0	0
16	48	5	.65	6.1	1	.02	3.2	0	0
17	45	5	.61	6.1	1	.02	3.1	0	0
18	44	5	.59	5.7	1	.02	3.1	0	0
19	41	5	.55	5.6	1	.02	3.1	0	0
20	38	5	.51	5.3	1	.01	3.1	0	0
21	37	6	.60	5.1	1	.01	2.9	1	0
22	35	6	.57	5.0	1	.01	2.9	1	0
23	32	6	.52	4.9	1	.01	2.9	1	0
24	30	6	.49	4.6	2	.02	2.8	1	0
25	27	5	.36	4.5	2	.02	2.8	1	0
26	25	5	.34	4.4	2	.02	2.8	1	0
27	22	5	.30	4.2	2	.02	2.7	1	0
28	22	5	.30	4.2	2	.02	2.7	1	0
29	20	4	.22	4.2	2	.02	2.7	1	0
30	19	3	.15	4.0	2	.02	2.7	1	0
31	17	2	.09	4.0	2	.02	---	---	---
TOTAL	1748	---	38.55	222.7	---	1.02	96.2	---	.05

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (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
JAN								
13...	1200	700	.0	1070	2020	8	13	20
14...	0930	482	1.0	340	442	--	--	--
14...	1245	386	1.0	375	391	--	--	--
FEB								
17...	2335	182	.5	556	273	--	--	--
APR								
18...	1540	102	7.0	75	21	--	--	--
25...	1910	129	5.0	142	49	--	--	--
26...	1625	135	7.0	135	49	--	--	--
30...	1740	220	6.0	134	80	--	--	--
MAY								
04...	1800	282	6.5	397	302	--	--	--
06...	1525	239	8.0	195	126	--	--	--
07...	1935	234	5.0	193	122	--	--	--
11...	1115	106	3.5	45	13	--	--	--
20...	2035	287	5.0	207	160	--	--	--
JUN								
09...	2110	181	6.0	112	55	--	--	--
11...	2025	190	6.0	118	61	--	--	--

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
JAN								
13...	29	42	57	72	91	98	100	--
14...	--	--	51	69	91	99	100	--
14...	--	--	36	52	74	87	94	100
FEB								
17...	--	--	28	45	78	99	100	--
APR								
18...	--	--	26	--	--	--	--	--
25...	--	--	20	--	--	--	--	--
26...	--	--	10	--	--	--	--	--
30...	--	--	13	--	--	--	--	--
MAY								
04...	--	--	30	--	--	--	--	--
06...	--	--	56	--	--	--	--	--
07...	--	--	12	--	--	--	--	--
11...	--	--	14	--	--	--	--	--
20...	--	--	23	--	--	--	--	--
JUN								
09...	--	--	17	--	--	--	--	--
11...	--	--	13	--	--	--	--	--

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.

WATER-DISCHARGE RECORDS

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. 13	2015	*1,450	41.1	June 1	2145	116	3.29
Feb. 17	2345	142	4.02	June 17	1815	144	4.08
May 6	1730	205	5.81	July 2	1945	137	3.88
May 21	1745	273	7.73				

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	.45	2.3	7.1	16	20	21	13	100	98	79	13	2.9
2	.45	2.3	6.6	14	19	21	13	112	101	98	11	2.7
3	.45	2.6	6.5	13	18	19	13	129	85	88	10	2.6
4	.48	2.7	6.2	12	17	19	12	150	82	75	9.6	2.4
5	.51	2.6	5.8	10	17	19	13	137	76	65	9.0	2.2
6	.50	2.5	6.1	9.0	17	18	12	152	71	59	8.5	2.2
7	.45	2.5	5.9	7.9	17	17	12	142	75	56	8.0	2.2
8	.59	2.6	5.5	7.5	17	17	12	131	90	53	7.4	2.4
9	.64	2.6	5.6	7.4	17	17	13	112	98	50	7.1	2.2
10	.63	2.5	5.6	17	16	17	15	88	107	47	6.6	2.4
11	.57	2.4	4.8	29	15	17	16	74	108	46	6.2	2.3
12	.57	2.4	4.4	275	15	18	17	68	103	44	5.9	2.1
13	.49	2.3	4.3	784	15	15	15	24	67	90	42	5.6
14	.60	2.3	4.1	331	14	15	32	71	90	41	5.5	2.1
15	1.1	2.3	4.0	115	14	14	35	81	96	39	5.3	2.1
16	1.2	2.3	4.0	88	15	14	40	100	105	37	5.5	1.9
17	1.0	2.7	4.0	74	45	14	50	110	114	36	5.3	1.9
18	1.2	3.1	4.0	59	94	14	59	125	116	34	5.2	1.9
19	17	2.7	4.0	52	59	13	67	155	110	32	5.0	2.0
20	10	2.4	4.0	46	36	13	75	173	105	30	4.5	2.0
21	4.3	2.4	4.3	42	32	14	65	196	100	29	4.2	2.0
22	3.9	2.6	4.5	38	30	13	52	186	93	28	4.0	2.0
23	3.4	3.2	4.8	35	28	12	50	139	85	26	3.8	1.9
24	3.2	14	5.2	33	26	12	60	105	82	24	3.8	1.8
25	8.4	18	5.5	31	24	12	70	87	79	22	3.8	1.8
26	7.1	16	5.4	29	24	12	79	76	78	20	3.6	1.7
27	4.9	11	5.3	27	24	12	90	74	71	18	3.4	1.7
28	4.0	8.4	5.0	25	23	12	98	76	74	17	3.3	1.6
29	3.0	7.6	5.0	23	22	12	114	84	81	16	3.0	1.5
30	2.5	7.4	6.0	22	---	14	105	91	81	15	3.0	1.6
31	2.5	---	18	21	---	14	---	98	---	14	3.0	---
TOTAL	86.08	140.7	171.5	2292.8	730	471	1326	3489	2744	1280	183.1	62.1
MEAN	2.78	4.69	5.53	74.0	25.2	15.2	44.2	113	91.5	41.3	5.91	2.07
MAX	17	18	18	784	94	21	114	196	116	98	13	2.9
MIN	.45	2.3	4.0	7.4	14	12	12	67	71	14	3.0	1.5
AC-FT	171	279	340	4550	1450	934	2630	6920	5440	2540	363	123
WTR YR 1979	TOTAL	7760.05	MEAN	21.3	MAX	199	MIN	.38	AC-FT	15390		
CAL YR 1980	TOTAL	12976.28	MEAN	35.5	MAX	784	MIN	.45	AC-FT	25740		

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 September 1980.

WATER TEMPERATURES: Water years 1973-78, October 1979 to September 1980.

SEDIMENT RECORDS: Water years 1973-78, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to September 1980.

SEDIMENT RECORDS: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to September 1980.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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.--

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

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	7.5	5.0	---	---	---
2	---	---	---	---	---	---	3.0	7.0	7.0	6.0	---	---
3	---	---	---	---	---	3.0	---	5.5	7.0	11.0	---	---
4	---	---	---	---	---	---	---	4.5	5.5	---	---	---
5	---	---	---	---	---	---	1.0	6.0	8.0	12.0	---	---
6	---	---	---	---	---	---	---	7.0	8.5	---	---	---
7	---	---	---	---	---	1.0	---	6.0	11.0	13.0	14.0	---
8	---	---	---	---	1.0	---	---	6.5	6.5	---	---	---
9	---	---	---	1.0	---	4.5	7.0	4.0	9.0	8.0	---	15.0
10	---	---	2.0	---	---	---	---	4.0	6.0	---	---	---
11	---	---	---	---	---	---	6.0	5.0	6.0	11.5	---	11.0
12	---	---	---	0.5	---	---	---	6.0	8.5	---	---	---
13	---	---	---	0.0	---	4.0	---	7.0	6.0	11.5	---	---
14	---	---	---	1.0	---	---	---	6.0	10.0	---	---	---
15	---	---	---	1.5	0.0	---	---	3.5	10.0	14.0	---	---
16	---	---	---	---	---	3.5	5.5	10.0	7.0	---	---	---
17	---	---	---	---	0.0	2.0	7.0	9.5	5.0	---	---	---
18	---	---	---	---	0.0	---	6.5	9.5	5.0	15.5	---	13.0
19	---	---	---	---	0.0	---	4.5	9.5	9.5	---	15.5	---
20	---	---	0.0	0.5	---	2.0	4.0	9.5	11.0	---	---	---
21	---	---	---	---	---	---	6.0	9.0	10.0	15.0	---	---
22	5.5	---	---	---	---	---	3.5	8.5	11.0	---	---	---
23	---	---	---	---	---	3.0	5.5	4.5	5.5	---	---	10.0
24	---	---	---	---	---	---	6.0	6.0	9.0	---	---	---
25	---	1.0	---	---	---	---	7.0	5.5	---	---	---	---
26	---	---	---	---	---	4.5	7.0	8.0	8.5	---	---	---
27	---	---	---	---	---	---	5.5	5.5	---	---	14.5	---
28	---	---	---	---	---	---	3.0	6.0	12.5	---	---	---
29	---	---	---	---	---	---	6.0	9.0	---	---	---	---
30	---	---	---	---	---	5.5	4.5	5.5	---	---	---	11.0
31	---	---	---	2.0	---	---	---	6.5	---	15.0	---	---
MONTH	---	---	---	---	---	---	---	6.5	8.0	---	---	---

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	.45	0	0	2.3	1	0	7.1	1	.02
2	.45	0	0	2.3	1	0	6.6	1	.02
3	.45	0	0	2.6	1	0	6.5	1	.02
4	.48	0	0	2.7	1	0	6.2	1	.02
5	.51	0	0	2.6	1	0	5.8	1	.02
6	.50	0	0	2.5	1	0	6.1	1	.02
7	.45	0	0	2.5	1	0	5.9	1	.02
8	.59	0	0	2.6	1	0	5.5	1	.01
9	.64	0	0	2.6	1	0	5.6	1	.02
10	.63	0	0	2.5	1	0	5.6	1	.02
11	.57	0	0	2.4	1	0	4.8	1	.01
12	.57	0	0	2.4	1	0	4.4	1	.01
13	.49	0	0	2.3	1	0	4.3	1	.01
14	.60	0	0	2.3	1	0	4.1	0	0
15	1.1	2	0	2.3	1	0	4.0	0	0
16	1.2	1	0	2.3	1	0	4.0	0	0
17	1.0	1	0	2.7	1	0	4.0	0	0
18	1.2	1	0	3.1	1	0	4.0	0	0
19	17	5	.23	2.7	1	0	4.0	0	0
20	10	3	.08	2.4	1	0	4.0	0	0
21	4.3	1	.01	2.4	1	0	4.3	0	0
22	3.9	1	.01	2.6	1	0	4.5	0	0
23	3.4	1	0	3.2	1	0	4.8	0	0
24	3.2	1	0	14	6	.23	5.2	0	0
25	8.4	3	.07	18	2	.10	5.5	1	.01
26	7.1	1	.02	16	1	.04	5.4	1	.01
27	4.9	1	.01	11	1	.03	5.3	1	.01
28	4.0	1	.01	8.4	1	.02	5.0	1	.01
29	3.0	1	0	7.6	1	.02	5.0	1	.01
30	2.5	1	0	7.4	1	.02	6.0	1	.02
31	2.5	1	0	---	---	---	18	3	.15
TOTAL	86.08	---	.44	140.7	---	.46	171.5	---	.44
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	16	2	.09	20	0	0	21	1	.06
2	14	2	.08	19	0	0	21	1	.06
3	13	2	.07	18	0	0	19	1	.05
4	12	2	.06	17	0	0	19	1	.05
5	10	2	.05	17	0	0	19	1	.05
6	9.0	2	.05	17	0	0	18	0	0
7	7.9	2	.04	17	0	0	17	0	0
8	7.5	2	.04	17	0	0	17	1	.05
9	7.4	2	.04	17	0	0	17	2	.09
10	17	5	.23	16	0	0	17	2	.09
11	29	15	1.2	15	0	0	17	2	.09
12	275	300	223	15	0	0	18	2	.10
13	784	670	1420	15	1	.04	15	2	.08
14	331	190	170	14	1	.04	15	2	.08
15	115	13	4.0	14	1	.04	14	1	.04
16	88	6	1.4	15	1	.04	14	1	.04
17	74	5	1.0	45	40	4.9	14	1	.04
18	59	4	.64	94	30	7.6	14	1	.04
19	52	3	.42	59	1	.16	13	0	0
20	46	2	.25	36	1	.10	13	0	0
21	42	2	.23	32	1	.09	14	0	0
22	38	2	.21	30	1	.08	13	1	.04
23	35	2	.19	28	1	.08	12	1	.03
24	33	2	.18	26	1	.07	12	1	.03
25	31	2	.17	24	1	.06	12	1	.03
26	29	1	.08	24	1	.06	12	1	.03
27	27	1	.07	24	1	.06	12	1	.03
28	25	1	.07	23	1	.06	12	0	0
29	23	1	.06	22	1	.06	12	0	0
30	22	1	.06	---	---	---	14	0	0
31	21	1	.06	---	---	---	14	0	0
TOTAL	2292.8	---	1824.04	730	---	13.54	471	---	1.20

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	13	0	0	100	17	4.6	98	5	1.3
2	13	0	0	112	22	6.7	101	7	1.9
3	13	0	0	129	40	14	85	5	1.1
4	12	1	.03	150	60	24	82	4	.89
5	13	1	.04	137	30	11	76	5	1.0
6	12	1	.03	152	35	14	71	5	.96
7	12	1	.03	142	25	9.6	75	6	1.2
8	12	0	0	131	18	6.4	90	9	2.2
9	13	0	0	112	28	8.5	98	16	4.2
10	15	1	.04	88	12	2.9	107	18	5.2
11	16	3	.13	74	7	1.4	108	20	5.8
12	17	6	.28	68	5	.92	103	10	2.8
13	24	8	.52	67	7	1.3	90	6	1.5
14	32	9	.78	71	8	1.5	90	6	1.5
15	35	10	.95	81	13	2.8	96	7	1.8
16	40	13	1.4	100	15	4.1	105	7	2.0
17	50	16	2.2	110	17	5.0	114	10	3.1
18	59	19	3.0	125	28	9.5	116	14	4.4
19	67	30	5.4	155	50	21	110	9	2.7
20	75	14	2.8	173	58	27	105	6	1.7
21	65	7	1.2	196	55	29	100	5	1.4
22	52	3	.42	186	48	24	93	5	1.3
23	50	4	.54	139	25	9.4	85	5	1.1
24	60	7	1.1	105	18	5.1	82	4	.89
25	70	25	4.7	87	7	1.6	79	4	.85
26	79	32	6.8	76	5	1.0	78	3	.63
27	90	32	7.8	74	7	1.4	71	3	.58
28	98	40	11	76	4	.82	74	2	.40
29	114	50	15	84	5	1.1	81	3	.66
30	105	30	8.5	91	12	2.9	81	3	.66
31	---	---	---	98	6	1.6	---	---	---
TOTAL	1326	---	74.69	3489	---	254.14	2744	---	55.72
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	79	3	.64	13	1	.04	2.9	0	
2	98	15	4.0	11	1	.03	2.7	0	
3	88	10	2.4	10	1	.03	2.6	0	
4	75	7	1.4	9.6	1	.03	2.4	0	
5	65	5	.88	9.0	1	.02	2.2	0	
6	59	4	.64	8.5	1	.02	2.2	0	
7	56	4	.60	8.0	1	.02	2.2	0	
8	53	4	.57	7.4	1	.02	2.4	0	
9	50	3	.41	7.1	1	.02	2.2	0	
10	47	3	.38	6.6	1	.02	2.4	0	
11	46	4	.50	6.2	1	.02	2.3	0	
12	44	3	.36	5.9	1	.02	2.1	0	
13	42	3	.34	5.6	0	0	2.0	0	
14	41	3	.33	5.5	0	0	2.1	0	
15	39	3	.32	5.3	0	0	2.1	0	
16	37	3	.30	5.5	0	0	1.9	0	
17	36	2	.19	5.3	0	0	1.9	0	
18	34	2	.18	5.2	0	0	1.9	0	
19	32	2	.17	5.0	0	0	2.0	0	
20	30	2	.16	4.5	0	0	2.0	0	
21	29	1	.08	4.2	0	0	2.0	1	
22	28	1	.08	4.0	0	0	2.0	1	
23	26	1	.07	3.8	0	0	1.9	1	
24	24	1	.06	3.8	0	0	1.8	1	
25	22	1	.06	3.8	0	0	1.8	1	
26	20	1	.05	3.6	0	0	1.7	1	
27	18	1	.05	3.4	0	0	1.7	1	
28	17	1	.05	3.3	0	0	1.6	1	
29	16	1	.04	3.0	0	0	1.5	1	
30	15	1	.04	3.0	0	0	1.6	1	
31	14	1	.04	3.0	0	0	---	---	
TOTAL	1280	---	15.39	183.1	---	.29	62.1	---	0
YEAR 12976.28			2240						

PYRAMID AND WINNEMUCCA LAKES BASIN

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

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (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
JAN								
13...	1230	785	.0	672	1420	9	14	19
13...	1730	1050	.0	949	2690	7	10	16
14...	0900	340	.5	172	158	--	--	--
APR								
29...	1755	137	4.5	103	38	--	--	--
MAY								
03...	2000	173	3.5	102	48	--	--	--
19...	2005	208	4.5	103	58	--	--	--
20...	2010	222	5.0	83	50	--	--	--
22...	1600	205	8.5	52	29	--	--	--
JUN								
18...	1700	135	5.0	23	8.4	--	--	--

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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
JAN								
13...	27	38	48	64	84	96	100	--
13...	24	34	46	62	84	97	100	--
14...	--	--	55	73	90	99	100	--
APR								
29...	--	--	45	--	--	--	--	--
MAY								
03...	--	--	45	--	--	--	--	--
19...	--	--	34	--	--	--	--	--
20...	--	--	37	--	--	--	--	--
22...	--	--	42	52	73	89	98	100
JUN								
18...	--	--	50	--	--	--	--	--

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).

PERIOD OF RECORD.--July to September 1980.

GAGE.--Water-stage recorder. Altitude of gage is 6,230 ft (1,898.9 m), from topographic map.

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

EXTREMES FOR PERIOD.--Maximum daily discharge, 0.30 ft³/s (0.008 m³/s) Aug. 1, 2, 16; minimum daily, 0.06 ft³/s (0.002 m³/s) Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	.30	.11
2										---	.30	.11
3										---	.19	.10
4										---	.19	.10
5										---	.17	.10
6										---	.19	.10
7										---	.14	.09
8										---	.12	.09
9										---	.11	.09
10										---	.11	.09
11										---	.11	.14
12										---	.09	.09
13										---	.12	.08
14										---	.12	.08
15										---	.14	.08
16										---	.30	.08
17										---	.22	.08
18										---	.19	.08
19										---	.19	.07
20										---	.19	.07
21										---	.17	.07
22										---	.17	.07
23										---	.17	.07
24										---	.16	.07
25										---	.15	.07
26										---	.15	.06
27										---	.14	.06
28										---	.13	.06
29										---	.13	.06
30										.26	.12	.06
31										.26	.12	---
TOTAL										---	5.10	2.48
MEAN										---	.16	.083
MAX										---	.30	.14
MIN										---	.09	.06
AC-FT										---	10	4.9

PYRAMID AND WINNEMUCCA LAKES BASIN
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 fair except those for winter months, which are poor. One transmountain diversion to Washoe Valley.

AVERAGE DISCHARGE.--7 years (water years 1970-73, 1978-80), 7.89 ft³/s (0.223 m³/s), 5,720 acre-ft/yr (7.05 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.--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. 13	2100	60 1.70	2.62 0.799	May 22	2000	63 1.78	2.76 .841
May 4	2000	35 0.99	2.53 .771	July 1	1800	*74 2.10	2.93 .893

Minimum daily, 2.0 ft³/s (0.057 m³/s) Oct. 2-4.

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	2.1	5.0	4.6	8.5	4.6	5.2	4.8	21	24	60	8.0	3.7
2	2.0	5.4	4.4	6.0	4.2	5.2	4.7	22	26	56	8.0	3.5
3	2.0	6.4	4.2	5.5	4.2	5.1	4.1	24	22	46	8.3	3.7
4	2.0	6.3	4.0	4.9	4.4	6.0	4.2	28	22	38	7.7	3.5
5	2.1	6.8	4.1	4.9	4.9	5.2	5.4	29	21	34	6.3	4.0
6	2.3	8.5	4.2	4.9	5.0	4.8	4.7	28	19	28	6.1	4.2
7	3.3	7.4	4.3	4.8	6.2	5.2	5.6	28	19	28	5.6	4.2
8	4.6	7.2	4.3	4.6	8.0	8.8	4.6	25	23	24	5.8	5.1
9	3.4	7.0	4.1	5.4	10	7.5	4.3	22	27	21	5.3	4.4
10	2.9	6.7	3.5	9.8	4.5	6.0	4.3	18	35	20	5.3	4.0
11	2.9	6.3	3.4	12	4.4	5.2	5.0	16	40	20	5.3	3.7
12	2.8	5.8	3.4	30	4.2	5.0	6.0	14	43	20	5.1	4.0
13	2.9	4.9	3.4	44	4.4	4.8	7.0	14	39	17	4.9	3.7
14	3.4	5.1	3.3	17	4.6	5.1	8.0	13	38	16	5.1	3.5
15	4.0	5.2	3.3	11	5.2	4.9	10	13	46	17	5.1	3.5
16	3.7	5.5	3.3	10	5.2	8.0	12	15	46	18	5.1	3.3
17	3.4	6.2	3.5	8.9	8.7	5.6	13	17	41	17	4.9	3.3
18	3.4	6.2	3.5	8.2	11	4.4	15	20	57	16	4.9	3.3
19	13	5.8	3.3	7.2	9.3	7.8	15	25	46	15	4.9	3.3
20	12	5.4	3.3	5.8	8.0	4.5	15	32	38	14	4.6	3.3
21	9.2	4.9	4.9	7.7	7.7	5.0	12	40	40	11	4.4	3.4
22	8.4	4.6	4.7	5.9	7.8	5.3	11	53	41	11	4.6	3.3
23	7.6	4.4	4.5	7.9	5.8	4.5	9.8	45	41	11	4.9	3.3
24	6.8	5.1	4.1	5.2	5.1	4.2	11	33	49	10	4.6	3.2
25	8.3	4.8	3.9	5.1	5.0	3.9	13	27	58	10	4.6	3.1
26	6.6	5.0	4.1	5.0	5.3	4.1	16	25	42	9.6	4.6	3.2
27	6.6	5.0	4.6	4.9	5.4	4.3	17	23	38	9.3	4.2	3.1
28	6.4	5.0	4.9	5.1	5.8	6.0	20	22	40	9.6	4.0	3.0
29	5.0	5.0	5.0	4.4	6.9	5.3	20	23	56	8.3	4.0	3.1
30	5.0	4.8	6.1	4.5	---	5.4	21	26	58	6.6	4.0	3.1
31	5.0	---	8.7	4.5	---	7.4	---	25	---	8.0	4.0	---
TOTAL	153.1	171.7	130.9	273.6	175.8	169.7	303.5	766	1135	629.4	164.2	107.0
MEAN	4.94	5.72	4.22	8.83	6.06	5.47	10.1	24.7	37.8	20.3	5.30	3.57
MAX	13	8.5	8.7	44	11	8.8	21	53	58	60	8.3	5.1
MIN	2.0	4.4	3.3	4.4	4.2	3.9	4.1	13	19	6.6	4.0	3.0
AC-FT	304	341	260	543	349	337	602	1520	2250	1250	326	212
CAL YR 1979	TOTAL	2208.8	MEAN	6.05	MAX	65	MIN	1.4	AC-FT	4380		
WTR YR 1980	TOTAL	4179.9	MEAN	11.4	MAX	60	MIN	2.0	AC-FT	8290		

PYRAMID AND WINNEMUCCA LAKES BASIN

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10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES: Water years 1970-73, 1975, 1978-79.

WATER TEMPERATURES: January to September 1980.

SEDIMENT RECORDS: January to September 1980.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January to September 1980.

SEDIMENT RECORDS: January to September 1980.

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

EXTREMES FOR PERIOD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 800 mg/L June 18; minimum daily mean, 3 mg/L on many days during September.

SEDIMENT DISCHARGE: Maximum daily, 123 tons (112 metric tons) June 18; minimum daily, 0.03 ton (0.03 metric ton) on many days during September.

TEMPERATURE (DEG. C) OF WATER, JANUARY 1980 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	---	---	---	---	5.0	8.5	---	---
2				---	---	---	---	4.5	5.0	8.0	---	---
3				---	---	---	6.5	9.5	3.5	12.0	---	---
4				---	---	---	---	6.0	5.5	---	---	---
5				---	---	---	---	5.0	8.5	9.5	---	---
6				---	5.0	---	3.0	3.0	6.5	12.0	14.0	---
7				---	---	---	---	7.0	11.0	10.0	---	12.0
8				2.5	---	---	---	6.5	8.0	12.0	---	---
9				---	---	---	---	1.5	7.0	13.5	---	---
10				---	---	---	---	3.5	7.0	11.5	---	---
11				---	---	---	---	3.5	4.5	14.0	---	---
12				---	---	---	5.0	3.5	---	14.0	---	13.5
13				2.0	---	4.0	---	5.5	4.5	12.0	9.0	---
14				2.0	---	---	5.0	6.0	10.0	11.0	---	---
15				3.0	---	---	10.5	4.5	---	15.0	---	12.0
16				---	---	---	---	---	9.5	---	---	---
17				---	---	---	---	3.5	---	---	---	---
18				---	1.5	---	---	7.0	5.5	---	---	---
19				---	---	6.5	5.0	10.5	8.5	---	---	---
20				---	---	---	5.0	4.5	8.0	16.0	---	---
21				---	---	---	6.5	5.0	4.5	18.0	---	9.5
22				---	---	---	6.0	4.0	8.0	---	---	---
23				---	---	5.0	7.5	3.0	10.0	---	---	---
24				---	---	---	6.0	3.0	9.0	---	---	---
25				---	---	0.0	---	4.0	9.5	---	---	---
26				---	---	---	6.5	6.0	11.0	12.0	---	---
27				---	---	7.0	3.5	7.0	10.5	---	13.0	10.0
28				---	---	---	---	---	12.0	---	---	---
29				---	---	---	4.5	10.0	11.5	---	---	---
30				---	---	---	5.5	6.0	11.0	---	---	---
31				---	---	3.5	---	5.0	---	17.0	---	---
MONTH				---	---	---	---	5.5	8.0	---	---	---

PYRAMID AND WINNEMUCCA LAKES BASIN

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), JANUARY 1980 TO SEPTEMBER 1980

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	8.5	9	.21	4.6	10	.12	5.2	5	.07
2	6.0	9	.15	4.2	12	.14	5.2	5	.07
3	5.5	9	.13	4.2	14	.16	5.1	5	.07
4	4.9	9	.12	4.4	17	.20	6.0	7	.11
5	4.9	9	.12	4.9	20	.26	5.2	5	.07
6	4.9	9	.12	5.0	20	.27	4.8	5	.06
7	4.8	9	.12	6.2	18	.30	5.2	7	.10
8	4.6	9	.11	8.0	16	.35	8.8	8	.19
9	5.4	9	.13	10	14	.38	7.5	8	.16
10	9.8	17	.45	4.5	12	.15	6.0	10	.16
11	12	25	.81	4.4	10	.12	5.2	6	.08
12	30	300	24	4.2	10	.11	5.0	7	.09
13	44	360	43	4.4	10	.12	4.8	10	.13
14	17	160	7.3	4.6	10	.12	5.1	10	.14
15	11	28	.83	5.2	10	.14	4.9	5	.07
16	10	14	.38	5.2	10	.14	8.0	7	.15
17	8.9	12	.29	8.7	35	.82	5.6	10	.15
18	8.2	11	.24	11	40	1.2	4.4	9	.11
19	7.2	10	.19	9.3	22	.55	7.8	12	.25
20	5.8	9	.14	8.0	19	.41	4.5	6	.07
21	7.7	9	.19	7.7	15	.31	5.0	9	.12
22	5.9	9	.14	7.8	13	.27	5.3	9	.13
23	7.9	9	.19	5.8	8	.13	4.5	12	.15
24	5.2	9	.13	5.1	7	.10	4.2	6	.07
25	5.1	10	.14	5.0	6	.08	3.9	6	.06
26	5.0	10	.14	5.3	5	.07	4.1	7	.08
27	4.9	10	.13	5.4	5	.07	4.3	14	.16
28	5.1	10	.14	5.8	5	.08	6.0	7	.11
29	4.4	10	.12	6.9	5	.09	5.3	9	.13
30	4.5	10	.12	---	---	---	5.4	8	.12
31	4.5	10	.12	---	---	---	7.4	8	.16
TOTAL	273.6	---	80.40	175.8	---	7.26	169.7	---	3.59

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	4.8	10	.13	21	40	2.3	24	15	.97
2	4.7	12	.15	22	60	3.6	26	15	1.1
3	4.1	13	.14	24	110	7.1	22	15	.89
4	4.2	12	.14	28	125	9.5	22	25	1.5
5	5.4	14	.20	29	55	4.3	21	15	.85
6	4.7	7	.09	28	50	3.8	19	15	.77
7	5.6	10	.15	28	50	3.8	19	60	3.1
8	4.6	13	.16	25	30	2.0	23	165	10
9	4.3	14	.16	22	25	1.5	27	195	14
10	4.3	18	.21	18	25	1.2	35	230	22
11	5.0	20	.27	16	25	1.1	40	160	17
12	6.0	30	.49	14	20	.76	43	170	20
13	7.0	35	.66	14	20	.76	39	130	14
14	8.0	65	1.4	13	20	.70	38	180	18
15	10	65	1.8	13	25	.88	46	230	29
16	12	70	2.3	15	30	1.2	46	180	22
17	13	80	2.8	17	60	2.8	41	450	50
18	15	95	3.8	20	85	4.6	57	800	123
19	15	110	4.5	25	125	8.4	46	350	43
20	15	50	2.0	32	190	16	38	200	21
21	12	28	.91	40	220	24	40	240	26
22	11	25	.74	53	250	36	41	240	27
23	9.8	20	.53	45	130	16	41	200	22
24	11	40	1.2	33	35	3.1	49	500	66
25	13	50	1.8	27	25	1.8	58	400	63
26	16	70	3.0	25	55	3.7	42	340	39
27	17	70	3.2	23	20	1.2	38	140	14
28	20	55	3.0	22	20	1.2	40	160	17
29	20	30	1.6	23	30	1.9	56	350	53
30	21	35	2.0	26	25	1.8	58	500	78
31	---	---	---	25	15	1.0	---	---	---
TOTAL	303.5	---	39.53	766	---	168.00	1135	---	817.18

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), JANUARY 1980 TO SEPTEMBER 1980

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	60	420	68	8.0	4	.09	3.7	5	.05
2	56	240	36	8.0	4	.09	3.5	5	.05
3	46	120	15	8.3	4	.09	3.7	5	.05
4	38	90	9.2	7.7	4	.08	3.5	4	.04
5	34	85	7.8	6.3	4	.07	4.0	5	.05
6	28	45	3.4	6.1	4	.07	4.2	4	.05
7	28	65	4.9	5.6	4	.06	4.2	4	.05
8	24	35	2.3	5.8	4	.06	5.1	4	.06
9	21	25	1.4	5.3	4	.06	4.4	3	.04
10	20	20	1.1	5.3	4	.06	4.0	3	.03
11	20	45	2.4	5.3	4	.06	3.7	3	.03
12	20	25	1.4	5.1	4	.06	4.0	3	.03
13	17	25	1.1	4.9	4	.05	3.7	3	.03
14	16	14	.60	5.1	4	.06	3.5	3	.03
15	17	18	.83	5.1	4	.06	3.5	3	.03
16	18	16	.78	5.1	4	.06	3.3	3	.03
17	17	14	.64	4.9	4	.05	3.3	3	.03
18	16	13	.56	4.9	4	.05	3.3	3	.03
19	15	11	.45	4.9	4	.05	3.3	3	.03
20	14	10	.38	4.6	4	.05	3.3	3	.03
21	11	9	.27	4.4	4	.05	3.4	3	.03
22	11	8	.24	4.6	5	.06	3.3	3	.03
23	11	7	.21	4.9	5	.07	3.3	3	.03
24	10	6	.16	4.6	5	.06	3.2	3	.03
25	10	5	.14	4.6	5	.06	3.1	3	.03
26	9.6	4	.10	4.6	5	.06	3.2	3	.03
27	9.3	4	.10	4.2	5	.06	3.1	3	.03
28	9.6	5	.13	4.0	5	.05	3.0	3	.02
29	8.3	4	.09	4.0	5	.05	3.1	3	.03
30	6.6	4	.07	4.0	5	.05	3.1	3	.03
31	8.0	4	.09	4.0	5	.05	---	---	---
TOTAL	629.4	---	159.84	164.2	---	1.90	107.0	---	1.06
PERIOD	3724.20		1278.76						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, JANUARY 1980 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED.	SED.	SED.	SED.	SED.	SED.
						SUSP. SIEVE DIAM. % FINER THAN .062 MM	SUSP. SIEVE DIAM. % FINER THAN .125 MM	SUSP. SIEVE DIAM. % FINER THAN .250 MM	SUSP. SIEVE DIAM. % FINER THAN .500 MM	SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
JAN											
13...	1450	47	2.0	354	45	53	63	74	88	98	100
FEB											
19...	1510	9.6	--	22	.57	55	--	--	--	--	--
MAR											
27...	1530	5.1	7.0	25	.34	89	--	--	--	--	--
APR											
19...	1900	18	5.0	226	11	30	--	--	--	--	--
27...	2350	21	3.5	110	6.2	30	--	--	--	--	--
MAY											
04...	1730	32	6.0	317	27	32	--	--	--	--	--
06...	2215	34	3.0	108	9.9	24	--	--	--	--	--
10...	1425	18	3.5	25	1.2	57	--	--	--	--	--
19...	1515	22	10.5	67	4.0	25	--	--	--	--	--
21...	1745	58	5.0	530	83	32	--	--	--	--	--
JUN											
09...	1815	42	7.0	188	21	13	--	--	--	--	--
18...	1930	56	5.5	1790	271	12	17	37	71	95	100
19...	1715	31	8.5	176	15	25	--	--	--	--	--
22...	1800	52	8.0	199	28	20	--	--	--	--	--
24...	1745	95	9.0	1100	282	32	--	--	--	--	--
30...	1715	68	11.0	960	176	4	--	--	--	--	--
JUL											
03...	1910	52	10.0	78	11	29	--	--	--	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

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, 12,160 acre-ft (15.0 hm³) Jan. 14-16, elevation, 7,838.87 ft (2,389.29 m); minimum, 11,520 acre-ft (14.2 hm³) Oct. 19, elevation, 7,837.29 ft (2,388.81 m).

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

7,835	10,650	7,837	11,410
7,836	11,030	7,838.5	12,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11570	11550	11610	11880	12010	12040	11970	12060	12120	12000	11910	11790
2	11580	11550	11610	11890	12010	12040	11960	12060	12110	12020	11910	11790
3	11570	11560	11610	11890	12000	12040	11950	12070	12100	12020	11900	11790
4	11570	11560	11610	11890	12000	12060	11940	12090	12100	12010	11890	11790
5	11570	11560	11610	11890	12000	12060	11940	12090	12100	12010	11890	11810
6	11570	11560	11610	11890	11980	12060	11950	12100	12090	12010	11880	11810
7	11570	11560	11610	11890	11990	12080	11950	12110	12090	12010	11880	11810
8	11560	11560	11610	11900	11980	12060	11950	12100	12090	12000	11870	11810
9	11560	11560	11610	11960	11980	12050	11960	12120	12080	11990	11860	11810
10	11560	11560	11610	11990	11980	12040	11960	12130	12070	12000	11860	11810
11	11560	11560	11610	12040	11970	12030	11970	12130	12060	11990	11850	11820
12	11550	11570	11610	12080	11970	12040	11970	12130	12060	11990	11850	11810
13	11550	11570	11610	12110	11970	12030	11980	12120	12050	11990	11850	11800
14	11550	11570	11610	12160	11970	12030	11980	12120	12050	11990	11840	11800
15	11550	11570	11620	12160	12000	12010	11990	12110	12050	11990	11840	11800
16	11550	11560	11620	12160	12010	12010	11990	12110	12050	11980	11840	11800
17	11550	11570	11620	12150	12010	12000	11990	12110	12040	11980	11830	11800
18	11540	11570	11620	12140	12050	12000	12000	12110	12040	11970	11830	11790
19	11520	11570	11620	12120	12100	12000	12000	12130	12030	11970	11830	11790
20	11560	11570	11620	12100	12150	11990	12010	12140	12030	11970	11820	11790
21	11560	11570	11630	12090	12150	12020	12020	12150	12020	11970	11820	11790
22	11550	11580	11650	12080	12140	12020	12030	12140	12010	11960	11820	11790
23	11550	11580	11660	12060	12120	12020	12030	12150	12010	11960	11820	11790
24	11550	11580	11730	12060	12100	12010	12030	12150	12010	11950	11820	11780
25	11560	11580	11770	12040	12090	12000	12030	12150	12010	11950	11820	11780
26	11560	11600	11770	12030	12070	12000	12040	12140	12000	11940	11810	11780
27	11560	11600	11770	12020	12070	12000	12040	12130	12000	11940	11810	11780
28	11550	11600	11780	12030	12060	11990	12050	12130	12000	11930	11810	11780
29	11550	11600	11780	12030	12050	11990	12050	12130	12000	11930	11800	11770
30	11550	11600	11810	12020	---	11980	12060	12130	12000	11930	11790	11780
31	11550	---	11850	12020	---	11970	---	12130	---	11920	11790	---
MAX	11580	11600	11850	12160	12150	12080	12060	12150	12120	12020	11910	11820
MIN	11520	11550	11610	11880	11970	11970	11940	12060	12000	11920	11790	11770
†	7837.38	7837.51	7838.14	7838.54	7838.62	7838.42	7838.63	7838.80	7838.50	7838.51	7838.01	7837.97
‡	-30	+50	+250	+170	+30	-80	+90	+70	-130	-80	-130	-10

CAL YR 1979 ‡ -90
WTR YR 1980 ‡ +200

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

10336715 MARLETTE CREEK NEAR CARSON CITY, NV

LOCATION.--Lat 39°10'20", long 119°54'25", in SE¼SW¼ 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.--2.08 mi² (5.39 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.--7 years, 2.14 ft³/s (0.061 m³/s), 1,550 acre-ft/yr (1.91 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, 19 ft³/s (0.538 m³/s) Jan. 12, gage height, 2.64 ft (0.805 m); minimum daily, 0.02 ft³/s (<0.001 m³/s) Dec. 24, 25.

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	.04	.03	.03	.05	3.5	5.7	2.7	6.0	10	2.2	1.0	.04
2	.04	.03	.03	.03	3.3	5.6	3.1	6.3	11	2.4	.91	.04
3	.04	.03	.03	.36	3.2	5.8	2.8	6.5	10	2.6	.76	.04
4	.04	.03	.03	.39	3.1	6.0	2.7	6.3	10	2.6	.67	.04
5	.04	.03	.03	.40	3.0	6.5	4.1	7.1	9.8	2.4	.62	.04
6	.04	.03	.03	.39	3.0	6.8	4.6	7.4	9.2	2.4	.56	.03
7	.04	.03	.03	.42	3.3	7.5	3.8	8.0	8.8	2.3	.53	.03
8	.04	.03	.03	.44	3.0	6.6	3.4	9.0	8.5	2.2	.49	.03
9	.04	.03	.03	.64	2.7	6.0	3.3	10	8.2	2.1	.41	.03
10	.04	.03	.03	3.4	2.6	5.7	3.0	11	8.1	1.9	.33	.03
11	.04	.03	.03	4.8	2.5	5.7	2.9	12	7.8	1.9	.31	.03
12	.04	.03	.03	8.8	2.4	5.6	2.7	12	6.8	1.8	.24	.06
13	.04	.03	.03	12	2.3	5.2	2.7	11	6.2	1.7	.20	.14
14	.04	.03	.04	14	2.5	5.0	2.7	10	6.0	1.7	.16	.05
15	.04	.03	.03	13	3.3	4.4	2.6	10	5.7	1.6	.11	.04
16	.04	.03	.04	13	3.6	3.9	2.7	9.8	5.0	1.6	.09	.04
17	.04	.03	.04	13	4.4	3.8	2.7	9.8	5.1	1.5	.08	.03
18	.04	.03	.03	13	6.8	3.7	2.9	7.8	4.8	1.4	.19	.05
19	.04	.03	.03	11	9.5	3.4	3.1	5.8	4.6	1.3	.05	.05
20	.04	.03	.03	10	10	3.4	3.5	6.7	4.4	1.2	.05	.06
21	.04	.03	.03	9.0	12	4.2	4.1	8.3	3.9	1.1	.05	.04
22	.04	.03	.03	7.8	12	4.6	4.5	11	3.2	1.4	.04	.04
23	.04	.03	.03	6.9	11	4.1	4.6	11	3.0	1.6	.04	.04
24	.04	.03	.02	6.1	9.9	3.9	4.5	11	2.8	1.5	.04	.04
25	.04	.03	.02	5.6	8.6	3.6	4.4	10	2.7	1.4	.04	.04
26	.04	.03	.03	5.6	7.3	3.4	4.8	10	2.6	1.3	.05	.04
27	.04	.03	.03	5.0	6.5	3.2	4.9	9.7	2.3	1.3	.04	.04
28	.04	.03	.03	4.5	6.7	3.0	5.2	9.5	2.2	1.3	.04	.04
29	.04	.03	.03	4.2	6.1	2.9	5.5	9.5	2.2	1.3	.06	.03
30	.04	.03	.03	3.9	---	2.7	5.9	9.4	2.2	1.2	.04	.03
31	.04	---	.03	3.7	---	2.6	---	9.4	---	1.1	.04	---
TOTAL	1.24	.90	.94	181.42	158.1	144.5	110.4	281.3	177.1	53.3	8.24	1.28
MEAN	.040	.030	.030	5.85	5.45	4.66	3.68	9.07	5.90	1.72	.27	.043
MAX	.04	.03	.04	14	12	7.5	5.9	12	11	2.6	1.0	.14
MIN	.04	.03	.02	.03	2.3	2.6	2.6	5.8	2.2	1.1	.04	.03
AC-FT	2.5	1.8	1.9	360	314	287	219	558	351	106	16	2.5
CAL YR 1979	TOTAL	681.61	MEAN	1.87	MAX	8.7	MIN	.02	AC-FT	1350		
WTR YR 1980	TOTAL	1118.72	MEAN	3.06	MAX	14	MIN	.02	AC-FT	2220		

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

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 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT 09...	1325	.04	57	9.5
DEC 04...	1235	.03	53	6.5
APR 04...	1330	2.7	42	3.0
JUN 24...	0940	2.8	41	8.5
JUL 30...	1105	1.1	43	20.0
SEP 11...	1110	.03	59	10.0

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 the winter period, which are fair. Minor diversions for local water supply.

AVERAGE DISCHARGE.--20 years, 35.4 ft³/s (1.003 m³/s), 25,650 acre-ft/yr (31.6 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.--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. 13	2345	*337 9.54	10.24 3.121	May 22	2245	148 4.19	8.00 2.438
May 7	0015	136 3.85	7.83 2.387	June 21	0200	162 4.59	8.18 2.493

Minimum daily, 9.7 ft³/s (0.27 m³/s) Oct. 2.

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	9.8	13	14	20	28	34	30	96	101	147	59	29
2	9.7	15	14	18	27	33	29	100	102	156	57	29
3	9.8	16	14	16	27	33	29	108	98	150	55	28
4	9.9	17	14	16	27	32	29	119	101	130	53	27
5	9.9	16	14	16	27	32	33	119	95	131	52	27
6	9.9	16	14	16	28	32	31	124	93	124	50	26
7	9.8	16	14	15	26	31	30	125	96	119	49	30
8	10	16	14	15	26	32	31	121	103	113	47	39
9	11	15	14	15	26	32	35	119	111	108	45	33
10	10	15	14	16	26	32	37	109	117	104	44	30
11	10	16	12	20	26	30	30	101	122	101	42	28
12	11	15	12	137	26	32	40	94	124	90	41	28
13	11	16	13	254	26	30	47	93	122	96	41	26
14	11	15	12	196	26	30	53	93	119	94	39	26
15	11	16	12	98	29	29	53	93	124	90	39	25
16	11	16	12	85	31	30	58	96	131	87	39	24
17	11	17	12	72	44	31	66	103	138	87	46	24
18	12	16	12	60	79	31	72	109	146	85	41	24
19	24	11	12	52	56	30	77	118	151	82	39	24
20	24	14	13	47	47	30	81	126	154	79	38	23
21	18	14	13	43	29	30	77	133	156	78	38	23
22	17	15	13	41	44	29	69	137	154	76	40	23
23	18	16	13	39	40	30	63	134	150	74	45	22
24	17	17	13	37	37	32	65	120	147	72	42	22
25	21	19	13	35	35	32	71	113	146	70	37	22
26	19	22	13	33	35	33	75	107	144	68	34	21
27	16	16	14	31	36	28	81	102	140	67	33	21
28	15	15	14	31	37	29	88	102	137	67	31	20
29	14	15	15	30	35	30	96	104	141	66	31	20
30	14	14	16	29	---	32	99	103	146	63	30	20
31	14	---	23	28	---	31	---	101	---	61	30	---
TOTAL	418.8	470	422	1561	986	962	1683	3422	3809	2951	1307	764
MEAN	13.5	15.7	13.6	50.4	34.0	31.0	56.1	110	127	95.2	42.2	25.5
MAX	24	22	23	254	79	34	99	137	156	156	59	39
MIN	9.7	11	12	15	26	28	29	93	93	61	30	20
AC-FT	831	932	837	3100	1960	1910	3340	6790	7560	5850	2590	1520

CAL YR 1979 TOTAL 9944.3 MEAN 27.2 MAX 110 MIN 9.7 AC-FT 19720
WTR YR 1980 TOTAL 18755.8 MEAN 51.2 MAX 254 MIN 9.7 AC-FT 37200

PYRAMID AND WINNEMUCCA LAKES BASIN

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974, 1978, 1980.

WATER TEMPERATURES: Water years 1974, 1978, March to September 1980.

SEDIMENT RECORDS: Water years 1974, 1978, March to September 1980.

PERIOD OF DAILY RECORD.--

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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 PERIOD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 150 mg/L May 4; minimum daily mean, 4 mg/L on several days during March.

SEDIMENT DISCHARGE: Maximum daily, 48 tons (44 metric tons) May 4; minimum daily, 0.31 ton (0.28 metric ton) Mar. 15, 22.

TEMPERATURE (DEG. C) OF WATER, MARCH TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	---	6.0	7.0	---	---	---
2						---	---	9.0	5.5	9.0	---	---
3						---	---	5.5	8.0	---	---	---
4						---	4.5	5.0	7.0	---	---	---
5						---	---	6.0	6.0	---	---	---
6						---	---	6.0	---	7.0	---	---
7						---	---	---	---	---	9.0	---
8						---	8.0	---	---	---	---	13.0
9						---	---	5.0	7.5	---	---	---
10						1.5	---	4.0	5.0	12.5	---	---
11						---	6.0	4.0	6.5	---	---	---
12						---	---	6.0	4.5	---	---	---
13						---	---	4.5	4.5	---	---	---
14						4.0	9.5	4.0	---	13.0	11.0	7.0
15						---	---	4.0	11.0	---	---	---
16						---	8.5	9.0	11.0	---	---	---
17						---	---	5.0	11.5	---	---	---
18						---	6.0	10.0	11.0	---	---	---
19						---	9.0	7.5	6.0	---	---	---
20						4.0	7.5	9.5	7.0	---	---	---
21						---	3.5	9.0	---	---	---	---
22						---	4.0	6.5	---	---	---	---
23						---	5.0	4.5	7.5	---	10.0	11.0
24						---	---	3.5	10.0	14.5	---	---
25						0.5	6.5	3.5	11.0	---	---	---
26						---	6.0	---	11.0	---	12.0	---
27						---	6.5	4.5	11.0	---	---	---
28						---	6.0	5.5	7.0	---	---	---
29						---	5.5	7.0	12.0	---	---	---
30						---	5.0	8.5	9.0	---	9.0	---
31						---	---	8.5	---	---	---	---
MONTH						---	---	6.0	8.0	---	---	---

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), MARCH TO SEPTEMBER 1980

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							34	5	.46
2							33	5	.45
3							33	5	.45
4							32	5	.43
5							32	5	.43
6							32	5	.43
7							31	5	.42
8							32	5	.43
9							32	4	.35
10							32	4	.35
11							30	4	.32
12							32	4	.35
13							30	4	.32
14							30	4	.32
15							29	4	.31
16							30	4	.32
17							31	4	.33
18							31	4	.33
19							30	4	.32
20							30	4	.32
21							30	4	.32
22							29	4	.31
23							30	4	.32
24							32	4	.35
25							32	5	.43
26							33	5	.45
27							28	5	.38
28							29	5	.39
29							30	5	.41
30							32	5	.43
31							31	5	.42
TOTAL							962	---	11.65

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	30	5	.41	96	100	26	101	48	13
2	29	5	.39	100	100	27	102	50	14
3	29	5	.39	108	140	41	98	40	11
4	29	5	.39	119	150	48	101	35	9.5
5	33	7	.62	119	130	42	95	33	8.5
6	31	6	.50	124	125	42	93	28	7.0
7	30	10	.81	125	115	39	96	35	9.1
8	31	11	.92	121	85	28	103	52	14
9	35	14	1.3	119	55	18	111	70	21
10	37	16	1.6	109	50	15	117	55	17
11	38	20	2.1	101	45	12	122	60	20
12	40	22	2.4	94	40	10	124	55	18
13	47	28	3.6	93	48	12	122	50	16
14	53	30	4.3	93	57	14	119	53	17
15	53	28	4.0	93	50	13	124	55	18
16	58	30	4.7	96	55	14	131	60	21
17	66	35	6.2	103	48	13	138	75	28
18	72	55	11	109	60	18	146	80	32
19	77	57	12	118	70	22	151	70	29
20	81	50	11	126	75	26	154	70	29
21	77	45	9.4	133	78	28	156	75	32
22	69	34	6.3	137	70	26	154	70	29
23	63	25	4.3	134	52	19	150	65	26
24	65	25	4.4	120	47	15	147	65	26
25	71	30	5.8	113	47	14	146	60	24
26	75	45	9.1	107	40	12	144	60	23
27	81	55	12	102	40	11	140	65	25
28	88	65	15	102	42	12	137	50	18
29	96	110	29	104	50	14	141	60	23
30	99	145	39	103	55	15	146	60	24
31	---	---	---	101	50	14	---	---	---
TOTAL	1683	---	202.93	3422	---	660	3809	---	602.1

PYRAMID AND WINNEMUCCA LAKES BASIN

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), MARCH TO SEPTEMBER 1980

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	147	55	22	59	17	2.7	29	8	.63
2	156	62	26	67	17	2.6	29	8	.63
3	150	60	24	55	17	2.5	28	8	.60
4	138	58	22	53	16	2.3	27	8	.58
5	131	57	20	52	16	2.2	27	8	.58
6	124	57	19	50	16	2.2	26	8	.56
7	119	55	18	49	16	2.1	30	12	.97
8	113	55	17	47	15	1.9	39	17	1.8
9	108	55	16	45	15	1.8	33	14	1.2
10	104	54	15	44	14	1.7	30	14	1.1
11	101	54	15	42	14	1.6	28	14	1.1
12	98	57	15	41	13	1.4	28	14	1.1
13	96	57	15	41	13	1.4	26	14	.98
14	94	57	14	39	13	1.4	26	14	.98
15	90	56	14	39	13	1.4	25	13	.88
16	87	53	12	39	13	1.4	24	13	.84
17	87	50	12	46	14	1.7	24	12	.78
18	85	47	11	41	14	1.5	24	12	.78
19	82	43	9.5	39	14	1.5	24	11	.71
20	79	39	8.3	38	14	1.4	23	11	.68
21	78	35	7.4	38	14	1.4	23	10	.62
22	76	30	6.2	40	15	1.6	23	10	.62
23	74	25	5.0	45	15	1.8	22	9	.53
24	72	20	3.9	42	15	1.7	22	9	.53
25	70	18	3.4	37	15	1.5	22	8	.48
26	68	18	3.3	34	15	1.4	21	8	.45
27	67	18	3.3	33	13	1.2	21	7	.40
28	67	18	3.3	31	11	.92	20	7	.38
29	66	17	3.0	31	10	.84	20	6	.32
30	63	17	2.9	30	8	.65	20	6	.32
31	61	17	2.8	30	8	.65	---	---	---
TOTAL	2951	---	369.3	1307	---	50.36	764	---	22.13
PERIOD	14898		1918.47						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MARCH TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .062 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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
APR												
21...	0915	77	3.5	42	8.7	--	38	--	--	--	--	--
25...	1105	68	5.5	22	4.0	--	40	--	--	--	--	--
28...	1145	82	6.0	51	11	--	34	--	--	--	--	--
30...	0001	109	5.0	228	67	--	19	--	--	--	--	--
MAY												
03...	0005	114	5.0	106	33	--	29	--	--	--	--	--
10...	1330	107	4.0	45	13	--	26	--	--	--	--	--
18...	1740	108	10.0	70	20	--	27	--	--	--	--	--
21...	2315	141	6.5	66	25	--	36	--	--	--	--	--
24...	1755	118	3.5	61	19	--	20	--	--	--	--	--
29...	1310	100	7.0	19	5.1	31	31	38	70	93	96	100
JUN												
10...	0030	124	5.0	67	22	--	27	--	--	--	--	--
16...	1840	126	11.0	60	20	--	34	--	--	--	--	--
23...	1150	150	7.5	61	25	--	38	--	--	--	--	--
24...	1510	143	10.0	60	23	--	31	--	--	--	--	--
27...	0600	144	6.0	83	32	--	100	--	--	--	--	--
JUL												
02...	1700	154	9.0	59	25	--	100	--	--	--	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

77

10337000 LAKE TAHOE AT TAHOE CITY, CA

LOCATION.--Lat 39°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) Water and Power Resources Service 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 Water and Power Resources Service 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, 6,227.32 ft (1,898.087 m) July 21; minimum, 6,223.28 ft (1,896.856 m) Dec. 18, 20.

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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.83	3.55	3.36	3.69	4.82	5.50	5.65	6.03	6.72	7.16	7.25	6.74
2	3.82	3.53	3.36	3.68	4.82	5.53	5.64	6.05	6.73	7.22	7.23	6.73
3	3.81	3.55	3.37	3.68	4.82	5.55	5.63	6.09	6.73	7.24	7.23	6.72
4	3.80	3.52	3.36	3.68	4.82	5.58	5.63	6.13	6.77	7.25	7.21	6.71
5	3.80	3.52	3.36	3.68	4.82	5.61	5.73	6.16	6.78	7.26	7.18	6.70
6	3.79	3.49	3.36	3.68	4.82	5.62	5.70	6.19	6.78	7.27	7.16	6.68
7	3.78	3.49	3.35	3.68	4.82	5.62	5.71	6.23	6.79	7.27	7.16	6.68
8	3.78	3.48	3.34	3.67	4.80	5.62	5.72	6.29	6.81	7.27	7.15	6.68
9	3.75	3.47	3.34	3.77	4.80	5.62	5.71	6.33	6.83	7.28	7.12	6.66
10	3.73	3.46	3.33	3.77	4.80	5.62	5.71	6.34	6.83	7.28	7.12	6.65
11	3.72	3.46	3.31	3.88	4.80	5.64	5.71	6.35	6.84	7.28	7.10	6.65
12	3.72	3.45	3.31	4.15	4.80	5.65	5.71	6.37	6.87	7.29	7.09	6.62
13	3.69	3.45	3.31	4.53	4.80	5.65	5.72	6.40	6.87	7.30	7.05	6.62
14	3.68	3.45	3.31	4.66	4.85	5.68	5.72	6.42	6.88	7.30	7.04	6.56
15	3.68	3.44	3.30	4.71	4.88	5.62	5.73	6.43	6.89	7.31	7.03	6.57
16	3.67	3.41	3.30	4.77	4.93	5.63	5.74	6.44	6.91	7.31	7.03	6.56
17	3.64	3.43	3.30	4.82	5.02	5.64	5.75	6.46	6.93	7.31	7.02	6.58
18	3.65	3.41	3.28	4.83	5.13	5.64	5.76	6.48	6.95	7.30	7.00	6.56
19	3.69	3.41	3.28	4.82	5.25	5.61	5.79	6.51	6.98	7.31	6.95	6.50
20	3.68	3.37	3.28	4.82	5.31	5.63	5.80	6.54	7.00	7.31	6.96	6.49
21	3.68	3.37	3.33	4.82	5.42	5.65	5.81	6.58	7.01	7.32	6.92	6.49
22	3.64	3.36	3.31	4.82	5.44	5.65	5.83	6.60	7.00	7.31	6.94	6.47
23	3.64	3.38	3.41	4.83	5.44	5.64	5.85	6.62	7.03	7.31	6.88	6.45
24	3.61	3.37	3.54	4.83	5.44	5.64	5.86	6.64	7.04	7.30	6.88	6.44
25	3.66	3.43	3.56	4.84	5.44	5.64	5.88	6.65	7.04	7.30	6.89	6.43
26	3.62	3.40	3.54	4.83	5.46	5.63	5.90	6.65	7.08	7.30	6.84	6.41
27	3.63	3.38	3.52	4.82	5.51	5.64	5.92	6.67	7.08	7.30	6.84	6.41
28	3.61	3.38	3.52	4.83	5.49	5.63	5.94	6.69	7.09	7.30	6.80	6.40
29	3.58	3.38	3.52	4.82	5.49	5.61	5.97	6.70	7.12	7.28	6.77	6.40
30	3.57	3.38	3.59	4.83	---	5.63	5.98	6.72	7.14	7.28	6.76	6.39
31	3.56	---	3.69	4.82	---	5.61	---	6.73	---	7.26	6.75	---
MEAN	3.69	3.44	3.39	4.39	5.07	5.62	5.77	6.44	6.92	7.28	7.01	6.57
MAX	3.83	3.55	3.69	4.84	5.51	5.68	5.98	6.73	7.14	7.32	7.25	6.74
MIN	3.56	3.36	3.28	3.67	4.80	5.50	5.63	6.03	6.72	7.16	6.75	6.39
†	68000	46200	83800	221100	302700	317300	362400	453900	503900	518700	456300	412400
‡	-32800	-21800	+37600	+137300	+81600	+14600	+45100	+91500	+50000	+14800	-62400	-43900

CAL YR 1979 ‡ +29200

WTR YR 1980 ‡ +311600

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

‡ Change in contents, in acre-feet.

NOTE.--Add 6,220 ft to obtain elevation, Water and Power Resources Service datum, at 2400 hours.

PYRAMID AND WINNEMUCCA LAKES BASIN

10337500 TRUCKEE RIVER AT TAHOE CITY, CA

LOCATION.--Lat 39°09'59", long 120°08'36", in NE¼NW¼ sec.7, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050101, 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 good. 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).--80 years (water years 1901-80), 243 ft³/s (6.882 m³/s), 176,100 acre-ft/yr (217 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, 340 ft³/s (9.63 m³/s) Aug. 6, gage height, 4.23 ft (1.289 m); minimum daily, 17 ft³/s (0.48 m³/s) Dec. 16.

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	55	71	27	114	71	49	63	59	67	79	249	261
2	45	64	27	113	71	49	61	59	69	82	249	261
3	41	65	27	110	71	49	59	61	69	82	249	244
4	36	62	27	105	72	50	60	62	68	80	282	191
5	40	59	27	99	72	50	62	61	67	80	296	174
6	40	55	27	99	72	50	61	61	67	81	337	178
7	40	55	27	88	72	50	60	61	64	80	336	180
8	40	49	25	58	72	50	61	60	67	80	335	165
9	40	47	20	69	72	50	62	59	74	80	332	142
10	40	46	20	72	72	50	63	60	78	80	330	119
11	40	43	20	74	71	56	63	61	78	80	305	71
12	40	44	20	101	72	68	63	61	78	80	291	71
13	40	41	20	118	72	69	64	61	76	80	291	71
14	40	41	20	92	72	68	65	62	76	80	289	71
15	40	40	19	72	74	68	62	62	76	80	288	72
16	41	36	17	69	75	68	62	63	75	99	289	74
17	41	37	19	66	85	68	63	65	75	121	288	76
18	40	36	18	64	93	67	61	67	76	118	275	75
19	43	37	18	64	78	66	60	65	76	116	259	75
20	40	31	18	66	58	66	60	65	76	116	252	75
21	39	28	25	66	49	64	57	66	76	122	262	75
22	41	27	37	67	51	63	55	66	76	148	267	75
23	39	28	40	68	52	64	55	65	78	161	266	75
24	38	29	60	72	51	64	58	63	78	169	266	75
25	34	27	76	72	51	65	58	64	78	192	266	75
26	30	31	90	71	51	63	59	62	78	192	266	75
27	36	31	83	70	50	63	59	61	78	192	266	76
28	37	27	83	70	51	64	59	61	79	232	264	76
29	38	27	83	71	49	65	57	64	79	255	261	75
30	40	27	90	70	---	63	57	62	79	251	261	75
31	44	---	105	70	---	64	---	62	---	251	260	---
TOTAL	1238	1241	1215	2480	1922	1862	1807	1931	2231	3936	8727	3398
MEAN	39.9	41.4	39.2	80.0	66.3	60.1	60.2	62.3	74.4	127	282	113
MAX	55	71	105	118	93	69	65	67	79	255	337	261
MIN	30	27	17	58	49	49	55	59	64	79	249	71
AC-FT	2460	2460	2410	4920	3810	3690	3580	3830	4430	7810	17310	6740
CAL YR 1979	TOTAL	47967	MEAN 131	MAX 450	MIN 17	AC-FT 95140						
WTR YR 1980	TOTAL	31988	MEAN 87.4	MAX 337	MIN 17	AC-FT 63450						

PYRAMID AND WINNEMUCCA LAKES BASIN

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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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
29...	1500	40	95	7.8	--	--	9.5	3	--	30	9.0	2.0
NOV												
29...	1215	27	94	7.7	--	--	10.0	--	--	30	9.0	2.0
DEC												
26...	1230	114	97	7.5	--	--	10.3	--	--	30	9.0	2.0
JAN												
24...	1230	72	96	7.9	--	--	10.1	--	--	30	9.0	2.0
MAR												
20...	1230	65	--	7.4	--	--	10.1	0	.8	--	--	--
APR												
29...	1420	56	95	7.9	--	--	9.6	--	--	30	9.0	2.0
MAY												
30...	0705	63	96	7.3	--	--	9.2	--	--	30	9.0	2.0
JUN												
02...	0900	69	99	8.3	9.0	--	8.1	--	--	--	--	--
24...	1430	78	93	7.4	--	--	9.0	--	--	30	9.0	2.0
JUL												
24...	1250	161	--	7.9	--	--	8.0	--	--	30	9.0	2.0
AUG												
08...	0845	335	87	8.2	18.5	.95	7.8	--	.4	--	--	--
28...	1530	264	94	7.8	--	--	7.6	--	--	30	9.0	2.0
SEP												
25...	1420	75	96	7.7	--	--	8.0	--	--	30	9.0	2.0

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, DIS- SOLVED PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT												
29...	6.0	28	.5	1.7	42	3.0	2.0	57	--	--	--	.00
NOV												
29...	6.0	28	.5	1.7	41	.0	2.0	77	--	.10	--	.01
DEC												
26...	6.0	29	.5	1.6	42	3.0	2.0	64	--	.09	--	.00
JAN												
24...	6.0	28	.5	1.7	42	.0	2.0	59	--	--	--	.00
MAR												
20...	--	--	--	--	--	.0	--	--	3	--	--	--
APR												
29...	6.0	28	.5	1.7	42	2.0	2.0	58	--	.08	--	.01
MAY												
30...	6.0	28	.5	1.7	41	2.0	2.0	60	--	--	--	.01
JUN												
02...	--	--	--	--	--	--	--	52	--	.07	.02	.03
24...	6.0	28	.5	1.7	41	2.0	2.0	51	--	.07	--	.01
JUL												
24...	6.0	28	.5	1.7	41	1.0	2.0	92	--	--	--	.00
AUG												
08...	--	--	--	--	--	--	--	58	--	.08	.00	.00
28...	6.0	28	.5	1.8	41	1.0	2.0	67	--	.09	--	.02
SEP												
25...	6.0	28	.5	1.7	41	1.0	2.0	57	--	--	--	.00

PYRAMID AND WINNEMUCCA LAKES BASIN

10337500 TRUCKEE RIVER AT TAHOE CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL, (MG/L AS P)
OCT											
29...	--	.00	--	--	.10	--	--	--	.01	--	.00
NOV											
29...	--	.00	--	--	.10	--	--	--	.02	--	.00
DEC											
26...	--	.00	--	--	.30	--	--	--	.02	--	.00
JAN											
24...	--	.00	--	--	.20	--	--	--	.00	--	.00
MAR											
20...	--	--	--	--	--	--	--	--	--	--	--
APR											
29...	--	.00	--	--	.00	--	--	--	.00	--	.00
MAY											
30...	--	.00	--	--	.00	--	--	--	.00	--	.00
JUN											
02...	.07	.08	.45	.38	.52	.46	.54	.49	--	.01	.00
24...	--	.00	--	--	.00	--	--	--	.00	--	.00
JUL											
24...	--	.00	--	--	.00	--	--	--	.00	--	.00
AUG											
08...	.06	.08	.27	--	.33	--	.33	--	.03	.03	.00
28...	--	.02	--	--	.10	--	--	--	.00	--	.00
SEP											
25...	--	.00	--	--	.00	--	--	--	.00	--	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT							
29...	1500	--	--	0	--	--	--
NOV							
29...	1215	0	0	0	0	0	0
DEC							
26...	1230	--	--	0	--	--	--
JAN							
24...	1230	0	0	0	0	10	0
MAR							
20...	1230	--	--	--	--	--	--
APR							
29...	1420	--	--	0	--	--	--
MAY							
30...	0705	0	0	0	0	0	0
JUN							
24...	1430	--	--	0	--	--	--
JUL							
24...	1250	0	0	0	0	0	0
AUG							
28...	1530	--	--	100	--	--	--
SEP							
25...	1420	--	0	0	0	0	0

10337500 TRUCKEE RIVER AT TAHOE CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT							
29...	--	--	--	--	--	--	--
NOV							
29...	10	0	0	.0	0	--	--
DEC							
26...	--	--	--	--	--	--	--
JAN							
24...	0	0	0	.0	0	--	--
MAR							
20...	--	--	--	--	--	.5	.00
APR							
29...	--	--	--	--	--	--	--
MAY							
30...	30	0	0	.0	0	--	--
JUN							
24...	--	--	--	--	--	--	--
JUL							
24...	20	0	0	.0	0	--	--
AUG							
28...	--	--	--	--	--	--	--
SEP							
25...	0	0	0	.0	10	--	--

PYRAMID AND WINNEMUCCA LAKES BASIN

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA

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.

DRAINAGE AREA.--553 mi² (1,432 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1944 to September 1961, June 1977 to current year. Monthly discharge only for some periods, published in WSP 1314.

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

AVERAGE DISCHARGE.--19 years (water years 1946-61, 1978-80), 324 ft³/s (9.18 m³/s), 234,700 acre-ft/yr (289 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, 4,900 ft³/s (139 m³/s) Jan. 13, gage height, 6.79 ft (2.070 m); minimum daily, 37 ft³/s (1.05 m³/s) Dec. 16, 20.

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	65	75	63	227	145	161	152	578	392	354	289	286
2	52	82	56	177	142	159	148	601	404	428	282	285
3	49	86	50	165	141	156	139	666	358	379	278	275
4	42	88	50	156	141	152	137	722	349	324	286	230
5	43	80	49	149	145	151	150	702	326	292	311	192
6	45	80	47	143	153	144	141	710	299	269	358	196
7	45	76	45	139	150	138	137	662	307	260	357	197
8	45	75	45	89	145	133	138	626	352	246	355	189
9	45	70	43	109	142	131	151	578	396	235	354	164
10	45	70	42	108	140	134	167	484	420	227	353	149
11	45	65	38	137	138	139	178	419	421	222	336	88
12	45	65	40	1410	136	145	191	373	403	218	314	85
13	45	63	38	3000	135	146	244	353	365	212	312	83
14	45	63	38	1520	146	146	318	354	344	207	311	82
15	47	58	38	667	162	144	336	379	374	200	311	84
16	45	56	37	528	171	139	357	427	408	203	311	85
17	45	61	38	439	359	144	412	468	432	226	311	86
18	45	63	40	344	639	146	460	500	439	215	304	86
19	121	56	38	290	442	141	506	572	422	203	286	86
20	99	50	37	254	332	141	545	638	406	199	275	86
21	65	45	43	226	270	140	494	680	387	202	285	86
22	58	45	42	208	229	135	408	665	362	214	290	86
23	54	49	43	194	210	133	373	551	342	233	291	85
24	50	52	48	189	197	131	418	437	339	229	291	87
25	88	57	54	185	184	129	454	377	342	250	289	87
26	77	62	64	178	178	127	494	342	331	243	289	87
27	61	68	73	171	177	127	540	324	311	241	288	87
28	61	70	93	167	176	130	598	316	320	267	286	86
29	56	67	93	158	166	139	642	331	346	300	284	86
30	58	65	123	151	---	154	626	353	348	296	284	84
31	56	---	225	148	---	154	---	391	---	293	284	---
TOTAL	1742	1962	1773	12026	5891	4389	10054	15579	11045	7887	9455	3875
MEAN	56.2	65.4	57.2	388	203	142	335	503	368	254	305	129
MAX	121	88	225	3000	639	161	642	722	439	428	358	286
MIN	42	45	37	89	135	127	137	316	299	199	275	82
AC-FT	3460	3890	3520	23850	11680	8710	19940	30900	21910	15640	18750	7690
CAL YR 1979	TOTAL	73992	MEAN 203	MAX 535	MIN 37	AC-FT 146800						
WTR YR 1980	TOTAL	85678	MEAN 234	MAX 3000	MIN 37	AC-FT 169900						

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 1977-79.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 189 micromhos Dec. 12; minimum recorded, 44 micromhos July 2.

WATER TEMPERATURES: Maximum recorded, 22.5°C July 30; ; minimum recorded, 0.0°C on many days during November to March.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	105	118	95		---	104	59	69	---	88	94
2	107	103	123	101		---	103	57	68	---	89	94
3	109	103	121	103		---	107	54	72	53	90	94
4	112	104	125	102		110	102	52	75	57	90	95
5	112	105	126	102		106	101	53	78	60	91	96
6	110	105	127	102		107	110	53	80	62	90	95
7	110	104	127	103		111	112	55	78	63	91	96
8	110	103	127	109		115	107	57	72	64	91	96
9	110	105	126	107		110	103	59	68	66	92	97
10	111	106	126	106		109	101	67	---	66	92	98
11	111	107	133	103		109	98	71	---	67	92	102
12	110	107	147	51		114	97	73	---	67	92	103
13	111	108	137	38		110	89	75	---	69	93	104
14	111	108	137	---		108	80	75	---	70	93	104
15	111	108	137	---		110	78	72	---	71	93	102
16	111	108	141	---		115	76	67	---	71	92	103
17	111	108	140	---		109	71	64	---	73	92	101
18	111	---	126	---		109	68	62	---	75	93	102
19	90	---	127	---		111	66	58	---	77	93	103
20	91	---	128	---		108	64	55	---	78	93	103
21	108	---	123	---		106	67	53	---	76	93	103
22	108	115	124	---		112	74	55	---	78	93	102
23	107	120	122	---		114	75	61	---	81	93	102
24	108	127	117	---		109	70	68	---	81	93	102
25	96	117	113	---		109	67	72	---	84	93	102
26	96	116	108	---		108	64	75	---	85	94	102
27	104	110	109	---		108	60	76	---	86	94	102
28	105	114	110	---		108	57	77	---	86	94	102
29	107	119	107	---		107	56	75	---	87	94	102
30	108	120	107	---		104	56	72	---	87	94	102
31	108	---	95	---		104	---	70	---	88	94	---
MONTH	107	110	124	---		109	83	64	---	73	92	100

PYRAMID AND WINNEMUCCA LAKES BASIN

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	11.5	8.0	3.5	1.0	0.5	4.0	1.5	4.5	2.0	---	---
2	18.0	11.5	8.5	5.0	1.5	0.5	4.0	1.0	5.0	2.5	---	---
3	17.0	11.0	7.0	5.0	5.5	0.5	4.5	2.0	5.0	3.0	---	---
4	18.0	11.0	7.5	5.0	4.5	1.5	5.0	3.0	6.5	4.0	5.5	1.0
5	18.0	11.0	8.0	4.5	4.5	1.0	6.0	4.0	6.5	3.5	4.0	0.0
6	17.0	12.0	8.0	4.0	4.5	1.0	6.0	4.0	6.0	3.5	3.0	1.5
7	15.5	12.5	8.5	4.0	4.5	1.0	5.5	3.5	3.5	2.0	6.0	1.5
8	14.0	11.0	8.0	3.5	5.5	2.0	5.0	4.0	4.5	1.0	6.0	1.0
9	15.5	8.5	7.5	3.0	5.5	2.0	4.0	0.5	---	---	7.0	1.0
10	15.5	9.0	7.5	2.5	5.0	1.5	1.0	0.0	---	---	7.0	1.5
11	14.0	9.5	7.0	2.5	2.5	0.5	1.0	0.0	---	---	4.5	1.5
12	15.5	9.0	7.0	2.0	4.0	0.5	1.5	0.5	---	---	5.5	0.5
13	13.5	10.0	7.5	2.5	4.0	0.5	---	---	---	---	7.5	2.0
14	12.5	10.5	7.0	2.5	3.5	0.5	3.0	2.0	---	---	7.0	3.0
15	13.0	11.0	7.5	3.0	4.0	0.5	3.5	2.0	---	---	6.5	2.5
16	15.5	10.0	7.5	4.5	3.5	0.5	3.0	2.0	---	---	7.0	1.0
17	14.5	9.0	7.0	4.5	3.5	0.5	3.0	2.5	---	---	8.0	2.5
18	11.5	9.0	---	---	1.5	0.5	3.0	1.0	---	---	6.5	2.0
19	9.5	6.5	---	---	2.5	0.5	2.5	1.0	---	---	7.5	1.5
20	8.0	3.5	---	---	3.5	0.0	2.5	0.5	---	---	4.5	2.0
21	8.0	2.0	---	---	0.5	0.0	3.0	0.5	---	---	5.0	1.0
22	9.5	4.5	3.0	0.5	1.5	0.0	3.5	1.0	---	---	7.5	2.5
23	11.0	6.0	3.5	2.0	1.0	0.0	3.5	0.5	---	---	8.0	2.5
24	10.5	6.0	4.0	0.0	0.5	0.0	4.0	1.0	---	---	7.5	2.5
25	7.5	5.0	0.0	0.0	0.5	0.0	4.0	1.5	---	---	5.0	2.0
26	9.0	3.5	0.0	0.0	1.0	0.5	4.0	1.5	---	---	7.5	1.0
27	9.5	4.0	0.5	0.0	1.0	0.5	2.5	1.0	---	---	8.5	2.5
28	7.5	4.5	1.0	0.0	0.5	0.0	3.5	1.0	---	---	8.5	2.5
29	7.5	3.0	1.0	0.5	0.5	0.5	2.5	0.5	---	---	9.5	3.0
30	5.5	3.0	1.0	0.5	0.5	0.0	3.5	0.5	---	---	9.0	4.5
31	8.5	3.5	---	---	2.0	0.0	4.5	1.0	---	---	7.5	2.5
MONTH	18.0	2.0	8.5	0.0	5.5	0.0	6.0	0.0	---	---	9.5	0.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	2.5	9.5	3.5	9.5	5.0	---	---	22.0	16.5	20.0	14.5
2	6.5	2.0	10.0	4.0	10.5	5.5	---	---	21.0	15.5	20.0	14.5
3	8.0	3.0	10.0	4.0	11.0	4.5	14.5	7.0	21.0	15.0	20.0	14.5
4	8.0	3.5	10.0	4.0	7.5	5.0	15.0	7.5	21.5	15.0	20.0	14.5
5	5.0	2.0	8.0	4.0	10.5	5.0	15.0	7.0	21.0	16.0	20.0	14.0
6	5.0	2.0	9.0	4.0	12.0	4.5	15.0	8.0	19.5	15.0	20.5	15.0
7	8.0	1.0	8.5	4.0	13.0	5.5	16.0	9.0	20.0	15.0	17.0	15.0
8	8.5	3.0	8.5	4.0	13.5	5.5	16.0	8.5	21.0	16.0	19.0	14.5
9	10.5	4.5	6.0	3.0	13.0	5.5	16.0	8.5	21.0	15.5	19.0	13.5
10	10.0	4.0	6.0	2.5	---	---	16.0	8.5	21.5	16.0	17.0	14.0
11	9.5	4.0	6.5	3.5	---	---	17.0	9.0	22.0	16.0	17.0	12.0
12	10.5	3.5	7.5	4.0	---	---	17.0	9.5	21.5	16.0	18.5	12.0
13	10.5	4.5	9.5	4.5	---	---	16.5	10.0	21.0	15.5	15.5	11.0
14	9.5	4.5	9.5	5.5	---	---	17.5	10.5	20.0	15.5	13.5	8.5
15	9.5	3.5	11.5	5.0	---	---	18.0	10.0	20.0	15.0	16.5	9.5
16	10.0	3.5	11.5	4.5	---	---	19.0	11.0	21.0	15.5	17.5	9.0
17	9.5	3.5	11.5	4.5	---	---	19.0	12.0	20.5	16.5	18.0	12.5
18	8.5	3.5	11.5	4.5	---	---	18.5	11.5	19.5	16.0	16.0	12.5
19	9.5	3.5	11.5	5.0	---	---	19.0	11.0	19.5	14.0	16.0	10.0
20	6.5	3.5	11.5	4.5	---	---	20.0	12.5	21.0	15.0	15.0	8.5
21	7.0	3.0	11.0	4.5	---	---	20.5	13.5	21.0	15.5	15.5	8.0
22	5.5	3.0	10.0	4.5	---	---	20.5	13.5	20.5	16.0	15.5	7.5
23	8.0	4.0	5.5	4.0	---	---	21.0	14.0	19.5	15.5	15.5	8.0
24	9.5	3.5	8.5	3.0	---	---	21.0	14.0	20.0	15.0	16.5	8.5
25	10.0	3.5	7.5	3.5	---	---	21.0	13.5	20.5	15.0	16.5	9.5
26	9.5	3.5	9.5	3.5	---	---	21.0	14.5	20.5	15.0	14.5	10.0
27	9.5	4.0	8.0	5.0	---	---	22.0	15.5	20.0	15.0	15.5	8.5
28	8.0	4.5	9.0	5.0	---	---	20.0	17.0	19.0	14.0	16.0	9.0
29	9.0	4.5	11.5	5.0	---	---	21.5	15.5	19.0	13.5	16.0	8.5
30	9.0	3.0	9.0	5.5	---	---	22.5	16.5	18.0	14.0	17.0	8.5
31	---	---	10.0	5.5	---	---	21.5	17.0	19.0	13.5	---	---
MONTH	10.5	1.0	11.5	2.5	---	---	22.5	7.0	22.0	13.5	20.5	7.5

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 700 ft³/s (19.8 m³/s), estimated, Nov. 21, 1950; maximum gage height observed, 4.55 ft (1.387 m) Dec. 25, 1964; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 451 ft³/s (12.8 m³/s) Jan. 14, gage height, 4.35 ft (1.326 m); minimum daily, 0.14 ft³/s (0.004 m³/s) Oct. 18.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	53	23	31	53	72	31	153	17	16	3.5	.63
2	.35	123	21	31	49	69	35	89	47	16	3.3	.59
3	.27	128	19	30	46	67	35	94	67	37	3.1	.59
4	.30	122	17	28	44	66	34	100	66	72	2.8	.49
5	1.2	117	16	26	42	67	38	107	66	72	2.6	.42
6	.54	140	15	25	41	66	40	103	74	71	2.4	.45
7	.35	189	14	23	40	61	39	96	85	67	2.1	.51
8	.25	217	13	23	39	57	37	100	87	57	2.0	.49
9	.27	214	12	25	38	53	38	103	95	44	1.8	.61
10	.34	178	11	32	36	51	36	103	108	34	1.8	.62
11	.28	150	10	35	35	50	37	103	108	25	1.7	.50
12	.35	127	9.7	102	33	48	38	101	108	24	1.6	.52
13	.40	109	9.2	295	31	46	40	92	108	23	1.7	.44
14	.55	102	8.8	443	33	43	48	62	107	22	1.6	.42
15	.28	94	8.3	409	39	43	56	45	107	15	1.5	.41
16	.23	80	7.9	360	44	41	63	46	106	16	1.5	.48
17	.17	71	7.5	319	62	39	74	47	87	14	1.5	.48
18	.14	63	7.2	276	115	40	86	47	68	14	1.4	.52
19	.33	55	6.7	232	141	39	97	22	68	11	1.4	.49
20	.18	47	6.7	198	140	39	113	1.7	68	10	1.3	.50
21	.38	41	8.3	171	139	40	126	40	68	8.4	1.3	.47
22	.28	37	8.6	149	130	38	125	107	68	6.2	1.3	.55
23	.29	35	9.7	131	118	36	120	132	58	4.9	1.2	25
24	.21	33	18	115	107	35	117	130	41	4.4	1.2	79
25	.36	35	23	103	97	34	121	116	40	4.8	1.1	120
26	.46	35	22	93	89	33	126	101	32	4.9	1.0	157
27	.43	33	20	84	83	31	130	81	20	4.4	.95	164
28	.24	30	18	76	82	30	131	61	18	4.3	.92	155
29	.56	27	17	69	77	29	142	45	17	4.3	.80	59
30	.33	25	18	63	---	29	168	25	17	4.0	.72	1.6
31	.29	---	25	57	---	30	---	19	---	3.6	.63	---
TOTAL	10.94	2710	430.6	4054	2023	1422	2319	2471.7	2026	714.2	51.72	771.78
MEAN	.35	90.3	13.9	131	69.8	45.9	77.3	79.7	67.5	23.0	1.67	25.7
MAX	1.2	217	25	443	141	72	168	153	108	72	3.5	164
MIN	.14	25	6.7	23	31	29	31	1.7	17	3.6	.63	.41
AC-FT	22	5380	854	8040	4010	2820	4600	4900	4020	1420	103	1530
CAL YR 1979	TOTAL	9630.16	MEAN	26.4	MAX	217	MIN	.14	AC-FT	19100		
WTR YR 1980	TOTAL	19004.94	MEAN	51.9	MAX	443	MIN	.14	AC-FT	37700		

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 north bank immediately downstream from confluence of main stem and Middle Martis Creek.

DRAINAGE AREA.--25.8 mi² (66.8 km²), revised.

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.

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, 23.5°C July 21, 31; minimum recorded, 0.0°C on many days during January to March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY (MG/L AS CAC03)
APR 23...	0930	79	50	7.0	4.5	--	3.9	10.4	24
JUN 20...	0930	13	95	7.2	7.5	--	3.0	9.5	46
SEP 03...	0945	5.0	119	7.6	8.5	616	2.0	10.0	64

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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, 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)
APR 23...	.14	.01	.15	.00	.56	.71	.05	.02
JUN 20...	.12	.01	.13	.01	.42	.56	.01	.01
SEP 03...	.01	.02	.03	.00	.30	.33	.03	.02

DATE	TIME	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
APR 23...	0930	0	0	2	360	250	110	.11
JUN 20...	0930	4	3	1	240	160	80	6
SEP 03...	0945	6	4	2	340	210	130	10

DATE	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 23...	11	0	30	10	20	130	100	30
JUN 20...	1	5	70	30	40	70	--	<3
SEP 03...	8	2	50	30	20	60	50	10

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

PYRAMID AND WINNEMUCCA LAKES BASIN

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	5.5	6.5	0.5	4.5	0.5	2.5	0.5	3.0	0.0	2.5	0.5
2	17.5	5.5	7.0	0.5	7.0	1.5	2.0	0.5	4.0	0.0	5.0	1.5
3	16.5	5.0	5.5	3.5	7.0	1.0	1.0	0.5	4.0	0.5	6.5	0.5
4	17.5	5.5	8.5	2.0	5.5	0.5	2.5	0.5	7.0	1.5	4.5	0.0
5	18.0	5.5	6.5	0.5	5.0	0.5	4.5	1.5	7.5	1.0	2.0	0.0
6	17.0	6.5	6.5	0.5	4.5	0.5	4.5	1.5	6.0	0.5	3.0	0.5
7	14.0	8.0	7.5	0.5	4.0	0.5	4.5	1.0	3.0	0.0	7.0	0.5
8	12.5	7.0	7.5	0.5	5.5	0.5	5.0	2.0	4.0	0.0	6.5	0.0
9	15.5	5.0	7.5	0.5	6.0	0.5	4.0	0.5	3.5	0.0	7.0	0.0
10	15.5	4.0	6.0	0.5	4.5	0.5	0.5	0.5	3.5	0.0	7.0	0.0
11	13.5	4.5	5.0	0.5	1.0	0.5	0.5	0.5	4.0	0.0	3.0	0.0
12	13.5	4.0	5.0	0.5	1.0	0.5	1.0	0.5	5.0	0.0	4.0	0.0
13	12.5	5.5	6.0	0.5	1.0	0.5	1.0	0.5	4.5	0.0	7.0	0.0
14	12.0	6.0	5.5	0.5	1.0	0.5	2.5	1.0	3.5	0.0	8.0	0.5
15	11.5	8.0	6.5	0.5	1.0	0.5	3.5	1.0	3.5	0.5	6.0	0.5
16	15.0	6.5	6.5	1.5	1.0	0.5	4.0	0.5	1.0	0.0	7.5	0.0
17	14.0	4.5	6.5	3.0	1.0	0.5	2.0	1.5	3.0	1.0	7.5	0.0
18	10.0	4.5	5.5	0.5	1.5	0.5	1.5	0.5	2.0	0.5	5.0	0.5
19	11.0	6.0	1.0	0.5	3.0	1.0	1.0	0.5	0.5	0.0	8.5	0.0
20	8.0	2.5	1.0	0.5	3.5	1.5	1.0	0.0	2.0	0.0	4.5	0.5
21	8.5	1.0	0.5	0.5	1.0	0.5	2.0	0.0	0.5	0.0	5.0	0.5
22	10.5	2.0	1.0	0.5	1.5	0.5	2.0	0.0	2.0	0.0	8.5	0.5
23	12.0	4.0	4.5	1.0	1.0	0.5	2.0	0.0	3.0	0.0	8.5	0.5
24	11.0	2.5	7.0	2.0	1.0	0.5	2.5	0.0	3.5	0.5	8.0	0.5
25	7.5	4.0	5.0	1.0	1.0	0.5	3.0	0.0	4.5	0.0	3.5	0.5
26	9.5	2.5	5.5	0.5	1.0	0.5	3.0	0.0	5.5	0.5	8.0	0.5
27	9.5	1.0	2.5	0.5	1.0	0.5	1.5	0.0	6.0	1.0	9.5	0.5
28	7.5	1.5	4.0	0.5	1.0	0.5	2.0	0.0	6.0	0.5	10.0	0.5
29	7.5	0.5	5.5	0.5	1.0	0.5	1.5	0.0	6.5	0.0	11.5	0.5
30	5.0	0.5	5.5	0.5	1.0	0.5	1.5	0.0	---	---	10.0	1.0
31	8.5	0.5	---	---	1.0	0.5	2.0	0.0	---	---	8.5	0.5
MONTH	18.0	0.5	8.5	0.5	7.0	0.5	5.0	0.0	7.5	0.0	11.5	0.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	0.5	---	---	13.5	5.5	17.5	10.5	23.0	12.0	18.5	7.0
2	8.0	0.5	---	---	11.0	6.0	12.5	9.5	21.5	9.0	18.5	7.0
3	9.5	1.0	---	---	13.0	4.5	18.5	8.0	21.5	8.5	18.5	6.5
4	9.5	1.0	---	---	11.5	6.0	19.5	7.5	22.0	8.5	18.0	6.5
5	7.0	1.0	---	---	13.5	5.5	19.0	6.5	21.0	8.5	17.5	7.0
6	9.0	0.5	---	---	14.5	4.0	19.0	7.0	20.0	8.0	18.0	8.0
7	11.0	0.5	---	---	17.0	5.0	20.5	9.5	21.0	8.5	15.0	8.5
8	11.5	1.0	---	---	17.5	6.0	20.0	8.5	21.0	8.5	17.5	9.0
9	8.0	1.5	---	---	18.0	6.0	19.5	7.5	21.0	7.5	17.0	7.5
10	14.0	1.0	---	---	17.0	6.0	20.0	7.0	21.5	8.0	13.0	8.5
11	11.5	1.0	---	---	17.0	6.0	20.5	7.5	21.5	8.5	14.5	4.5
12	15.0	1.0	---	---	16.5	6.5	20.0	8.0	21.0	8.5	15.5	7.5
13	14.0	2.0	---	---	14.0	5.0	21.0	9.0	20.0	7.5	14.5	7.5
14	12.5	2.5	---	---	17.5	7.0	21.0	9.0	18.5	7.0	12.0	5.5
15	13.5	1.0	---	---	18.5	6.0	21.5	8.0	19.0	7.5	15.5	6.5
16	13.5	1.5	---	---	19.0	7.0	22.0	9.0	20.5	8.5	16.0	5.5
17	13.0	2.0	---	---	20.0	7.5	22.5	9.5	19.5	9.5	18.0	8.5
18	12.0	2.0	---	---	19.5	7.5	21.0	9.0	19.5	9.5	16.0	10.0
19	13.5	2.0	---	---	18.0	7.0	21.5	7.5	20.0	7.5	16.0	6.5
20	8.5	3.5	---	---	19.0	6.5	23.0	9.5	20.5	8.0	14.0	5.0
21	9.0	2.0	---	---	18.5	6.5	23.5	11.0	20.0	8.0	14.5	4.5
22	8.0	2.5	---	---	17.5	6.5	23.0	10.5	18.5	8.5	14.5	3.5
23	10.5	3.5	---	---	18.0	7.0	23.0	10.0	17.5	9.5	15.0	4.0
24	13.5	2.5	---	---	18.5	6.0	23.0	10.0	17.5	8.0	15.0	4.0
25	14.0	3.0	---	---	19.0	7.5	23.0	9.5	18.0	8.0	15.0	5.5
26	13.5	3.0	11.0	3.0	19.0	7.5	23.0	10.0	18.5	7.5	13.0	6.0
27	13.5	3.5	9.0	5.0	19.0	6.0	23.0	11.0	18.5	7.0	14.5	4.5
28	11.5	4.5	9.5	5.0	20.5	8.0	18.0	13.0	17.0	6.0	15.0	5.0
29	12.5	4.5	15.0	4.5	19.5	11.0	22.5	10.0	17.0	5.5	15.0	4.0
30	13.0	2.5	10.0	6.0	18.0	11.0	22.5	11.0	16.5	7.0	15.5	4.5
31	---	---	12.0	6.5	---	---	23.5	12.5	18.0	6.0	---	---
MONTH	15.0	0.5	---	---	20.5	4.0	23.5	6.5	23.0	5.5	18.5	3.5

PYRAMID AND WINNEMUCCA LAKES BASIN

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

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR, OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
APR 23...	0930	79	4.5	11	2.3
JUN 20...	0930	13	7.5	8	.28
SEP 03...	0945	5.0	8.5	12	.16

PYRAMID AND WINNEMUCCA LAKES BASIN

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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, 7,700 acre-ft (9.49 hm³) May 11, 12, elevation, 5,815.16 ft (1,772.461 m); minimum, 777 acre-ft (958,000 m³) Oct. 1-4, elevation, 5,780.03 ft (1,761.753 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	777	782	783	806	796	829	1840	6240	2510	798	787	786
2	777	782	782	796	798	830	1910	6410	2280	798	787	786
3	777	783	782	791	799	830	1980	6580	2020	801	786	786
4	777	783	782	788	801	827	2050	6760	1760	804	786	786
5	778	783	782	787	801	825	2150	6930	1500	802	786	786
6	778	783	782	786	800	820	2310	7090	1480	800	786	786
7	778	782	783	786	798	819	2410	7230	1460	798	786	788
8	780	782	782	787	797	818	2490	7380	1440	798	786	789
9	779	782	783	794	796	818	2580	7500	1420	797	786	788
10	779	782	781	787	796	819	2680	7610	1410	796	786	788
11	780	782	780	808	795	815	2770	7700	1300	796	786	820
12	779	782	780	1060	794	816	2880	7700	1190	796	786	822
13	779	782	781	1850	794	817	3010	7610	1080	796	786	790
14	779	782	781	2170	802	821	3180	7510	968	796	786	789
15	779	782	781	1460	829	817	3400	7400	858	796	786	788
16	779	782	781	911	831	816	3540	7290	809	796	786	788
17	779	783	781	858	921	855	3900	7190	803	796	786	786
18	780	783	782	834	928	933	4100	7090	801	796	786	786
19	784	781	782	827	910	1000	4260	7000	799	796	786	786
20	785	781	783	822	871	1070	4410	6920	798	795	786	786
21	784	781	784	818	845	1140	4580	6840	798	794	786	786
22	783	783	783	815	845	1210	4740	6610	798	789	788	786
23	782	783	792	811	839	1270	4900	6200	798	788	788	786
24	781	784	795	810	832	1330	5050	5800	799	788	789	786
25	785	786	787	807	829	1380	5200	5390	800	788	788	786
26	785	785	785	804	831	1430	5360	4980	799	788	788	786
27	784	784	784	803	846	1480	5540	4550	798	788	788	786
28	782	783	783	800	840	1540	5720	4140	798	788	786	786
29	782	783	783	797	834	1620	5900	3720	798	788	786	786
30	782	783	797	797	---	1690	6080	3310	798	788	786	786
31	782	---	820	798	---	1770	---	2910	---	788	786	---
MAX	785	786	820	2170	928	1770	6080	7700	2510	804	789	822
MIN	777	781	780	786	794	815	1840	2910	798	788	786	786
†	5780.11	5780.12	5780.72	5780.36	5780.93	5790.98	5810.59	5798.25	5780.37	5780.20	5780.18	5780.17
‡	+4	+1	+37	-22	+36	+936	+4310	-3170	-2112	-10	-2	0
CAL YR 1979	†	-1540										
WTR YR 1980	†	+8										

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

PYRAMID AND WINNEMUCCA LAKES BASIN

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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	ALKALINITY (MG/L AS CaCO3)
APR 23...	1035	86	7.0	9.0	--	2.4	9.2	34
JUN 20...	1025	91	7.3	16.5	--	4.0	8.6	48
SEP 03...	1045	119	8.7	18.5	620	4.0	9.2	65

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)
APR 23...	.89	.00	.89	.00	.40	1.3	.03	.01
JUN 20...	.07	.01	.08	.03	1.2	1.3	.03	.01
SEP 03...	.00	.02	.02	.02	.65	.69	.03	.01

DATE	TIME	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
APR 23...	1035	0	0	1	220	190	30	27
JUN 20...	1025	5	4	1	--	--	--	6
SEP 03...	1045	10	7	3	460	270	190	28

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
APR 23...	27	0	30	20	10	120	100	20
JUN 20...	1	5	90	30	60	80	40	40
SEP 03...	24	4	50	30	20	90	80	10

SUSPENDED SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	TEMPERATURE, WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)
APR 23...	1035	9.0	8
JUN 20...	1025	16.5	11

10339400 MARTIS CREEK NEAR TRUCKEE, CA

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.

DRAINAGE AREA.--39.9 mi² (103.3 km²).

WATER-DISCHARGE RECORDS

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

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

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.

REMARKS.--Records good. Flow subject to regulation by Martis Creek Lake Dam since Oct. 7, 1971.

AVERAGE DISCHARGE (unadjusted).--22 years, 23.4 ft³/s (0.663 m³/s), 16,950 acre-ft/yr (20.9 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, 633 ft³/s (17.9 m³/s) Jan. 15, gage height, 5.61 ft (1.710 m); minimum daily, 1.8 ft³/s (0.051 m³/s) on several days during March.

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	4.4	5.6	6.5	32	18	56	2.5	19	272	20	13	8.3
2	4.4	5.6	6.8	19	18	53	2.6	19	175	25	12	8.3
3	4.4	6.4	6.3	13	19	55	2.7	19	77	30	10	8.2
4	4.4	6.4	6.3	11	20	52	2.9	20	82	25	8.7	8.1
5	4.4	5.9	6.3	10	21	49	3.2	20	81	22	8.6	8.4
6	4.4	5.8	6.2	9.7	22	47	3.2	21	80	20	8.4	8.5
7	4.5	5.8	6.3	9.4	20	44	3.4	21	79	20	8.4	8.8
8	5.0	5.8	6.6	9.4	18	41	3.6	22	78	19	8.5	11
9	5.1	5.8	6.5	11	17	39	3.8	22	78	19	8.2	10
10	4.9	5.8	6.5	12	18	40	4.0	23	77	19	8.2	9.6
11	4.8	5.8	5.6	13	16	42	4.2	23	76	19	8.0	17
12	4.8	5.8	5.3	290	16	36	4.6	54	75	19	7.8	24
13	4.8	6.0	6.0	230	16	37	5.0	117	74	19	7.7	13
14	4.9	6.1	6.3	183	18	40	5.6	117	73	19	7.6	9.9
15	5.1	6.1	6.2	534	35	42	6.2	117	71	19	7.9	9.5
16	5.3	6.4	6.3	436	46	37	7.0	116	71	19	8.2	8.9
17	5.3	6.5	6.3	130	136	24	8.0	116	70	19	8.4	8.5
18	5.4	6.8	6.2	77	271	1.8	9.1	115	69	19	8.4	8.2
19	6.3	6.0	6.6	51	263	1.8	10	115	67	19	8.1	8.0
20	8.3	5.7	6.8	43	158	1.8	11	115	65	19	8.3	8.2
21	7.7	5.5	8.1	39	92	1.8	12	115	43	18	8.2	8.2
22	6.4	6.1	7.4	35	77	1.8	13	210	28	17	8.3	8.3
23	5.6	7.1	7.6	31	70	1.8	14	315	25	17	9.6	8.3
24	5.2	7.3	15	29	60	1.8	15	312	24	16	9.6	8.0
25	8.3	7.9	12	27	54	1.9	15	309	23	16	9.4	8.1
26	8.3	8.5	8.7	24	53	1.9	16	305	22	15	8.0	8.1
27	6.7	7.3	8.0	23	62	2.0	16	299	21	15	8.6	8.1
28	5.6	6.9	7.5	22	76	2.0	17	296	21	16	8.5	7.8
29	5.6	6.8	7.4	20	62	2.2	17	292	20	16	8.2	7.7
30	5.6	6.7	11	18	---	2.3	18	285	20	15	8.2	7.6
31	5.6	---	28	18	---	2.4	---	280	---	14	8.3	---
TOTAL	171.5	190.2	246.6	2409.5	1772	761.3	255.6	4229	2037	584	269.3	284.6
MEAN	5.53	6.34	7.95	77.7	61.1	24.6	8.52	136	67.9	18.8	8.69	9.49
MAX	8.3	8.5	28	534	271	56	18	315	272	30	13	24
MIN	4.4	5.5	5.3	9.4	16	1.8	2.5	19	20	14	7.6	7.6
AC-FT	340	377	489	4780	3510	1510	507	8390	4040	1160	534	565
CAL YR 1979	TOTAL	6239.3	MEAN 17.1	MAX 132	MIN 4.0	AC-FT 12380						
WTR YR 1980	TOTAL	13210.6	MEAN 36.1	MAX 534	MIN 1.8	AC-FT 26200						

PYRAMID AND WINNEMUCCA LAKES BASIN

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, 21.5°C Aug. 1; minimum recorded, 0.5°C Jan. 13, 14, Feb. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY (MG/L AS CACO3)
APR 23...	1130	14	388	7.3	9.5	--	7.9	9.8	43
JUN 02...	1215	91	85	7.2	12.0	608	--	7.1	--
20...	1115	65	93	7.5	15.5	--	4.0	8.6	42
SEP 03...	1250	8.4	121	8.4	18.0	620	3.0	9.0	65

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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, 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)
APR 23...	.01	.00	.01	.00	.82	.83	.04	.01
JUN 02...	.03	.01	.04	.04	.85	.93	.08	--
20...	.34	.01	.35	.00	.53	.88	.03	.01
SEP 03...	.00	.02	.02	.00	1.2	1.2	.04	.01

DATE	TIME	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE D RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
APR 23...	1130	0	0	0	440	340	100	32
JUN 20...	1115	4	3	1	--	--	--	6
SEP 03...	1250	5	3	2	390	180	210	22

DATE	LEAD, SUS- PENDE D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV- (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE D RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 23...	32	0	30	10	20	150	140	8
JUN 20...	2	4	80	20	60	50	20	30
SEP 03...	17	5	60	20	40	50	20	30

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	12.0	8.5	5.5	6.0	3.0	---	---	---	---	3.5	3.0
2	17.5	12.0	8.0	5.5	6.0	3.5	---	---	---	---	3.5	3.0
3	17.0	12.0	7.0	6.0	6.0	3.5	3.5	2.0	---	---	3.5	3.0
4	17.0	12.0	8.0	5.5	6.0	3.0	3.5	2.5	---	---	4.0	3.0
5	17.5	12.0	7.5	5.0	5.5	3.0	4.5	3.0	4.5	3.0	---	---
6	17.0	12.5	8.0	5.0	5.5	3.0	4.0	3.0	4.5	3.0	---	---
7	15.5	13.0	8.0	5.0	5.5	3.0	4.5	3.0	4.5	3.5	---	---
8	15.5	12.5	8.0	5.0	5.5	3.0	4.5	3.0	5.0	3.5	---	---
9	16.5	12.0	7.5	4.5	6.0	3.0	4.0	2.0	5.5	3.5	---	---
10	17.0	11.5	7.5	4.0	5.0	2.5	4.0	2.0	5.0	4.0	---	---
11	15.5	11.5	7.0	3.5	4.5	2.0	3.5	2.5	5.5	4.0	---	---
12	15.5	11.5	7.0	3.5	5.0	2.0	3.0	1.0	6.0	4.0	---	---
13	14.5	11.5	7.0	3.5	5.5	2.5	0.5	0.5	6.0	4.0	---	---
14	14.0	11.5	7.0	3.5	5.5	2.5	1.0	0.5	5.5	4.0	---	---
15	13.5	12.0	7.0	3.5	5.5	2.5	1.0	1.0	5.0	4.5	---	---
16	15.0	11.5	6.5	4.5	5.5	2.5	2.0	1.0	4.5	4.0	---	---
17	15.0	11.0	6.0	5.0	5.5	2.5	2.0	1.5	4.0	2.5	---	---
18	12.0	10.5	6.5	3.5	5.5	2.5	2.0	2.0	3.0	2.0	---	---
19	12.0	10.0	5.5	3.0	4.5	3.5	2.0	2.0	2.0	1.0	---	---
20	11.5	9.0	5.5	2.5	4.5	3.0	2.5	1.5	1.0	0.5	---	---
21	11.5	8.5	5.5	2.0	3.5	2.5	2.5	2.0	1.5	1.0	---	---
22	11.5	8.5	4.5	3.0	4.5	2.5	2.5	2.0	1.5	1.0	---	---
23	12.0	9.0	5.0	3.5	---	---	3.0	2.0	1.5	1.0	---	---
24	11.5	8.5	6.0	4.0	---	---	3.0	2.0	2.0	1.0	---	---
25	9.5	8.0	5.0	4.0	---	---	3.5	2.5	2.0	1.5	---	---
26	10.5	8.0	5.0	3.0	---	---	3.5	2.5	2.5	2.0	---	---
27	11.0	7.5	5.0	2.5	---	---	3.0	2.5	3.0	2.0	---	---
28	9.5	7.0	5.0	3.0	---	---	3.5	2.5	3.0	2.5	---	---
29	9.5	6.5	5.5	3.0	---	---	3.5	2.5	3.5	2.5	---	---
30	8.0	6.0	6.0	3.0	---	---	4.0	2.5	---	---	---	---
31	9.5	6.0	---	---	---	---	---	---	---	---	---	---
MONTH	18.0	6.0	8.5	2.0	---	---	4.5	0.5	6.0	0.5	---	---

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

PYRAMID AND WINNEMUCCA LAKES BASIN

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
APR 23...	1130	14	9.5	8	.30
JUN 20...	1115	65	15.5	16	2.8
SEP 03...	1250	8.4	18.0	3	.07

10340300 PROSSER CREEK RESERVOIR NEAR TRUCKEE, CA

LOCATION (REVISED).--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 Water and Power Resources Service).

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 Water and Power Resources Service.

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, 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, 25,488 acre-ft (31.4 hm³) Oct. 1, elevation, 5,735.08 ft (1,748.052 m); minimum observed, 8,979 acre-ft (11.1 hm³) Mar. 7-10, elevation, 5,701.10 ft (1,737.695 m).

MONTHEND ELEVATION NGVD AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	5735.30	25637	--
Oct. 31.....	5704.20	10001	-15636
Nov. 30.....	5703.10	9629	-372
Dec. 31.....	5702.83	9539	-90
CAL YR 1979.....	--	--	+410
Jan. 31.....	5702.95	9578	+39
Feb. 29.....	5701.68	9165	-413
Mar. 31.....	5701.55	9123	-42
Apr. 30.....	5725.75	19716	+10593
May 31.....	5717.35	15348	-4368
June 30.....	5724.53	19034	+3686
July 31.....	5734.02	24780	+5746
Aug. 31.....	5734.46	25074	+294
Sept. 30.....	5713.73	13702	-11372
WTR YR 1980.....	--	--	-11935

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

LOCATION.--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 0.2 mi (0.3 km) downstream from Prosser Creek Dam, 1.0 mi (1.6 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 Water and Power Resources Service). 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).--37 years (water years 1943-50, 1952-80), 85.7 ft³/s (2.427 m³/s), 62,090 acre-ft/yr (76.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1943-80): 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, 1,580 ft³/s (44.7 m³/s) Jan. 17, gage height, 6.68 ft (2.036 m); minimum daily, 9.9 ft³/s (0.28 m³/s) Dec. 11.

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	85	211	35	57	92	122	77	191	404	15	42	29
2	87	32	35	74	91	122	77	226	473	16	42	41
3	86	10	35	74	91	122	77	227	541	15	42	86
4	85	10	35	52	56	122	76	227	535	15	25	154
5	85	10	35	35	32	122	78	228	529	15	12	193
6	85	10	35	35	38	121	77	227	418	15	12	235
7	85	10	35	35	41	100	76	347	284	15	12	234
8	41	10	35	35	41	85	76	449	215	15	12	252
9	12	10	35	36	41	86	76	531	155	14	12	263
10	56	10	20	36	41	80	77	581	54	14	12	246
11	149	10	9.9	36	41	76	76	571	15	14	13	285
12	305	10	10	52	41	77	77	406	15	14	14	284
13	373	10	10	50	71	78	78	301	15	15	14	283
14	370	10	10	111	91	79	101	237	15	15	14	282
15	368	10	10	588	94	78	117	247	15	15	14	297
16	365	10	10	1250	93	78	119	361	15	15	14	306
17	373	10	10	1490	100	79	120	362	15	15	14	305
18	376	10	10	1270	257	79	120	363	15	14	14	303
19	385	10	10	698	410	79	119	309	15	14	14	301
20	389	10	10	160	386	79	120	275	15	14	13	299
21	387	10	10	118	342	79	120	275	15	47	13	297
22	394	10	10	90	266	79	122	348	15	70	13	249
23	398	25	11	109	216	79	62	466	15	70	13	215
24	412	35	26	120	216	78	15	546	15	70	13	163
25	428	35	36	55	158	78	15	575	14	70	13	130
26	454	35	35	10	119	78	15	487	14	70	13	90
27	466	35	35	54	120	78	15	464	14	70	13	64
28	459	35	35	120	121	78	87	480	15	53	13	64
29	430	35	35	120	122	78	136	478	15	42	13	64
30	345	35	36	103	---	77	137	473	15	42	13	64
31	306	---	37	92	---	77	---	469	---	42	13	---
TOTAL	8639	713	740.9	7165	3828	2723	2538	11727	3905	940	504	6078
MEAN	279	23.8	23.9	231	132	87.8	84.6	378	130	30.3	16.3	203
MAX	466	211	37	1490	410	122	137	581	541	70	42	306
MIN	12	10	9.9	10	32	76	15	191	14	14	12	29
AC-FT	17140	1410	1470	14210	7590	5400	5030	23260	7750	1860	1000	12060
CAL YR 1979 TOTAL	21446.2			MEAN 58.8	MAX 466	MIN 6.2	AC-FT 42540		MEAN ‡ 59.3	AC-FT ‡ 42950		
WTR YR 1980 TOTAL	49500.9			MEAN 135	MAX 1490	MIN 9.9	AC-FT 98190		MEAN ‡ 119	AC-FT ‡ 86260		

‡ Adjusted for change in contents in Prosser Creek Reservoir.

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°25'54", long 120°14'07", 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.

DRAINAGE AREA.--10.5 mi² (27.2 km²).

PERIOD OF RECORD.--October 1953 to current year.

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.

REMARKS.--Records excellent. No storage or diversion above station.

AVERAGE DISCHARGE.--27 years, 12.1 ft³/s (0.343 m³/s), 8,770 acre-ft/yr (10.8 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.--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. 13	2100	*285 8.07	3.82 1.164	May 4	1700	142 4.02	3.28 1.000
Feb. 18	0030	56 1.59	2.66 0.811	May 21	1900	98 2.78	3.02 .920
Apr. 20	1900	83 2.35	2.91 .887	July 2	1900	52 1.47	2.62 .799

Minimum daily, 1.6 ft³/s (0.045 m³/s) Oct. 1-3.

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	1.6	2.4	2.6	9.5	6.9	10	7.0	87	46	23	4.9	2.7
2	1.6	2.4	2.7	6.1	6.8	10	6.8	94	46	34	4.6	2.6
3	1.6	2.8	2.7	4.6	6.7	9.8	6.5	103	42	27	4.4	2.6
4	1.7	2.8	2.6	4.0	7.0	9.4	6.5	109	44	22	4.5	2.6
5	1.7	2.7	2.6	3.7	7.3	9.3	6.8	102	42	20	4.2	2.5
6	1.7	2.5	2.5	3.6	7.5	8.8	6.5	104	38	18	4.0	2.5
7	1.8	2.5	2.5	3.6	7.1	8.4	6.3	99	38	17	3.9	3.0
8	2.1	2.4	2.5	3.4	6.8	8.1	6.6	95	38	16	3.8	3.3
9	1.9	2.4	2.5	3.7	6.5	8.0	8.4	86	38	15	3.7	3.1
10	1.8	2.3	2.5	3.7	6.3	8.1	10	71	38	14	3.6	3.3
11	1.8	2.3	2.4	6.8	6.1	8.1	11	61	37	13	3.5	3.0
12	1.8	2.3	2.4	6.9	5.9	7.7	12	55	35	13	3.3	2.8
13	1.8	2.3	2.3	173	5.9	7.4	16	53	34	12	3.3	2.6
14	2.0	2.3	2.3	117	6.2	7.4	22	55	32	12	3.3	2.7
15	2.3	2.2	2.3	50	6.8	7.2	25	59	32	11	3.3	2.7
16	2.1	2.3	2.2	35	7.5	7.0	31	62	32	10	3.4	2.6
17	2.0	2.9	2.2	30	23	7.0	41	65	32	9.7	3.4	2.5
18	2.2	2.6	2.3	24	44	6.9	51	66	31	9.2	3.3	2.6
19	6.3	2.4	2.4	19	24	6.8	61	72	31	8.7	3.3	2.6
20	4.4	2.2	2.4	18	19	6.8	67	78	30	8.3	3.1	2.6
21	3.0	2.1	2.6	15	16	6.7	57	83	29	7.9	3.0	2.6
22	2.7	2.4	2.4	13	14	6.5	45	82	28	7.5	3.0	2.6
23	2.5	2.6	2.4	12	13	6.4	53	72	27	7.2	3.2	2.5
24	2.4	3.6	2.4	11	12	6.3	63	59	26	6.8	3.0	2.5
25	8.9	3.9	2.4	10	12	6.2	67	52	26	6.4	3.0	2.4
26	4.4	4.2	2.6	10	12	6.1	71	49	24	6.0	2.9	2.4
27	3.0	3.0	2.7	9.4	12	6.0	77	46	23	5.8	2.8	2.4
28	2.7	2.8	2.7	8.9	12	6.0	79	44	22	6.0	2.7	2.4
29	2.5	2.7	2.8	8.2	11	6.5	90	44	22	5.9	2.7	2.4
30	2.5	2.7	5.0	7.7	---	7.2	88	46	22	5.4	2.7	2.3
31	2.6	---	10	7.3	---	7.1	---	50	---	5.2	2.8	---
TOTAL	81.4	79.0	86.9	700.2	331.3	233.2	1098.4	2203	985	383.0	106.6	79.4
MEAN	2.63	2.63	2.80	22.6	11.4	7.52	36.6	71.1	32.8	12.4	3.44	2.65
MAX	8.9	4.2	10	173	44	10	90	109	46	34	4.9	3.3
MIN	1.6	2.1	2.2	3.4	5.9	6.0	6.3	44	22	5.2	2.7	2.3
AC-FT	161	157	172	1390	657	463	2180	4370	1950	760	211	157
CAL YR 1979 TOTAL	2575.4			MEAN 7.06	MAX 46	MIN 1.5	AC-FT 5110					
WTR YR 1980 TOTAL	6367.4			MEAN 17.4	MAX 173	MIN 1.6	AC-FT 12630					

PYRAMID AND WINNEMUCCA LAKES BASIN

10344300 STAMPEDE RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°28'24", long 120°06'06", in NW¼NW¼ sec.28, T.19 N., R.17 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, in control house on Stampede Dam on Little Truckee River, just downstream from mouth of Davies Creek, 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 Water and Power Resources Service).

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 (1,767.32 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 Water and Power Resources Service, 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, 165,047 acre-ft (204 hm³) May 22, elevation, 5,929.19 ft (1,807.217 m); minimum, 55,792 acre-ft (68.8 hm³) Nov. 21, elevation, 5,876.87 ft (1,791.270 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56738	55915	56655	59752	83695	93583	104070	133895	152939	143423	147883	146344
2	56690	55888	56745	59896	83965	94000	104473	135578	152045	144235	147830	146291
3	56641	55870	56834	60164	84235	94416	104697	137343	151034	145287	147777	146238
4	56600	55851	56911	60431	84505	94888	104921	139108	150023	145762	147724	146224
5	56559	55833	56987	60557	84764	95360	105299	140874	148913	146088	147657	146211
6	56527	55833	57056	60683	85023	95731	105677	142831	147803	146414	147591	146193
7	56494	55833	57125	60809	85283	96101	106055	144787	145917	146741	147551	146175
8	56462	55846	57199	60919	85543	96450	106389	146794	144031	146953	147511	146158
9	56400	55860	57273	61028	85555	96799	106723	148098	142145	147458	147449	146131
10	56339	55869	57347	61212	85568	97149	107178	149402	140385	147737	147387	146105
11	56291	55879	57382	61395	85580	97474	107632	150706	138626	148016	147325	146119
12	56243	55888	57417	64371	85618	97798	108272	152010	136825	148230	147271	146132
13	56184	55901	57487	67347	85655	98032	108912	153314	135024	148243	147218	146061
14	56124	55915	57556	70322	85786	98266	109553	154618	133645	148256	147152	145990
15	56065	55902	57617	73028	85916	98641	110081	155922	132946	148323	147086	145920
16	56031	55888	57678	75733	86392	99016	110609	157226	132772	148390	147059	145920
17	55997	55870	57738	76892	86868	99392	112443	158530	133220	148390	147032	145920
18	55963	55851	57808	78050	87343	99691	114276	159834	134020	148390	147006	145880
19	55929	55833	57878	78638	88428	99989	115910	161138	134848	148283	146953	145841
20	55961	55812	57963	79226	89513	100362	117544	162442	135805	148176	146900	145771
21	55993	55792	58047	79813	90111	100734	119179	163743	136601	148070	146860	145701
22	56024	55846	58207	80277	90708	101039	119993	165047	137397	148043	146820	145630
23	55997	55901	58367	80740	91051	101344	120952	163942	138192	148016	146776	145603
24	55967	56015	58526	81172	91394	101649	122275	162074	138884	148016	146732	145577
25	55990	56129	58650	81603	91738	101911	123597	160207	139575	148016	146688	145564
26	56010	56243	58774	81935	91973	102172	125234	159260	140212	147981	146661	145551
27	55996	56311	58898	82267	92207	102445	126871	158111	140848	147946	146635	145516
28	55982	56380	59023	82599	92649	102718	128509	156962	141489	147910	146542	145481
29	55969	56476	59166	82882	93090	103063	130280	155795	142130	147896	146449	145445
30	55963	56572	59309	83164	---	103408	132051	154628	142770	147883	146396	145445
31	55956	---	59451	83420	---	103752	---	153701	---	147883	146344	---
MAX	56738	56572	59451	83420	93090	103752	132051	165047	152939	148390	147883	146344
MIN	55929	55792	56655	59752	83695	93583	104070	133895	132772	143423	146344	145445
†	5876.99	5877.44	5879.49	5894.18	5899.27	5904.49	5916.80	5925.11	5921.01	5922.95	5922.37	5922.03
‡	-837	+616	+2879	+23969	+9670	+10662	+28299	+21650	-10931	+5113	-1539	-899

CAL YR 1979 ‡ -1797

WTR YR 1980 ‡ +88652

† 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 (Water and Power Resources Service bench mark). June 1903 to October 1910, nonrecording gages at different sites and datums.

REMARKS.--Records good. 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).--48 years (water years 1904-10, 1940-80), 188 ft³/s (5.324 m³/s), 136,200 acre-ft/yr (168 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, 1,650 ft³/s (46.7 m³/s) May 23, gage height, 3.15 ft (0.960 m); minimum daily, 4.5 ft³/s (0.13 m³/s) Dec. 11.

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	30	30	4.9	6.4	7.2	44	29	51	995	32	31	30
2	30	30	4.9	6.4	7.3	43	40	50	1000	61	31	30
3	30	31	4.9	5.5	7.6	36	39	50	1010	109	31	28
4	30	30	4.9	6.2	7.9	21	39	50	1020	139	31	27
5	30	30	4.9	5.5	9.0	20	45	49	1020	138	31	27
6	30	30	5.1	5.4	9.9	18	44	49	1120	138	31	28
7	31	30	5.0	5.4	14	17	42	48	1480	104	31	28
8	31	30	4.9	5.6	89	16	43	47	1480	52	32	23
9	30	30	4.9	6.5	107	16	46	47	1490	31	31	28
10	30	30	4.9	7.3	107	17	48	47	1480	31	31	29
11	30	30	4.5	8.6	107	17	49	47	1490	43	31	32
12	30	30	5.2	49	106	15	50	46	1500	108	32	32
13	30	30	4.9	106	106	15	55	45	1320	137	31	30
14	30	38	4.9	62	109	16	64	45	925	114	31	29
15	31	45	4.9	31	114	15	65	44	649	74	29	29
16	31	45	4.8	26	114	14	66	44	378	93	30	29
17	31	45	4.7	23	136	15	70	46	190	134	31	29
18	31	45	4.9	18	172	16	73	46	112	134	31	28
19	32	45	4.9	17	150	16	109	46	73	134	31	28
20	32	45	4.9	17	135	16	206	46	34	134	31	28
21	32	40	5.4	11	127	16	328	115	34	114	30	28
22	31	9.8	5.0	12	122	15	311	1060	33	72	31	28
23	31	7.9	5.4	10	120	15	203	1620	33	64	31	29
24	30	5.6	6.0	9.9	118	14	99	1630	33	52	31	29
25	31	5.8	7.0	9.3	118	14	54	1390	32	52	31	29
26	31	5.7	7.5	8.6	119	14	53	1020	32	51	30	29
27	31	5.4	7.5	8.7	77	13	53	982	32	52	30	29
28	30	4.9	7.3	8.6	49	14	53	982	32	46	30	29
29	30	4.9	7.1	7.5	46	15	52	982	31	32	30	28
30	31	4.9	6.9	7.7	---	16	51	983	31	31	30	28
31	31	---	6.7	7.6	---	16	---	993	---	31	30	---
TOTAL	949	793.9	169.7	518.7	2510.9	565	2479	12700	19089	2537	953	858
MEAN	30.6	26.5	5.47	16.7	86.6	18.2	82.6	410	636	81.8	30.7	28.6
MAX	32	45	7.5	106	172	44	328	1630	1500	139	32	32
MIN	30	4.9	4.5	5.4	7.2	13	29	44	31	31	29	23
AC-FT	1880	1570	337	1030	4980	1120	4920	25190	37860	5030	1890	1700
CAL YR 1979 TOTAL	36753.6											
WTR YR 1980 TOTAL	44123.2											
MEAN 101												
MAX 121												
MIN 4.5												
AC-FT 72900												
MEAN ‡ 98.2												
AC-FT ‡ 71100												
MEAN ‡ 243												
AC-FT ‡ 176200												

‡ Adjusted for change in contents in Stampede Reservoir.

PYRAMID AND WINNEMUCCA LAKES BASIN

10344490 BOCA RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'20", long 120°05'45", 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 Water and Power Resources Service).

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.--Daily elevations furnished by Water and Power Resources Service, 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, 40,722 acre-ft (50.2 hm³) July 7, 8, elevation, 5,604.85 ft (1,708.358 m); minimum, 10,100 acre-ft (12.5 hm³) May 22, elevation, 5,562.90 ft (1,695.572 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30918	26843	23068	13656	16173	23589	23216	22994	20347	39704	40042	33423
2	30488	26803	22810	13656	16173	23739	23216	23068	20695	39800	39945	33114
3	30062	26803	22480	13461	16173	23889	23142	23068	21116	39945	39849	32851
4	29554	26763	22225	13378	16203	24040	23068	23031	21471	40187	39704	32588
5	29260	26683	22008	13378	16203	24192	22994	22994	21828	40478	39512	32501
6	28885	26683	21649	13378	16203	24230	22920	22920	22153	40673	39272	32414
7	28429	26643	21399	13323	16203	24230	22847	22847	22031	40722	39080	32370
8	28058	26643	21116	13158	16234	24230	22773	22773	22434	40722	38937	32326
9	27569	26723	20800	13022	16388	24192	22736	22663	25930	40673	38842	32326
10	27084	26803	20451	12886	16604	24154	22626	22517	27650	40673	38652	32370
11	26523	26843	20002	12724	16791	24154	22590	22371	29512	40673	38509	32326
12	26325	26803	19593	12832	16979	24116	22517	22189	31656	40673	38367	32501
13	26364	26723	19323	13489	17168	24116	22517	21435	33956	40673	38131	32457
14	26404	26643	19054	14681	17359	24116	22517	20520	35761	40673	37895	32457
15	26404	26603	18425	15209	17678	24078	22407	19323	37239	40673	37613	32414
16	26404	26484	18066	15507	18001	24002	22081	18001	38272	40673	37426	32414
17	26444	26364	17678	15747	18327	24002	21900	16480	38842	40673	37239	32457
18	26484	26206	17359	15868	18988	23965	21685	14915	39033	40673	37006	32414
19	26523	26009	17042	15898	19797	23927	21471	13712	39224	40673	36774	32326
20	26563	25812	16542	15990	20416	23889	21010	12246	39320	40673	36543	32153
21	26563	25538	16112	16112	20905	23852	20695	10921	39368	40673	36312	32240
22	26563	25305	15808	16173	21328	23776	21258	10100	39416	40673	36036	32066
23	26643	25034	15387	16173	21685	23776	21293	11881	39416	40673	35761	31893
24	26643	24802	15150	16173	22044	23664	21721	13768	39416	40673	35579	31699
25	26683	24496	14915	16173	22334	23589	21936	16542	39464	40673	35351	31307
26	26683	24230	14681	16173	22626	23551	22225	17775	39512	40673	35079	31177
27	26723	24002	14335	16173	22920	23477	22371	18261	39512	40624	34898	31048
28	26763	23739	14050	16173	23216	23439	22517	18722	39608	40624	34582	30875
29	26763	23514	13908	16173	23365	23402	22700	19188	39656	40381	34313	30746
30	26763	23290	13768	16173	---	23328	22847	19525	39704	40284	34000	30275
31	26803	---	13684	16173	---	23253	---	19934	---	40090	33689	---
MAX	30918	26843	23068	16173	23365	24230	23216	23068	39704	40722	40042	33423
MIN	26325	23290	13684	12724	16173	23253	20695	10100	20347	39704	33689	30275
†	5589.15	5584.60	5569.85	5574.10	5584.70	5584.55	5584.00	5579.90	5603.80	5604.20	5597.30	5593.35
‡	-4548	-3513	-9606	+2489	+7192	-112	-406	-2913	+19770	+386	-6401	-3414
CAL YR 1979	†	-6871										
WTR YR 1980	‡	-1076										

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

‡ Change in contents, in acre-feet.

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).--45 years (water years 1912-15, 1940-80), 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, 876 ft³/s (24.8 m³/s) June 7, gage height, 4.20 ft (1.280 m); minimum daily, 1.1 ft³/s (0.031 m³/s) on several days during April.

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	245	24	141	34	15	30	79	24	841	2.2	48	169
2	238	53	144	36	15	30	102	67	846	2.4	64	181
3	229	40	144	36	24	32	112	94	851	2.2	73	160
4	219	48	151	36	24	34	121	94	856	2.3	102	98
5	219	41	155	36	24	40	125	94	860	2.3	134	90
6	217	48	155	38	25	76	125	94	863	82	118	43
7	217	48	153	64	26	76	130	93	831	98	97	43
8	249	48	153	74	26	76	135	93	673	45	96	25
9	279	48	153	105	26	76	135	116	540	30	96	2.1
10	271	48	173	104	27	76	135	143	477	30	96	51
11	175	39	197	87	27	75	135	142	387	51	105	2.3
12	49	57	199	36	27	73	135	320	260	104	117	29
13	14	81	206	11	27	73	135	520	174	120	131	39
14	14	81	201	11	27	73	172	591	95	92	146	29
15	14	103	193	11	27	73	266	719	27	63	143	29
16	14	114	193	11	27	73	266	798	2.8	90	132	29
17	14	125	191	11	28	79	266	784	2.6	122	132	38
18	14	136	197	13	29	80	237	770	2.5	122	132	47
19	13	144	201	16	29	80	356	755	2.4	122	131	55
20	13	158	201	16	30	80	484	740	2.4	122	146	62
21	13	166	199	16	30	80	376	723	2.3	94	158	62
22	13	169	199	16	30	80	171	607	2.3	74	151	99
23	13	151	199	15	30	80	62	399	2.2	64	144	143
24	13	143	166	15	30	80	1.1	461	2.2	49	144	172
25	13	146	136	15	30	80	1.1	533	2.3	60	144	146
26	12	133	138	15	30	79	1.1	679	2.3	73	144	104
27	13	119	138	15	30	79	1.1	816	2.2	73	152	104
28	14	119	130	15	30	79	1.1	821	2.2	96	159	104
29	14	128	122	15	30	79	1.1	827	2.2	119	171	183
30	15	133	122	15	---	79	1.1	832	2.1	97	182	310
31	15	---	80	15	---	79	---	837	---	60	169	---
TOTAL	2865	2891	5130	953	780	2179	4267.7	14586	8616.0	2163.4	3957	2648.4
MEAN	92.4	96.4	165	30.7	26.9	70.3	142	471	287	69.8	128	88.3
MAX	279	169	206	105	30	80	484	837	863	122	182	310
MIN	12	24	80	11	15	30	1.1	24	2.1	2.2	48	2.1
AC-FT	5680	5730	10180	1890	1550	4320	8460	28930	17090	4290	7850	5250
CAL YR 1979 TOTAL	42296.90			MEAN 116	MAX 1390	MIN .32	AC-FT 83900					
WTR YR 1980 TOTAL	51036.50			MEAN 139	MAX 863	MIN 1.1	AC-FT 101200					

PYRAMID AND WINNEMUCCA LAKES BASIN

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 (Water and Power Resources Service bench mark). See WSP 2127 for history of changes prior to Aug. 26, 1957.

REMARKS.--Records good. Flow regulated by Lake Tahoe (station 10337000), Martis Creek Lake (station 10339380), Prosser Creek (station 10340300), Stampede and Boca Reservoirs (stations 10343300 and 10344490), Donner and Independence Lakes, and by several powerplants.

AVERAGE DISCHARGE.--81 years (water years 1900-80), 787 ft³/s (22.29 m³/s), 570,200 acre-ft/yr (703 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, 8,150 ft³/s (231 m³/s) Jan. 14, gage height, 9.70 ft (2.957 m); minimum daily, 291 ft³/s (8.24 m³/s) Nov. 11.

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	458	390	312	506	402	610	471	1500	2280	780	498	557
2	437	345	315	426	393	593	494	1530	2310	870	498	588
3	425	304	305	392	393	590	496	1700	2230	897	502	601
4	411	319	308	356	269	583	500	1830	2190	779	502	577
5	408	299	310	317	339	576	543	1820	2170	712	548	542
6	409	302	305	310	352	597	535	1790	2040	718	570	552
7	413	353	304	324	351	565	523	1850	1910	723	555	552
8	412	339	302	301	340	531	531	1900	1760	644	551	557
9	397	355	300	343	333	517	547	1910	1660	579	552	513
10	416	315	304	367	332	511	578	1830	1570	560	549	523
11	422	291	305	365	326	516	601	1710	1420	541	549	481
12	424	299	302	2250	322	499	615	1650	1260	582	526	485
13	458	311	321	5100	334	501	689	1770	1100	592	532	485
14	458	296	315	4150	370	502	868	1760	949	561	552	467
15	458	310	300	2640	414	503	1100	1850	933	513	551	476
16	456	311	297	2900	456	483	1140	2140	970	506	542	485
17	458	307	292	2750	684	484	1260	2200	1010	571	544	490
18	462	319	298	2330	1700	471	1360	2240	1020	563	536	499
19	513	305	306	1640	1650	449	1550	2270	1000	545	518	494
20	576	316	300	882	1360	453	1810	2330	968	532	515	504
21	504	308	308	751	1130	457	1690	2410	930	529	525	504
22	496	319	303	646	950	445	1280	2520	860	529	545	499
23	493	318	306	604	833	439	1010	2400	806	545	537	509
24	497	316	356	583	782	435	919	2270	766	523	536	552
25	524	408	315	518	708	430	990	2270	765	526	532	537
26	609	383	333	426	632	423	1080	2230	748	533	524	504
27	566	330	352	427	640	424	1170	2280	698	524	530	490
28	557	312	324	497	678	426	1340	2250	687	530	536	481
29	534	308	314	471	633	435	1500	2270	748	583	543	494
30	461	311	346	438	---	465	1540	2280	762	565	558	523
31	424	---	434	413	---	467	---	2320	---	527	550	---
TOTAL	14536	9699	9792	34423	18206	15380	28730	63080	38520	18682	16606	15521
MEAN	469	323	316	1110	628	496	958	2035	1284	603	536	517
MAX	609	408	434	5100	1700	610	1810	2520	2310	897	570	601
MIN	397	291	292	301	322	423	471	1500	687	506	498	467
AC-FT	28830	19240	19420	68280	36110	30510	56990	125100	76400	37060	32940	30790
CAL YR 1979 TOTAL	186189			MEAN 510	MAX 2470	MIN 162	AC-FT 369300					
WTR YR 1980 TOTAL	283175			MEAN 774	MAX 5100	MIN 291	AC-FT 561700					

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-61, 1964 to current year. Published as Truckee River at Floriston (station 10345900) January 1964 to September 1971.

CHEMICAL ANALYSES: Water years 1951-61, 1964 to current year.

BIOLOGICAL DATA: Water years 1975-77, 1979 to current year.

SPECIFIC CONDUCTANCE: Water years 1964 to current year.

WATER TEMPERATURES: Water years 1964 to current year.

SEDIMENT RECORDS: Water years 1974-78.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1964 to current year.

WATER TEMPERATURES: January 1964 to current year.

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 are 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 is 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 daily recorded, 377 micromhos Dec. 27, 1979; minimum daily recorded, 39 micromhos Dec. 23, 1964.

WATER TEMPERATURES: Maximum recorded, 21.0°C Aug. 2, 6, 1971; minimum recorded, 0.0°C on several days during winter periods of most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 377 micromhos Dec. 27; minimum daily recorded, 61 micromhos Sept. 3.

WATER TEMPERATURES: Maximum recorded, 17.5°C Sept. 26; minimum recorded, 0.0°C Dec. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979											
04...	1110	413	108	7.6	13.5	1.5	9.2	17	130	<1	K22
NOV											
07...	0915	347	133	8.1	6.5	.60	10.6	10	150	K11	72
21...	1110	296	127	7.6	3.5	.50	11.9	46	78	<1	24
DEC											
05...	1015	310	124	8.0	4.0	.50	11.6	14	--	<1	22
19...	1100	300	122	7.5	4.0	.80	11.3	16	--	--	--
JAN , 1980											
04...	1130	366	145	7.1	2.5	1.4	11.5	16	--	--	--
FEB											
06...	1100	352	118	7.4	5.0	2.4	11.0	10	--	--	--
29...	1310	629	118	--	4.5	7.2	11.2	14	--	--	--
MAR											
18...	1000	481	117	7.9	3.5	2.7	11.2	14	--	--	--
APR											
03...	0905	499	113	7.9	5.0	3.4	11.6	17	--	--	--
23...	1400	978	89	7.3	8.0	3.3	10.4	14	--	--	--
MAY											
05...	1200	1770	71	--	7.5	6.7	10.2	17	--	K3	--
22...	1130	2400	63	7.1	9.0	7.5	9.5	17	--	K9	--
JUN											
03...	1045	2240	61	7.8	8.0	2.2	10.0	17	--	--	--
20...	1330	912	65	7.4	11.0	1.4	9.5	0	--	1	--
JUL											
01...	1400	740	61	7.7	11.5	2.7	9.1	8	--	K2	--
17...	0930	592	72	7.4	13.5	1.7	9.2	9	--	13	--
AUG											
05...	1000	552	92	7.6	13.5	2.2	8.9	6	--	35	--
14...	1030	552	91	7.6	13.5	2.9	8.8	13	--	K15	--
SEP											
04...	1030	592	90	7.5	13.0	1.5	9.2	18	--	K10	--

See footnotes at end of table.

PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	HARD- NESS (MG/L AS CAC03)	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)	SODIUM AD- SORP- TION RATIO	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT , 1979											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
07...	--	--	--	--	--	--	--	--	38	--	--
21...	--	--	--	--	--	--	--	--	42	--	--
DEC											
05...	--	--	--	--	--	--	--	--	39	--	--
19...	41	2	8.7	4.7	5.9	.4	35	1.5	39	3.7	5.8
JAN , 1980											
04...	--	--	--	--	--	--	--	--	39	--	--
FEB											
06...	--	--	--	--	--	--	--	--	38	--	--
29...	--	--	--	--	--	--	--	--	34	--	--
MAR											
18...	39	0	10	3.5	7.6	.5	29	1.3	39	3.0	13
APR											
03...	--	--	--	--	--	--	--	--	37	--	--
23...	--	--	--	--	--	--	--	--	31	--	--
MAY											
05...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	26	--	--
JUN											
03...	--	--	--	--	--	--	--	--	28	--	--
20...	23	0	6.3	1.8	3.7	.3	25	1.1	23	4.2	3.1
JUL											
01...	--	--	--	--	--	--	--	--	23	--	--
17...	--	--	--	--	--	--	--	--	32	--	--
AUG											
05...	--	--	--	--	--	--	--	--	39	--	--
14...	--	--	--	--	--	--	--	--	38	--	--
SEP											
04...	32	0	8.5	2.6	5.3	.4	26	1.4	39	4.7	3.5

DATE	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, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	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)
OCT , 1979											
04...	--	--	--	--	--	9	.12	.02	.14	--	.01
NOV											
07...	--	--	--	--	--	24	.01	.02	.03	--	.03
21...	--	--	--	--	--	0	.12	.00	.12	--	.01
DEC											
05...	--	--	--	--	--	0	.99	.01	1.0	--	.01
19...	.1	14	81	63	.11	0	.26	.02	.28	.05	.01
JAN , 1980											
04...	--	--	--	--	--	2	.11	.01	.12	--	.02
FEB											
06...	--	--	--	--	--	1	.34	.00	.34	--	.00
29...	--	--	--	--	--	11	.14	.02	.16	--	.04
MAR											
18...	.0	18	86	81	.12	0	.13	.01	.14	.18	.00
APR											
03...	--	--	--	--	--	2	.08	.00	.08	--	.00
23...	--	--	--	--	--	0	.01	.01	.02	--	.00
MAY											
05...	--	--	--	--	--	28	.01	.00	.01	--	.01
22...	--	--	--	--	--	9	.06	.01	.07	--	.01
JUN											
03...	--	--	--	--	--	23	.05	.01	.06	--	.01
20...	.1	17	61	52	.08	9	.07	.01	.08	.10	.00
JUL											
01...	--	--	--	--	--	21	.02	.02	.04	--	.03
17...	--	--	--	--	--	16	.00	.01	.00	--	.01
AUG											
05...	--	--	--	--	--	15	.07	.02	.09	--	.01
14...	--	--	--	--	--	4	.12	.00	.12	--	.00
SEP											
04...	.1	15	64	65	.09	7	.12	.01	.13	.10	.03

PYRAMID AND WINNEMUCCA LAKES BASIN

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10346000 TRUCKEE RIVER AT FARAD, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT , 1979											
04...	--	.46	--	.47	--	.61	--	.00	--	200	2.2
NOV											
07...	--	.31	--	.34	--	.37	--	.02	--	100	5.2
21...	--	.33	--	.34	--	.46	--	.01	--	80	3.0
DEC											
05...	--	.53	--	.54	--	1.5	--	.07	--	130	2.6
19...	.01	.51	.22	.52	.23	.80	.28	.01	.00	110	3.4
JAN , 1980											
04...	--	.91	--	.93	--	1.1	--	.01	--	240	2.1
FEB											
06...	--	.45	--	.45	--	.79	--	.01	--	560	2.9
29...	--	.00	--	.04	--	.20	--	.01	--	370	1.9
MAR											
18...	.00	.20	.14	.20	.14	.34	.32	.05	.01	280	1.9
APR											
03...	--	.47	--	.47	--	.55	--	.04	--	250	2.3
23...	--	.33	--	.33	--	.35	--	.01	--	400	2.4
MAY											
05...	--	.58	--	.59	--	.60	--	.05	--	1000	5.2
22...	--	.40	--	.41	--	.48	--	.05	--	520	4.2
JUN											
03...	--	.28	--	.29	--	.35	--	.07	--	350	3.0
20...	.03	.39	.38	.39	.41	.47	.51	.02	.01	350	2.4
JUL											
01...	--	.39	--	.42	--	.46	--	.06	--	730	11
17...	--	.57	--	.58	--	.58	--	.05	--	580	2.5
AUG											
05...	--	.44	--	.45	--	.54	--	.04	--	320	3.2
14...	--	.45	--	.45	--	.57	--	.03	--	320	2.6
SEP											
04...	.04	.41	--	.44	--	.57	--	.01	.00	300	3.1

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)
DEC , 1979									
19...	1100	4	3	300	30	1	2	20	0
MAR , 1980									
18...	1000	1	3	0	30	0	1	0	0
JUN									
20...	1330	3	2	0	20	0	<1	0	0
SEP									
04...	1030	3	2	0	20	0	<1	20	0

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	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)
DEC , 1979									
19...	0	<3	3	0	40	12	1	30	30
MAR , 1980									
18...	0	<3	3	1	40	2	0	20	20
JUN									
20...	0	<3	11	3	20	11	4	40	10
SEP									
04...	0	<3	3	1	30	5	0	40	10

See footnotes at end of table.

PYRAMID AND WINNEMUCCA LAKES BASIN

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NITRO- GEN, TOTAL (MG/L AS NO3)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC , 1979								
19...	.0	3.5	1	1	0	0	40	10
MAR , 1980								
18...	.0	1.5	0	0	0	0	10	3
JUN								
20...	.1	2.1	0	0	0	0	80	<3
SEP								
04...	.1	2.5	0	0	0	0	70	<3

< 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).

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	101	---	102			---	108			89	66
2	---	102	---	100			109	71			---	62
3	---	108	---	102			105	---			---	61
4	---	---	---	102			105	---			84	63
5	103	98	94	---			71	---			82	66
6	99	101	93	111			---	---			---	66
7	99	94	96	106			105	---			84	67
8	99	94	96	98			104	---			89	---
9	102	92	94	98			103	67			---	75
10	---	94	---	98			102	---			87	76
11	98	92	93	359			99	78			---	78
12	98	90	91	115			---	69			---	75
13	233	89	96	---			99	77			91	74
14	176	---	---	---			89	---			84	74
15	128	94	96	66			---	---			84	76
16	101	92	92	66			---	---			82	78
17	101	98	89	---			80	---			84	76
18	---	101	94	64			74	---			---	75
19	---	98	94	66			---	---			---	---
20	99	92	96	90			70	---			---	80
21	99	90	---	85			72	---			---	78
22	98	90	98	93			78	---			---	78
23	94	90	94	97			---	---			---	78
24	91	101	100	98			86	---			---	---
25	89	102	164	---			80	---			---	80
26	---	99	254	98			86	---			---	81
27	92	102	377	115			111	---			---	81
28	94	102	101	98			112	---			---	---
29	92	99	101	100			---	---			---	---
30	94	---	110	---			71	---			---	---
31	101	---	112	---			---	---			---	---
MONTH	---	96	---	---			---	---			---	74

10346000 TRUCKEE RIVER AT FARAD, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.0	---	1.0			---	5.5			18.0	9.5
2	14.5	8.0	---	1.5			5.5	---			---	9.5
3	12.0	7.0	---	1.0			6.0	---			---	10.0
4	---	---	---	2.5			4.5	---			17.0	10.0
5	14.0	5.0	4.0	---			4.0	---			13.5	11.0
6	---	---	4.5	4.0			---	---			---	14.5
7	13.0	6.0	3.0	4.0			4.0	---			14.0	14.0
8	14.0	5.0	3.0	4.5			5.0	---			14.5	---
9	12.5	5.5	3.0	4.0			6.0	5.5			---	11.0
10	---	5.0	---	1.0			5.0	---			14.5	10.5
11	12.0	4.5	2.0	2.5			6.0	5.5			---	11.5
12	12.5	4.0	1.5	3.0			---	6.0			---	11.5
13	10.5	4.0	1.5	---			8.0	8.0			13.0	11.5
14	11.0	---	---	---			6.5	---			13.5	13.5
15	11.0	4.0	2.0	3.0			7.0	---			13.0	11.5
16	11.0	6.5	1.5	3.0			---	---			13.0	15.0
17	---	7.0	1.5	---			5.5	---			14.0	13.0
18	---	6.0	3.0	2.5			5.0	---			---	13.0
19	---	5.0	4.0	2.0			---	---			---	---
20	10.0	4.0	2.0	1.5			5.0	---			---	14.5
21	11.0	2.0	---	1.5			7.0	---			---	14.5
22	9.0	3.5	2.0	1.5			5.0	---			---	14.5
23	12.0	5.0	1.0	1.5			---	---			---	14.5
24	9.5	5.0	2.5	1.5			6.0	---			---	---
25	11.0	5.0	1.0	---			6.0	---			---	17.0
26	---	5.0	2.0	---			5.0	---			---	17.5
27	10.5	4.0	1.0	2.0			5.0	---			---	17.0
28	9.0	3.5	0.0	2.5			5.0	---			---	---
29	8.5	4.0	0.5	1.5			---	---			---	---
30	8.0	---	1.5	---			7.0	---			---	---
31	7.5	---	2.0	---			---	---			---	---
MONTH	---	5.0	---	---			---	---			---	13.0

PYRAMID AND WINNEMUCCA LAKES BASIN

10348000 TRUCKEE RIVER AT RENO, NV

LOCATION.--Lat 39°31'53", long 119°47'07", in NW¼ sec.7, T.19 N., R.20 E., Washoe County, Hydrologic Unit 16050102, on left bank 400 ft (120 m) downstream from Kietzke Lane bridge, 0.5 mi (0.8 km) downstream from Scott Island, 1.5 mi (2.4 km) east of Reno Post Office, and 5 mi (8 km) upstream from Steamboat Creek.

DRAINAGE AREA.--1,067 mi² (2,764 km²).

PERIOD OF RECORD.--July 1906 to September 1921, June 1925 to September 1926, January 1930 to December 1935, January to December 1943, January 1946 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734.

REVISED RECORDS.--WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,431.97 ft (1,350.864 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). July 1906 to September 1946, nonrecording gage at site 1 mi (2 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by Lake Tahoe, Martis Creek Lake, Prosser Creek, Boca, and Stampede Reservoirs (stations 10337000, 10339380, 10340300, 10344300, and 10344490), Donner and Independence Lakes, and by several powerplants. Many diversions above station.

AVERAGE DISCHARGE.--54 years (water years 1907-21, 1926, 1931-34, 1947-80), 662 ft³/s (18.75 m³/s), 479,600 acre-ft/yr (591 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,800 ft³/s (589 m³/s) Dec. 23, 1955; maximum gage height, 13.83 ft (4.215 m) Nov. 21, 1950; no flow on several days during September 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,630 ft³/s (244 m³/s) Jan. 14, gage height, 9.79 ft (2.984 m); minimum daily, 163 ft³/s (4.62 m³/s) Oct. 3.

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	182	392	296	524	465	732	470	1330	1950	538	229	252
2	186	348	296	455	460	715	470	1330	1970	616	210	282
3	163	303	296	402	456	709	480	1490	1920	703	224	287
4	165	302	288	377	447	691	475	1630	1880	571	212	293
5	170	300	300	327	405	685	549	1650	1870	504	239	282
6	181	279	316	316	414	687	549	1570	1720	464	318	309
7	180	308	308	320	418	668	524	1630	1570	488	321	295
8	212	325	304	335	410	622	534	1660	1430	446	313	316
9	225	325	296	372	398	602	544	1630	1350	384	313	293
10	236	306	300	476	397	595	581	1590	1280	350	307	268
11	256	283	300	439	391	591	597	1470	1180	310	245	239
12	241	270	289	2540	387	574	613	1380	1040	322	229	219
13	253	290	308	6520	375	569	668	1500	927	334	223	236
14	280	288	312	5030	420	558	805	1490	780	325	239	223
15	288	288	300	2830	475	555	1070	1530	738	268	252	228
16	285	304	296	2980	529	534	1110	1830	762	242	249	237
17	275	292	296	2810	818	529	1190	1880	805	282	255	222
18	285	296	296	2360	2380	531	1290	1920	805	287	269	224
19	333	300	312	1700	2160	513	1400	1960	787	269	255	229
20	445	296	308	935	1640	506	1690	2030	750	254	226	236
21	386	292	312	811	1400	505	1650	2130	720	245	233	241
22	376	300	307	697	1180	492	1250	2260	657	239	250	243
23	390	312	308	663	996	481	996	2190	613	261	259	244
24	388	300	400	640	928	472	837	1990	570	260	256	268
25	409	357	350	607	856	463	882	2010	555	242	252	291
26	500	369	323	499	768	466	962	1900	544	245	252	257
27	510	332	344	480	780	459	1030	1960	509	245	245	236
28	508	300	327	565	843	449	1180	1910	493	242	252	227
29	512	288	316	539	768	451	1320	1920	520	290	252	220
30	470	300	352	504	---	475	1410	1960	540	298	260	264
31	424	---	485	475	---	476	---	2040	---	244	269	---
TOTAL	9714	9245	9841	38528	22364	17355	27126	54770	31235	10768	7908	7661
MEAN	313	308	317	1243	771	560	904	1767	1041	347	255	255
MAX	512	392	485	6520	2380	732	1690	2260	1970	703	321	316
MIN	163	270	288	316	375	449	470	1330	493	239	210	219
AC-FT	19270	18340	19520	76420	44360	34420	53800	108600	61950	21360	15690	15200
CAL YR 1979	TOTAL	139694	MEAN 383	MAX	2230	MIN 144	AC-FT	277100				
WTR YR 1980	TOTAL	246515	MEAN 674	MAX	6520	MIN 163	AC-FT	489000				

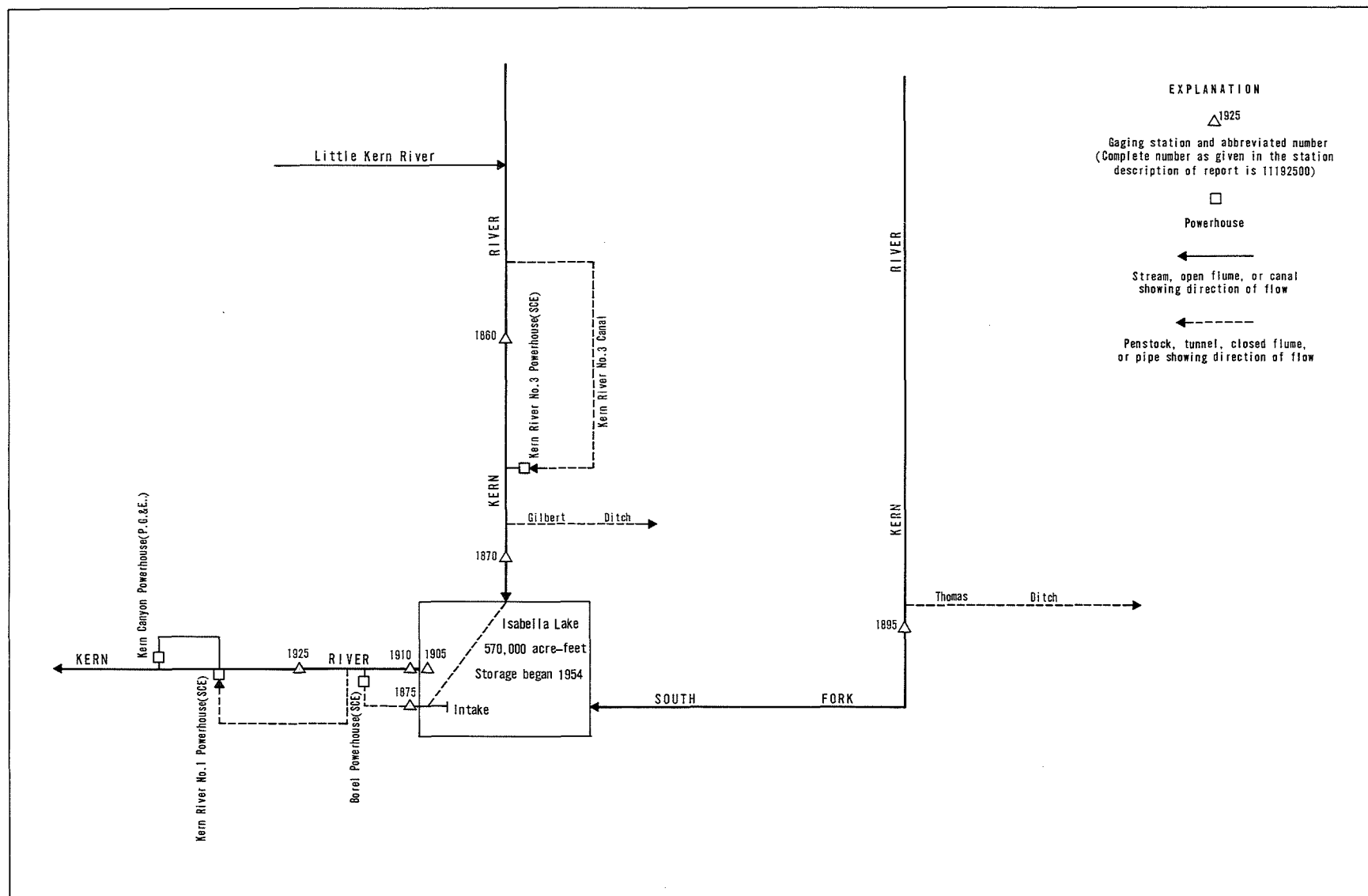


FIGURE 4. — Schematic diagram showing diversions and storage in Kern River basin.

BUENA VISTA LAKE 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, 30 ft (9 m) upstream from sand trap sluice gates, 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 except those for Jan. 12-31, which are fair. 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 15 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); 53 years (water years 1921-53, 1961-80), 377 ft³/s (10.68 m³/s), 273,100 acre-ft/yr (337 hm³/yr).

Combined river and diversion: 60 years (water years 1921-80), 726 ft³/s (20.56 m³/s), 526,000 acre-ft/yr (649 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, 13,000 ft³/s (368 m³/s) Jan. 12, from hydrographic comparison with Kern River at Kernville (station 11187000); minimum daily 37 ft³/s (1.05 m³/s) Dec. 28.

Combined river and diversion: Maximum discharge, 13,500 ft³/s (382 m³/s) Jan. 12; minimum daily, 201 ft³/s (5.69 m³/s) Dec. 23.

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	60	45	40	42	75	809	771	2150	2060	4280	1460	84
2	52	42	39	42	69	813	725	1960	2170	4010	1460	77
3	51	41	39	42	67	946	705	2120	2390	3650	1470	77
4	50	42	39	42	74	867	733	2360	2530	3170	1290	75
5	50	42	39	42	92	968	870	2730	2660	2900	1170	75
6	51	41	39	42	115	905	856	2890	2660	2640	988	75
7	50	41	41	42	115	769	781	3220	2750	2500	840	75
8	50	41	42	42	88	718	762	3030	3180	2450	767	75
9	50	41	42	42	69	698	863	2990	3520	2450	731	76
10	50	40	42	46	62	697	1030	2620	3820	2260	686	73
11	50	40	42	160	57	678	1090	2160	4050	2420	648	73
12	50	40	42	6000	51	631	1150	1950	3790	2420	555	73
13	50	42	42	6800	47	632	1290	1880	3540	2410	513	73
14	50	39	42	6200	129	673	1400	1730	3330	2420	461	73
15	50	40	42	3100	328	692	1470	1740	3440	2390	387	73
16	51	41	42	1300	351	689	1640	1900	3640	2260	315	73
17	52	40	41	900	1150	701	1860	2230	4080	2530	270	73
18	51	39	41	680	6460	756	2090	2640	4070	2890	251	73
19	51	39	42	560	3500	675	2260	3200	4220	2710	229	71
20	51	39	41	470	2560	679	2430	3680	4410	2120	197	69
21	51	41	42	390	2560	719	2520	3980	4480	2000	176	68
22	52	42	41	340	1730	659	2100	4030	4350	2060	161	67
23	51	41	41	290	1360	622	1820	4000	4200	2250	144	68
24	51	41	41	250	1160	649	1650	3450	4010	2410	109	68
25	50	40	41	225	1020	610	1710	2880	4070	2300	93	68
26	51	40	41	210	960	581	1870	2540	4100	2120	99	68
27	51	39	41	185	941	564	2020	2280	4030	2280	92	68
28	51	39	37	170	873	584	2080	2130	4070	2030	93	69
29	51	45	42	185	835	626	1960	2060	4100	1930	93	68
30	50	41	42	110	---	714	1970	2160	4090	1650	93	68
31	50	---	42	76	---	764	---	2130	---	1390	93	---
TOTAL	1579	1224	1270	29025	26898	22088	44476	80820	107810	77300	15934	2166
MEAN	50.9	40.8	41.0	936	928	713	1483	2607	3594	2494	514	72.2
MAX	60	45	42	6800	6460	968	2520	4030	4480	4280	1470	84
MIN	50	39	37	42	47	564	705	1730	2060	1390	92	67
AC-FT	3130	2430	2520	57570	53350	43810	88220	160300	213800	153300	31610	4300
CAL YR 1979 TOTAL	120639			331		2840						
WTR YR 1980 TOTAL	410590			1122		6800						
MEAN												
MAX												
MIN												
AC-FT												

NOTE.--No gage-height record Jan. 12-31.

11186000 KERN RIVER NEAR KERNNVILLE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KERN RIVER AND KERN RIVER
NO. 3 CANAL NEAR KERNNVILLE, CA., WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	317	269	249	320	679	1400	1380	2730	2630	4860	2070	546
2	309	260	246	276	669	1400	1330	2540	2740	4590	2070	546
3	293	259	244	262	658	1540	1310	2700	2960	4240	2080	546
4	278	306	241	254	679	1470	1340	2940	3100	3760	1900	537
5	265	290	239	253	701	1570	1470	3310	3230	3480	1780	533
6	255	288	240	255	724	1500	1460	3470	3230	3220	1590	576
7	248	286	241	259	724	1360	1380	3800	3330	3080	1450	566
8	245	279	242	253	696	1300	1360	3610	3760	3030	1370	558
9	243	272	242	298	665	1290	1450	3580	4100	3030	1340	551
10	238	266	241	489	642	1280	1610	3220	4410	2840	1290	553
11	235	265	238	666	632	1260	1680	2740	4640	3000	1250	522
12	234	262	223	6530	620	1210	1730	2520	4360	3000	1160	501
13	233	259	222	7390	614	1240	1870	2450	4110	2990	1120	486
14	234	258	230	6790	724	1270	1980	2300	3900	3000	1070	476
15	233	259	227	3660	935	1280	2050	2310	4010	2970	992	462
16	232	257	225	1900	958	1270	2220	2470	4210	2840	920	453
17	233	295	221	1500	1760	1290	2440	2800	4660	3110	876	442
18	233	298	220	1280	7010	1360	2670	3210	4650	3480	857	436
19	237	254	224	1150	4100	1280	2840	3770	4800	3300	834	434
20	412	232	226	1060	3160	1280	3010	4250	4990	2720	801	433
21	363	225	229	996	3160	1320	3100	4550	5060	2610	781	426
22	319	250	221	940	2330	1260	2690	4600	4930	2670	766	418
23	304	263	201	896	1960	1220	2410	4570	4780	2860	748	410
24	300	265	236	856	1760	1250	2220	4030	4590	3020	712	404
25	303	267	255	832	1620	1190	2280	3460	4650	2910	678	397
26	327	268	235	816	1560	1160	2440	3120	4680	2730	641	390
27	347	276	226	791	1550	1140	2590	2860	4610	2890	626	386
28	315	261	235	776	1480	1180	2650	2710	4650	2640	619	383
29	297	262	264	791	1430	1230	2530	2630	4680	2540	596	377
30	279	254	263	705	---	1320	2540	2730	4670	2260	574	369
31	273	---	326	671	---	1370	---	2700	---	2000	557	---
TOTAL	8634	8005	7372	43915	44200	40490	62030	98680	125120	95670	34118	14117
MEAN	279	267	238	1417	1524	1306	2068	3183	4171	3086	1101	471
MAX	412	306	326	7390	7010	1570	3100	4600	5060	4860	2080	576
MIN	232	225	201	253	614	1140	1310	2300	2630	2000	557	369
AC-FT	17130	15880	14620	87110	87670	80310	123000	195700	248200	189800	67670	28000
CAL YR 1979	TOTAL	262071	MEAN	718	MAX	3310	MIN	201	AC-FT	519800		
WTR YR 1980	TOTAL	582351	MEAN	1591	MAX	7390	MIN	201	AC-FT	1155000		

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNVILLE, CA
(National stream-quality accounting network station)

LOCATION (Revised).--Lat 35°45'16", long 118°25'21", in NE¼SW¼ 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.--34 years, 873 ft³/s (24.72 m³/s), 632,500 acre-ft/yr (780 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft³/s (2,100 m³/s) Dec. 6, 1966, gage height, 19.32 ft (5.889 m) 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 12	2100	*16,100 456	13.06 3.981	May 23	0900	4,820 137	8.47 2.582
Feb. 18	Unknown	14,200 402	12.30 3.749	June 21	1130	5,100 144	8.62 2.627
Apr. 21	0630	3,800 108	7.88 2.402	July 1	1430	5,370 152	8.76 2.670
May 7	0730	4,110 116	8.07 2.460				

Minimum daily, 214 ft³/s (6.06 m³/s) Dec. 23.

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	328	279	266	363	735	1820	1670	3220	2760	4950	1990	548
2	306	264	261	306	726	1780	1600	3030	2820	4660	2030	535
3	291	265	259	283	716	2080	1890	3150	3050	4410	2020	538
4	280	320	255	273	722	2000	1940	3410	3160	3960	1850	528
5	268	305	255	270	743	2060	2050	3670	3250	3660	1700	522
6	257	297	256	270	774	2050	2220	3800	3230	3410	1540	570
7	250	295	256	275	779	1940	2060	3960	3280	3240	1390	565
8	247	288	258	270	756	1930	2040	3830	3560	3190	1310	557
9	244	282	259	316	725	1870	2000	3860	3920	3140	1260	549
10	237	277	257	568	702	1860	1960	3690	4230	2880	1220	573
11	234	273	253	775	686	1800	2110	3270	4370	2910	1180	522
12	232	271	234	8700	672	1620	2190	3010	4170	2930	1150	497
13	231	269	229	9900	666	1560	2350	2920	3920	2920	1110	484
14	230	270	242	9300	734	1610	2500	2740	3750	2910	1070	476
15	229	267	239	4900	980	1620	2590	2610	3810	2910	1010	464
16	228	260	238	2270	1120	1610	2690	2740	3950	2770	927	454
17	226	305	235	1900	2070	1610	2890	3060	4280	3040	869	442
18	227	334	233	1700	9600	1690	3130	3500	4370	3410	846	434
19	232	270	237	1400	5930	1590	3320	3890	4510	3390	828	430
20	510	244	243	1260	4670	1580	3480	4300	4720	2850	796	435
21	425	232	245	1170	4450	1640	3600	4550	4780	2660	768	430
22	329	255	243	1090	3430	1560	3180	4600	4710	2690	752	424
23	306	273	214	1010	2820	1500	2840	4590	4550	2860	741	412
24	301	277	250	960	2470	1540	2610	4070	4370	3000	717	404
25	306	281	282	928	2200	1480	2700	3610	4410	2900	674	395
26	326	281	256	901	2060	1440	2880	3330	4430	2700	640	389
27	368	297	241	867	2010	1410	3050	3040	4380	2880	619	383
28	323	277	256	833	1910	1420	3140	2860	4410	2540	614	382
29	302	273	279	867	1860	1470	3040	2750	4500	2430	592	373
30	284	270	280	785	---	1570	3030	2830	4720	2170	569	361
31	276	---	354	747	---	1650	---	2790	---	1920	552	---
TOTAL	8833	8351	7865	55457	57716	52360	76750	106680	120370	96290	33334	14076
MEAN	285	278	254	1789	1990	1689	2558	3441	4012	3106	1075	469
MAX	510	334	354	9900	9600	2080	3600	4600	4780	4950	2030	573
MIN	226	232	214	270	666	1410	1600	2610	2760	1920	552	361
AC-FT	17520	16560	15600	110000	114500	103900	152200	211600	238800	191000	66120	27920
CAL YR 1979 TOTAL	272242			746	MAX 3180	MIN 201	AC-FT 540000					
WTR YR 1980 TOTAL	638082			MEAN 1743	MAX 9900	MIN 214	AC-FT 1266000					

11187000 KERN RIVER AT KERNVILLE, 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.

COOPERATION.--The letter "A" following a date indicates chemical-quality records furnished by California Department of Water Resources.

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, 21.0°C Aug. 11, 12; minimum recorded, 2.0°C Dec. 29, Jan. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UN-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT , 1979										
17...	1300	225	147	8.1	13.5	.80	10.3	--	10	38
NOV										
14...	1045	252	134	7.7	5.0	.70	11.8	K2	K4	41
DEC										
11...	1000	255	140	7.7	6.0	1.7	11.1	K18	<1	44
JAN , 1980										
10...	1230	720	112	7.4	4.5	22	11.8	110	200	34
FEB										
08...	0930	772	96	7.3	4.0	1.3	11.6	K2	K2	34
MAR										
12...	1400	1510	90	7.5	5.5	38	11.0	<1	K3	37
25...A	1330	1440	95	7.4	5.0	--	12.0	--	--	33
APR										
10...	0830	1970	79	7.4	8.5	4.4	10.1	<1	K4	28
MAY										
07...	1230	3900	46	7.2	10.0	15	10.2	K30	K47	17
JUN										
11...	1200	4570	38	7.4	11.5	8.1	9.8	--	200	12
JUL										
11...	1200	3180	40	7.4	13.5	2.4	9.5	<1	15	12
AUG										
05...	1100	1660	49	7.5	17.5	1.6	8.0	64	12	15
SEP										
12...	1030	498	91	7.4	15.0	20	8.6	24	36	30

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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT , 1979										
17...	0	12	1.9	12	45	.9	1.7	49	12	5.1
NOV										
14...	0	13	2.0	13	45	.9	1.6	54	12	4.6
DEC										
11...	0	14	2.3	14	45	.9	1.5	53	8.5	5.0
JAN , 1980										
10...	0	11	1.5	10	38	.8	1.5	42	9.7	4.5
FEB										
08...	0	11	1.6	8.9	35	.7	1.3	40	7.8	4.7
MAR										
12...	0	11	2.3	8.3	32	.6	1.2	41	6.3	2.0
25...A	--	10	2.0	8.0	33	.6	1.2	41	4.0	2.0
APR										
10...	0	8.7	1.5	7.0	34	.6	1.1	38	2.5	2.0
MAY										
07...	0	5.5	.7	4.2	34	.4	.9	23	1.6	1.1
JUN										
11...	0	3.9	.6	2.9	33	.4	.6	17	2.1	1.7
JUL										
11...	0	4.0	.6	3.3	35	.4	.7	16	1.9	.8
AUG										
05...	0	4.6	.8	4.7	39	.5	.8	25	2.4	1.3
SEP										
12...	0	9.4	1.5	7.9	35	.6	1.5	45	4.0	2.8

See footnotes at end of table.

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT , 1979									
17...	.2	15	82	89	.11	.02	.00	.01	.00
NOV									
14...	.1	17	92	96	.13	.01	.00	.02	.00
DEC									
11...	.2	19	107	96	.15	--	.02	.02	.02
JAN , 1980									
10...	.2	16	81	80	.11	.02	.05	.03	.04
FEB									
08...	.1	19	78	79	.11	.04	.04	--	.04
MAR									
12...	.2	22	84	78	.11	.08	.05	.06	.00
25...A	--	--	76	--	.10	--	--	--	--
APR									
10...	.1	21	66	66	.09	.00	.01	.00	.00
MAY									
07...	.1	15	47	43	.08	.03	.03	.06	.00
JUN									
11...	.0	10	32	32	.04	.01	.02	--	.03
JUL									
11...	.3	9.2	--	31	.06	.05	.05	.01	.01
AUG									
05...	.4	8.8	38	39	.05	.02	.02	.06	.04
SEP									
12...	.2	15	--	69	.12	.00	.00	.00	.00

DATE	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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979								
17...	.63	.28	.64	.28	.66	.28	--	.04
NOV								
14...	1.3	.28	1.3	.28	1.3	.28	--	.05
DEC								
11...	.37	.33	.39	.35	--	.37	.01	.02
JAN , 1980								
10...	1.7	.96	1.7	1.0	1.7	1.1	.12	.11
FEB								
08...	--	.32	--	.36	--	.40	.01	.00
MAR								
12...	.47	.26	.53	.26	.61	.31	.05	.02
25...A	--	--	--	--	--	--	--	--
APR								
10...	.31	.32	.31	.32	.31	.33	.05	.02
MAY								
07...	.60	.46	.66	.46	.69	.49	.11	.06
JUN								
11...	--	.40	.45	.43	--	.45	.06	.01
JUL								
11...	.32	.28	.33	.29	.38	.34	.06	.04
AUG								
05...	.25	--	.31	--	.33	--	.02	.03
SEP								
12...	.25	.17	.25	.17	.25	.17	.04	.04

BUENA VISTA LAKE BASIN

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11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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 17...	1300	5	4	200	20	0	3	0	0	0	<3
JAN 10...	1230	8	4	200	20	2	2	0	0	2	<3
APR 10...	0830	1	2	0	20	1	1	0	0	0	<3
JUL 11...	1200	2	2	0	20	1	1	0	10	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)
OCT 17...	4	0	280	70	0	8	4	6	.0	.1
JAN 10...	22	0	2900	80	6	0	60	6	.0	.0
APR 10...	10	3	690	80	3	0	20	4	.0	.0
JUL 11...	15	6	750	40	52	3	20	5	.0	.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)	SELE- NIUM, SUS- PENDED TOTAL (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)
OCT 17...	1	2	0	0	0	0	0	0	10	2.2
JAN 10...	4	0	0	0	0	0	0	60	<3	5.8
APR 10...	4	0	0	0	0	0	0	30	8	4.4
JUL 11...	4	3	0	0	0	0	0	120	30	--

X Results based on colony count outside the acceptable range (non-ideal colony count).
 < Actual value is known to be less than the value shown.

11187000 KERN RIVER AT KERNVILLE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
PHYTOPLANKTON

DATE TIME	NOV 14,79 1045	JAN 10,80 1230	APR 10,80 0830	JUL 11,80 1200	AUG 5,80 1100	SEP 12,80 1030				
TOTAL CELLS/ML	64	1700	670	360	180	65				
DIVERSITY: DIVISION	0.7	0.2	0.8	0.9	0.6	0.7				
..CLASS	0.7	0.2	0.8	0.9	0.6	0.7				
...ORDER	1.4	0.4	1.2	0.9	0.6	1.5				
...FAMILY	2.3	2.8	3.0	0.9	0.6	1.9				
....GENUS	2.3	3.3	3.1	0.9	0.6	1.9				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	10	1	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	13#	20
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	120#	18	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	150#	86	--	-
....SCENEDESMUS	--	-	54	3	--	-	--	-	--	-
..ULOTRICHIALES										
...CHAETOPHORACEAE										
....STIGEOCLONIUM	--	-	--	-	--	-	130#	36	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	5	1	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	45	7	--	-	--	-
....MELOSIRA	--	-	54	3	--	-	--	-	26#	40
....STEPHANODISCUS	13#	20	--	-	--	-	--	-	--	-
...PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	27	2	71	10	--	-	--	-
....COCCONEIS	--	-	54	3	--	-	--	-	--	-
....RHOICOSPHEA	--	-	14	1	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	41	2	15	2	--	-	13#	20
....EPITHEMIA	--	-	220	13	5	1	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	68	4	--	-	--	-	--	-
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	5	1	--	-	--	-
...FRAGILARIACEAE										
....FRAGILARIA	--	-	150	9	--	-	--	-	--	-
....HANNAEA	--	-	14	1	10	1	--	-	--	-
....SYNEDRA	13#	20	380#	22	65	10	--	-	--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	140	8	86	13	--	-	--	-
...NAVICULACEAE										
....NAVICULA	--	-	240	14	55	8	--	-	26	14
...PINNULARIA	13#	20	--	-	--	-	--	-	--	-
...NITZSCHIA	13#	20	280#	16	180#	26	--	-	13#	20
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....COCCOCHLORIS	13#	20	--	-	--	-	--	-	--	-
...HORMOGONALES										
....OSCILLATORIA	--	-	--	-	--	-	230#	64	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....EUGLENA	--	-	--	-	5	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

11187000 KERN RIVER AT KERNVILLE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PERIPHYTON

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (NG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (NG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	Sampling method
OCT 17...	23	4.02	3.54	3.96	.660	121	Polyethylene strip
NOV 14...	28	4.49	3.78	17.0	4.11	41.8	do
JUN 11...	35	.551	.394	.000	.000	--	do

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	14.5	8.5	7.0	6.5	5.0	6.0	5.0	5.0	3.0	7.0	6.0
2	17.0	14.5	9.0	7.0	6.0	5.0	5.5	4.0	6.0	4.0	6.0	6.0
3	16.5	15.0	8.5	7.0	6.5	5.0	4.5	3.0	6.5	5.0	6.0	4.5
4	17.0	14.5	9.0	7.0	6.5	5.0	4.0	2.0	6.5	5.0	7.5	4.0
5	18.0	15.5	8.5	6.5	6.5	5.0	4.5	3.0	7.0	5.5	6.5	5.0
6	17.5	15.5	8.0	6.5	6.5	4.5	5.5	4.0	7.5	6.0	5.0	4.5
7	17.0	15.0	8.0	7.0	6.5	5.0	7.0	5.0	6.5	5.0	6.5	4.0
8	16.5	14.5	9.0	7.0	7.0	5.5	6.0	4.5	5.0	3.5	7.0	4.5
9	15.5	13.0	8.5	7.0	7.5	5.5	5.5	5.0	4.5	3.5	7.5	5.0
10	15.0	13.0	8.0	6.5	6.5	5.5	5.0	4.5	4.5	3.0	6.5	5.5
11	15.5	13.0	7.5	6.0	7.0	5.5	5.5	4.0	4.5	2.5	7.5	6.0
12	15.5	13.5	7.5	5.5	5.0	3.5	6.5	4.5	4.5	3.0	7.5	5.5
13	15.0	13.5	7.0	5.5	4.5	2.5	6.0	4.5	4.0	3.0	8.5	5.0
14	15.0	12.5	7.0	5.0	4.5	2.5	6.0	5.5	4.5	3.5	8.5	5.0
15	15.5	13.0	6.5	4.5	5.0	3.0	6.0	4.5	5.5	4.5	8.5	5.5
16	15.5	13.5	6.0	5.0	5.0	3.0	6.0	5.5	5.5	4.0	9.0	5.5
17	14.5	13.5	7.5	6.0	5.0	3.0	6.0	5.0	5.0	3.5	9.0	5.5
18	14.5	13.0	7.5	6.0	5.0	3.0	5.5	4.0	5.5	5.0	7.0	6.5
19	13.5	12.5	7.0	5.5	4.0	3.0	4.0	3.0	6.0	5.0	7.5	4.0
20	13.0	11.0	5.5	3.5	5.5	3.5	4.0	2.5	5.5	4.0	9.0	5.0
21	11.0	10.0	4.5	3.0	7.0	5.0	6.5	2.5	6.0	4.5	8.5	6.5
22	10.5	9.0	5.0	2.5	5.0	4.0	5.0	3.0	6.0	4.0	7.5	5.0
23	11.0	9.0	5.5	3.5	6.0	4.5	4.5	3.0	6.5	4.5	8.0	4.5
24	12.0	9.5	6.0	4.0	---	---	4.5	3.0	6.5	5.5	9.0	6.0
25	12.0	10.0	7.0	5.0	---	---	4.5	3.0	7.0	5.0	6.0	4.5
26	12.5	10.5	8.5	6.5	---	---	4.5	3.5	7.5	5.5	7.5	3.0
27	11.5	10.0	7.5	6.0	---	---	4.5	3.0	7.0	6.0	8.5	5.0
28	11.0	9.5	7.0	5.5	---	---	4.5	3.5	8.0	6.5	9.0	4.0
29	10.0	8.5	7.0	5.0	3.5	2.0	5.0	4.0	8.0	6.0	10.0	6.0
30	9.0	7.0	6.5	5.0	6.0	2.5	4.5	3.0	---	---	9.5	6.0
31	9.5	7.0	---	---	6.0	4.0	3.5	2.5	---	---	10.0	6.5
MONTH	18.0	7.0	9.0	2.5	7.5	2.0	7.0	2.0	8.0	2.5	10.0	3.0

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (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 , 1979						
17...	1300	225	13.5	4	2.4	73
NOV						
14...	1045	252	5.0	2	1.4	68
DEC						
11...	1000	255	6.0	7	4.8	86
JAN , 1980						
10...	1230	720	4.5	66	128	82
FEB						
08...	0930	772	4.0	4	8.3	72
MAR						
12...	1400	1510	5.5	9	37	47
APR						
10...	0830	1970	8.5	20	106	53
MAY						
07...	1230	3900	10.0	176	1850	27
JUN						
11...	1200	4570	11.5	324	4000	11
JUL						
11...	1200	3180	13.5	64	550	16
AUG						
05...	1100	1660	17.5	22	99	13
SEP						
12...	1030	498	15.0	6	8.1	68

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.--Seventeen discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--59 years, 375 ft³/s (10.62 m³/s), 271,700 acre-ft/yr (335 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	0	315	296	581	586	587	559	561	562	549	570
2	376	0	308	355	581	578	595	513	563	546	547	570
3	357	0	288	385	581	566	598	510	562	512	548	565
4	339	0	294	371	583	577	598	498	563	510	549	569
5	326	189	261	339	584	577	597	503	563	512	548	568
6	322	315	259	325	583	577	598	502	563	512	547	572
7	322	315	286	303	582	582	598	151	561	527	547	568
8	321	307	294	293	582	582	598	502	562	550	547	570
9	322	287	294	346	581	583	599	523	563	555	546	568
10	328	273	295	496	582	584	598	524	563	562	549	566
11	333	294	301	564	581	584	598	524	562	559	549	558
12	319	320	311	564	580	588	599	523	564	561	546	565
13	308	334	290	553	581	591	598	524	563	561	555	565
14	314	310	261	553	577	590	598	530	561	562	568	563
15	1.6	312	252	564	570	589	598	533	562	561	570	561
16	0	299	252	569	564	588	599	541	563	561	575	562
17	0	290	252	568	555	588	599	542	562	562	577	563
18	0	315	264	568	557	587	598	542	563	553	573	562
19	0	326	270	569	559	586	597	542	562	551	569	563
20	0	320	278	570	569	586	597	548	563	550	571	562
21	0	299	261	574	576	588	575	553	562	549	572	563
22	0	281	249	577	576	586	575	554	562	558	570	563
23	0	259	289	577	575	586	574	553	562	555	572	565
24	0	247	286	577	577	586	574	533	562	556	571	566
25	0	259	271	581	576	586	530	544	563	554	571	571
26	0	264	271	583	580	585	576	552	562	554	571	570
27	0	301	271	582	588	586	576	551	561	554	571	570
28	0	375	364	580	587	586	570	551	561	554	573	574
29	0	382	360	572	584	585	559	563	562	555	571	572
30	0	343	284	584	---	587	558	563	561	554	573	571
31	0	---	296	582	---	588	---	563	---	551	572	---
TOTAL	4676.6	7816	8827	15520	16732	18118	17618	16214	16867	17023	17417	16995
MEAN	151	261	285	501	577	584	587	523	562	549	562	567
MAX	388	382	364	584	588	591	599	563	564	562	577	574
MIN	0	0	249	293	555	566	530	151	561	510	546	558
AC-FT	9280	15500	17510	30780	33190	35940	34950	32160	33460	33770	34550	33710
CAL YR 1979 TOTAL	168594.6			MEAN 462	MAX 594	MIN 0	AC-FT 334400					
WTR YR 1980 TOTAL	173823.6			MEAN 475	MAX 599	MIN 0	AC-FT 344800					

BUENA VISTA LAKE BASIN

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).

WATER-DISCHARGE RECORDS

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 fair. 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.--56 years (water years 1912-13, 1920-25, 1927, 1930-42, 1947-80), 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 180 ft³/s (5.10 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. 14	0500	2,710 76.7	8.19 2.496	May 3	1645	2,130 60.3	7.54 2.298
Feb. 18	0600	*4,360 123	9.20 2.804	May 18	1430	1,390 39.4	6.86 2.091
Mar. 3	2215	523 14.8	5.56 1.695	July 2	1600	401 11.4	5.32 1.622
Mar. 18	1715	450 12.7	5.37 1.637	Aug. 1	0715	234 6.63	4.74 1.445
Apr. 21	1045	1,730 49.0	7.24 2.207				

Minimum daily, 24 ft³/s (0.68 m³/s) Oct. 16.

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	43	37	44	51	114	437	465	1390	740	339	142	48
2	45	39	42	46	117	436	453	1390	728	373	117	49
3	39	38	43	44	114	489	441	1450	707	361	109	48
4	36	42	41	43	112	453	463	1690	687	320	101	47
5	34	41	43	45	114	468	480	1720	675	298	96	47
6	33	42	42	46	117	469	485	1740	653	281	91	48
7	31	42	43	44	120	415	468	1790	641	267	86	49
8	30	45	44	43	117	396	476	1630	633	253	81	50
9	30	45	44	52	111	382	522	1670	627	232	76	50
10	28	43	43	76	107	381	615	1580	632	224	73	54
11	26	42	42	90	107	377	694	1410	626	214	70	56
12	25	41	34	838	106	362	713	1270	607	206	67	54
13	25	40	31	1240	105	367	767	1210	592	196	63	52
14	29	40	34	1930	125	389	841	1120	573	190	62	50
15	26	41	35	704	152	395	899	1090	550	182	61	49
16	24	40	36	468	193	397	944	1100	535	172	62	48
17	27	43	35	385	363	402	1020	1190	527	165	59	48
18	29	48	34	320	3210	435	1140	1260	513	158	56	48
19	29	45	36	280	1570	414	1230	1270	499	150	55	46
20	45	36	39	230	962	418	1300	1290	483	144	56	46
21	58	29	43	198	881	425	1490	1290	472	138	57	45
22	51	31	40	182	660	404	1250	1280	454	132	56	45
23	46	39	34	163	577	385	1000	1180	435	128	55	45
24	43	42	36	151	525	397	916	1060	420	130	55	45
25	41	44	43	145	475	386	1110	980	405	133	54	44
26	40	48	36	139	464	386	1230	930	388	127	54	44
27	40	48	32	132	468	380	1350	880	368	147	52	43
28	40	45	33	127	466	381	1410	850	356	141	51	42
29	38	44	44	144	445	381	1290	820	348	129	50	42
30	37	45	38	117	---	414	1310	792	342	114	49	41
31	36	---	47	112	---	448	---	777	---	109	48	---
TOTAL	1104	1245	1211	8585	12997	12669	26772	39099	16216	6153	2164	1423
MEAN	35.6	41.5	39.1	277	448	409	892	1261	541	198	69.8	47.4
MAX	58	48	47	1930	3210	489	1490	1790	740	373	142	56
MIN	24	29	31	43	105	362	441	777	342	109	48	41
AC-FT	2190	2470	2400	17030	25780	25130	53100	77550	32160	12200	4290	2820
CAL YR 1979	TOTAL	43178	MEAN 118	MAX 653	MIN 12	AC-FT 85640						
WTR YR 1980	TOTAL	129638	MEAN 354	MAX 3210	MIN 24	AC-FT 257100						

BUENA VISTA LAKE BASIN
11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA
WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL ANALYSES: October 1979 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	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)
NOV 14...	1430	40	156	7.9	8.0	--	.05	.00	.01
FEB 07...	1530	124	162	7.8	8.0	9.2	.06	.04	.07
JUN 11...	1500	630	79	7.5	19.0	8.4	.02	.01	.04
AUG 05...	1530	96	152	7.9	23.0	7.1	.05	.03	.06

DATE	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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
NOV 14...	.55	.75	.55	.76	.81	.007	.11	.01
FEB 07...	.16	.29	.20	.36	.42	.020	.01	.03
JUN 11...	.92	.72	.93	.76	.78	.056	.02	.04
AUG 05...	.93	.38	.96	.44	.49	.285	.10	.10

BUENA VISTA LAKE BASIN

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).

WATER-DISCHARGE RECORDS

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). Surge storage 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, 585,381 acre-ft (722 hm³) July 3, elevation, 2,607.00 ft (794.614 m); minimum, 208,224 acre-ft (257 hm³) Jan. 7, elevation, 2,566.41 ft (782.242 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217918	211700	209719	208970	296544	384338	361432	389383	502420	583870	537775	405306
2	217709	211700	209583	208970	295796	386048	359685	393023	503827	585264	534766	401901
3	217569	211563	209651	208700	295052	388239	358035	396871	505666	585381	531432	398417
4	217430	211563	209379	208496	294307	390053	356297	401513	508052	584451	528222	394945
5	217292	211495	209651	208360	293399	392063	355018	406572	510226	582592	524356	391775
6	217083	211358	209719	208292	292574	393696	354108	411957	512622	580161	520286	388908
7	216805	211289	209651	208224	291914	395137	352832	417971	514808	577965	516009	386238
8	216527	211152	209651	208292	291011	395812	351471	423230	517324	575543	512079	383483
9	216249	211152	209583	208632	289943	396391	350019	428618	520286	573010	508379	380927
10	216041	211152	209515	209719	288633	396198	348934	433632	523694	570138	504149	378474
11	215763	211152	209515	211015	287408	395041	348301	437575	527005	567732	500046	376029
12	215557	211015	209311	227232	286103	393888	347490	440818	529771	565327	495638	373685
13	215280	210879	209106	250310	284884	392639	347219	443664	531766	562702	490817	371536
14	215003	210810	209106	274831	284072	391298	347219	446211	533544	560311	485308	369206
15	214657	210605	209106	283991	283828	390053	347759	448052	535323	550151	480930	366791
16	214312	210333	209106	288715	285370	389099	348572	450099	537663	556564	476391	364569
17	213899	210470	209106	291750	289697	387762	350019	452563	540232	555883	471768	362261
18	213348	210402	209038	294307	316138	386524	352196	456064	543694	555883	466955	359594
19	213072	210402	209106	295879	333119	385477	355018	460510	545724	555996	462169	357119
20	213417	210265	208768	296959	344878	383768	358402	465914	549326	555316	457193	354562
21	213624	210060	208700	297542	354927	382158	362169	471664	553166	554182	452254	352377
22	213624	209992	208834	297956	361708	380455	365124	477338	556337	553505	447745	350019
23	213348	209924	208768	298039	366884	378380	366884	482942	559175	553052	443359	347400
24	213210	209788	208700	298123	370975	376687	367906	487512	561792	552600	488788	344878
25	212935	209924	208768	297956	373779	374998	369765	490924	564758	552034	433941	342456
26	212729	210129	208700	297625	375935	372842	372470	493598	568073	551130	429119	340042
27	212454	210265	208632	297375	378286	370695	375186	495638	571169	550342	424025	337637
28	211975	210060	208632	297542	380927	368647	378946	497248	574735	548988	419257	335330
29	212112	209856	208768	298039	383199	366605	382345	498540	578312	546962	415008	332854
30	211769	209719	208632	297873	---	364754	385667	499831	581319	544266	411564	330388
31	211769	---	208768	297292	---	363000	---	501234	---	540904	408528	---
MAX	217918	211700	209719	298123	383199	396391	385667	501234	581319	585381	537775	405306
MIN	211769	209719	208632	288224	283828	363000	347219	389383	502420	540904	408528	330388
†	2566.93	2566.63	2566.49	2578.20	2587.85	2585.69	2588.11	2599.49	2606.65	2603.10	2590.48	2582.07
‡	-6499	-2050	-951	+88524	+85907	-20199	+22667	+115567	+80085	-40415	-132376	-78140
††	3313	1869	1247	1050	1376	2233	3712	4937	8292	10372	10171	6637

CAL YR 1979 ‡ -36138

WTR YR 1980 ‡ +112120

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA--Continued

WATER-QUALITY RECORDS

NORTH ARM OF ISABELLA LAKE AT WOFFORD HEIGHTS, CA

LOCATION.--Lat 35°41'44", long 118°26'34", Kern County, Hydrologic Unit 18030001, 3.5 mi (5.6 km) north of Isabella Lake main dam and 1.0 mi (1.6 km) south of Wofford Heights.

PERIOD OF RECORD.--
CHEMICAL ANALYSES: Water years 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAM- PLING DEPTH (M) <u>1/</u>	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	LIGHT TRANS- MISSION (1 METER PATH- LENGTH (%))	LIGHT ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
JAN									
30...	1020	.50	110	7.6	7.9	9.6	89	--	--
30...	1021	1.0	110	7.6	7.9	9.6	89	--	--
30...	1022	2.0	111	7.6	7.7	9.6	89	--	--
30...	1023	3.0	111	7.6	7.7	9.7	89	--	--
30...	1024	4.0	111	7.6	7.7	9.6	89	--	--
30...	1025	5.0	111	7.6	7.7	9.6	89	--	--
30...	1026	6.0	111	7.6	7.7	9.6	89	--	--
30...	1027	7.0	110	7.5	7.7	9.6	89	--	--
30...	1028	8.0	110	7.5	7.7	9.6	89	--	--
30...	1029	9.0	109	7.5	7.6	9.6	88	--	--
30...	1030	10.0	109	7.5	7.6	9.7	89	--	--
30...	1031	11.0	110	7.6	7.0	10.2	92	--	--
30...	1032	12.0	105	7.6	6.6	10.4	93	--	--
30...	1033	13.0	102	7.5	6.5	10.5	94	--	--
MAY									
21...	1145	.50	98	7.9	19.6	8.5	102	--	--
21...	1146	1.0	97	7.9	19.6	8.6	103	--	--
21...	1147	2.0	98	7.9	19.4	8.8	105	--	--
21...	1148	3.0	91	7.9	18.2	9.2	107	--	--
21...	1149	4.0	87	7.8	17.0	9.6	109	--	--
21...	1150	5.0	86	7.8	16.1	9.6	107	--	--
21...	1151	6.0	83	7.7	15.6	9.7	107	--	--
21...	1152	7.0	83	7.7	15.3	9.7	106	--	--
21...	1153	8.0	92	7.7	14.8	9.7	105	--	--
21...	1154	9.0	85	7.7	14.4	9.6	103	--	--
21...	1155	10.0	82	7.7	14.2	9.5	102	--	--
21...	1156	11.0	82	7.7	14.2	9.5	102	--	--
21...	1158	13.0	77	7.6	13.7	9.1	96	--	--
21...	1159	14.0	72	7.6	13.5	9.0	95	--	--
21...	1200	15.0	69	7.6	13.4	9.0	95	--	--
21...	1201	16.0	64	7.6	13.2	8.8	92	--	--
21...	1202	17.0	63	7.5	13.1	8.8	92	--	--
21...	1203	18.0	58	7.2	13.0	8.9	93	--	--
AUG									
20...	1138	.50	86	9.0	23.8	8.3	108	2.3	3.77
20...	1139	1.0	85	8.9	23.7	8.4	109	1.7	4.09
20...	1140	2.0	86	8.9	23.1	8.4	108	1.2	4.43
20...	1141	3.0	86	8.5	22.5	7.6	96	.9	4.68
20...	1142	4.0	85	8.5	22.4	7.3	92	1.5	4.20
20...	1143	5.0	84	8.4	22.4	7.3	92	2.1	3.87
20...	1144	6.0	84	8.4	22.3	7.2	91	2.1	3.87
20...	1145	7.0	84	8.4	22.2	7.1	90	2.1	3.87
20...	1146	8.0	84	8.3	22.0	7.0	88	2.6	3.67
20...	1147	9.0	83	8.2	22.0	7.0	88	2.1	3.87
20...	1148	10.0	83	8.2	21.9	7.0	88	2.1	3.87
20...	1149	11.0	83	8.2	21.9	7.0	88	2.1	3.87
20...	1150	12.0	83	8.1	21.9	6.8	85	2.1	3.87
20...	1151	13.0	82	8.1	21.8	6.8	85	1.9	3.98
20...	1152	14.0	81	8.0	21.7	6.7	84	1.9	3.98
20...	1153	15.0	81	7.8	21.7	6.7	84	1.7	4.09
20...	1154	16.0	80	7.3	21.4	5.4	67	1.3	4.32
20...	1155	17.0	76	7.0	20.2	3.5	42	1.3	4.32
20...	1156	18.0	75	6.8	19.1	1.7	20	1.5	4.20
20...	1157	19.0	73	6.9	18.7	1.4	16	--	--

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	TRANS- PAR- ENCY (SECCHI DISK) (M) <u>1/</u>	LIGHT DEPTH TO 1% OF SURFACE LIGHT (FEET)	HARD- NESS (MG/L AS CAC03)	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
JAN												
30...	1040	6.5	3.2	1.00	8.20	33	0	10	1.9	9.9	38	.8
MAY												
21...	1210	9.8	9.8	--	--	--	--	--	--	--	--	--
AUG												
20...	1205	13	13	1.40	14.8	--	--	--	--	--	--	--

1. To convert meters to feet, multiply by 3.281.

BUENA VISTA LAKE BASIN

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA--Continued

NORTH ARM OF ISABELLA LAKE AT WOFFORD HEIGHTS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
JAN 30...	1.7	44	10	3.3	.2	10	74	.10	.05	.05	.04
MAY 21...	--	--	--	--	--	--	--	--	.01	.01	.01
AUG 20...	--	--	--	--	--	--	--	--	.00	.00	.00

DATE	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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL- SOLVED (MG/L AS P)	BORON, SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN 30...	.78	.08	.83	.12	.17	.052	.03	.02	90	70	7
MAY 21...	.31	.26	.32	.27	.28	--	.02	.02	--	--	--
AUG 20...	.51	.49	.51	.49	.49	.008	.01	.00	--	--	--

SOUTH FORK ARM OF ISABELLA LAKE NEAR LIME POINT, CA

LOCATION.--Lat 35°39'53", long 118°23'45", Kern County, Hydrologic Unit 18030001, 1.2 mi (1.9 km) northwest of Lime Point.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1979 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	LIGHT TRAN- SMIS- SION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
JAN 30...	1218	.50	112	7.9	9.4	9.7	93	--	--
30...	1219	1.0	144	7.8	9.0	9.7	92	--	--
30...	1220	2.0	117	7.8	8.1	9.6	89	--	--
30...	1221	3.0	119	7.7	7.8	9.6	89	--	--
30...	1222	4.0	118	7.7	7.8	9.5	88	--	--
30...	1223	5.0	118	7.7	7.8	9.6	89	--	--
30...	1224	6.0	118	7.7	7.8	9.6	89	--	--
30...	1225	7.0	118	7.7	7.8	9.6	89	--	--
30...	1226	8.0	118	7.7	7.8	9.6	89	--	--
30...	1227	9.0	118	7.6	7.8	9.6	89	--	--
AUG 20...	1308	.50	110	9.0	26.4	8.4	115	.90	4.68
20...	1309	1.0	110	8.9	24.6	8.4	111	.28	5.88
20...	1310	2.0	107	8.8	24.0	8.1	106	.46	5.39
20...	1311	3.0	103	8.8	23.7	7.5	97	.46	5.39
20...	1312	4.0	100	8.7	23.5	7.4	96	.46	5.39
20...	1313	5.0	99	8.7	23.4	7.3	94	.60	5.09
20...	1314	6.0	98	8.8	23.4	7.4	96	.60	5.09
20...	1315	7.0	97	8.8	23.3	7.5	97	.60	5.09
20...	1316	8.0	96	8.8	23.3	7.7	99	.71	4.95
20...	1317	9.0	95	8.8	23.2	7.6	98	.71	4.95
20...	1318	10.0	93	8.2	23.1	7.5	96	.81	4.82
20...	1319	11.0	93	8.6	23.0	7.1	91	.92	4.68
20...	1320	12.0	92	8.5	22.7	7.0	89	1.2	4.43
20...	1321	13.0	88	8.1	22.4	6.7	85	1.0	4.56
20...	1322	14.0	83	7.4	21.4	5.0	62	1.3	4.32

1. To convert meters to feet, multiply by 3.281.

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA--Continued

SOUTH FORK ARM OF ISABELLA LAKE NEAR LIME POINT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	TRANS- PAR- ENCY (SECCHI DISK) (M) 1/	LIGHT DEPTH TO 1% OF SURFACE LIGHT (FEET)	HARD- NESS (MG/L CAC03)	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
JAN 30...	1235	6.5	3.2	.80	8.85	36	0	11	2.0	11	39	.8
AUG 20...	1330	13	13	1.20	--	--	--	--	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (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 SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
JAN 30...	1.7	46	11	3.4	.2	9.9	78	.11	.05	.05	.04
AUG 20...	--	--	--	--	--	--	--	--	.00	.00	.00

DATE	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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL. (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JAN 30...	.78	.08	.83	.12	.17	.052	.03	.02	100	60	5
AUG 20...	.65	.29	.65	.29	.29	.019	.01	.00	--	--	--

ISABELLA LAKE AT ENGINEER POINT, NEAR LAKE ISABELLA, CA

LOCATION.--Lat 35°39'33", long 118°27'48", Kern County, Hydrologic Unit 18030001, 0.2 mi (0.3 km) north of Engineer Point and 2.4 mi (3.9 km) north of Lake Isabella Post Office.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1979 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	LIGHT TRANSMISSION 1 METER COEFFI- CIENT (ALPHA/ METER)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
JAN 30...	1334	.50	110	7.9	8.2	9.5	89	--	--
30...	1335	1.0	110	7.8	8.2	9.6	90	--	--
30...	1336	2.0	111	7.8	7.9	9.6	89	--	--
30...	1337	3.0	110	7.7	7.8	9.5	88	--	--
30...	1338	4.0	110	7.7	7.8	9.5	88	--	--
30...	1339	5.0	111	7.7	7.7	9.5	88	--	--
30...	1340	6.0	109	7.6	7.7	9.5	88	--	--
30...	1341	7.0	109	7.6	7.7	9.5	88	--	--
30...	1342	8.0	109	7.6	7.7	9.5	88	--	--
30...	1343	9.0	109	7.6	7.7	9.5	88	--	--
30...	1344	10.0	109	7.6	7.6	9.5	87	--	--
30...	1345	11.0	109	7.6	7.6	9.5	87	--	--
30...	1346	11.5	109	7.6	7.6	9.5	87	--	--
MAY 21...	0916	.50	102	7.8	17.8	8.7	101	9.0	2.54
21...	0917	1.0	103	7.8	17.4	8.6	99	9.0	2.54
21...	0918	2.0	104	7.6	15.1	8.3	91	9.0	2.54
21...	0919	3.0	104	7.6	14.9	8.3	90	7.0	2.62
21...	0920	4.0	102	7.6	14.8	8.3	90	8.0	2.46
21...	0921	5.0	102	7.6	14.7	8.3	90	10	2.32
21...	0922	6.0	102	7.7	14.7	8.4	91	8.0	2.46
21...	0923	7.0	99	7.7	14.6	8.4	91	8.0	2.46
21...	0924	8.0	99	7.7	14.6	8.4	91	9.0	2.39

1. To convert meters to feet, multiply by 3.281.

BUENA VISTA LAKE BASIN

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA--Continued
 ISABELLA LAKE AT ENGINEER POINT, NEAR LAKE ISABELLA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	LIGHT TRANS- MISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)		
MAY											
21...	0925	9.0	98	7.7	14.5	8.4	91	9.0	2.39		
21...	0926	10.0	98	7.7	14.5	8.4	91	9.0	2.25		
21...	0927	11.0	97	7.6	14.4	8.4	90	10	2.32		
21...	0928	12.0	94	7.6	14.3	8.4	90	10	2.32		
21...	0929	13.0	93	7.6	14.2	8.4	90	10	2.32		
21...	0930	14.0	91	7.6	14.2	8.4	90	9.0	2.39		
21...	0931	15.0	90	7.6	14.1	8.4	90	8.0	2.46		
21...	0932	16.0	87	7.6	13.9	8.4	89	8.0	2.46		
21...	0933	17.0	83	7.6	13.8	8.4	89	8.0	2.46		
21...	0934	18.0	82	7.6	13.8	8.3	88	9.0	2.54		
21...	0935	19.0	85	7.6	13.6	8.2	87	9.0	2.54		
21...	0936	20.0	83	7.6	13.6	8.3	88	9.0	2.39		
21...	0937	21.0	85	7.6	13.5	8.4	88	10	2.32		
21...	0938	22.0	88	7.6	13.4	8.2	86	7.0	2.62		
21...	0939	23.0	84	7.6	13.3	8.2	86	9.0	2.39		
21...	0940	24.0	85	7.5	13.2	8.0	84	1.0	4.31		
21...	0941	25.0	86	7.5	13.1	7.9	83	1.0	4.56		
21...	0942	26.0	86	7.5	13.0	7.8	81	1.0	4.56		
21...	0943	27.0	85	7.5	12.9	7.9	82	1.0	4.56		
21...	0944	28.0	84	7.5	12.8	7.9	82	.80	4.82		
21...	0945	29.0	84	7.5	12.7	7.8	81	.80	4.82		
21...	0946	30.0	84	7.5	12.7	7.8	81	.80	4.82		
21...	0947	31.0	85	7.5	12.6	7.8	81	.80	4.82		
21...	0948	32.0	85	7.5	12.5	7.7	79	.80	5.09		
21...	0949	33.0	84	7.5	12.5	7.6	78	.50	5.24		
21...	0950	34.0	84	7.5	12.4	7.5	77	.50	5.39		
AUG											
20...	0850	.50	84	8.8	22.1	7.5	94	3.0	3.47		
20...	0851	1.0	84	8.7	22.1	7.4	93	2.0	3.87		
20...	0852	2.0	84	8.6	22.1	7.4	93	3.0	3.67		
20...	0853	3.0	83	8.4	22.1	7.2	91	4.0	3.19		
20...	0854	4.0	83	8.1	21.9	6.7	84	5.0	3.02		
20...	0855	5.0	82	8.0	21.9	6.7	84	5.0	2.94		
20...	0856	6.0	82	8.0	21.8	6.7	84	7.0	2.69		
20...	0857	7.0	82	8.0	21.8	6.7	84	6.0	2.85		
20...	0858	8.0	81	8.0	21.8	6.7	84	6.0	2.77		
20...	0859	9.0	81	8.0	21.8	6.7	84	6.0	2.77		
20...	0900	10.0	81	7.9	21.7	6.7	84	6.0	2.77		
20...	0901	11.0	81	7.9	21.6	6.6	82	7.0	2.62		
20...	0902	12.0	81	7.8	21.5	6.6	82	9.0	2.39		
20...	0903	13.0	80	7.7	21.5	6.4	80	10	2.32		
20...	0904	14.0	80	7.5	21.2	5.9	73	10	2.32		
20...	0905	15.0	78	7.4	20.9	5.4	66	11	2.25		
20...	0906	16.0	78	7.3	20.6	5.0	61	12	2.11		
20...	0907	17.0	76	7.2	20.4	4.6	56	14	1.98		
20...	0908	18.0	73	7.0	19.9	4.0	48	15	1.91		
20...	0909	19.0	72	7.0	19.6	3.8	46	15	1.91		
20...	0910	20.0	70	7.0	19.6	3.8	46	16	1.85		
20...	0911	21.0	69	6.9	19.1	3.4	40	17	1.79		
20...	0912	22.0	69	6.8	18.3	2.9	34	15	1.91		
20...	0913	23.0	67	6.8	17.9	2.6	30	14	1.98		
20...	0914	24.0	67	6.8	17.7	2.3	26	17	1.78		
20...	0915	25.0	67	6.8	17.6	2.3	26	15	1.91		
20...	0916	26.0	67	6.7	17.5	2.2	25	14	1.98		
20...	0917	27.0	66	6.7	17.4	2.1	24	13	2.04		
20...	0918	28.0	66	6.7	17.4	2.0	23	11	2.18		
20...	0919	29.0	66	6.7	17.4	2.0	23	12	2.11		
20...	0920	30.0	66	6.7	17.4	2.0	23	10	2.32		
20...	0921	31.0	66	6.7	17.4	2.0	23	10	2.32		
20...	0922	32.0	66	6.7	17.3	1.7	19	9.0	2.39		
20...	0923	33.0	67	6.7	17.3	1.7	19	9.0	2.46		
20...	0924	34.0	68	6.7	17.3	1.6	18	--	--		
DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	TRANS- PAR- ENCY (SECCHI DISK) (M) 1/	LIGHT DEPTH TO 1% OF SURFACE LIGHT (FEET)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
JAN											
30...	1350	6.5	6.5	.50	7.22	36	0	11	2.1	10	36
MAY											
21...	0955	9.8	9.8	3.0	21.9	--	--	--	--	--	--
21...	1000	68	49	--	--	--	--	--	--	--	--
AUG											
20...	0930	13	13	2.50	4.90	25	0	7.7	1.4	5.9	33
20...	0935	98	98	--	--	20	0	6.3	1.1	4.4	31

1. To convert meters to feet, multiply by 3.281.

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA--Continued
 ISABELLA LAKE AT ENGINEER POINT, NEAR LAKE ISABELLA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
JAN 30...	.7	1.7	44	8.2	3.3	.2	11	75	.10	.07	.04
MAY 21...	--	--	--	--	--	--	--	--	--	.01	.03
21...	--	--	--	--	--	--	--	--	--	.01	.03
AUG 20...	.5	.7	33	.8	2.3	.2	8.1	47	.06	.00	.01
20...	.4	1.0	25	2.1	1.3	.1	11	43	.06	.10	.03

DATE	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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL. (MG/L AS P)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)
JAN 30...	.04	.70	.07	.74	.11	.18	.056	.03	.02	4	20
MAY 21...	.01	.39	.34	.42	.35	.36	--	.04	.03	--	--
21...	.03	.32	.27	.35	.30	.31	--	.03	.02	--	--
AUG 20...	.01	.62	.29	.63	.30	.30	.005	--	.00	--	--
20...	.03	.26	.30	.29	.33	.43	.039	--	.03	--	--

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 30...	90	<1	0	0	110	3	7	.0	0	0	4
MAY 21...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	170	--	--	--	40	--	3	--	--	--	--
20...	130	--	--	--	100	--	210	--	--	--	--

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

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).--35 years, 922 ft³/s (26.11 m³/s), 668,000 acre-ft/yr (824 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, 4,080 ft³/s (116 m³/s) July 6, gage height, 14.02 ft (4.273 m); minimum daily, 0.80 ft³/s (0.023 m³/s) Dec. 16, 17.

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	2.7	285	1.4	3.5	713	1110	2210	2240	2240	3300	2970	1560
2	3.3	285	1.8	3.5	713	1120	2200	2160	2170	3520	2930	1690
3	6.0	285	2.8	3.5	714	1130	2170	1990	2030	3970	2900	1720
4	5.3	319	2.6	3.5	713	1160	2100	2000	2040	3970	2910	1740
5	3.3	152	2.3	3.3	713	1220	2100	2000	2030	3980	2860	1660
6	3.2	5.5	2.0	3.0	733	1220	2100	2000	2040	4000	2890	1470
7	3.2	5.1	1.8	2.8	756	1250	2170	2350	2080	3800	2900	1300
8	2.9	4.6	1.9	2.7	814	1320	2200	1990	2230	3680	2790	1300
9	19	4.4	1.9	3.0	881	1320	2240	1980	2430	3680	2630	1280
10	17	4.2	2.0	3.5	917	1450	2340	1990	2470	3670	2650	1240
11	8.3	9.2	1.7	3.7	918	2010	2440	1940	2580	3520	2710	1180
12	6.4	12	1.4	7.7	918	2010	2540	1980	2720	3440	2670	1120
13	3.3	5.4	1.0	9.2	918	2010	2600	1980	2780	3440	2760	992
14	12	5.1	1.1	110	887	2000	2600	1970	2780	3440	2750	1030
15	358	5.0	.90	296	821	2010	2600	2000	2780	3360	2690	1130
16	373	4.9	.80	379	590	2000	2600	2100	2760	3160	2580	1090
17	369	5.0	.80	450	104	2010	2610	2190	2860	2880	2520	1100
18	375	5.1	2.0	478	52	2010	2610	2260	3000	2710	2490	1140
19	346	5.1	2.6	477	65	1940	2600	2260	3050	2670	2510	1130
20	308	4.9	2.6	509	533	2200	2600	2260	2890	2650	2640	1080
21	275	4.4	2.1	562	527	2210	2620	2250	2780	2650	2600	1010
22	338	3.9	1.8	616	529	2210	2630	2250	2830	2580	2470	1050
23	383	3.7	1.7	619	529	2210	2630	2250	2910	2520	2300	1130
24	383	3.7	1.2	619	572	2210	2620	2260	2890	2570	2300	1160
25	382	3.7	.90	619	792	2210	2460	2250	2780	2650	2420	1140
26	394	3.7	2.6	619	992	2210	2130	2240	2590	2590	2460	1090
27	411	3.6	5.6	619	887	2210	2420	2240	2560	2630	2460	1030
28	379	3.5	4.9	619	506	2210	2390	2240	2560	2680	2400	1020
29	314	3.5	4.2	388	633	2210	2140	2240	2570	2760	2150	1070
30	314	3.4	3.8	510	---	2210	2240	2250	2740	2960	1650	1110
31	297	---	3.5	668	---	2210	---	2240	---	2950	1480	---
TOTAL	6094.9	1448.6	67.70	9209.9	19440	50810	71910	66350	77170	98380	79440	36762
MEAN	197	48.3	2.18	297	670	1833	2397	2140	2572	3174	2563	1225
MAX	411	319	5.6	668	992	2210	2630	2350	3050	4000	2970	1740
MIN	2.7	3.4	.80	2.7	52	1110	2100	1940	2030	2520	1480	992
AC-FT	12090	2870	134	18270	38560	112700	142600	131600	153100	195100	157600	72920
MEAN ‡	296	306	292	2554	2765	2125	3427	4623	4620	3233	1138	581
AC-FT ‡	18180	18190	17940	138600	159000	130700	203900	284300	274900	198800	69940	34590
CAL YR 1979 TOTAL	152826.10			MEAN 419	MAX 1870	MIN .80	AC-FT 303100	MEAN ‡ 902	AC-FT ‡ 653300			
WTR YR 1980 TOTAL	523083.10			MEAN 1429	MAX 4000	MIN .80	AC-FT 1038000	MEAN ‡ 2135	AC-FT ‡ 1550000			

‡ Adjusted for change in contents in and evaporation from Isabella Lake and diversion to Borel Canal.

11191000 KERN RIVER BELOW ISABELLA DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-66, 1971 to current year.

CHEMICAL ANALYSES: Water years 1956-66.

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, 24.5°C Sept. 3, 1971, Sept. 17, 1975; minimum recorded, 4.0°C Jan. 4, 1972, Feb. 1, 1973, Jan. 30, 31, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 20.5°C Aug. 29; minimum recorded, 5.5°C Dec. 27.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			---	---	10.5	8.0	9.5	7.5	8.0	7.5		
2			---	---	9.5	8.0	9.0	7.0	8.0	7.5		
3			---	---	10.0	8.5	8.5	6.5	7.5	6.5		
4			---	---	10.0	8.0	8.5	6.0	7.5	6.0		
5			---	---	10.5	8.5	8.5	6.5	9.0	6.0		
6			---	---	10.0	8.0	8.5	7.5	8.0	6.0		
7			---	---	10.5	8.0	9.0	7.5	8.0	7.5		
8			---	---	10.5	8.0	9.5	7.0	8.0	8.0		
9			---	---	10.0	8.0	8.5	8.0	8.0	8.0		
10			---	---	9.5	8.0	8.5	8.0	8.0	8.0		
11			---	---	10.0	8.5	9.5	8.0	8.5	7.5		
12			---	---	9.0	7.0	11.0	8.5	8.5	7.5		
13			---	---	9.0	7.0	10.0	8.5	8.5	8.0		
14			---	---	9.5	7.0	10.0	8.0	9.5	7.5		
15			---	---	9.0	7.0	8.0	7.0	8.0	8.0		
16			12.0	10.0	9.0	7.0	7.5	7.0	8.5	8.0		
17			11.5	10.5	9.0	7.0	7.5	7.0	8.5	8.0		
18			11.5	10.5	9.5	7.0	7.5	7.0	8.5	8.0		
19			11.5	9.5	8.5	7.0	8.5	7.0	---	---		
20			11.0	9.0	9.5	7.0	8.5	6.5	---	---		
21			11.0	8.5	9.5	8.0	8.5	7.0	---	---		
22			9.5	8.5	8.0	7.5	7.5	7.5	---	---		
23			11.0	8.5	7.5	6.5	8.0	7.5	---	---		
24			10.5	8.5	7.5	7.0	7.5	7.5	---	---		
25			11.5	9.5	9.0	7.5	9.0	7.0	---	---		
26			10.0	9.5	8.5	6.5	7.5	6.5	---	---		
27			11.0	9.0	9.0	5.5	7.5	7.0	---	---		
28			11.0	8.5	9.0	6.5	7.5	7.0	---	---		
29			11.0	8.5	9.0	7.0	8.0	6.5	---	---		
30			10.5	8.5	8.0	7.0	8.0	6.0	---	---		
31			---	---	9.5	7.5	8.0	7.5	---	---		
MONTH			---	---	10.5	5.5	11.0	6.0	---	---		

BUENA VISTA LAKE BASIN

11191000 KERN RIVER BELOW ISABELLA DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	12.5	12.0	14.0	13.0	15.5	15.0	17.5	16.5		
2	---	---	13.0	12.0	13.5	13.0	15.5	15.5	18.0	16.5		
3	---	---	13.0	12.0	13.5	13.0	15.5	15.0	17.5	16.5		
4	---	---	12.5	12.0	14.0	13.5	16.5	15.0	18.0	16.5		
5	---	---	13.0	12.0	14.0	13.5	16.5	15.5	18.0	17.0		
6	---	---	12.0	12.0	14.0	13.5	16.0	15.5	18.0	17.0		
7	---	---	12.5	12.0	14.5	13.5	16.0	15.5	18.5	17.0		
8	---	---	13.5	12.5	14.5	13.5	16.0	15.5	19.5	17.5		
9	---	---	13.0	12.5	14.5	13.5	15.5	15.5	19.5	18.5		
10	---	---	13.0	12.5	14.5	13.5	16.0	15.0	19.5	18.5		
11	---	---	13.0	12.5	14.5	14.0	16.0	15.0	19.5	18.5		
12	11.5	11.0	12.5	12.5	14.5	14.0	16.0	15.5	19.5	18.5		
13	11.0	11.0	13.0	12.5	14.5	14.0	16.0	15.5	20.0	19.0		
14	11.0	11.0	13.0	12.5	14.5	14.0	16.5	15.0	20.0	19.0		
15	11.5	11.0	13.0	12.5	15.0	14.0	16.0	15.0	---	---		
16	12.0	11.5	13.0	12.5	15.0	14.5	15.5	15.5	---	---		
17	12.0	11.5	13.5	13.0	15.0	14.5	16.0	15.5	---	---		
18	11.5	11.5	13.5	13.5	14.5	14.5	16.5	15.5	---	---		
19	12.0	11.5	14.0	13.5	15.0	14.5	16.5	15.5	---	---		
20	12.0	11.5	13.5	13.0	15.0	14.5	16.5	15.5	---	---		
21	11.5	11.5	13.5	13.0	15.0	14.5	16.0	15.5	---	---		
22	11.5	11.5	13.5	13.0	15.0	14.5	16.5	15.5	---	---		
23	11.5	11.5	13.5	13.5	15.0	14.5	16.5	15.5	---	---		
24	11.5	11.5	13.5	13.5	15.0	14.5	16.5	16.0	---	---		
25	12.0	11.5	13.5	13.5	15.0	15.0	17.0	16.0	---	---		
26	12.0	12.0	13.5	13.0	15.0	15.0	17.0	16.0	---	---		
27	12.5	12.0	13.0	12.5	15.5	15.0	16.5	16.0	---	---		
28	12.5	12.0	13.0	12.0	15.5	15.0	16.5	16.5	---	---		
29	12.0	12.0	13.5	13.0	15.5	15.0	17.0	16.5	20.5	19.5		
30	12.0	12.0	13.5	12.5	15.5	15.0	17.0	16.5	---	---		
31	---	---	13.5	13.0	---	---	17.5	16.5	---	---		
MONTH	---	---	14.0	12.0	15.5	13.0	17.5	15.0	---	---		

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 13 discharge measurements for river and gage-height record and 13 discharge measurements for conduit furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only, 30 years, 604 ft³/s (17.11 m³/s), 437,600 acre-ft/yr (540 hm³/yr). Combined river and diversion, 30 years, 936 ft³/s (26.51 m³/s), 678,100 acre-ft/yr (836 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, 4,560 ft³/s (129 m³/s) July 6, gage height, 14.46 ft (4.407 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Dec. 7, 18, 19, Jan. 8. Combined flow: Maximum discharge, 4,950 ft³/s (140 m³/s) July 6; minimum daily, 257 ft³/s (7.28 m³/s) Dec. 6.

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	37	2.1	2.2	2.1	954	1280	2520	2440	2450	3610	3200	1680
2	50	2.1	2.0	9.7	950	1350	2520	2390	2410	3880	3180	1840
3	14	2.1	1.9	31	947	1440	2500	2150	2220	4360	3100	1850
4	2.6	3.3	1.8	24	947	1400	2400	2160	2220	4440	3140	1880
5	2.4	47	1.8	9.8	943	1590	2400	2140	2220	4460	3060	1820
6	2.4	18	1.8	2.1	948	1790	2390	2140	2220	4470	3060	1670
7	2.6	2.4	1.7	1.9	991	1730	2430	2190	2240	4360	3120	1450
8	2.6	2.3	1.8	1.7	1010	1620	2490	2100	2360	4170	3040	1450
9	2.6	2.3	2.0	2.6	1090	1610	2510	2130	2610	4140	2840	1420
10	3.9	2.3	8.2	138	1130	1640	2600	2150	2630	4150	2780	1400
11	2.7	2.2	2.9	284	1120	2270	2680	2140	2730	4030	2950	1310
12	2.6	2.2	2.0	515	1120	2310	2790	2130	2890	3890	2840	1270
13	2.6	17	1.9	486	1120	2300	2860	2130	2990	3880	2980	1150
14	2.6	4.5	1.8	740	1120	2320	2860	2130	2990	3870	2970	1120
15	11	2.1	1.8	681	1040	2330	2860	2130	2990	3830	2930	1240
16	32	2.1	1.8	639	1010	2330	2860	2240	2990	3560	2810	1200
17	19	2.3	1.8	712	503	2330	2860	2340	3040	3200	2730	1200
18	32	3.2	1.7	855	386	2330	2850	2430	3220	2960	2710	1240
19	24	6.1	1.7	767	554	2300	2840	2430	3360	2900	2670	1240
20	8.0	2.4	1.8	756	1140	2560	2840	2440	3160	2850	2860	1200
21	2.4	2.2	2.0	814	1030	2550	2840	2440	3000	2840	2830	1130
22	8.1	2.1	2.0	861	932	2550	2850	2440	3020	2800	2730	1140
23	36	2.1	2.7	862	875	2520	2840	2450	3170	2710	2530	1230
24	35	2.1	2.6	857	861	2500	2840	2460	3130	2720	2470	1270
25	35	2.0	2.0	852	1000	2500	2790	2450	3080	2850	2620	1270
26	35	2.1	1.9	856	1220	2510	2250	2450	2810	2780	2660	1210
27	62	2.1	1.9	849	1250	2520	2610	2400	2780	2810	2670	1170
28	62	14	1.9	853	794	2520	2630	2460	2770	2880	2630	1140
29	6.0	61	1.9	771	803	2520	2320	2460	2790	2900	2480	1180
30	2.3	16	1.9	661	---	2520	2430	2460	2830	3230	1890	1200
31	2.2	---	2.0	878	---	2520	---	2460	---	3160	1660	---
TOTAL	542.6	233.7	67.2	15771.9	27788	66560	79460	71460	83320	108690	86140	40570
MEAN	17.5	7.79	2.17	509	958	2147	2649	2305	2777	3506	2779	1352
MAX	62	61	8.2	878	1250	2560	2860	2460	3360	4470	3200	1880
MIN	2.2	2.0	1.7	1.7	386	1280	2250	2100	2220	2710	1660	1120
AC-FT	1080	464	133	31280	55120	132000	157600	141700	165300	215600	170900	80470

CAL YR 1979 TOTAL 190559.5 MEAN 522 MAX 2070 MIN 1.7 AC-FT 378000
WTR YR 1980 TOTAL 580603.4 MEAN 1586 MAX 4470 MIN 1.7 AC-FT 1152000

BUENA VISTA LAKE BASIN

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KERN RIVER AND KERN RIVER
NO. 1 CONDUIT NEAR DEMOCRAT SPRINGS, CA., WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	381	304	340	311	1340	1660	2900	2830	2840	4000	3590	2070
2	414	305	323	331	1340	1730	2900	2780	2800	4270	3570	2230
3	374	307	315	395	1330	1820	2880	2540	2610	4750	3490	2240
4	352	314	294	391	1330	1780	2780	2550	2610	4830	3530	2270
5	336	358	301	371	1330	1970	2780	2530	2610	4850	3450	2210
6	327	338	257	341	1330	2170	2770	2530	2610	4860	3450	2060
7	327	326	282	334	1380	2110	2810	2580	2630	4750	3510	1840
8	327	325	306	308	1390	2000	2870	2490	2750	4560	3430	1840
9	327	306	304	326	1480	1990	2890	2520	3000	4530	3230	1810
10	347	285	308	508	1520	2020	2980	2540	3020	4540	3170	1790
11	345	290	310	656	1510	2650	3060	2530	3120	4420	3340	1700
12	334	322	321	888	1510	2690	3170	2520	3280	4280	3230	1660
13	314	351	318	863	1510	2680	3240	2520	3380	4270	3370	1540
14	308	332	282	1110	1510	2690	3240	2520	3380	4260	3360	1510
15	353	316	263	1060	1420	2700	3240	2520	3380	4220	3320	1630
16	395	323	264	1020	1400	2700	3240	2630	3380	3950	3200	1580
17	382	305	264	1090	886	2700	3240	2730	3430	3590	3120	1580
18	396	309	269	1230	772	2710	3230	2820	3610	3350	3100	1630
19	385	346	283	1150	940	2680	3220	2820	3750	3290	3060	1630
20	358	331	285	1140	1530	2940	3220	2830	3550	3240	3250	1590
21	299	326	295	1200	1420	2940	3220	2830	3390	3230	3220	1520
22	316	293	264	1240	1320	2940	3230	2830	3410	3190	3120	1530
23	400	281	276	1240	1260	2910	3220	2840	3560	3100	2920	1620
24	399	258	326	1240	1250	2890	3220	2850	3520	3110	2860	1660
25	399	263	284	1240	1380	2890	3170	2840	3470	3240	3010	1660
26	401	276	288	1240	1600	2890	2630	2840	3200	3170	3050	1600
27	432	289	286	1230	1630	2900	2990	2790	3170	3200	3060	1560
28	432	348	285	1240	1180	2900	3010	2850	3160	3270	3020	1530
29	343	406	273	1160	1190	2900	2700	2850	3180	3290	2870	1570
30	334	370	281	1050	---	2908	2810	2850	3220	3620	2280	1590
31	330	---	312	1260	---	2900	---	2850	---	3550	2050	---
TOTAL	11167	9503	9059	27163	38988	78350	90860	83550	95020	120780	98230	52250
MEAN	360	317	292	876	1344	2527	3029	2695	3167	3896	3169	1742
MAX	432	406	340	1260	1630	2940	3240	2850	3750	4860	3590	2270
MIN	299	258	257	308	772	1660	2630	2490	2610	3100	2850	1510
AC-FT	22150	18850	17970	53880	77330	155400	180200	165700	188500	239600	194800	103600
CAL YR 1979	TOTAL	322876	MEAN	885	MAX	2450	MIN	257	AC-FT	640400		
WTR YR 1980	TOTAL	714920	MEAN	1953	MAX	4860	MIN	257	AC-FT	1418000		

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 September 1980.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 28...	1130	172	8.0	9.0	11.1	4	1.1	50	15	3.0	15
JAN 22...	1200	123	7.7	8.5	11.2	--	--	36	11	2.0	10
MAR 26...	0915	--	7.4	10.0	10.6	11	1.2	--	--	--	--
JUN 25...	1100	80	7.5	17.0	8.0	10	.9	24	8.0	1.0	6.0
AUG 27...	1030	--	7.4	20.0	8.8	8	.6	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	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, ORTHOPH DISSOL. (MG/L AS P)
NOV 28...	--	60	16	6.0	104	3	.04	.00	.30	.03	.02
JAN 22...	--	42	5.0	3.0	91	--	.10	.02	.50	.11	.03
MAR 26...	--	--	--	--	--	17	--	--	--	--	--
JUN 25...	1.1	30	4.0	2.0	53	17	.02	.00	.20	.04	.02
AUG 27...	--	--	--	--	--	12	.10	.00	.20	.05	.01

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 28...	1130	0	0	200	0	0	0
JAN 22...	1200	--	--	100	--	--	--
MAR 26...	0915	--	--	--	--	--	--
JUN 25...	1100	0	0	100	0	0	0
AUG 27...	1030	10	0	--	0	0	0

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 28...	20	0	10	.0	20	3.8	.00
JAN 22...	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	2.5	.00
JUN 25...	40	0	0	.0	10	--	.00
AUG 27...	40	0	0	.0	0	2.8	.00

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 current year.

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 poor. Small diversions for stock and domestic use above station.

AVERAGE DISCHARGE.--21 years, 2.52 ft³/s (0.071 m³/s), 1,830 acre-ft/yr (2.26 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.--Peak discharges above base of 25 ft³/s (0.71 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 14	Unknown	97	2.75	10.60	3.231
Feb. 18	Unknown	*212	6.00	11.30	3.444
Apr. 28	Unknown	30	0.850	9.86	3.005

Minimum daily, 2.4 ft³/s (0.068 m³/s) Mar. 4.

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	5.3	5.4	5.4	5.2	5.0	3.1	5.3	16	6.4	5.2	4.2	5.6
2	5.1	5.4	5.4	5.1	4.8	3.6	4.3	14	6.4	5.6	4.2	5.6
3	5.2	5.3	5.4	4.9	4.8	3.2	3.6	16	6.5	5.9	4.1	5.5
4	5.2	5.6	5.4	4.8	4.9	2.4	3.2	11	6.9	5.6	4.1	5.5
5	5.1	5.5	5.4	4.8	4.7	3.2	3.3	8.8	6.6	5.7	4.0	5.6
6	5.2	5.3	5.4	4.7	4.6	5.8	3.2	7.9	6.7	6.2	4.0	5.5
7	5.2	5.3	5.5	4.7	4.9	4.2	3.4	13	7.2	6.2	4.1	5.4
8	5.3	5.4	5.5	4.6	5.0	3.4	3.6	15	7.2	6.4	3.9	5.4
9	5.3	5.3	5.5	5.0	4.9	2.9	3.4	15	11	6.2	4.0	5.4
10	5.3	5.3	5.4	5.4	4.9	2.9	3.4	16	9.1	7.3	4.1	5.4
11	5.2	5.3	5.4	6.3	4.9	3.5	3.7	15	12	6.5	4.1	5.4
12	5.2	5.2	5.4	19	4.9	4.0	3.7	12	12	8.7	4.0	5.4
13	5.3	5.2	5.4	18	5.2	3.9	3.6	11	12	5.3	4.0	5.4
14	5.3	5.2	5.3	50	5.7	3.7	3.8	11	11	5.1	4.3	5.5
15	5.3	5.1	5.3	12	5.7	3.5	4.1	11	11	5.2	4.4	5.6
16	5.3	5.2	5.3	6.2	61	3.6	4.0	11	12	5.6	4.6	5.6
17	5.3	7.8	5.3	6.2	45	3.6	4.1	12	11	5.5	4.7	5.5
18	5.3	6.0	5.2	6.4	88	4.0	4.3	10	9.8	5.3	5.0	5.4
19	5.3	5.7	5.2	6.2	62	3.8	4.4	9.3	11	5.3	5.1	5.5
20	6.3	5.5	5.2	5.9	30	3.4	4.7	12	11	5.6	5.2	5.6
21	5.8	5.4	5.3	5.6	39	3.2	5.4	12	8.3	5.5	5.1	5.6
22	5.6	5.3	5.7	5.4	21	3.3	5.5	11	6.7	5.4	5.1	5.5
23	5.4	5.3	5.7	5.5	9.9	3.2	5.6	14	6.2	5.2	5.2	5.5
24	5.3	5.4	5.7	5.3	6.6	3.2	5.3	14	5.3	5.1	5.3	5.5
25	5.2	5.3	6.0	5.3	5.2	4.6	5.2	12	4.9	5.1	5.2	5.4
26	5.4	5.3	6.0	5.2	4.1	5.1	5.0	10	5.5	5.0	5.3	5.3
27	5.3	5.3	5.8	5.3	3.6	3.8	5.0	7.0	5.4	5.1	5.4	5.3
28	5.4	5.3	5.5	5.5	3.4	3.0	22	6.7	5.2	4.4	5.4	5.4
29	5.4	5.3	5.2	6.2	3.2	2.9	18	7.2	5.5	3.9	5.6	5.4
30	5.5	5.4	5.1	5.1	---	2.9	16	7.9	5.5	4.3	5.6	5.3
31	5.3	---	5.4	5.1	---	3.6	---	7.9	---	4.4	5.6	---
TOTAL	165.6	163.3	168.7	244.9	456.9	110.5	170.1	356.7	245.3	171.8	144.9	164.0
MEAN	5.34	5.44	5.44	7.90	15.8	3.56	5.67	11.5	8.18	5.54	4.67	5.47
MAX	6.3	7.8	6.0	50	88	5.8	22	16	12	8.7	5.6	5.6
MIN	5.1	5.1	5.1	4.6	3.2	2.4	3.2	6.7	4.9	3.9	3.9	5.3
AC-FT	328	324	335	486	906	219	337	708	487	341	287	325
CAL YR 1979	TOTAL	2392.8	MEAN	6.56	MAX	31	MIN	3.8	AC-FT	4750		
1980	TOTAL	2562.7	MEAN	7.00	MAX	88	MIN	2.4	AC-FT	5080		

LOCATION.--Lat 35°18'41", long 118°34'10", in SE&SW¼ 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.

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 ft/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, 113 ft³/s (3.20 m³/s) Feb. 17 (0045 hrs), gage height, 2.56 ft (0.780 m), no other peak above base of 50 ft³/s (1.42 m³/s); minimum daily, 0.40 ft³/s (0.011 m³/s) Aug. 10-12.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.1	1.9	2.3	3.6	5.8	4.9	4.0	2.4	1.4	.61	.78
2	1.1	1.9	1.9	2.3	3.5	5.8	4.6	3.8	2.3	1.5	.55	.71
3	1.1	1.9	1.9	2.2	3.4	9.9	4.5	3.7	2.2	1.7	.47	.72
4	1.2	2.0	1.9	2.2	3.5	8.5	4.5	3.8	2.1	1.7	.43	.71
5	1.2	2.0	2.0	2.2	3.4	8.3	4.5	3.9	2.0	1.4	.44	.68
6	1.2	1.9	2.0	2.2	3.5	12	4.4	3.8	2.0	1.4	.47	.71
7	1.3	1.9	2.1	2.2	3.6	13	4.3	3.7	2.0	1.4	.43	.80
8	1.4	2.0	2.0	2.2	3.5	12	4.1	3.6	1.8	1.4	.43	.87
9	1.5	2.2	2.0	3.0	3.6	11	4.0	3.7	1.8	1.4	.43	.97
10	1.4	2.2	2.1	4.0	3.9	9.8	4.0	4.0	1.7	1.3	.40	1.1
11	1.4	2.1	2.1	5.1	3.9	8.8	3.9	3.7	1.6	1.2	.40	1.0
12	1.5	2.0	2.2	8.0	3.9	7.9	3.7	3.7	1.6	1.1	.40	1.0
13	1.6	1.9	2.1	7.4	4.4	7.2	3.4	3.6	1.7	1.1	.42	.98
14	1.7	1.9	2.1	11	4.5	6.9	3.4	3.7	1.9	1.1	.50	.89
15	1.7	1.6	2.1	8.0	4.5	6.7	3.4	3.6	1.8	1.1	.60	.98
16	1.7	1.5	2.1	5.7	6.1	6.4	3.2	3.5	1.9	.99	.68	1.1
17	1.8	2.0	2.1	5.4	57	6.0	2.9	3.4	1.9	1.0	.72	1.1
18	1.8	2.2	2.0	9.7	23	6.5	2.9	3.4	1.9	1.1	.63	.98
19	2.0	2.0	2.0	7.1	15	6.0	2.8	3.3	1.9	1.1	.56	1.1
20	3.3	2.0	2.0	5.6	16	5.6	2.8	3.3	2.1	1.0	.50	1.1
21	2.7	1.9	2.2	4.9	19	5.5	3.2	3.2	2.1	.95	.46	1.1
22	2.4	1.9	2.6	4.4	15	5.4	3.5	3.1	2.1	.92	.44	1.1
23	2.2	1.8	2.4	4.0	12	5.3	3.7	3.1	2.0	1.0	.44	1.0
24	2.0	1.9	2.3	3.7	10	5.1	3.6	3.5	2.4	.96	.44	.93
25	2.0	1.8	2.3	3.6	9.1	5.3	3.3	3.3	2.5	.89	.44	.75
26	2.2	1.9	2.4	3.4	8.0	5.9	3.0	3.2	2.2	.80	.44	.67
27	2.2	2.0	2.4	3.2	7.3	5.5	2.9	3.1	1.6	.74	.44	.72
28	2.1	1.9	2.4	3.5	7.0	5.1	3.7	3.0	1.6	.90	.72	.81
29	2.1	1.8	2.3	5.7	6.0	4.8	5.9	2.7	1.6	.75	.70	.85
30	2.1	1.9	2.3	4.4	---	4.7	4.6	2.6	1.2	.67	.71	.74
31	2.1	---	2.2	3.8	---	4.7	---	2.5	---	.66	.75	---
TOTAL	55.3	58.1	66.4	142.4	267.2	221.4	113.6	106.5	57.9	34.62	16.05	26.95
MEAN	1.78	1.94	2.14	4.59	9.21	7.14	3.79	3.44	1.93	1.12	.52	.90
MAX	3.3	2.2	2.6	11	57	13	5.9	4.0	2.5	1.7	.75	1.1
MIN	1.1	1.5	1.9	2.2	3.4	4.7	2.8	2.5	1.2	.66	.40	.67
AC-FT	110	115	132	282	530	439	225	211	115	69	32	53
CAL YR 1979	TOTAL	1701.20		MEAN	4.66	MAX	40	MIN	1.0	AC-FT	3370	
WTR YR 1980	TOTAL	1166.42		MEAN	3.19	MAX	57	MIN	.40	AC-FT	2310	

BUENA VISTA LAKE BASIN

11196420 TEHACHAPI CREEK NEAR TEHACHAPI, CA

LOCATION.--Lat 35°10'26", long 118°28'43", in NE&SW¼ 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 3.2 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 fair.

AVERAGE DISCHARGE.--18 years, 0.46 ft³/s (0.013 m³/s), 333 acre-ft/yr (411,000 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.--Peak discharges above base of 10 ft³/s (0.28 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. 12	0830	35 0.99	0.82 0.250	Feb. 16	1900	*320 9.06	1.87 .570
Jan. 13	2245	24 .68	.73 .223	Mar. 3	0045	13 .37	.65 .198
Jan. 29	0245	24 .68	.73 .223	Mar. 6	1315	27 .76	.76 .232
Feb. 14	0530	34 .96	.81 .247				

Minimum daily, 0.01 ft³/s (<0.001 m³/s) on many days during August and September.

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	.02	.02	.03	.09	.24	.59	1.0	.15	.15	.19	.03	.01
2	.02	.02	.03	.05	.24	1.8	.59	.15	.15	.18	.02	.01
3	.02	.02	.03	.03	.24	3.6	.38	.15	.13	.19	.03	.01
4	.02	.03	.03	.03	.33	1.2	.85	.15	.15	.18	.03	.01
5	.02	.02	.03	.03	.41	1.7	.91	.15	.15	.16	.03	.01
6	.02	.02	.03	.03	.25	9.9	.91	.15	.15	.16	.04	.01
7	.02	.02	.03	.07	.24	3.9	.56	.15	.15	.17	.07	.01
8	.02	.02	.03	.09	.24	1.7	.96	.15	.15	.17	.07	.01
9	.02	.03	.03	.18	.24	1.1	.27	.15	.16	.16	.09	.01
10	.02	.03	.05	.44	.24	1.3	.24	.23	.16	.17	.07	.01
11	.02	.03	.06	.48	.24	1.6	.24	.15	.15	.17	.07	.01
12	.02	.03	.03	2.9	.24	1.5	.24	.15	.17	.16	.04	.01
13	.02	.03	.03	2.0	2.0	1.4	.24	.15	.20	.15	.04	.01
14	.02	.03	.03	2.0	7.8	1.4	.24	.16	.19	.17	.05	.01
15	.03	.03	.03	.25	.66	1.3	.24	.15	.19	.20	.06	.01
16	.03	.03	.03	.11	42	1.4	.19	.15	.19	.16	.08	.01
17	.03	.15	.03	.22	18	1.6	.23	.15	.19	.12	.09	.01
18	.03	.03	.03	3.0	5.6	1.7	.20	.15	.19	.09	.06	.01
19	.03	.03	.03	.21	2.3	1.2	.23	.12	.19	.08	.08	.01
20	.18	.03	.05	.15	4.7	1.1	.20	.12	.19	.08	.09	.01
21	.03	.03	.21	.16	4.8	1.1	.24	.12	.19	.09	.07	.01
22	.03	.03	.17	.15	1.8	1.1	.24	.13	.26	.07	.05	.01
23	.03	.03	.07	.15	1.3	1.1	.24	.15	.28	.04	.04	.01
24	.03	.03	.05	.15	.98	1.0	.19	.17	.30	.05	.05	.01
25	.03	.03	.08	.15	.91	1.1	.15	.15	.30	.04	.03	.02
26	.02	.03	.09	.15	.73	1.6	.15	.15	.29	.02	.03	.02
27	.02	.03	.09	.15	.81	1.1	.15	.15	.27	.02	.03	.02
28	.02	.02	.09	.40	.91	.93	1.1	.15	.25	.03	.02	.02
29	.02	.02	.09	6.9	.70	.91	.71	.15	.24	.02	.02	.02
30	.02	.03	.09	.33	---	.95	.15	.15	.18	.02	.01	.02
31	.02	---	.07	.24	---	.91	---	.15	---	.02	.01	---
TOTAL	.88	.93	1.77	21.29	99.15	52.79	12.24	4.65	5.91	3.53	1.50	.36
MEAN	.028	.031	.057	.69	3.42	1.70	.41	.15	.20	.11	.048	.012
MAX	.18	.15	.21	6.9	42	9.9	1.1	.23	.30	.20	.09	.02
MIN	.02	.02	.03	.03	.24	.59	.15	.12	.13	.02	.01	.01
AC-FT	1.7	1.8	3.5	42	197	105	24	9.2	12	7.0	3.0	.7
CAL YR 1979	TOTAL 167.30	MEAN .46	MAX 16	MIN .01	AC-FT 332							
WTR YR 1980	TOTAL 205.00	MEAN .56	MAX 42	MIN .01	AC-FT 407							

11197250 AVENAL CREEK NEAR AVENAL, CA

LOCATION.--Lat 35°51'15", long 120°07'34", in SW¼NW¼ 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.--19 years, 3.59 ft³/s (0.102 m³/s), 2,600 acre-ft/yr (3.21 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.--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. 11	1300	72	2.04	2.72	0.829	Feb. 20	0215	451	12.8	3.69	1.125
Jan. 12	1900	91	2.58	2.78	.847	Feb. 21	0500	826	23.4	4.47	1.362
Jan. 14	0700	171	4.84	2.99	.911	Mar. 3	0745	293	8.30	3.31	1.009
Feb. 16	1515	*1,680	47.6	6.07	1.850	Mar. 5	1000	278	7.87	3.27	.997
Feb. 17	2115	1,090	30.9	4.98	1.518	Mar. 6	1715	114	3.23	2.84	.866
Feb. 19	1200	678	19.2	4.16	1.268						

Minimum daily, 0.10 ft³/s (0.003 m³/s) on several days during October.

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	.10	.17	.16	.19	.66	14	7.6	3.3	1.6	.70	.24	.30
2	.10	.16	.16	.19	.68	24	7.4	2.9	1.5	.71	.21	.29
3	.10	.17	.15	.19	.71	104	6.9	2.5	1.5	.76	.21	.29
4	.10	.17	.15	.19	.71	31	6.9	2.3	1.4	.67	.22	.27
5	.10	.16	.16	.19	.71	80	7.8	2.2	1.4	.61	.25	.25
6	.10	.16	.16	.19	.71	69	7.3	2.2	1.4	.56	.27	.24
7	.10	.16	.16	.19	.75	40	6.2	2.3	1.3	.56	.26	.27
8	.10	.16	.16	.19	.83	32	5.7	2.2	1.2	.56	.24	.32
9	.10	.16	.16	.21	.86	27	5.3	2.3	1.1	.58	.24	.34
10	.11	.16	.16	.36	.86	25	5.0	4.8	1.0	.58	.22	.31
11	.11	.16	.16	21	.90	22	4.7	6.5	.99	.51	.21	.31
12	.11	.16	.17	25	.91	19	4.2	3.8	1.0	.47	.20	.32
13	.11	.16	.17	27	.99	18	3.9	3.2	1.0	.46	.18	.30
14	.11	.16	.17	92	1.1	16	3.8	3.5	1.0	.49	.22	.33
15	.11	.15	.17	30	2.2	15	3.9	2.9	1.0	.44	.30	.37
16	.11	.15	.17	3.5	302	14	3.6	2.3	.90	.41	.29	.37
17	.13	.16	.17	2.0	354	13	3.2	2.2	.79	.39	.27	.33
18	.13	.16	.16	1.7	462	13	3.2	2.0	.71	.38	.25	.30
19	.13	.16	.16	1.2	302	12	3.2	1.9	.74	.38	.30	.31
20	.15	.16	.17	1.0	208	11	3.0	1.7	.71	.38	.30	.32
21	.15	.17	.17	.93	279	11	3.2	1.9	.67	.37	.29	.31
22	.15	.16	.17	.86	94	11	4.7	2.1	.65	.35	.26	.31
23	.15	.16	.17	.79	52	9.9	4.9	2.1	.67	.34	.28	.30
24	.15	.16	.23	.78	36	9.6	4.2	2.4	.71	.32	.30	.29
25	.15	.16	.22	.75	26	11	3.7	2.6	.69	.31	.28	.28
26	.17	.16	.19	.73	20	11	3.3	2.4	.68	.29	.26	.26
27	.16	.16	.19	.71	17	9.5	3.0	2.2	.62	.26	.25	.26
28	.16	.16	.19	.71	17	8.8	4.4	1.9	.61	.24	.25	.30
29	.16	.16	.19	.71	16	8.3	4.6	1.8	.59	.23	.25	.31
30	.16	.16	.18	.69	---	8.0	3.9	1.6	.62	.24	.29	.30
31	.17	---	.19	.64	---	7.7	---	1.6	---	.29	.30	---
TOTAL	3.94	4.82	5.34	214.79	2198.58	704.8	142.7	79.6	28.75	13.84	7.89	9.06
MEAN	.13	.16	.17	6.93	75.8	22.7	4.76	2.57	.96	.45	.25	.30
MAX	.17	.17	.23	92	462	104	7.8	6.5	1.6	.76	.30	.37
MIN	.10	.15	.15	.19	.66	7.7	3.0	1.6	.59	.23	.18	.24
AC-FT	7.8	9.6	11	426	4360	1400	283	158	57	27	16	18
CAL YR 1979 TOTAL	885.49			MEAN 2.43	MAX 103	MIN .01	AC-FT 1760					
WTR YR 1980 TOTAL	3414.11			MEAN 9.33	MAX 462	MIN .10	AC-FT 6770					

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 fair. Oilfield waste comprises most of low flow.

AVERAGE DISCHARGE.--21 years, 31.1 ft³/s (0.881 m³/s), 22,530 acre-ft/yr (27.8 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 14	0700	*2,160 61.2	11.45 3.490	Mar. 7	0500	665 18.8	9.59 2.923
Jan. 18	2100	458 13.0	9.26 2.822	Apr. 6	1400	119 3.37	7.95 2.423
Feb. 20	1830	907 25.7	9.92 3.024	Apr. 29	1200	113 3.20	7.91 2.411

Minimum, no flow for many days.

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	3.3	11	13	44	132	103	70	44	18	1.3	0
2	0	5.0	11	13	40	124	102	68	42	19	.48	0
3	0	4.2	11	12	36	173	99	66	41	20	0	0
4	0	5.0	11	12	33	265	93	68	41	19	0	0
5	0	8.7	11	11	32	212	90	70	39	17	0	0
6	0	9.3	11	11	31	441	108	68	36	15	0	0
7	0	8.2	11	10	31	550	105	66	35	15	0	0
8	0	6.7	11	10	29	373	96	64	35	14	0	0
9	0	7.2	11	15	27	309	90	67	33	14	0	0
10	0	7.6	11	19	25	276	86	72	31	12	0	0
11	0	7.6	11	90	25	259	85	66	31	10	0	0
12	0	6.7	11	167	24	243	81	66	31	9.8	0	0
13	0	6.7	11	562	24	222	77	64	31	9.8	0	0
14	0	7.6	11	1340	27	210	74	66	31	9.3	0	0
15	0	6.2	11	595	38	193	73	65	30	9.3	0	0
16	0	6.7	10	228	44	184	72	63	27	7.2	0	0
17	0	8.2	10	171	123	173	69	61	27	7.2	0	0
18	0	13	9.8	304	189	167	66	61	25	6.2	0	0
19	0	15	9.8	307	288	171	65	60	24	5.8	0	0
20	0	12	9.8	184	555	154	65	58	22	5.4	0	0
21	0	11	10	139	572	145	73	57	22	5.2	0	.08
22	.38	11	12	113	357	141	78	55	22	5.4	0	.97
23	.12	11	12	93	300	135	79	55	22	5.0	0	.91
24	.05	11	11	79	248	128	79	62	21	4.7	0	.57
25	.02	11	13	68	215	126	77	58	20	4.7	0	0
26	1.2	12	13	58	189	132	73	56	17	3.3	0	0
27	4.2	11	12	51	171	130	69	55	18	2.4	0	0
28	3.3	12	11	47	156	121	83	53	17	2.2	0	0
29	4.2	12	11	73	145	113	105	50	16	1.9	0	0
30	4.2	12	11	73	---	108	81	47	17	1.7	0	0
31	2.6	---	11	51	---	106	---	45	---	1.7	0	---
TOTAL	20.27	268.9	341.4	4919	4018	6216	2496	1902	848	281.2	1.78	2.53
MEAN	.65	8.96	11.0	159	139	201	83.2	61.4	28.3	9.07	.057	.084
MAX	4.2	15	13	1340	572	550	108	72	44	20	1.3	.97
MIN	0	3.3	9.8	10	24	106	65	45	16	1.7	0	0
AC-FT	40	533	677	9760	7970	12330	4950	3770	1680	558	3.5	5.0
CAL YR 1979	TOTAL	11470.30	MEAN	31.4	MAX	420	MIN	0	AC-FT	22750		
WTR YR 1980	TOTAL	21315.08	MEAN	58.2	MAX	1340	MIN	0	AC-FT	42280		

11199500 WHITE RIVER NEAR DUCOR, CA

LOCATION.--Lat 35°48'36", long 118°55'03", in NW¼SE¼ 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.

AVERAGE DISCHARGE.--20 years (water years 1943-53, 1972-80), 9.80 ft³/s (0.278 m³/s), 7,100 acre-ft/yr (8.75 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s (65.1 m³/s), estimated by Water and Power Resources Service, 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. 10	2000	43	1.22	1.78	0.543	Feb. 20	0830	296	8.38	3.12	0.951
Jan. 13	2230	*388	11.0	3.56	1.085	Mar. 6	1630	247	7.00	2.87	0.853
Jan. 18	1630	145	4.11	2.37	0.722						

Minimum, no flow for many days.

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	.87	2.0	3.4	6.4	33	21	18	11	4.0	.39	0
2	0	1.0	2.0	3.4	6.1	31	20	17	11	4.2	.28	0
3	0	1.2	1.8	3.0	5.8	52	20	16	11	4.2	.19	0
4	0	1.5	1.7	3.0	6.1	48	19	16	10	4.2	.10	0
5	0	2.0	1.8	2.8	5.8	68	19	15	9.7	4.0	.08	0
6	0	2.0	1.8	2.7	5.6	154	23	15	9.7	3.8	.10	0
7	0	1.7	2.0	2.7	5.6	133	20	15	9.7	3.6	.10	0
8	0	1.7	1.8	2.7	5.3	84	19	14	9.4	3.6	.08	0
9	0	1.3	1.8	3.4	5.1	65	19	14	8.3	3.4	.04	0
10	0	1.5	1.8	16	5.1	56	18	19	8.0	3.4	.02	0
11	0	1.5	2.0	20	4.8	53	18	18	7.6	3.2	.01	0
12	0	1.5	2.0	70	4.8	48	18	15	7.6	2.8	0	0
13	0	1.5	2.0	146	4.8	46	17	16	7.6	2.8	0	0
14	0	1.5	2.0	186	5.1	44	17	15	7.6	2.7	0	0
15	0	1.3	2.0	71	7.0	42	17	15	7.3	2.7	0	0
16	0	1.3	2.0	38	9.7	40	17	15	6.7	2.5	0	0
17	0	2.1	2.0	33	25	37	16	14	6.4	2.4	0	0
18	0	4.6	2.0	105	46	38	17	14	6.1	2.2	0	0
19	0	2.8	2.0	57	62	36	17	13	5.8	2.1	0	0
20	0	2.2	2.0	29	194	31	17	12	5.8	2.0	0	.11
21	0	2.1	2.4	22	128	30	18	12	5.3	1.8	.23	.28
22	.03	2.0	3.0	17	85	30	20	12	5.3	1.8	.33	.33
23	.46	2.0	3.0	15	61	27	19	12	5.3	1.7	.19	.33
24	.55	2.0	2.8	13	51	25	18	13	5.3	1.3	.19	.28
25	.55	2.0	3.4	11	46	25	18	13	5.1	1.2	.13	.19
26	.55	2.0	3.4	9.7	42	26	17	12	5.1	1.0	.10	.08
27	.75	2.0	3.2	8.6	41	24	17	12	4.8	.87	.05	.07
28	.87	2.1	2.8	8.3	38	23	18	12	4.6	.64	.04	.06
29	.87	2.0	2.8	11	35	22	22	12	4.0	.46	.03	.07
30	.87	2.0	2.7	9.4	---	21	20	12	3.8	.46	.02	.06
31	.87	---	2.8	7.0	---	21	---	11	---	.55	0	---
TOTAL	6.37	55.27	70.8	930.1	947.1	1413	556	439	214.9	75.58	2.70	1.86
MEAN	.21	1.84	2.28	30.0	32.7	45.6	18.5	14.2	7.16	2.44	.087	.062
MAX	.87	4.6	3.4	186	194	154	23	19	11	4.2	.39	.33
MIN	0	.87	1.7	2.7	4.8	21	16	11	3.8	.46	0	0
AC-FT	13	110	140	1840	1880	2800	1100	871	426	150	5.4	3.7
CAL YR 1979	TOTAL	2504.36	MEAN	6.86	MAX	76	MIN	0	AC-FT	4970		
WTR YR 1980	TOTAL	4712.68	MEAN	12.9	MAX	194	MIN	0	AC-FT	9350		

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA

LOCATION.--Lat 35°56'30", long 118°49'19", in SE¼NE¼ 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.--12 years, 33.1 ft³/s (0.937 m³/s), 23,980 acre-ft/yr (29.6 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. 13	2130	*1,860 52.7	7.98 2.432	Mar. 6	1445	342 9.69	4.91 1.497
Jan. 18	0930	276 7.82	4.61 1.405	Apr. 5	2145	122 3.46	3.76 1.146
Feb. 20	0630	916 25.9	6.41 1.954	May 10	1245	101 2.86	3.63 1.106

Minimum daily, 3.6 ft³/s (0.102 m³/s) Oct. 5, 6.

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	6.0	7.9	10	13	44	103	74	67	49	25	10	6.2
2	4.5	7.7	9.8	12	43	100	74	65	47	26	9.9	7.0
3	3.8	7.8	9.8	11	41	175	72	66	46	27	9.4	6.1
4	3.8	14	9.6	11	40	144	70	70	45	27	8.6	5.9
5	3.6	12	9.5	11	39	186	80	62	44	26	7.9	5.4
6	3.6	9.8	9.8	10	38	255	87	60	42	24	7.4	5.2
7	3.8	8.9	9.7	10	38	215	77	60	41	23	7.4	5.2
8	3.8	8.7	9.6	11	37	181	73	58	39	22	8.0	6.1
9	4.3	8.5	9.5	15	35	164	72	58	37	22	7.6	7.2
10	4.5	8.7	9.5	87	35	154	72	78	37	22	6.9	6.8
11	4.3	8.5	9.9	102	34	146	72	72	36	22	6.5	7.0
12	4.3	8.3	10	422	33	135	69	66	37	21	6.3	6.2
13	4.5	8.1	9.9	696	32	126	68	67	38	21	6.1	6.1
14	4.7	7.9	9.8	705	35	122	67	65	37	21	6.8	6.2
15	4.9	7.7	9.8	231	50	117	67	65	36	18	7.4	6.8
16	5.1	7.5	9.6	151	55	111	66	62	35	18	7.6	6.0
17	5.1	17	9.4	115	131	106	65	60	33	17	7.9	5.5
18	5.1	23	9.2	203	224	112	64	57	32	18	7.6	5.6
19	5.5	14	9.1	130	276	103	64	54	31	18	8.7	6.1
20	29	12	9.4	100	565	98	65	52	31	17	9.3	7.6
21	18	11	10	86	388	97	70	52	30	16	8.8	7.4
22	11	11	12	76	250	95	73	52	30	15	7.7	7.3
23	9.2	11	11	69	194	90	71	54	30	14	8.3	6.8
24	7.9	11	11	64	168	87	68	58	30	13	8.1	5.8
25	7.1	10	15	60	147	87	68	58	29	13	6.6	5.2
26	7.2	10	13	56	134	86	66	57	29	12	6.8	4.8
27	8.0	11	12	52	124	83	64	55	30	12	6.9	4.8
28	7.8	11	11	50	116	80	63	53	27	11	6.7	5.3
29	7.8	10	11	62	108	77	74	52	27	11	6.1	6.1
30	7.9	10	11	51	---	77	69	50	26	11	5.6	5.8
31	7.8	---	12	47	---	75	---	49	---	11	6.2	---
TOTAL	213.9	314.0	321.9	3719	3454	3787	2104	1854	1061	574	235.1	183.5
MEAN	6.90	10.5	10.4	120	119	122	70.1	59.8	35.4	18.5	7.58	6.12
MAX	29	23	15	705	565	255	87	78	49	27	10	7.6
MIN	3.6	7.5	9.1	10	32	75	63	49	26	11	5.6	4.8
AC-FT	424	623	638	7380	6850	7510	4170	3680	2100	1140	466	364
CAL YR 1979	TOTAL	8008.04	MEAN 21.9	MAX 142	MIN .65	AC-FT 15880						
WTR YR 1980	TOTAL	17821.40	MEAN 48.7	MAX 705	MIN 3.6	AC-FT 35350						

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.--10 years, 1.46 ft³/s (0.041 m³/s), 1,060 acre-ft/yr (1.31 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.52	6.0	6.2	0	0	12	9.8	6.7	.06	
2		0	.55	5.7	6.0	0	0	12	9.7	7.0	.11	
3		0	.40	5.3	5.8	0	0	11	9.5	7.2	.08	
4		0	.43	5.1	5.6	0	0	12	9.3	7.3	.02	
5		0	.40	5.0	5.6	.01	5.6	11	9.3	7.0	0	
6		0	1.4	4.9	6.1	.15	8.8	11	8.9	6.7	0	
7		0	3.0	4.9	6.4	0	8.4	11	8.7	6.7	0	
8		0	3.8	5.0	6.4	0	8.2	8.2	8.5	7.0	0	
9		0	3.8	6.2	6.3	0	8.2	.76	8.7	6.8	0	
10		0	4.1	7.4	6.3	0	8.2	.32	8.8	6.9	0	
11		0	4.1	6.2	6.4	0	8.2	.26	8.8	6.7	0	
12		0	4.2	8.0	6.3	0	8.2	.17	8.8	6.6	0	
13		0	4.3	8.2	6.3	0	8.1	.11	8.9	6.5	0	
14		0	4.7	7.0	6.4	0	8.0	3.5	8.7	6.1	0	
15		0	4.6	2.2	7.2	0	8.0	11	8.7	5.3	0	
16		0	4.4	.36	7.7	0	8.0	11	8.3	4.6	0	
17		0	4.6	.03	8.5	0	7.9	11	8.2	5.3	0	
18		2.6	4.7	0	7.9	0	7.9	10	8.0	5.9	0	
19		3.9	4.6	0	5.8	0	7.9	10	7.9	5.9	0	
20		2.9	4.9	0	5.2	0	9.1	10	7.6	5.2	0	
21		2.6	5.6	0	1.6	0	11	10	7.6	4.3	0	
22		2.9	5.8	0	.26	0	12	10	7.5	2.8	0	
23		2.9	6.2	0	.02	0	12	10	7.4	2.1	0	
24		3.2	6.5	0	0	0	12	10	7.3	1.5	0	
25		3.6	6.2	0	0	0	12	12	7.2	1.2	0	
26		3.7	6.5	0	0	0	12	12	7.0	.78	0	
27		3.8	5.5	0	0	0	12	9.8	7.0	.46	0	
28		5.8	5.1	0	0	0	12	9.9	6.8	.28	0	
29		5.8	5.0	8.4	0	0	12	9.8	6.5	.17	0	
30		3.9	5.0	9.2	---	0	12	9.8	6.5	.05	0	
31		---	5.1	6.6	---	0	---	9.7	---	.16	0	---
TOTAL	0	47.6	126.00	111.69	130.28	.16	247.7	269.32	245.9	141.20	.27	0
MEAN	0	1.59	4.06	3.60	4.49	.005	8.26	8.69	8.20	4.55	.009	0
MAX	0	5.8	6.5	9.2	8.5	.15	12	12	9.8	7.3	.11	0
MIN	0	0	.40	0	0	0	0	.11	6.5	.05	0	0
AC-FT	0	94	250	222	258	.3	491	534	488	280	.5	0
CAL YR 1979	TOTAL	881.92	MEAN 2.42	MAX 14	MIN 0	AC-FT 1750						
WTR YR 1980	TOTAL	1320.12	MEAN 3.61	MAX 12	MIN 0	AC-FT 2620						

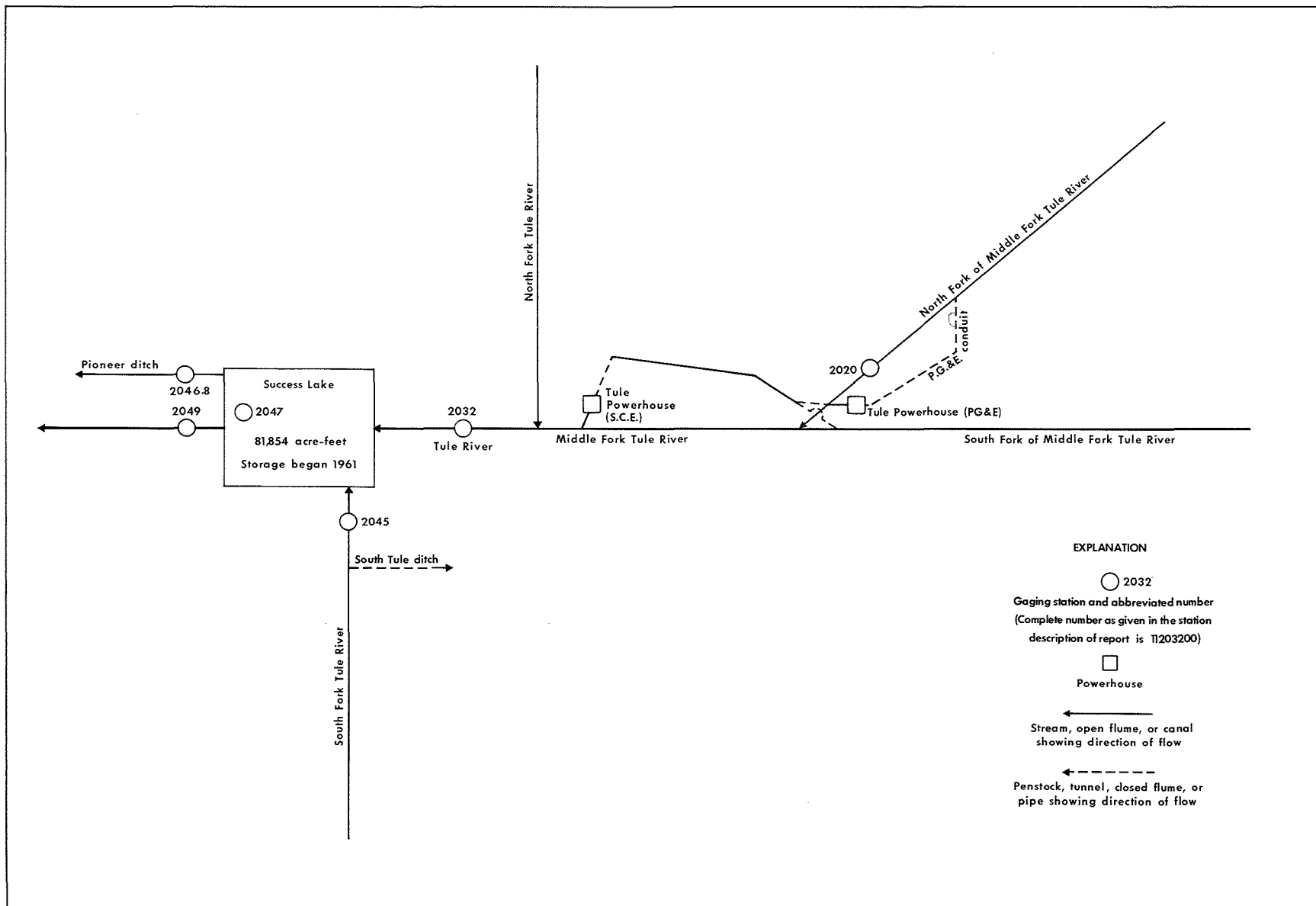


FIGURE 5.--Schematic diagram showing diversions and storage in Tule River basin.

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA

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.

DRAINAGE AREA.--39.3 mi² (101.8 km²).

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.

REVISED RECORDS.--WSP 1445: 1951.

GAGE.--Water-stage recorder. Concrete control on river since Aug. 6, 1958. Water-stage recorder and rectangular concrete channel for conduit diversion. Altitude of gage is 2,920 ft (890 m), from topographic map.

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.

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.--River only: 41 years, 26.7 ft³/s (0.756 m³/s), 19,340 acre-ft/yr (23.8 hm³/yr). Combined river and diversion: 41 years, 58.2 ft³/s (1.648 m³/s), 42,170 acre-ft/yr (52.0 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, 6,300 ft³/s (178 m³/s) Jan. 12, gage height, 10.07 ft (3.069 m); minimum daily, 0.06 ft³/s (0.002 m³/s) Nov. 2.

Combined flow, maximum discharge, 6,310 ft³/s (179 m³/s) Jan. 12; minimum daily, 9.8 ft³/s (0.28 m³/s) Oct. 17.

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	1.7	.09	1.5	1.7	22	174	45	138	94	111	4.9	4.3
2	1.5	.06	1.5	1.9	25	173	42	134	95	105	4.9	4.0
3	1.6	.65	1.4	1.7	26	194	40	140	103	99	4.9	4.1
4	1.5	3.2	1.3	1.5	31	171	40	153	109	92	5.0	4.1
5	1.4	.42	1.2	1.4	29	187	90	168	112	83	5.7	4.1
6	1.2	.93	1.2	1.3	28	181	79	175	118	72	5.1	5.0
7	1.1	1.4	1.1	1.2	23	166	68	173	124	65	4.7	5.0
8	1.3	1.4	.98	1.2	17	158	66	158	134	60	4.4	4.6
9	1.3	1.5	.91	3.4	14	153	72	153	149	54	4.3	4.6
10	1.2	1.4	.89	41	13	149	81	152	163	48	4.7	4.6
11	1.1	1.3	.89	104	12	115	95	128	166	45	4.5	4.2
12	1.0	1.2	.89	2240	11	90	107	118	159	43	4.3	3.9
13	1.0	1.1	.89	2390	10	87	115	111	152	39	3.2	3.7
14	1.1	1.1	.95	1660	22	86	121	107	146	35	3.8	3.6
15	1.1	.97	.97	458	37	83	126	100	145	31	4.2	3.9
16	4.1	1.1	.97	265	55	79	134	99	149	27	4.3	3.7
17	1.5	3.9	.91	189	261	79	148	111	134	25	4.4	3.7
18	4.2	3.0	.89	160	1390	84	161	133	124	22	5.1	3.9
19	1.5	1.7	.89	120	656	75	168	157	126	19	6.2	4.9
20	11	1.5	.91	99	452	73	172	179	144	14	5.3	4.4
21	1.6	1.4	1.2	84	462	74	168	193	157	11	4.7	3.8
22	1.4	1.3	1.5	74	321	66	145	194	152	9.1	4.6	4.2
23	.63	1.3	1.4	64	248	62	129	174	144	7.5	4.7	4.2
24	.22	1.2	1.6	54	202	59	117	152	136	6.7	4.3	4.2
25	.14	1.1	4.2	44	175	55	118	133	132	6.3	4.3	3.9
26	.87	1.6	1.9	44	161	51	126	120	128	6.3	4.2	3.7
27	.17	2.2	1.9	38	152	48	135	109	124	9.1	4.3	3.5
28	.08	1.8	1.5	35	168	46	137	101	122	9.0	4.2	3.6
29	1.1	1.6	1.4	32	182	48	135	96	120	5.2	4.4	15
30	.22	1.5	1.5	22	---	50	138	97	117	5.3	4.4	23
31	.15	---	1.9	20	---	48	---	96	---	5.1	4.2	---
TOTAL	47.98	42.92	41.14	8252.3	5205	3164	3318	4252	3978	1169.6	142.2	153.4
MEAN	1.55	1.43	1.33	266	179	102	111	137	133	37.7	4.59	5.11
MAX	11	3.9	4.2	2390	1390	194	172	194	166	111	6.2	23
MIN	.08	.06	.89	1.2	10	46	40	96	94	5.1	3.2	3.5
AC-FT	95	85	82	16370	10320	6280	6580	8430	7890	2320	282	304

CAL YR 1979 TOTAL 5097.94 MEAN 14.0 MAX 139 MIN .06 AC-FT 10110
WTR YR 1980 TOTAL 29766.54 MEAN 81.3 MAX 2390 MIN .06 AC-FT 59040

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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	17	20	32	84	175	113	206	162	178	55	34
2	18	17	20	26	83	174	110	202	163	172	54	33
3	18	19	18	24	84	195	107	208	171	165	52	33
4	18	28	18	23	88	172	107	221	177	158	50	32
5	16	21	18	21	91	188	159	236	180	149	50	31
6	16	21	18	22	91	182	148	244	186	138	48	32
7	16	20	18	22	89	167	137	241	191	131	47	32
8	16	20	18	21	85	159	134	226	201	126	46	32
9	17	20	18	37	82	154	139	221	216	120	44	33
10	16	19	18	95	80	151	148	220	230	114	44	33
11	16	19	18	166	79	155	163	196	232	111	44	32
12	16	19	18	2270	77	156	175	186	226	109	42	31
13	16	18	17	2450	75	153	183	179	218	105	40	31
14	17	18	17	1710	89	153	189	175	212	101	41	31
15	17	18	17	512	104	150	194	168	212	97	41	30
16	12	17	17	326	122	146	202	167	216	93	40	30
17	9.8	25	17	251	330	146	216	179	201	93	40	29
18	14	25	17	223	1450	151	229	201	190	91	40	29
19	18	21	17	185	720	143	236	225	193	88	41	29
20	53	20	17	165	520	141	240	247	211	83	39	29
21	26	19	18	152	528	142	236	261	224	79	38	29
22	21	19	19	141	386	134	212	262	219	76	38	28
23	19	20	18	132	313	129	197	242	211	73	38	28
24	17	20	22	123	267	126	185	220	203	71	36	27
25	17	20	29	114	240	122	186	201	199	68	36	27
26	18	25	21	113	227	118	195	188	195	65	36	27
27	18	24	20	105	218	115	204	177	191	69	35	27
28	17	22	20	100	203	113	205	169	189	70	35	27
29	16	21	19	99	183	116	202	164	187	61	34	24
30	17	20	25	91	---	118	206	165	184	58	34	26
31	17	---	43	87	---	116	---	164	---	57	34	---
TOTAL	561.8	612	610	9838	6988	4560	5357	6361	5990	3169	1292	896
MEAN	18.1	20.4	19.7	317	241	147	179	205	200	102	41.7	29.9
MAX	53	28	43	2450	1450	195	240	262	232	178	55	34
MIN	9.8	17	17	21	75	113	107	164	162	57	34	24
AC-FT	1110	1210	1210	19510	13860	9040	10630	12620	11880	6290	2560	1780
CAL YR 1979	TOTAL	17760.8	MEAN	48.7	MAX	207	MIN	9.8	AC-FT	35230		
WTR YR 1980	TOTAL	46234.8	MEAN	126	MAX	2450	MIN	9.8	AC-FT	91710		

11203200 TULE RIVER NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°06'02", long 118°52'07", in NE¼SW¼ 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.--23 years, 148 ft³/s (4.191 m³/s), 107,200 acre-ft/yr (132 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. 12	2000	*20,800 589	Apr. 5	2345	712 20.2
Jan. 18	0900	1,600 45.3	May 10	1245	682 19.3
Feb. 18	1030	7,450 211	May 22	0045	564 16.0
Mar. 6	1430	2,240 63.4	June 11	0345	421 11.9

Minimum daily, 11 ft³/s (0.312 m³/s) Oct. 7.

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	22	24	41	105	254	605	341	491	341	270	73	37
2	17	23	41	82	246	581	330	484	321	266	72	36
3	14	23	39	70	239	1010	316	477	325	257	67	35
4	14	60	37	63	239	768	317	506	330	246	63	39
5	13	48	36	57	241	1050	428	535	332	229	62	35
6	12	40	37	54	241	1530	510	541	336	213	59	33
7	11	35	35	55	241	1030	406	549	340	202	57	34
8	12	34	33	54	227	806	375	509	354	192	56	35
9	13	34	34	66	215	712	380	484	371	183	55	34
10	15	33	34	506	208	668	392	560	394	172	51	38
11	14	33	36	789	201	658	421	500	405	166	46	37
12	14	33	35	6180	195	603	441	449	395	162	45	35
13	17	32	37	8790	189	557	455	435	378	158	45	35
14	19	31	37	6640	206	538	464	426	364	154	44	34
15	19	31	37	2170	338	525	464	418	358	147	45	36
16	19	31	38	1200	529	497	468	400	354	140	46	36
17	18	56	37	831	1780	478	491	401	366	134	46	34
18	16	74	35	1210	5270	510	521	434	367	130	46	34
19	18	51	33	677	3370	472	548	480	371	126	47	33
20	104	46	34	532	3920	449	563	516	367	121	47	34
21	74	41	38	455	2920	447	566	536	359	116	47	36
22	39	42	49	419	1900	433	526	553	350	109	48	36
23	30	40	44	391	1340	407	483	516	337	105	44	35
24	27	42	42	387	1070	397	446	464	323	98	41	34
25	25	42	115	369	890	385	434	427	313	94	40	33
26	25	43	73	351	799	375	449	392	307	93	39	32
27	29	58	57	332	741	361	465	361	297	86	39	30
28	26	51	50	317	689	349	476	344	285	101	37	31
29	24	45	48	314	639	341	507	329	283	83	36	30
30	24	41	47	286	---	350	503	330	276	76	35	27
31	23	---	74	269	---	344	---	321	---	76	37	---
TOTAL	747	1217	1363	34021	29337	18236	13486	14168	10299	4705	1515	1028
MEAN	24.1	40.6	44.0	1097	1012	588	450	457	343	152	48.9	34.3
MAX	104	74	115	8790	5270	1530	566	560	405	270	73	39
MIN	11	23	33	54	189	341	316	321	276	76	35	27
AC-FT	1480	2410	2700	67480	58190	36170	26750	28100	20430	9330	3010	2040

CAL YR 1979 TOTAL 47080.1 MEAN 129 MAX 729 MIN 3.8 AC-FT 93380
WTR YR 1980 TOTAL 130122.0 MEAN 356 MAX 8790 MIN 11 AC-FT 258100

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, 27.5°C on several days during August; minimum recorded, 6.0°C Dec. 17, 28, Jan. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.0	19.0	14.5	11.5	11.0	8.5	12.0	10.0	9.5	8.5	10.0	8.5
2	24.5	19.0	15.0	11.5	11.5	9.0	11.5	10.5	10.5	9.5	10.0	9.0
3	23.5	20.0	13.5	12.0	12.0	9.5	11.0	9.0	10.5	10.0	9.5	8.5
4	24.5	19.5	13.5	12.0	11.5	9.5	10.0	7.5	10.5	10.0	11.0	7.5
5	25.0	20.5	13.5	11.0	11.5	9.5	9.5	7.5	11.0	10.5	9.5	8.5
6	24.5	19.5	14.0	11.0	11.0	8.5	10.5	8.5	11.0	10.5	9.0	8.0
7	24.0	19.5	13.5	11.5	11.0	8.5	11.5	9.5	10.5	10.0	10.5	7.5
8	23.0	18.5	14.5	11.5	11.5	8.5	10.5	8.5	10.0	9.5	11.0	7.0
9	22.0	17.5	14.5	12.0	12.0	9.5	11.0	10.5	10.0	9.0	11.5	7.5
10	22.0	17.0	14.0	11.5	11.0	9.5	10.5	9.5	9.5	9.0	10.5	8.5
11	22.5	18.0	13.5	11.0	11.5	9.5	11.0	9.0	9.5	9.0	11.0	9.5
12	22.0	18.0	13.5	10.5	10.0	8.5	10.0	8.5	9.5	9.0	10.5	8.0
13	20.5	18.0	12.5	9.5	9.5	7.5	11.0	9.0	9.5	9.0	11.0	8.5
14	22.0	17.5	13.0	9.5	9.0	7.0	10.5	9.5	9.5	9.0	11.5	9.0
15	21.5	17.0	12.5	9.5	9.0	7.0	10.5	10.0	10.0	9.5	11.0	9.0
16	22.0	18.0	12.5	9.5	9.5	6.5	12.0	10.0	9.5	8.5	11.0	8.0
17	22.0	19.0	13.0	11.0	9.5	6.0	12.0	9.0	9.5	9.0	12.0	8.0
18	21.0	18.5	13.0	11.5	10.0	6.5	9.5	8.0	9.5	9.5	11.0	8.0
19	19.5	18.0	12.5	11.0	9.5	8.0	8.5	7.0	9.5	9.5	11.0	6.5
20	18.5	15.0	11.0	9.0	10.5	8.5	8.5	6.0	10.0	9.5	12.0	8.5
21	16.5	14.0	10.0	8.0	11.0	9.0	8.5	6.5	10.0	8.5	11.0	8.5
22	16.5	13.0	9.5	7.5	9.5	8.5	9.0	6.5	9.0	6.5	11.0	7.5
23	17.5	13.0	11.0	8.5	8.5	7.5	9.0	7.0	10.0	8.5	11.5	7.5
24	18.0	14.0	11.0	9.0	9.5	8.5	9.0	7.0	10.5	8.5	12.0	9.0
25	18.0	13.5	11.5	9.5	10.0	8.5	8.5	7.0	10.5	7.5	9.5	7.5
26	17.5	15.0	12.0	10.5	9.5	8.5	8.5	7.0	11.5	8.0	9.5	7.0
27	18.0	15.0	11.5	10.0	9.0	7.0	9.0	7.5	11.0	8.5	10.5	8.5
28	18.0	15.5	10.5	8.5	8.0	6.0	9.0	7.5	12.0	9.0	12.0	8.5
29	16.0	13.5	11.0	9.0	9.5	7.0	9.5	9.0	11.5	9.0	13.0	9.0
30	15.0	12.0	11.0	8.5	10.0	8.0	10.0	9.5	---	---	13.0	9.5
31	14.5	11.5	---	---	12.0	10.0	9.5	9.0	---	---	12.0	9.0
MONTH	25.0	11.5	15.0	7.5	12.0	6.0	12.0	6.0	12.0	6.5	13.0	6.5

11203200 TULE RIVER NEAR SPRINGVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.5	9.5	13.5	12.5	15.0	14.0	18.0	17.0	27.5	24.0	23.5	19.5
2	12.0	8.5	15.5	13.0	16.0	14.5	18.5	17.5	27.5	24.5	24.0	20.5
3	12.5	8.5	16.0	14.5	15.5	14.5	18.5	17.5	27.0	23.5	24.5	20.5
4	12.0	10.0	16.5	14.5	15.5	14.5	19.0	18.0	26.5	23.0	24.5	20.5
5	11.0	10.0	16.0	15.0	15.5	14.5	19.0	18.0	26.0	22.5	24.5	21.0
6	11.5	9.5	16.0	15.0	15.5	14.5	19.0	18.0	26.0	22.0	24.5	21.5
7	12.0	9.5	15.5	14.0	16.0	14.5	19.0	18.0	25.5	22.5	23.0	21.0
8	13.0	10.0	15.5	13.5	16.5	15.0	19.0	18.0	27.0	23.0	23.0	19.0
9	14.0	11.5	15.5	13.0	17.0	15.5	19.0	17.5	27.0	23.5	22.5	19.5
10	14.5	12.0	13.0	12.5	17.0	16.0	18.5	17.0	27.5	24.0	23.0	19.5
11	15.0	12.5	12.5	11.5	17.0	15.5	19.0	17.5	27.5	24.5	23.0	19.5
12	15.0	12.5	12.5	11.0	16.5	15.0	19.5	18.0	27.5	24.5	23.5	20.0
13	15.0	12.5	13.0	12.0	15.5	15.0	19.0	18.0	27.5	24.0	23.0	20.0
14	14.5	12.5	13.0	12.5	16.0	14.5	21.5	17.5	26.0	23.5	21.5	18.5
15	14.0	12.0	14.0	12.5	16.0	15.0	22.0	18.0	25.5	22.5	20.0	17.0
16	15.0	12.5	15.5	13.5	17.0	15.5	22.0	18.5	25.5	23.0	21.0	17.0
17	15.5	13.0	16.0	14.5	17.0	16.0	22.5	19.5	26.0	23.5	22.0	19.0
18	15.5	13.0	17.0	15.5	17.5	16.0	23.0	20.0	26.5	24.0	22.5	19.5
19	15.5	13.5	17.5	16.0	17.5	16.5	23.0	20.0	25.5	23.5	22.0	19.5
20	15.0	13.5	17.5	16.5	17.5	16.5	23.0	19.5	26.0	23.0	21.5	19.0
21	14.5	11.5	17.5	16.0	17.5	16.5	23.5	20.0	26.5	23.5	21.0	18.0
22	11.5	10.5	17.0	15.5	17.0	16.0	24.0	21.0	26.5	24.0	21.0	18.0
23	11.0	10.0	15.5	13.5	17.0	16.0	24.5	21.5	26.0	23.0	21.5	18.0
24	11.5	10.5	13.5	12.0	17.0	15.5	25.0	22.5	26.0	23.0	21.5	18.0
25	13.5	11.0	13.0	11.0	17.0	16.0	25.5	23.0	25.0	22.0	22.0	18.5
26	14.5	12.5	13.5	12.5	17.5	16.5	26.0	23.5	25.0	20.0	22.0	18.5
27	14.5	13.5	14.0	13.0	18.0	16.5	26.0	23.5	25.0	20.5	21.5	18.0
28	14.5	13.5	14.0	13.0	18.0	17.0	26.0	23.0	24.5	20.5	21.0	18.5
29	13.5	13.0	15.0	13.0	18.0	17.5	27.0	23.5	23.0	19.5	21.0	18.0
30	13.5	12.5	15.0	14.5	18.0	17.5	26.0	24.0	23.0	18.5	22.0	18.5
31	---	---	15.0	14.0	---	---	26.5	22.5	23.5	19.0	---	---
MONTH	15.5	8.5	17.5	11.0	18.0	14.0	27.0	17.0	27.5	18.5	24.5	17.0

11204680 PIONEER DITCH BELOW SUCCESS DAM, CA

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.

PERIOD OF RECORD.--April 1959 to current year. Prior to October 1960, monthly diversions only, published with Tule River near 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.

REMARKS.--Records excellent. Ditch receives water from Success Lake (station 11204700).

AVERAGE DISCHARGE.--21 years, 6.93 ft³/s (0.196 m³/s), 5,020 acre-ft/yr (6.19 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.

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	11	7.9	1.3	.70	.90	.70	.90	5.4	9.6	16	14	12
2	14	9.1	1.3	.70	.90	.70	5.8	5.5	8.4	14	13	16
3	12	5.6	1.3	.70	.90	.70	3.1	5.5	8.4	13	12	17
4	11	2.2	1.3	.70	.90	.70	3.8	5.4	9.0	14	15	15
5	9.6	1.5	4.4	.70	3.8	.70	4.3	5.4	9.5	14	16	14
6	8.7	1.5	3.5	.70	5.4	.70	4.3	9.1	11	14	17	13
7	7.6	1.4	1.5	.70	5.4	.70	4.3	11	12	13	14	13
8	9.0	1.4	2.5	.70	5.4	.70	4.3	11	16	13	13	13
9	9.6	1.4	3.0	.70	5.4	.70	4.3	11	17	16	13	16
10	7.4	3.8	3.7	.70	5.4	.70	4.3	6.7	15	17	12	17
11	6.7	3.3	4.1	.70	5.4	.70	4.2	4.6	13	14	15	14
12	6.7	2.4	4.1	.70	5.4	.70	4.2	3.1	13	12	17	13
13	6.7	1.9	4.1	.80	5.4	.70	4.3	0	13	12	17	13
14	6.6	3.3	6.6	.80	5.4	.50	7.9	0	12	13	15	10
15	9.6	4.5	3.8	.70	2.7	.50	10	0	11	15	14	9.1
16	12	4.5	1.8	.60	.60	.50	10	0	15	15	12	10
17	11	4.5	1.8	.60	.60	.50	9.7	4.9	15	14	11	13
18	7.7	2.9	1.3	.60	.70	4.2	11	13	13	11	14	15
19	6.7	1.1	1.1	.60	.70	6.0	11	15	10	10	16	16
20	3.4	1.1	1.8	.60	.60	3.5	11	16	9.5	10	16	12
21	1.8	3.9	2.2	.60	.50	.90	11	15	10	10	13	10
22	1.8	2.2	2.1	2.9	.50	.90	11	12	10	13	11	10
23	1.8	.60	1.2	4.3	.50	.90	13	12	13	14	9.6	11
24	2.7	.60	.70	4.3	.50	.90	11	12	15	13	9.1	11
25	3.8	1.2	.70	4.3	.50	.90	5.6	11	12	13	13	11
26	6.1	2.2	.80	4.3	.50	.90	3.9	10	10	14	15	13
27	7.7	3.1	.80	4.3	.50	.90	4.9	10	10	14	16	13
28	5.8	3.4	.70	4.3	.50	.90	5.4	10	10	16	13	9.7
29	5.8	2.2	.60	2.7	.50	.90	5.4	10	13	17	12	8.6
30	6.7	1.4	.60	.90	---	.90	5.5	11	15	17	10	11
31	6.7	---	.60	.90	---	.90	---	12	---	15	9.1	---
TOTAL	227.7	86.10	65.30	47.50	66.40	34.70	199.40	257.6	358.4	426	416.8	379.4
MEAN	7.35	2.87	2.11	1.53	2.29	1.12	6.65	8.31	11.9	13.7	13.4	12.6
MAX	14	9.1	6.6	4.3	5.4	6.0	13	16	17	17	17	17
MIN	1.8	.60	.60	.60	.50	.50	.90	0	8.4	10	9.1	8.6
AC-FT	452	171	130	94	132	69	396	511	711	845	827	753

CAL YR 1979 TOTAL 2428.50 MEAN 6.65 MAX 17 MIN 0 AC-FT 4820
WTR YR 1980 TOTAL 2565.30 MEAN 7.01 MAX 17 MIN 0 AC-FT 5090

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. Surcharge 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. Dead 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, 82,093 acre-ft (101 hm³) June 10, elevation, 652.42 ft (198.858 m); minimum, 11,035 acre-ft (13.6 hm³) Nov. 16, elevation, 596.77 ft (181.895 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12702	11541	11239	12762	47258	61687	61155	66652	79966	81969	74486	40980
2	12672	11456	11233	12878	45827	61174	60628	67352	80257	81969	73606	39801
3	12642	11389	11217	12969	44363	61706	60067	68059	80548	81969	72757	38624
4	12606	11389	11194	13049	43229	61725	59511	68815	80865	81945	71917	37574
5	12570	11383	11172	13123	42350	62339	59290	69558	81158	81895	71632	36557
6	12516	11355	11161	13185	41473	61273	59272	70136	81477	81871	70978	35598
7	12445	11316	11156	13246	40781	64571	59015	70632	81747	81821	70050	34657
8	12362	11289	11139	13309	40152	63996	58723	70956	81895	81797	69069	33952
9	12320	11266	11123	13415	39491	63192	58505	71261	82043	81772	68038	33336
10	12285	11250	11106	14454	38814	62512	58341	71802	82093	81698	66981	32729
11	12267	11228	11112	15949	38134	62224	58269	72182	82043	81649	65918	32140
12	12250	11211	11134	28142	37586	62108	58215	72402	81969	81625	64831	31559
13	12214	11183	11167	42432	37142	62089	58215	72646	81895	81600	63740	30932
14	12232	11128	11189	55666	36740	62089	58269	72869	81797	81551	62532	30334
15	12185	11084	11222	59089	36679	62070	58450	73069	81772	81526	61307	29723
16	12109	11035	11266	60309	37057	61974	58614	73247	81797	81477	60067	29101
17	12016	11128	11311	60534	39891	61706	58942	73404	81846	81423	53832	28486
18	11935	11239	11400	61745	50112	64155	59456	73606	81871	81379	57562	27851
19	11808	11266	11484	61611	57425	65151	60067	73876	81895	81305	56293	27343
20	11912	11272	11569	61042	64691	65251	60665	74282	81920	81207	55028	26900
21	11993	11250	11648	60253	65634	65191	61283	74850	81920	81109	53873	26462
22	12010	11228	11745	59309	64273	65071	61783	75559	81871	80938	52707	26038
23	12033	11222	11825	58323	63603	64891	62204	76228	81821	80572	51561	25401
24	12004	11228	11929	57264	63231	64651	62532	76833	81797	80136	50412	24681
25	11958	11239	12150	56171	62436	64432	62861	77371	81772	79701	49268	23956
26	11906	11239	12267	55011	62070	64174	63270	77841	81772	79292	48071	23254
27	11866	11244	12332	53806	62803	63780	63740	78267	81846	78766	46870	22564
28	11820	11250	12391	52575	62551	63251	64254	78624	81945	78196	45696	21888
29	11768	11244	12445	51371	62147	62687	65051	78981	82019	77511	44505	21225
30	11648	11244	12498	50018	---	62127	65877	79292	82019	76553	43326	20533
31	11648	---	12606	48605	---	61630	---	79605	---	75490	42146	---
MAX	12702	11541	12606	61745	65634	65251	65877	79605	82093	81969	74486	40980
MIN	11648	11035	11106	12762	36679	61174	58215	66652	79966	75490	42146	20533
†	597.87	597.15	599.51	635.43	643.31	643.04	645.20	651.40	652.39	649.65	630.95	610.66
‡	-1090	-404	+1362	+35999	+13542	-517	+4247	+13728	+2414	-6529	-33344	-21613
††	222	100	75	106	219	418	589	985	1530	1896	1432	640

CAL YR 1979 ‡ +1088
WTR YR 1980 ‡ +7795

† 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).--27 years, 186 ft³/s (5.268 m³/s), 134,800 acre-ft/yr (166 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, 3,250 ft³/s (92.0 m³/s) Feb. 21, gage height, 9.50 ft (2.896 m); minimum daily, 0.60 ft³/s (0.017 m³/s) Mar. 18.

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	47	63	55	29	1080	1090	752	216	249	315	579	633
2	33	65	55	29	1080	1090	752	226	249	298	510	632
3	27	65	58	29	1080	1090	752	226	249	293	438	632
4	33	64	59	29	933	1090	752	225	249	284	466	568
5	35	64	52	29	783	1090	749	255	249	266	183	545
6	6.0	64	50	30	778	1090	747	341	249	246	356	521
7	45	64	50	30	682	1330	720	399	267	233	505	509
8	41	58	50	30	635	1500	701	428	354	213	556	394
9	25	51	50	30	635	1500	666	439	382	203	572	336
10	20	48	50	58	635	1360	648	439	464	203	569	330
11	20	48	41	112	635	1150	648	443	515	185	572	322
12	19	48	31	325	549	976	648	443	524	170	677	317
13	19	52	25	513	498	845	648	443	507	165	677	327
14	20	55	29	720	498	811	589	443	501	166	630	327
15	33	55	27	859	500	811	550	443	452	157	649	330
16	50	55	25	924	479	811	550	443	414	152	661	332
17	54	50	20	1050	416	313	486	446	408	152	660	332
18	54	47	.90	1100	430	.60	418	446	422	152	665	329
19	54	54	.80	1100	458	140	395	446	429	152	666	265
20	54	57	.80	1100	1440	602	395	411	426	151	667	242
21	54	60	10	1100	3120	705	398	340	425	163	628	240
22	43	61	14	1080	3050	705	398	264	425	175	618	238
23	25	55	14	1040	2090	705	401	248	418	271	618	356
24	52	49	14	1040	1610	705	398	248	388	311	613	378
25	52	49	14	1040	1610	705	398	248	376	289	613	377
26	52	56	26	1040	1280	705	363	248	343	284	623	363
27	52	62	35	1040	637	743	347	237	293	330	630	353
28	52	64	31	1040	1100	796	346	246	274	363	632	354
29	52	58	29	1050	1100	806	241	246	274	410	632	355
30	55	55	29	1070	---	806	191	246	297	554	636	354
31	56	---	29	1080	---	770	---	247	---	606	635	---
TOTAL	1234.0	1696	974.50	19746	29821	26840.60	16047	10419	11072	7912	18136	11591
MEAN	39.8	56.5	31.4	637	1028	866	535	336	369	255	585	386
MAX	56	65	59	1100	3120	1500	752	446	524	606	677	633
MIN	6.0	47	.80	29	416	.60	191	216	249	151	183	238
AC-FT	2450	3360	1930	39170	59150	53240	31830	20670	21960	15690	35970	22990
CAL YR 1979 TOTAL	49563.60			MEAN 136	MAX 547	MIN .80	AC-FT 98310	MEAN ± 153		AC-FT ± 111100		
WTR YR 1980 TOTAL	155489.10			MEAN 425	MAX 3120	MIN .60	AC-FT 308400	MEAN ± 454		AC-FT ± 329500		

‡ 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 FOR 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, 25.5°C on several days during September; minimum recorded, 7.5°C Feb. 1, 14.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	25.0	23.0	19.0	18.0	14.5	12.0	11.0	9.0	10.0	7.5	11.0	9.0
2	25.0	23.0	19.0	17.5	14.5	11.5	11.0	9.5	10.0	8.0	10.5	9.5
3	24.5	22.5	18.5	17.5	14.5	11.0	11.0	9.0	10.0	8.5	11.5	10.0
4	24.5	23.0	18.5	17.0	14.5	10.5	11.0	9.0	10.0	8.5	10.5	9.5
5	24.5	23.0	19.0	16.5	14.0	10.5	11.5	9.0	10.0	8.5	11.0	9.5
6	24.5	23.0	18.0	14.0	14.0	10.0	10.5	9.0	10.0	8.0	11.0	9.0
7	24.5	22.5	19.5	14.5	14.5	10.0	11.0	9.5	10.0	8.5	11.0	10.0
8	24.5	23.0	19.0	14.5	14.5	10.0	11.0	10.0	10.0	9.0	11.0	9.0
9	25.0	22.5	19.0	14.0	14.0	10.5	11.0	8.5	10.0	9.5	11.0	9.5
10	24.0	21.0	17.5	14.5	12.0	10.5	11.0	9.5	10.0	9.0	11.0	9.5
11	24.0	20.5	18.5	14.0	13.5	11.0	11.0	10.0	10.5	8.5	11.0	10.0
12	24.5	20.5	18.0	16.0	13.0	11.0	11.0	10.0	10.5	8.5	11.0	10.5
13	23.5	19.5	17.0	16.0	13.0	11.0	10.5	9.5	10.0	8.0	10.5	9.5
14	25.0	20.0	16.5	15.5	13.5	11.0	10.5	9.5	10.5	7.5	11.0	10.0
15	23.5	21.0	16.5	15.5	12.5	11.0	10.5	9.5	10.0	8.5	11.0	10.0
16	24.0	20.0	16.5	15.0	12.0	10.5	10.5	9.5	10.5	8.5	11.5	9.0
17	24.0	21.0	16.5	15.0	12.0	10.0	10.5	9.5	10.5	9.0	20.0	10.5
18	23.5	20.0	16.5	15.0	14.5	8.0	10.5	9.5	10.5	10.0	17.0	11.5
19	24.0	20.0	15.5	14.5	13.5	9.5	10.5	10.0	10.5	9.0	24.0	8.5
20	22.5	19.5	15.5	13.5	14.5	9.5	10.0	9.5	10.5	10.0	11.0	9.5
21	22.0	20.5	15.0	13.5	14.0	9.5	10.0	9.0	10.5	9.5	11.5	9.0
22	21.5	18.5	14.5	13.5	12.5	10.0	9.5	8.5	10.5	9.5	11.5	9.5
23	21.5	15.5	14.5	13.5	11.0	10.0	10.0	8.5	10.5	9.0	11.5	10.0
24	21.5	19.5	14.5	13.0	11.0	9.0	9.5	8.0	10.5	9.0	11.5	8.5
25	21.0	19.0	14.0	12.0	12.0	9.5	10.5	8.0	10.0	9.5	11.5	9.0
26	21.0	19.0	14.5	12.5	11.0	9.5	10.0	8.5	10.5	8.5	11.5	9.5
27	21.0	19.5	14.5	12.5	11.0	9.0	10.0	9.0	12.5	9.0	12.0	10.5
28	21.0	19.5	14.5	12.0	11.0	9.0	10.0	8.5	10.0	9.0	11.5	9.5
29	20.5	19.0	14.0	12.5	10.5	9.0	9.5	8.5	10.5	9.0	12.0	8.5
30	20.0	18.5	14.0	12.0	10.5	8.0	10.0	9.0	---	---	12.5	10.0
31	19.5	18.5	---	---	11.0	8.0	10.0	8.0	---	---	12.0	9.5
MONTH	25.0	15.5	19.5	12.0	14.5	8.0	11.5	8.0	12.5	7.5	24.0	8.5

11204900 TULE RIVER BELOW SUCCESS DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	9.0	14.5	10.5	15.5	13.5	---	---	17.0	16.5	24.5	23.0
2	12.5	10.0	15.0	11.5	15.0	14.0	---	---	17.0	16.5	24.5	23.5
3	12.0	11.5	14.5	11.0	15.5	14.0	---	---	18.0	15.0	24.5	22.5
4	12.0	11.0	14.5	10.5	15.0	14.0	---	---	18.0	16.0	25.0	22.0
5	12.0	10.5	15.0	10.5	15.0	14.0	---	---	18.0	15.0	25.0	22.0
6	12.5	10.5	15.0	10.5	15.0	14.0	---	---	18.5	15.0	25.0	24.0
7	13.0	11.0	15.0	10.0	15.0	13.5	---	---	18.0	15.0	25.5	23.0
8	12.5	12.0	15.5	10.5	15.0	14.0	---	---	19.5	15.0	25.5	23.5
9	12.5	11.5	15.5	10.5	15.5	14.0	---	---	19.0	15.0	25.0	23.5
10	12.5	11.5	15.5	12.0	15.5	13.5	---	---	19.5	14.5	25.5	23.5
11	13.0	11.5	15.5	12.0	16.0	13.0	---	---	19.0	15.0	25.5	23.5
12	12.5	11.5	15.5	12.0	15.5	13.5	16.0	15.0	20.0	15.5	25.0	23.5
13	13.0	10.0	15.5	12.0	16.0	14.0	16.0	15.0	19.5	17.0	25.5	23.5
14	12.5	12.0	16.0	11.5	16.5	13.5	16.0	14.5	18.5	16.0	25.5	24.0
15	13.0	10.5	15.5	12.0	15.5	14.5	16.0	13.5	18.5	18.0	25.0	24.0
16	13.0	11.5	15.5	12.0	15.5	14.0	16.5	15.0	19.0	17.5	24.5	24.0
17	13.5	11.5	16.0	12.0	15.5	13.5	16.5	14.0	19.0	18.5	24.5	24.0
18	13.0	11.5	---	---	16.0	14.0	16.5	15.0	---	---	24.5	24.0
19	13.5	11.5	15.5	11.5	16.0	14.0	16.5	15.0	---	---	24.5	24.0
20	14.0	11.5	15.5	11.5	15.5	14.0	16.5	14.5	---	---	24.5	24.0
21	14.5	10.0	16.0	12.0	15.5	15.0	16.5	15.0	---	---	24.5	24.0
22	14.5	10.0	---	---	15.5	15.0	16.5	15.0	---	---	24.5	24.0
23	14.5	10.0	16.0	11.5	16.0	15.0	16.5	15.5	20.5	19.5	24.5	23.5
24	14.5	10.5	16.5	11.5	15.5	15.0	16.5	14.5	21.0	20.0	24.5	23.5
25	14.5	10.5	16.0	12.5	16.0	15.0	16.5	15.0	21.5	20.0	24.5	23.5
26	14.0	10.5	16.0	12.5	16.0	15.0	16.5	16.0	22.0	21.0	24.5	23.5
27	14.0	10.0	16.0	12.0	16.0	15.0	16.5	15.0	22.5	20.5	24.5	23.5
28	14.5	10.0	17.0	12.0	15.5	14.5	16.5	15.5	23.5	20.0	24.5	23.5
29	15.0	10.5	15.5	12.0	16.0	13.5	17.0	15.5	23.5	20.0	24.5	23.5
30	15.0	11.0	15.5	12.0	---	---	17.0	15.5	24.0	22.0	24.5	23.5
31	---	---	16.0	11.5	---	---	17.5	15.5	24.5	22.0	---	---
MONTH	15.0	9.0	17.0	10.0	16.5	13.0	---	---	24.5	14.5	25.5	22.0

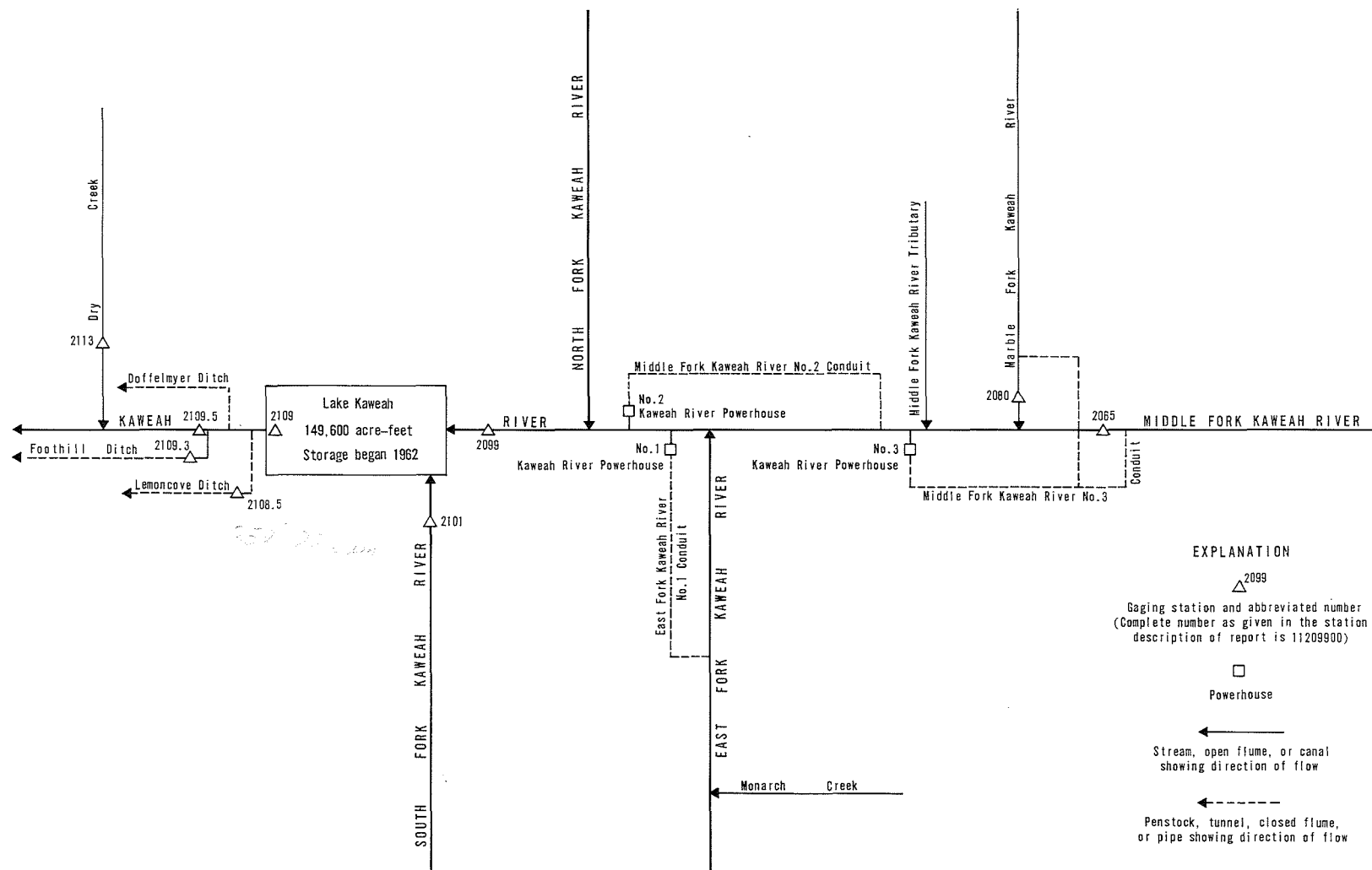


FIGURE 6. — Schematic diagram showing diversions and storage in Kaweah River basin.

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA

LOCATION (REVISED).--Lat 36°30'48", long 118°47'27", in T.16 S., R.29 E., unsurveyed, 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), revised, 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 11 discharge measurements for river and gage-height record and 14 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, 137 ft³/s (3.880 m³/s), 99,260 acre-ft/yr (122 hm³/yr).
Combined river and diversion: 31 years, 177 ft³/s (5.013 m³/s), 128,200 acre-ft/yr (158 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, 7,740 ft³/s (219 m³/s) Jan. 12, gage height, 12.32 ft (3.755 m); minimum daily, 5.1 ft³/s (0.14 m³/s) Sept. 22.
Combined flow, maximum discharge, 7,750 ft³/s (219 m³/s) Jan. 12; minimum daily, 19 ft³/s (0.54 m³/s) Oct. 11-18.

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	14	15	14	42	144	358	229	625	373	881	279	8.7
2	13	9.3	14	21	141	353	217	680	370	959	277	7.3
3	13	13	14	17	144	400	210	573	487	738	252	7.3
4	13	15	13	17	150	355	212	576	557	663	219	6.9
5	13	10	13	17	154	392	313	663	531	600	199	5.9
6	13	11	13	17	156	403	254	629	588	546	171	10
7	15	12	13	17	153	363	237	646	637	557	153	9.1
8	18	11	13	16	139	335	233	576	755	565	142	8.5
9	15	11	13	31	133	323	245	557	845	534	138	5.8
10	13	11	13	175	125	318	266	505	922	478	131	6.3
11	12	11	13	461	119	313	295	405	894	487	130	6.4
12	12	10	12	3620	116	297	321	365	831	487	123	7.0
13	12	10	12	4010	110	290	358	350	755	472	113	5.7
14	12	11	12	2410	160	290	384	340	722	431	100	5.5
15	12	12	12	1060	213	288	403	316	776	436	82	5.4
16	12	12	12	718	287	273	436	323	840	448	69	5.4
17	12	13	12	510	680	275	494	397	922	523	65	5.7
18	12	14	12	419	2110	297	542	531	922	546	66	6.2
19	14	11	12	335	1240	275	588	672	950	475	60	6.2
20	256	9.1	12	290	929	268	573	792	960	419	50	6.3
21	73	9.3	13	258	1010	271	557	836	899	419	47	6.2
22	44	9.1	13	233	773	252	714	840	885	448	44	5.1
23	29	9.5	13	227	650	243	805	714	831	463	40	5.4
24	37	9.5	23	221	546	239	854	411	788	460	35	6.3
25	28	9.3	38	206	466	229	831	442	797	431	31	6.7
26	87	17	14	197	436	221	738	386	818	405	28	6.2
27	40	12	12	190	416	219	659	345	801	394	23	5.5
28	23	12	10	176	392	217	654	333	823	368	21	6.0
29	13	14	10	165	370	225	663	318	845	340	17	6.3
30	11	14	33	151	---	239	654	368	831	297	12	6.0
31	10	---	103	147	---	235	---	381	---	268	9.8	---
TOTAL	901	347.1	536	16374	12462	9056	13939	15895	22955	15538	3126.8	195.3
MEAN	29.1	11.6	17.3	528	430	292	465	513	765	501	101	6.51
MAX	256	17	103	4010	2110	403	854	840	960	959	279	10
MIN	10	9.1	10	16	110	217	210	316	370	268	9.8	5.1
AC-FT	1790	688	1060	32480	24720	17960	27650	31530	45530	30820	6200	387
CAL YR 1979	TOTAL	43394.1	MEAN 119	MAX 876	MIN 9.1	AC-FT 86070						
WTR YR 1980	TOTAL	111325.2	MEAN 304	MAX 4010	MIN 5.1	AC-FT 220800						

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 1979 TO SEPTEMBER 1980

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	45	45	105	175	369	252	683	431	943	342	74
2	26	43	42	82	172	364	241	737	428	1020	340	72
3	25	50	41	75	174	411	234	631	547	800	315	73
4	23	74	39	67	179	367	236	634	617	726	281	73
5	23	59	37	62	185	402	337	721	591	662	261	71
6	22	55	36	65	187	412	278	687	649	608	232	77
7	20	53	36	62	184	376	261	704	698	620	214	75
8	22	49	36	58	170	352	257	634	817	628	203	75
9	22	47	36	85	163	340	274	615	907	597	199	70
10	20	45	35	236	155	335	299	563	985	541	191	69
11	19	44	35	517	149	330	330	462	957	550	190	65
12	19	41	31	3630	146	314	358	421	893	550	183	62
13	19	38	30	4010	144	307	396	406	816	535	172	59
14	19	38	29	2410	196	307	422	398	783	494	160	58
15	19	38	27	1060	249	305	441	372	837	499	141	55
16	19	37	27	720	323	290	474	380	902	511	128	51
17	19	54	27	531	716	292	539	455	985	585	124	51
18	19	57	26	462	2140	314	598	589	985	609	126	50
19	21	44	26	381	1280	294	646	732	1010	537	121	51
20	272	39	27	333	974	288	631	853	1020	481	111	53
21	96	40	34	304	1040	291	615	897	961	481	108	50
22	82	38	31	279	798	272	771	901	947	511	105	46
23	73	45	31	261	667	263	861	775	893	526	101	43
24	77	44	66	249	562	259	910	470	849	523	96	40
25	83	44	86	241	482	249	887	500	858	494	91	38
26	146	67	50	230	450	241	795	444	880	468	91	35
27	98	61	48	218	428	239	716	403	863	457	90	34
28	80	54	48	207	404	237	711	391	885	431	87	33
29	66	50	47	201	382	246	720	376	907	404	83	31
30	57	47	79	187	---	260	711	426	892	360	78	30
31	51	---	165	180	---	256	---	439	---	331	76	---
TOTAL	1586	1440	1353	17508	13274	9582	15281	17699	24793	17481	5040	1664
MEAN	51.2	48.0	43.6	565	458	309	507	571	826	564	163	55.5
MAX	272	74	165	4010	2140	412	910	901	1020	1020	342	77
MIN	19	37	26	58	144	237	234	372	428	331	76	30
AC-FT	3150	2860	2680	34730	26330	19010	30150	35110	49180	34670	10000	3300
CAL YR 1979	TOTAL	60239	MEAN 165	MAX 942	MIN 17	AC-FT 119500						
WTR YR 1980	TOTAL	126621	MEAN 346	MAX 4010	MIN 19	AC-FT 251200						

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES: June to September 1980.

SPECIFIC CONDUCTANCE: October 1979 to September 1980.

WATER TEMPERATURES: October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to September 1980.

WATER TEMPERATURES: October 1979 to September 1980.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperatures since Oct. 4, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 68 micromhos Oct. 16-19; minimum recorded, 19 micromhos Jan. 13.

WATER TEMPERATURES: Maximum recorded, 20.0°C Aug. 1, 2, 11; minimum recorded, 0.5°C Mar. 3, 7.

WATER QUALITY DATA, JUNE TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
JUN 12...	1545	700	18	7.3	11.5	--	10.6	7	0	2.1	.4	1.0
JUL 10...	1330	435	19	7.3	12.5	--	10.0	7	0	2.1	.4	1.3
AUG 06...	1600	155	23	7.1	17.5	702	9.0	7	0	2.4	.3	1.3
SEP 11...	1000	6.6	48	7.0	14.0	706	8.9	14	0	4.8	.6	2.7

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	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 SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
JUN 12...	23	.2	.4	8	.5	.3	.0	6.2	16	.02	.06	.010
JUL 10...	28	.2	.4	9	1.4	.2	.1	6.1	18	.02	.05	.003
AUG 06...	26	.2	.5	8	.3	.3	.3	6.4	17	.02	.03	.010
SEP 11...	27	.3	1.1	16	6.1	.9	.1	12	38	.05	.14	.001

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUN 12...	1545	5	10	6
JUL 10...	1330	--	20	4
AUG 06...	1600	--	<10	3
SEP 11...	1000	--	<10	2

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

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	8.0	6.0	7.0	5.5	7.0	6.0	---	---	3.5	2.0
2	---	---	8.5	6.5	7.5	6.0	6.0	4.5	---	---	4.0	2.5
3	---	---	8.5	7.0	7.5	6.0	5.5	4.5	---	---	3.0	0.5
4	---	---	8.0	6.5	7.5	6.0	5.5	4.0	---	---	4.0	1.5
5	18.5	16.0	8.0	6.0	6.5	5.5	5.5	4.5	---	---	3.0	1.5
6	18.0	16.0	8.0	6.5	6.5	5.0	7.0	5.5	---	---	1.5	1.0
7	17.5	15.5	7.5	6.5	7.0	5.5	8.0	7.0	---	---	3.0	0.5
8	16.0	15.0	7.5	7.0	7.5	6.0	7.0	6.0	---	---	4.0	1.0
9	15.5	13.0	8.5	7.0	8.0	6.5	7.0	6.0	---	---	5.0	1.5
10	16.0	13.5	8.5	6.5	7.5	6.5	7.0	5.5	---	---	4.5	2.5
11	16.0	14.0	8.0	6.5	7.5	6.5	7.5	5.5	---	---	5.0	3.0
12	16.0	14.0	8.0	6.0	6.0	4.5	7.0	1.5	---	---	4.0	1.5
13	15.0	14.0	7.5	6.0	4.5	3.0	8.0	6.5	---	---	5.0	2.5
14	16.0	14.0	7.0	5.5	4.5	3.5	8.0	7.5	---	---	6.0	2.5
15	16.0	14.0	7.5	5.5	4.5	3.5	7.5	5.5	---	---	5.0	3.5
16	16.5	14.5	7.5	6.0	5.0	3.5	8.5	6.5	---	---	4.5	3.0
17	16.5	15.0	8.5	7.5	5.0	3.5	6.5	5.5	---	---	6.5	3.0
18	16.0	14.5	8.5	7.0	5.0	4.0	5.5	4.0	---	---	5.0	2.0
19	16.0	14.5	7.0	5.5	5.0	4.0	4.0	3.0	---	---	5.0	1.5
20	15.0	10.5	5.5	3.5	6.0	4.5	---	---	---	---	6.5	3.0
21	10.0	8.5	3.5	2.0	6.5	5.5	---	---	---	---	5.5	3.0
22	10.0	8.0	4.0	2.5	5.5	4.0	---	---	---	---	4.5	1.5
23	11.0	8.5	6.0	4.0	4.5	3.0	---	---	---	---	6.0	2.0
24	12.0	9.5	7.0	5.5	6.0	4.5	---	---	---	---	6.5	3.5
25	11.0	9.5	7.0	5.5	6.0	5.0	---	---	---	---	3.5	2.0
26	11.5	11.0	8.5	7.0	5.0	4.0	---	---	---	---	5.0	2.0
27	11.0	9.5	8.5	7.0	4.0	2.5	---	---	4.5	2.0	5.5	3.0
28	11.0	9.0	7.5	6.0	3.5	2.0	---	---	4.5	2.5	7.0	4.0
29	9.5	8.0	7.0	6.0	4.5	3.5	---	---	4.0	1.5	7.5	4.5
30	8.5	6.5	7.0	5.5	7.0	4.0	---	---	---	---	8.0	5.0
31	8.5	6.5	---	---	8.0	7.0	---	---	---	---	7.0	6.0
MONTH	18.5	6.5	8.5	2.0	8.0	2.0	---	---	---	---	8.0	0.5

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA

LOCATION (REVISED).--Lat 36°31'08", long 118°48'03", in T.16 S., R.29 E. unsurveyed, 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 11 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: 30 years, 76.5 ft³/s (2.166 m³/s), 55,420 acre-ft/yr (68.3 hm³/yr). Combined river and diversion: 30 years, 101 ft³/s (2.860 m³/s), 73,170 acre-ft/yr (90.2 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, 3,040 ft³/s (86.1 m³/s) Jan. 13, gage height, 9.27 ft (2.825 m), from rating curve extended as explained above; minimum daily, 0.76 ft³/s (0.022 m³/s) Oct. 28. Combined flow, maximum discharge, 3,040 ft³/s (86.1 m³/s) Jan. 13; minimum daily, 8.9 ft³/s (0.25 m³/s) Oct. 17.

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	4.6	.90	.90	29	49	135	81	344	235	513	142	4.8
2	4.7	.90	.95	11	52	128	71	330	250	549	133	1.4
3	1.8	1.9	3.2	7.2	59	136	70	391	344	413	116	1.4
4	2.3	3.9	2.9	6.4	56	126	73	439	368	382	100	1.4
5	2.3	3.4	.97	6.4	65	131	91	465	347	347	90	1.6
6	2.3	.92	.99	6.4	70	126	86	449	370	313	76	1.9
7	4.1	.88	1.0	6.4	65	112	82	445	398	339	58	2.1
8	5.1	.88	1.3	6.4	56	109	83	382	489	336	53	2.3
9	4.6	.88	1.3	14	50	107	98	373	550	307	52	2.3
10	3.1	.89	1.3	55	48	104	113	325	580	285	48	1.9
11	7.3	.91	1.8	203	44	100	145	263	565	290	52	1.9
12	5.1	.93	1.8	1530	43	90	166	238	517	285	45	1.7
13	8.9	.97	1.8	2210	43	90	191	233	489	263	40	1.7
14	9.6	2.3	1.8	1570	59	94	211	221	465	250	33	1.7
15	8.3	.99	2.3	551	81	94	223	202	510	255	26	1.7
16	5.1	.96	2.3	342	115	87	253	207	565	261	24	1.7
17	4.6	9.5	3.1	235	335	93	288	277	587	304	26	1.7
18	5.1	8.3	3.1	187	1440	97	347	373	599	290	26	1.7
19	5.5	2.7	2.3	151	646	84	368	472	610	245	24	1.7
20	110	1.0	2.3	125	413	86	391	535	610	216	17	1.7
21	42	1.0	6.6	109	385	90	365	561	583	223	11	1.7
22	17	1.0	4.1	97	288	81	268	557	568	235	9.5	1.7
23	3.1	1.3	5.8	88	238	74	228	472	521	238	8.4	1.7
24	12	1.9	21	83	211	77	207	347	503	233	8.4	1.9
25	7.3	.83	19	82	185	70	233	290	514	216	8.4	1.9
26	52	12	8.9	79	170	65	285	253	514	196	9.5	2.1
27	4.8	9.7	4.7	74	164	64	339	230	496	181	11	2.1
28	.76	.83	2.3	70	151	68	342	218	521	196	9.9	2.1
29	.84	.84	.97	64	144	74	319	216	521	166	10	2.3
30	.89	.85	8.2	57	---	86	336	263	496	138	11	2.3
31	.90	---	60	53	---	84	---	250	---	135	12	---
TOTAL	345.99	74.26	178.98	8108.2	5725	2962	6353	10621	14685	8600	1290.1	58.1
MEAN	11.2	2.48	5.77	262	197	95.5	212	343	490	277	41.6	1.94
MAX	110	12	60	2210	1440	136	391	561	610	549	142	4.8
MIN	.76	.83	.90	6.4	43	64	70	202	235	135	8.4	1.4
AC-FT	686	147	355	16080	11360	5880	12600	21070	29130	17060	2560	115
CAL YR 1979 TOTAL	26793.82	MEAN	73.4	MAX	602	MIN	.76	AC-FT	53150			
WTR YR 1980 TOTAL	59001.63	MEAN	161	MAX	2210	MIN	.76	AC-FT	117000			

WATER-QUALITY RECORDS

WATER TEMPERATURE: Water years 1979 to current year.

WATER TEMPERATURE: August 1979 to current year.

EXTREMES FOR PERIOD AUGUST AND SEPTEMBER 1979.--

WATER TEMPERATURE: Maximum recorded, 22.0°C Sept. 10, 11, 13, 14; minimum recorded, 15.0°C Sept. 27, 28.

WATER TEMPERATURE: Maximum recorded, 19.5°C Aug. 2; minimum recorded, 3.0°C Dec. 27.

[illegible]

TULARE LAKE BASIN

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

TEMPERATURE (DEG. C) OF WATER, AUGUST AND SEPTEMBER 1979
(NOT PREVIOUSLY PUBLISHED)

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1									---	---	20.0	17.0
2									---	---	20.5	18.0
3									---	---	21.0	18.5
4									---	---	21.0	18.5
5									---	---	21.0	18.5
6									---	---	21.0	18.5
7									---	---	21.0	18.5
8									---	---	21.5	19.0
9									---	---	21.5	19.0
10									---	---	22.0	19.0
11									---	---	22.0	19.5
12									---	---	21.5	19.5
13									---	---	22.0	19.5
14									---	---	22.0	20.0
15									20.5	18.0	21.5	19.0
16									20.0	17.5	21.0	19.0
17									19.5	18.0	21.5	19.5
18									20.0	17.0	21.0	19.0
19									20.0	16.5	20.5	18.5
20									20.0	16.5	20.0	18.0
21									19.5	16.5	19.5	17.0
22									19.5	16.5	19.5	17.5
23									20.0	16.5	19.5	17.5
24									20.0	17.5	19.5	17.5
25									20.5	17.0	19.0	16.0
26									20.5	17.5	17.5	16.0
27									20.5	17.5	16.5	15.0
28									20.5	18.0	17.5	15.0
29									19.5	18.0	17.0	16.5
30									19.5	17.5	18.0	16.5
31									20.0	16.5	---	---
MONTH									---	---	22.0	15.0
PERIOD	22.0	15.0										

WATER QUALITY DATA, JUNE TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	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)
JUN 12...	1430	445	15	7.2	10.0	--	10.8	7	0	2.0	.4	1.1
JUL 10...	1145	243	19	7.1	10.5	--	10.1	6	0	1.9	.4	1.0
AUG 06...	1430	65	30	7.2	17.0	702	8.6	10	1	3.2	.6	1.1
SEP 10...	1500	1.6	68	7.5	15.0	706	9.1	28	3	8.6	1.7	2.4
DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY (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)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+N03 DIS- SOLVED (MG/L AS N)	
JUN 12...	25	.2	.4	8	1.0	.7	.0	6.3	17	.02	.03	
JUL 10...	24	.2	.3	9	.9	.1	.1	5.7	16	.02	.00	
AUG 06...	18	.1	.4	9	2.0	.5	.2	6.6	20	.03	.03	
SEP 10...	15	.2	1.0	25	3.3	.6	.1	14	47	.06	.00	

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

WATER QUALITY DATA, JUNE TO SEPTEMBER 1980

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUN 12...	1430	7	20	--
JUL 10...	1145	--	20	2
AUG 06...	1430	--	10	4
SEP 10...	1500	--	<10	4

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	64	59	37	---	41					---	62
2	92	66	59	42	---	42					---	65
3	94	66	60	44	---	42					---	65
4	95	66	61	46	---	44					---	65
5	98	64	63	48	---	44					---	65
6	99	63	63	49	---	47					29	67
7	101	63	64	49	---	50					30	67
8	101	64	63	49	---	50					30	66
9	102	64	63	48	---	49					31	67
10	102	65	64	57	---	49					32	68
11	102	65	64	45	---	50					31	69
12	103	65	63	20	---	50					33	70
13	104	65	65	15	---	50					34	72
14	105	65	66	19	---	49					37	71
15	106	66	68	21	---	49					39	72
16	106	67	69	28	---	49					41	73
17	105	66	70	22	---	---					41	74
18	105	61	72	38	---	---					40	77
19	105	63	72	41	---	---					41	77
20	55	64	73	40	---	---					44	77
21	46	66	72	41	---	---					45	75
22	51	67	71	42	---	---					46	74
23	55	67	71	42	---	---					48	75
24	52	65	67	42	---	---					51	75
25	50	63	56	43	47	---					53	77
26	34	59	61	44	45	---					53	78
27	43	53	60	---	43	---					54	79
28	52	56	60	---	40	---					54	80
29	56	57	59	---	39	---					56	80
30	58	58	58	---	---	---					58	80
31	61	---	36	---	---	---					60	---
MONTH	82	63	64	39	---	---					43	72

TULARE LAKE BASIN

11208000 MARBLE FORK KAWeah RIVER AT POTWISHA CAMP, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	15.5	9.5	8.0	8.0	7.0	7.0	5.0	7.5	5.0	7.5	6.0
2	17.5	16.0	9.5	8.5	8.5	7.5	6.5	4.5	9.0	6.5	---	---
3	17.0	16.0	9.5	8.5	9.0	7.5	6.0	4.5	9.5	7.5	---	---
4	17.5	15.5	9.0	8.0	8.5	7.5	6.0	4.0	9.5	7.0	---	---
5	17.5	16.0	8.5	7.0	8.0	7.0	6.5	4.5	10.0	8.5	---	---
6	17.5	15.5	9.0	7.5	8.0	7.0	7.0	5.5	9.0	8.5	---	---
7	17.0	15.5	8.5	8.0	9.0	7.5	7.5	6.5	8.5	6.0	---	---
8	16.5	15.5	9.0	8.5	9.5	8.0	6.5	5.0	7.0	5.0	---	---
9	15.5	13.5	9.5	8.0	9.5	8.5	7.0	6.0	7.5	5.5	---	---
10	15.5	13.5	9.5	8.0	9.0	8.0	6.5	5.0	7.5	5.5	---	---
11	16.0	14.0	9.0	8.0	9.0	7.5	6.5	4.5	7.5	5.5	---	---
12	16.0	14.5	8.5	7.5	7.5	6.0	5.5	3.5	7.5	5.0	---	---
13	15.0	14.0	9.0	7.5	6.0	5.0	6.0	4.5	7.5	5.5	---	---
14	16.0	14.0	8.5	7.5	6.5	5.5	6.0	4.5	9.0	4.0	---	---
15	16.0	14.0	9.0	7.5	6.5	5.5	6.0	4.5	8.0	4.5	---	---
16	16.5	14.5	9.0	8.0	7.0	5.5	7.5	6.0	---	---	---	---
17	16.5	15.0	9.5	9.0	7.0	6.0	6.0	5.0	---	---	---	---
18	16.0	15.0	9.0	7.5	7.5	6.0	5.0	4.0	---	---	---	---
19	15.5	14.5	8.5	6.5	7.0	6.5	4.0	2.5	---	---	---	---
20	15.0	10.0	7.0	5.0	7.5	6.5	5.0	3.0	---	---	---	---
21	10.5	8.5	5.5	4.0	7.5	6.5	6.0	4.0	---	---	---	---
22	11.0	8.5	6.0	4.5	6.5	5.5	6.5	4.5	---	---	---	---
23	11.5	9.0	7.5	5.5	5.5	4.0	6.5	4.5	---	---	---	---
24	12.0	9.5	7.5	6.5	6.5	5.5	6.5	4.5	---	---	---	---
25	11.5	9.5	8.0	7.0	6.5	4.5	6.5	4.5	---	---	---	---
26	12.0	10.0	9.5	8.0	5.5	4.5	6.0	4.5	8.5	6.0	---	---
27	11.5	9.5	8.5	7.5	4.5	3.0	5.5	4.5	8.5	6.0	---	---
28	12.0	11.0	8.5	7.5	5.0	3.5	6.0	4.5	8.0	6.5	---	---
29	11.5	9.5	8.5	7.5	6.0	4.5	6.5	6.0	8.0	5.5	---	---
30	9.5	8.0	8.0	7.0	7.0	5.0	6.0	3.5	---	---	---	---
31	9.5	8.0	---	---	7.0	6.0	6.0	4.0	---	---	---	---
MONTH	17.5	8.0	9.5	4.0	9.5	3.0	7.5	2.5	---	---	---	---

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

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 1979 TO SEPTEMBER 1980

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	20	63	107	213	152	378	270	546	174	27
2	13	15	19	44	105	206	142	364	285	582	165	24
3	9.5	17	18	36	111	214	141	425	380	445	148	24
4	9.7	24	18	31	118	204	144	474	404	412	131	24
5	9.5	23	16	28	128	207	163	500	382	375	121	24
6	9.2	21	16	28	133	202	154	484	404	341	107	24
7	11	21	16	27	128	187	154	480	432	367	92	25
8	12	20	16	25	119	180	152	417	522	364	90	25
9	11	18	16	37	112	179	166	407	582	334	89	23
10	9.5	18	17	81	108	177	194	359	612	312	83	23
11	11	18	17	226	104	173	211	296	596	318	87	22
12	9.2	17	15	1540	103	163	223	270	547	319	80	20
13	12	16	15	2210	102	163	248	267	520	304	75	19
14	13	17	14	1570	119	167	263	254	496	293	67	19
15	12	16	14	551	140	168	280	240	542	289	57	18
16	9.2	15	13	359	168	161	308	244	596	291	52	18
17	8.9	26	13	282	380	166	331	314	618	335	55	17
18	9.2	27	13	239	1480	170	382	408	630	321	57	16
19	9.8	22	12	202	692	157	407	505	641	273	51	17
20	118	17	13	183	464	159	425	573	641	246	47	17
21	54	17	18	173	449	163	399	595	614	254	45	16
22	42	17	14	161	358	154	304	598	599	269	44	16
23	34	17	16	152	308	147	264	514	552	272	41	15
24	40	19	33	147	282	150	242	386	533	267	37	15
25	43	19	30	146	255	143	269	324	544	249	35	14
26	97	32	21	140	241	138	322	287	544	229	35	13
27	45	34	19	132	238	136	374	261	530	214	35	12
28	32	25	16	128	229	137	375	251	555	229	33	12
29	25	23	15	122	223	144	353	252	555	198	32	12
30	20	21	24	114	---	157	371	299	529	170	32	12
31	18	---	91	110	---	155	---	285	---	167	32	---
TOTAL	769.7	609	608	9287	7504	5240	7913	11711	15655	9585	2229	563
MEAN	24.8	20.3	19.6	300	259	169	264	378	522	309	71.9	18.8
MAX	118	34	91	2210	1480	214	425	598	641	582	174	27
MIN	8.9	15	12	25	102	136	141	240	270	167	32	12
AC-FT	1530	1210	1210	18420	14880	10390	15700	23230	31050	19010	4420	1120
CAL YR 1979	TOTAL	34994.6	MEAN	95.9	MAX	631	MIN	8.7	AC-FT	69410		
WTR YR 1980	TOTAL	71673.7	MEAN	196	MAX	2210	MIN	8.9	AC-FT	142200		

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.

WATER-DISCHARGE RECORDS

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.

AVERAGE DISCHARGE.--50 years (1910-60), 100 ft³/s (2.83 m³/s), 72,400 acre-ft/yr (89.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (1910-60, 1966-67).--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 PERIOD.--Maximum discharge, 42 ft³/s (1.05 m³/s) Aug. 6; minimum daily, 16 ft³/s (0.45 m³/s) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, AUGUST AND SEPTEMBER 1980
MEAN VALUES

[illegible]

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 and September 1980.

WATER TEMPERATURES: August and September 1980.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August and September 1980.

WATER TEMPERATURES: August and September 1980.

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

EXTREMES FOR PERIOD.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 159 micromhos Sept. 14, 15; minimum daily recorded, 117

micromhos Aug. 6.

WATER TEMPERATURES: Maximum recorded, 27.5°C Aug. 10-12; minimum recorded, 16.0°C Sept. 15, 16.

WATER QUALITY DATA, JUNE TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM HG)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
JUN 12...	1100	--	46	7.2	13.0	--	9.9	19	0
JUL 10...	1000	--	89	7.6	17.0	--	9.0	39	0
AUG 06...	1400	37	121	8.0	23.5	731	7.6	49	0
SEP 10...	1605	27	157	8.1	23.0	733	7.7	58	1

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JUN 12...	6.2	.9	2.4	21	.2	.7	24	.5	.0
JUL 10...	13	1.7	4.0	18	.3	1.0	42	1.0	.2
AUG 06...	16	2.1	4.8	17	.3	1.2	61	1.5	.2
SEP 10...	19	2.5	5.2	16	.3	1.5	57	3.4	.1

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUN 12...	13	39	.05	.06	.011	0	30	3
JUL 10...	19	66	.09	.01	.005	--	50	4
AUG 06...	21	85	.12	.05	.014	--	20	6
SEP 10...	21	95	.13	.03	.002	--	10	2

TULARE LAKE BASIN

11209500 NORTH FORK KAWEAH RIVER NEAR THREE RIVERS, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), AUGUST AND SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	156
2											---	---
3											---	---
4											---	---
5											---	---
6											117	---
7											118	---
8											118	---
9											119	---
10											120	---
11											120	157
12											121	156
13											121	157
14											121	159
15											122	159
16											123	158
17											122	158
18											123	157
19											123	157
20											123	158
21											123	158
22											126	158
23											129	157
24											132	156
25											135	156
26											138	156
27											141	156
28											144	156
29											148	156
30											150	155
31											154	---
MONTH											128	---

TEMPERATURE (DEG. C) OF WATER, AUGUST AND SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1									---	---	23.5	18.5
2									---	---	24.0	19.5
3									---	---	24.5	19.5
4									---	---	25.0	20.0
5									---	---	25.0	20.0
6									26.0	23.5	24.5	20.5
7									25.5	21.5	23.0	20.5
8									27.0	22.0	23.0	18.5
9									27.0	22.0	22.0	19.0
10									27.5	22.5	22.5	17.0
11									27.5	22.5	23.0	18.5
12									27.5	23.0	23.0	19.0
13									27.0	22.0	23.0	19.0
14									25.5	21.5	20.5	17.5
15									25.0	20.5	19.0	16.0
16									25.0	20.5	20.5	16.0
17									25.5	21.0	22.0	18.0
18									25.5	21.5	22.0	18.5
19									24.5	21.0	21.5	18.5
20									25.0	20.5	21.0	17.5
21									25.5	20.5	20.5	17.0
22									25.0	21.0	21.0	16.5
23									24.5	20.0	21.0	17.0
24									24.0	19.5	21.5	17.0
25									24.0	19.0	21.5	17.0
26									24.0	19.5	21.5	17.5
27									24.5	19.5	21.5	17.0
28									23.5	19.5	21.0	17.5
29									23.5	18.5	21.0	17.0
30									22.5	18.0	21.5	17.0
31									23.0	18.0	---	---
MONTH									27.5	18.0	25.0	16.0

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.--22 years, 527 ft³/s (14.92 m³/s), 381,800 acre-ft/yr (471 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.--Peak discharges above base of 1,800 ft³/s (51.0 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. 12	1745	*23,600 668	12.39 3.776	May 7	0045	2,530 71.6	6.88 2.097
Feb. 18	0530	12,500 354	10.12 3.085	May 22	0030	3,350 94.9	7.31 2.228
Mar. 5	1415	2,570 72.8	6.90 2.103	June 19	2345	3,480 98.6	7.37 2.246

Minimum daily, 42 ft³/s (1.19 m³/s) Oct. 11, 13.

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	65	98	110	375	535	1380	908	1860	1350	2320	731	158
2	53	97	104	226	534	1340	861	1760	1360	2450	715	152
3	52	93	91	186	530	1750	828	1970	1670	1970	670	150
4	50	141	94	165	543	1480	858	2130	1790	1810	601	147
5	49	141	92	153	570	1790	1130	2270	1750	1660	560	142
6	46	126	94	146	586	1980	1050	2220	1860	1500	498	144
7	45	119	94	146	578	1650	951	2270	1980	1520	439	147
8	46	114	91	144	545	1470	923	2020	2290	1510	418	148
9	48	112	91	167	519	1380	972	2010	2580	1430	411	144
10	46	107	91	1070	500	1360	1060	1980	2780	1320	388	147
11	42	104	92	2020	487	1310	1170	1610	2730	1340	385	138
12	43	107	85	11300	470	1220	1240	1440	2480	1330	371	132
13	42	98	82	14700	462	1170	1350	1390	2340	1290	347	126
14	44	95	81	11300	528	1170	1420	1430	2230	1200	320	122
15	44	90	79	4270	833	1150	1490	1310	2360	1200	289	119
16	44	86	77	2560	870	1100	1600	1310	2560	1190	269	115
17	45	106	75	1910	2830	1080	1770	1520	2740	1340	264	110
18	45	146	73	1620	8860	1160	1930	1890	2760	1350	266	109
19	46	115	72	1280	5460	1070	2050	2230	2840	1220	258	110
20	472	98	73	1030	4960	1040	2120	2600	2840	1070	244	114
21	246	94	84	917	4890	1060	2040	2760	2690	1070	232	111
22	178	95	89	832	3360	990	1650	2800	2620	1120	223	108
23	149	100	81	761	2530	947	1440	2410	2430	1120	217	103
24	149	107	104	723	2140	948	1340	1940	2310	1120	203	99
25	155	105	224	705	1860	914	1410	1680	2320	1070	192	93
26	269	118	137	684	1720	887	1620	1500	2320	1040	184	90
27	199	164	117	659	1630	870	1810	1370	2280	986	180	89
28	154	130	111	632	1550	856	1830	1300	2330	959	176	84
29	132	119	108	610	1440	877	1830	1270	2350	874	167	81
30	116	115	111	579	---	933	1840	1390	2270	778	158	83
31	107	---	453	560	---	929	---	1360	---	702	155	---
TOTAL	3221	3340	3360	62430	52320	37261	42491	57000	69210	40859	10531	3615
MEAN	104	111	108	2014	1804	1202	1416	1839	2307	1318	340	121
MAX	472	164	453	14700	8860	1980	2120	2800	2840	2450	731	158
MIN	42	86	72	144	462	856	828	1270	1350	702	155	81
AC-FT	6390	6620	6660	123800	103800	73910	84280	113100	137300	81040	20890	7170
CAL YR 1979 TOTAL	178954			490	2900	39	AC-FT	355000				
WTR YR 1980 TOTAL	385638			1054	14700	42	AC-FT	764900				

TULARE LAKE BASIN

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, 24.0°C Aug. 11, 12; minimum recorded, 4.0°C Dec. 28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

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.--22 years, 527 ft³/s (14.92 m³/s), 381,800 acre-ft/yr (471 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.--Peak discharges above base of 1,800 ft³/s (51.0 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. 12	1745	*23,600 668	12.39 3.776	May 7	0045	2,530 71.6	6.88 2.097
Feb. 18	0530	12,500 354	10.12 3.085	May 22	0030	3,350 94.9	7.31 2.228
Mar. 5	1415	2,570 72.8	6.90 2.103	June 19	2345	3,480 98.6	7.37 2.246

Minimum daily, 42 ft³/s (1.19 m³/s) Oct. 11, 13.

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	65	98	110	375	535	1380	908	1860	1350	2320	731	158
2	53	97	104	226	534	1340	861	1760	1360	2450	715	152
3	52	93	91	186	530	1750	828	1970	1670	1970	670	150
4	50	141	94	165	543	1480	858	2130	1790	1810	601	147
5	49	141	92	153	570	1790	1130	2270	1750	1660	560	142
6	46	126	94	146	586	1980	1050	2220	1860	1500	498	144
7	45	119	94	146	578	1650	951	2270	1980	1520	439	147
8	46	114	91	144	545	1470	923	2020	2290	1510	418	148
9	48	112	91	167	519	1380	972	2010	2580	1430	411	144
10	46	107	91	1070	500	1360	1060	1980	2780	1320	388	147
11	42	104	92	2020	487	1310	1170	1610	2730	1340	385	138
12	43	107	85	11300	470	1220	1240	1440	2480	1330	371	132
13	42	98	82	14700	462	1170	1350	1390	2340	1290	347	126
14	44	95	81	11300	528	1170	1420	1430	2230	1200	320	122
15	44	90	79	4270	833	1150	1490	1310	2360	1200	289	119
16	44	86	77	2560	870	1100	1600	1310	2560	1190	269	115
17	45	106	75	1910	2830	1080	1770	1520	2740	1340	264	110
18	45	146	73	1620	8860	1160	1930	1890	2760	1350	266	109
19	46	115	72	1280	5460	1070	2050	2230	2840	1220	258	110
20	472	98	73	1030	4960	1040	2120	2600	2840	1070	244	114
21	246	94	84	917	4890	1060	2040	2760	2690	1070	232	111
22	178	95	89	832	3360	990	1650	2800	2620	1120	223	108
23	149	100	81	761	2530	947	1440	2410	2430	1120	217	103
24	149	107	104	723	2140	948	1340	1940	2310	1120	203	99
25	155	105	224	705	1860	914	1410	1680	2320	1070	192	93
26	269	118	137	684	1720	887	1620	1500	2320	1040	184	90
27	199	164	117	659	1630	870	1810	1370	2280	986	180	89
28	154	130	111	632	1550	856	1830	1300	2330	959	176	84
29	132	119	108	610	1440	877	1830	1270	2350	874	167	81
30	116	115	111	579	---	933	1840	1390	2270	778	158	83
31	107	---	453	560	---	929	---	1360	---	702	155	---
TOTAL	3221	3340	3360	62430	52320	37261	42491	57000	69210	40859	10531	3615
MEAN	104	111	108	2014	1804	1202	1416	1839	2307	1318	340	121
MAX	472	164	453	14700	8860	1980	2120	2800	2840	2450	731	158
MIN	42	86	72	144	462	856	828	1270	1350	702	155	81
AC-FT	6390	6620	6660	123800	103800	73910	84280	113100	137300	81040	20890	7170
CAL YR 1979 TOTAL	178954			490		2900						
WTR YR 1980 TOTAL	385638			1054		14700						

TULARE LAKE BASIN

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, 24.0°C Aug. 11, 12; minimum recorded, 4.0°C Dec. 28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

11209900 KAWEAH RIVER AT THREE RIVERS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	7.5	11.0	9.5	13.5	10.0	16.5	13.0	23.0	20.0	22.0	17.0
2	10.0	6.5	13.5	9.5	14.0	11.0	16.0	12.0	23.5	20.0	23.0	17.5
3	10.5	6.5	13.0	11.0	13.0	10.0	16.5	13.0	22.5	19.5	23.0	18.0
4	10.5	8.0	14.0	11.0	13.0	9.5	16.5	13.0	22.0	18.5	23.5	18.5
5	9.0	8.5	13.5	10.5	13.0	9.5	16.5	13.5	22.0	18.5	23.5	18.5
6	10.5	7.5	13.0	10.5	13.0	10.0	16.5	13.0	22.0	18.5	23.0	19.0
7	10.5	7.5	12.5	9.5	13.5	10.0	17.0	14.0	21.5	18.0	22.0	18.5
8	12.0	8.0	13.0	9.5	14.0	10.5	17.0	14.0	23.5	18.5	21.5	17.0
9	13.0	9.0	11.5	9.0	14.5	10.5	16.0	12.5	23.5	19.0	20.0	17.0
10	13.0	10.0	9.0	7.0	14.5	10.5	16.5	13.0	23.5	19.0	21.5	16.0
11	13.0	10.5	8.5	6.5	13.5	10.0	17.5	14.0	24.0	19.5	21.5	17.0
12	13.0	10.0	9.5	7.0	13.0	9.5	17.5	14.5	24.0	20.0	22.0	17.5
13	12.5	9.5	10.5	8.5	13.0	9.5	17.5	14.5	23.5	19.5	22.0	17.5
14	12.0	9.5	10.0	9.0	13.5	9.5	18.0	14.5	22.5	18.5	19.5	16.0
15	12.0	9.5	11.5	9.0	14.0	10.0	18.0	15.0	22.0	17.5	17.5	14.5
16	13.0	9.5	14.0	10.5	15.5	11.0	19.0	15.5	22.5	18.0	19.5	14.5
17	13.0	10.0	14.5	11.5	15.0	11.0	19.5	16.0	23.5	18.5	21.5	16.5
18	13.0	9.5	15.0	12.0	15.5	11.5	19.5	16.5	23.5	19.5	21.5	17.5
19	12.5	9.5	14.5	11.5	15.5	11.0	19.0	16.0	22.5	19.0	21.0	17.0
20	12.0	9.5	14.0	11.0	15.5	11.5	19.5	16.5	23.0	18.5	20.5	16.0
21	11.0	7.0	14.0	11.0	15.5	11.5	20.0	16.5	23.5	18.5	20.0	15.5
22	7.5	6.5	13.0	11.0	15.0	11.0	20.5	17.0	23.5	19.5	20.5	15.5
23	7.0	6.5	10.5	7.5	14.5	11.0	21.0	17.5	22.5	18.0	20.5	15.5
24	8.5	7.0	7.5	6.5	15.0	11.0	21.5	18.0	22.5	17.5	21.0	16.0
25	12.0	8.5	9.5	5.5	15.5	11.5	22.0	19.0	22.0	17.0	21.5	16.0
26	12.5	10.0	11.0	7.5	16.0	12.0	22.0	18.5	22.5	17.5	21.5	16.0
27	12.5	10.5	11.5	8.5	16.0	12.0	20.5	18.0	22.5	18.0	21.0	16.0
28	12.5	10.5	10.5	9.0	17.0	12.5	22.0	19.0	22.0	17.5	20.5	16.0
29	10.5	10.0	13.0	9.0	16.0	13.0	22.5	19.0	21.5	16.5	21.0	15.5
30	11.0	10.0	12.5	11.0	15.0	13.0	21.0	19.0	21.0	16.0	21.5	16.0
31	---	---	12.5	10.0	---	---	23.0	19.0	22.0	16.5	---	---
MONTH	13.0	6.5	15.0	5.5	17.0	9.5	23.0	12.0	24.0	16.0	23.5	14.5

TULARE LAKE BASIN

11210100 SOUTH FORK KANEAH 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.--22 years, 69.0 ft³/s (1.954 m³/s), 49,990 acre-ft/yr (61.6 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.--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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	1915	*5,060 143	6.41 1.954	May 21	2330	522 14.8	3.66' 1.116'
Jan. 18	0630	501 14.2	3.62 1.103	June 10	2245	590 16.7	3.78 1.152
Feb. 20	0500	1,570 44.5	4.87 1.484	June 18	2315	590 16.7	3.78 1.152
Mar. 6	1245	511 14.5	3.64 1.109				

Minimum daily, 2.6 ft³/s (0.074 m³/s) Oct. 7.

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	4.1	6.3	11	29	70	160	94	257	183	295	37	9.0
2	4.0	6.0	11	21	68	163	90	218	220	284	35	8.8
3	3.5	6.6	10	17	66	246	86	243	281	276	33	8.7
4	3.4	15	10	15	65	192	86	263	291	242	30	8.7
5	3.2	10	9.9	14	66	280	129	293	284	216	28	8.3
6	3.2	9.9	10	14	67	399	130	319	302	190	26	8.2
7	2.6	9.1	10	14	65	298	106	320	328	176	24	7.9
8	3.3	8.9	10	14	63	246	100	280	368	171	23	7.4
9	3.7	8.6	10	19	59	219	104	276	418	160	21	7.1
10	3.2	8.5	11	97	57	208	112	255	449	143	20	8.1
11	3.0	8.2	11	126	55	204	122	202	439	143	19	8.9
12	3.0	8.1	10	1130	54	183	136	176	393	137	17	7.5
13	3.1	8.4	9.7	2080	53	170	146	170	300	134	17	7.1
14	3.3	8.5	10	1640	64	162	154	162	365	127	17	7.0
15	3.5	8.2	9.5	527	98	155	159	154	382	122	17	7.4
16	3.4	8.1	9.2	337	222	146	170	159	407	109	17	7.0
17	3.4	14	9.1	262	438	139	194	221	431	117	16	6.3
18	3.6	16	8.9	348	1010	146	221	298	437	116	14	6.3
19	3.9	12	8.8	213	969	133	233	355	451	104	14	6.7
20	13	10	9.0	174	984	125	243	390	439	88	13	6.9
21	14	9.5	9.9	152	765	124	245	419	428	82	13	6.9
22	7.9	9.6	12	136	440	118	194	409	406	79	12	6.9
23	6.9	10	10	122	342	111	167	339	373	75	12	6.5
24	6.4	10	11	113	279	108	150	251	360	69	12	5.8
25	7.2	10	26	106	239	106	162	208	353	65	12	5.3
26	9.2	11	15	99	216	102	199	187	346	65	11	5.0
27	12	15	14	93	199	99	231	171	336	58	11	5.0
28	8.8	13	12	87	186	96	243	159	341	58	10	5.1
29	7.3	12	12	84	171	94	245	157	336	49	10	5.3
30	6.7	11	12	77	---	96	253	191	315	43	9.9	5.0
31	6.5	---	21	73	---	96	---	178	---	41	9.3	---
TOTAL	170.3	301.5	353.0	8233	7430	5124	4904	7680	10832	4034	560.2	210.1
MEAN	5.49	10.1	11.4	266	256	165	163	248	361	130	18.1	7.00
MAX	14	16	26	2080	1010	399	253	419	451	295	37	9.0
MIN	2.6	6.0	8.8	14	53	94	86	154	183	41	9.3	5.0
AC-FT	338	598	700	16330	14740	10160	9730	15230	21490	8000	1110	417
CAL YR 1979 TOTAL	22153.83			MEAN 60.7	MAX 491	MIN .60	AC-FT 43940					
WTR YR 1980 TOTAL	49832.10			MEAN 136	MAX 2080	MIN 2.6	AC-FT 98840					

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.--18 years, 4.94 ft³/s (0.140 m³/s), 3,580 acre-ft/yr (4.41 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	5.1	3.1	2.9	1.4	1.4	0	6.3	6.0	6.8	8.0	8.0
2	7.1	5.1	3.0	2.9	1.4	1.4	.60	6.3	6.0	6.8	8.0	8.0
3	7.1	4.8	3.1	2.9	1.4	1.4	.90	6.3	6.0	6.8	8.0	8.0
4	7.1	4.7	3.2	2.9	1.4	1.4	4.5	6.3	6.0	6.8	8.0	8.0
5	7.1	3.6	3.2	2.9	1.4	1.4	7.0	6.3	6.0	6.8	8.0	8.2
6	7.1	3.0	3.2	2.9	1.4	1.4	6.9	6.3	6.0	6.8	8.0	8.2
7	7.1	3.1	3.1	2.9	1.4	1.4	3.4	6.3	6.0	6.8	8.0	8.2
8	7.1	3.1	2.6	2.9	1.4	1.3	1.0	6.3	6.0	6.8	8.0	8.2
9	7.1	3.0	2.6	2.7	1.4	1.3	1.7	6.3	6.0	6.8	8.0	7.5
10	7.0	3.0	2.6	1.0	1.5	1.3	3.0	6.3	6.0	6.8	8.0	7.0
11	7.1	3.0	2.7	.10	1.5	1.3	3.0	6.3	6.0	6.8	8.0	7.0
12	7.1	3.0	2.7	.10	1.5	1.3	2.8	6.3	6.0	6.8	8.0	7.0
13	7.1	2.9	2.8	0	1.5	1.3	2.8	6.3	6.0	6.8	8.0	7.0
14	7.1	2.8	2.5	.80	1.5	1.3	2.9	6.3	6.0	6.8	8.0	7.0
15	7.2	2.6	2.5	1.6	1.5	1.3	2.9	6.3	6.0	6.8	8.1	7.0
16	7.3	2.7	2.6	1.6	1.5	1.3	3.0	6.3	6.0	6.8	8.0	7.0
17	7.4	2.9	4.9	1.6	1.5	1.3	4.0	6.3	6.0	6.8	8.0	7.0
18	7.4	2.8	6.0	1.5	1.5	1.3	6.1	6.3	6.0	6.8	8.0	7.1
19	7.0	2.8	6.0	1.5	1.5	1.3	6.2	6.3	6.0	6.9	8.0	7.1
20	7.0	2.7	6.0	1.5	1.5	1.3	6.2	6.3	6.0	6.9	8.0	7.1
21	7.0	2.7	5.0	1.5	1.5	1.3	6.2	6.3	6.0	6.9	8.0	7.1
22	7.0	2.7	3.0	1.5	1.5	1.2	6.2	6.3	6.0	6.9	8.1	7.1
23	7.1	2.7	2.8	1.5	1.5	1.3	6.2	6.3	6.5	6.9	8.1	7.1
24	7.1	2.7	3.0	1.4	1.5	1.3	6.2	6.3	6.7	6.9	8.1	7.1
25	7.1	2.7	3.0	1.4	1.5	1.3	6.2	6.3	6.7	6.9	8.1	7.0
26	7.1	2.7	3.0	1.4	1.5	1.3	6.4	6.3	6.7	6.9	8.1	7.0
27	7.1	2.7	3.0	1.4	1.5	1.3	6.4	6.3	6.7	6.9	8.1	7.0
28	7.1	2.3	3.0	1.4	1.5	1.3	6.4	6.3	6.7	6.9	8.1	7.0
29	7.1	2.6	3.0	1.4	1.5	1.3	6.4	6.3	6.7	6.9	8.1	7.0
30	5.7	3.2	2.9	1.4	---	1.3	6.3	6.3	6.7	7.5	8.0	7.0
31	5.1	---	2.9	1.4	---	.70	---	6.3	---	7.5	8.0	---
TOTAL	217.8	93.7	103.0	52.90	42.6	40.30	131.80	195.3	185.4	213.3	248.9	220.0
MEAN	7.03	3.12	3.32	1.71	1.47	1.30	4.39	6.30	6.18	6.88	8.03	7.33
MAX	7.8	5.1	6.0	2.9	1.5	1.4	7.0	6.3	6.7	7.5	8.1	8.2
MIN	5.1	2.3	2.5	0	1.4	.70	0	6.3	6.0	6.8	8.0	7.0
AC-FT	432	186	204	105	84	80	261	387	368	423	494	436
CAL YR 1979 TOTAL	1795.00			MEAN 4.92	MAX 8.2	MIN .10	AC-FT 3560					
WTR YR 1980 TOTAL	1745.00			MEAN 4.77	MAX 8.2	MIN 0	AC-FT 3460					

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, 144,710 acre-ft (178 hm³) June 28, elevation, 694.91 ft (211.809 m); minimum, 9,295 acre-ft (11.5 hm³) Oct. 1, elevation, 577.72 ft (176.089 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9295	12612	15087	16394	75257	76141	62771	74067	116623	143903	104504	43424
2	9344	12736	15026	16421	73462	74025	61958	74732	118783	143941	102466	41552
3	9379	12897	14956	16259	71690	73224	61087	76027	121513	143596	100561	39950
4	9414	13183	14925	16039	69966	72274	60628	77635	124540	143366	98511	38386
5	9445	13408	14931	15801	68265	72776	61010	79465	126838	143040	96288	36775
6	9456	13599	14936	15550	66558	74209	61215	81065	128529	142467	93915	35142
7	9456	13773	14946	15302	64781	74449	61368	82681	129756	141723	91429	33403
8	9526	13939	14946	15042	62887	74152	61739	83532	131318	140999	88959	31650
9	9526	14098	14946	14860	60845	73575	61945	84342	133279	140277	87040	30202
10	9537	14243	14946	16361	58738	73168	62009	85202	135046	139425	85413	38920
11	9540	14384	14956	19129	56487	73000	62087	85247	136336	138612	83487	27250
12	9540	14522	14956	41072	54082	73168	62215	84915	136880	137783	81375	25000
13	9540	14650	14946	74364	51815	73715	62551	84433	136937	136880	79130	22544
14	9544	14695	14941	99046	49478	73899	62991	84132	136393	135738	76642	20159
15	9547	14655	14941	104637	48507	73913	63498	83592	135868	134505	74067	17860
16	9555	14665	14936	105238	48946	73800	63955	83667	135494	133056	71967	15665
17	9569	14760	14925	103906	54801	73617	64571	84598	135924	131779	70268	14576
18	9576	14925	14920	102862	73715	73631	64953	86324	137219	130563	68929	14045
19	9597	15016	14910	100529	84840	73420	64926	83805	139349	129151	67752	13594
20	10325	15072	14905	97719	92574	73126	64847	91742	141704	127400	66611	13192
21	10816	15103	14931	95170	95281	72720	64650	94232	143213	125695	65494	12790
22	11093	15133	14961	92920	94169	71967	63680	96561	143826	124234	64413	12389
23	11281	15184	14971	90727	91773	71012	62732	98269	143768	122816	63381	12237
24	11464	15251	15021	88728	89376	69816	62926	99599	143941	121352	62318	12233
25	11559	15312	15379	86979	87025	68170	64046	101430	144268	119684	61100	12289
26	11816	15302	15488	85156	84975	66758	65680	103706	144459	117868	59339	12315
27	12015	15317	15529	83233	82949	65666	67792	105906	144536	115977	56732	12323
28	12104	15230	15482	81523	80771	64900	70172	107975	144710	114117	53831	12328
29	12207	15174	15405	80154	79373	64335	72107	109926	144633	112132	51014	12198
30	12345	15138	15343	78664	---	63876	73266	112201	144210	109738	48271	12104
31	12485	---	15864	77001	---	63368	---	114411	---	106997	45712	---
MAX	12485	15317	15864	105238	95281	76141	73266	114411	144710	143941	104504	43424
MIN	9295	12612	14905	14860	48507	63368	60628	74067	116623	106997	45712	12104
†	585.88	591.49	592.89	654.81	655.76	644.86	652.18	678.35	694.65	674.01	630.08	585.00
‡	+3248	+2653	+726	+61137	+2372	-16005	+9898	+41145	+29799	-37213	-61285	-33608
††	172	114	83	96	220	332	463	755	1314	1675	1260	491

CAL YR 1979 † +1208
WTR YR 1980 † +2867

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

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.--19 years, 18.7 ft³/s (0.530 m³/s), 13,550 acre-ft/yr (16.7 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, 1978-80.

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	27	25	28	17			1.5	25	20	24	17	27
2	27	27	28	19			2.1	25	19	24	16	26
3	27	27	28	21			2.1	25	18	23	16	26
4	27	28	27	21			2.1	25	16	23	16	26
5	25	28	25	21			2.1	25	18	23	16	26
6	21	28	22	20			2.1	23	21	23	16	26
7	21	21	21	21			2.1	20	22	22	17	27
8	21	12	21	20			2.0	20	22	22	17	26
9	21	12	18	8.5			2.1	20	22	22	17	26
10	22	11	15	0			5.8	20	23	22	17	25
11	22	11	15	0			7.1	20	23	22	18	26
12	23	11	15	0			7.3	20	23	21	18	27
13	23	15	15	0			7.3	19	23	21	19	26
14	24	20	15	0			7.9	19	24	21	19	26
15	24	22	14	0			8.2	19	24	21	20	26
16	23	21	14	0			8.1	18	24	21	19	25
17	23	23	14	0			13	18	24	20	19	21
18	23	25	14	0			14	18	23	20	19	18
19	24	25	13	0			18	18	23	20	19	17
20	28	25	13	0			18	18	23	19	20	17
21	27	25	14	0			24	18	23	19	20	16
22	26	25	15	0			27	19	24	18	20	16
23	26	25	15	0			26	18	24	18	21	15
24	27	25	15	0			24	18	24	18	21	12
25	31	24	15	0			22	17	24	18	22	11
26	32	27	16	0			22	15	24	18	23	14
27	31	30	17	0			22	16	24	17	25	15
28	31	30	17	0			21	18	24	17	26	15
29	29	29	17	0			22	18	24	17	27	17
30	25	27	17	0	---		24	18	24	17	27	16
31	24	---	17	0	---		---	19	---	17	27	---
TOTAL	785	684	550	168.5	0	0	366.9	609	674	628	614	637
MEAN	25.3	22.8	17.7	5.44	0	0	12.2	19.6	22.5	20.3	19.8	21.2
MAX	32	30	28	21	0	0	27	25	24	24	27	27
MIN	21	11	13	0	0	0	1.5	15	16	17	16	11
AC-FT	1560	1360	1090	334	0	0	728	1210	1340	1250	1220	1260
CAL YR 1979	TOTAL	5700.00	MEAN	15.6	MAX	50	MIN	0	AC-FT	11310		
WTR YR 1980	TOTAL	5716.40	MEAN	15.6	MAX	32	MIN	0	AC-FT	11340		

TULARE LAKE BASIN

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'51", long 119°00'42", in SE¼SE¼ 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).--19 years, 656 ft³/s (18.58 m³/s), 475,300 acre-ft/yr (586 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, 4,660 ft³/s (132 m³/s) Feb. 21, gage height, 8.18 ft (2.493 m); minimum daily 6.8 ft³/s (0.19 m³/s) Nov. 2.

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	11	7.8	113	131	1640	2790	1370	1640	389	2570	1980	1280
2	11	6.8	113	213	1640	2710	1420	1560	433	2580	1740	1080
3	10	7.2	110	272	1640	2590	1410	1470	485	2330	1620	946
4	9.5	8.2	89	271	1640	2320	1240	1480	485	2100	1620	924
5	9.2	9.4	72	268	1640	2050	1150	1550	807	1980	1660	948
6	9.9	11	73	268	1670	2060	1150	1620	1230	1920	1680	963
7	9.4	14	74	269	1690	2060	1060	1690	1590	2000	1690	1020
8	8.8	20	74	269	1700	2060	898	1770	1780	1980	1650	1030
9	12	20	74	276	1730	2060	1010	1810	1870	1930	1380	878
10	17	20	72	289	1750	1940	1190	1780	2150	1860	1200	785
11	17	20	72	459	1790	1740	1320	1750	2360	1840	1340	947
12	16	20	71	563	1840	1460	1380	1750	2450	1830	1420	1210
13	16	18	71	146	1840	1160	1390	1760	2530	1830	1460	1300
14	16	41	66	668	1940	1340	1420	1720	2710	1850	1550	1270
15	15	77	64	1740	1690	1400	1460	1710	2830	1900	1580	1230
16	15	67	63	2490	1560	1400	1580	1430	2920	1970	1350	1200
17	14	56	62	2820	997	1400	1570	1230	2760	2040	1120	694
18	15	55	60	2840	761	1400	1890	1240	2370	2030	950	350
19	15	55	58	2840	882	1400	2190	1250	2040	2000	845	319
20	15	57	58	2830	2360	1400	2300	1360	1930	1990	816	292
21	16	57	58	2580	4340	1480	2310	1740	2180	1960	792	292
22	21	57	60	2330	4490	1590	2270	1900	2540	1890	757	288
23	30	57	62	2220	4260	1620	2060	1810	2670	1880	732	174
24	31	57	62	2040	3820	1760	1410	1470	2440	1900	728	78
25	84	58	62	1880	3420	1950	988	929	2370	1930	781	48
26	100	94	75	1880	3100	1820	946	515	2430	1980	1030	43
27	88	143	86	1870	2970	1620	945	389	2430	1970	1440	58
28	89	158	110	1740	2960	1430	807	375	2440	1920	1590	59
29	63	136	131	1520	2940	1330	1040	390	2580	1900	1540	111
30	26	112	131	1520	---	1330	1440	386	2660	1990	1500	103
31	11	---	130	1560	---	1350	---	383	---	2080	1410	---
TOTAL	820.8	1519.4	2476	41062	64700	54020	42614	41857	60859	61930	40951	19920
MEAN	26.5	50.6	79.9	1325	2231	1743	1420	1350	2029	1998	1321	664
MAX	100	158	131	2840	4490	2790	2310	1900	2920	2580	1980	1300
MIN	8.8	6.8	58	131	761	1160	807	375	389	1830	728	43
AC-FT	1630	3010	4910	81450	128300	107100	84520	83020	120700	122800	81230	39510
MEAN ‡	115	123	114	2328	2260	1504	1611	2058	2580	1446	373	136
AC-FT ‡	7040	7320	7010	143100	130000	95510	95870	126500	153500	88940	22920	8090
CAL YR 1979 TOTAL	196057.6		MEAN 537	MAX 2330	MIN 4.8	AC-FT 388900	MEAN ‡ 567	AC-FT ‡ 410600				
WTR YR 1980 TOTAL	432729.2		MEAN 1182	MAX 4490	MIN 6.8	AC-FT 858300	MEAN ‡ 1216	AC-FT ‡ 882900				

‡ Adjusted for change in contents and evaporation in Lake Kaweah and for diversions to Lemoncove and Foothill ditches.

11210950 KAWEAH 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, 25.0°C on several days during October and September; minimum recorded, 7.0°C on several days during January.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	25.0	19.0	19.5	14.0	13.0	12.0	10.5	9.0	8.0	7.5	9.5	9.0
2	24.5	19.0	19.0	14.0	13.0	12.0	10.0	9.0	8.0	8.0	9.5	9.0
3	23.0	19.0	17.0	14.0	13.0	11.5	10.0	9.0	8.0	7.5	9.5	9.0
4	24.0	19.0	18.5	14.0	13.5	11.5	10.0	9.0	8.0	7.5	9.5	9.0
5	24.5	19.0	18.0	14.0	13.0	11.0	10.0	9.0	8.5	7.5	9.5	8.5
6	25.0	19.5	18.0	13.5	13.0	11.0	9.5	9.0	8.5	7.5	9.5	9.0
7	25.0	19.5	16.5	13.5	13.0	11.0	10.0	9.0	8.5	7.5	9.5	8.5
8	24.5	19.5	18.5	13.5	13.0	11.0	10.0	9.0	9.0	8.0	9.5	8.5
9	24.5	19.0	17.5	14.0	13.0	11.0	10.0	9.0	9.0	8.0	---	---
10	23.5	19.0	17.5	13.5	12.0	11.0	9.5	9.0	9.0	8.0	---	---
11	24.5	19.5	17.5	13.5	11.5	11.0	10.0	9.0	9.0	8.0	---	---
12	24.0	19.5	17.5	13.0	12.5	10.5	10.5	8.5	9.0	8.5	---	---
13	22.5	19.0	16.5	13.0	12.0	10.0	11.0	7.5	9.0	8.0	---	---
14	24.0	19.0	16.0	12.5	12.0	10.0	10.0	7.5	9.0	8.0	10.0	9.0
15	24.0	19.0	16.0	13.5	12.0	10.0	8.0	7.5	9.5	8.5	10.0	9.5
16	24.0	19.5	15.5	13.0	12.0	9.5	8.0	7.5	9.5	9.0	10.0	9.0
17	24.0	19.5	15.0	13.0	12.0	9.5	8.0	7.5	9.5	8.5	10.0	9.5
18	23.0	19.0	15.5	13.0	12.0	9.5	8.0	7.5	9.5	8.5	10.0	9.5
19	22.5	19.5	14.5	13.0	11.0	9.0	8.0	7.5	9.0	8.5	10.0	9.0
20	22.5	19.0	15.0	12.5	11.5	9.0	8.0	7.5	9.0	8.5	10.0	9.5
21	21.5	17.5	14.5	12.0	11.5	9.0	8.0	7.5	9.0	8.0	10.0	9.5
22	20.5	16.5	13.5	12.0	11.0	9.0	8.0	7.0	9.0	8.5	10.0	9.0
23	20.5	17.0	13.5	12.0	10.5	9.5	8.0	7.0	9.0	8.5	10.5	9.5
24	20.5	17.0	13.5	12.0	10.0	9.5	8.0	7.0	9.0	8.5	10.0	9.5
25	20.0	15.5	14.0	12.0	11.5	9.0	8.0	7.0	9.5	8.5	10.5	9.5
26	19.5	17.0	13.0	12.0	9.5	9.0	8.0	7.0	9.0	8.0	10.5	9.5
27	19.5	18.0	13.0	12.0	11.0	9.0	8.0	7.0	9.5	8.5	10.0	9.5
28	19.5	17.5	13.5	12.0	10.0	8.5	8.0	8.0	9.5	8.5	10.5	9.5
29	19.5	16.5	13.5	12.0	10.0	8.5	8.0	7.5	9.5	8.5	10.5	10.0
30	20.0	15.0	13.0	12.0	10.0	9.0	8.0	8.0	---	---	10.5	10.0
31	19.5	14.5	---	---	10.5	8.5	8.0	7.5	---	---	11.0	9.5
MONTH	25.0	14.5	19.5	12.0	13.5	8.5	11.0	7.0	9.5	7.5	11.0	8.5

TULARE LAKE BASIN

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	10.0	12.0	11.5			---	---	18.5	16.5	24.5	22.5
2	10.5	9.5	12.5	11.5			---	---	18.5	18.0	24.5	22.0
3	11.0	10.5	12.5	11.0			---	---	18.5	18.0	24.5	22.5
4	11.0	10.0	12.5	11.5			---	---	19.0	18.0	24.5	23.0
5	11.0	10.0	12.5	11.5			---	---	19.0	17.5	25.0	21.0
6	11.0	10.0	12.5	11.5			---	---	19.0	17.5	24.5	23.0
7	11.0	10.0	13.0	12.0			---	---	19.5	18.0	25.0	21.0
8	11.0	10.0	13.0	11.5			---	---	19.5	18.0	25.0	22.5
9	11.0	10.5	13.0	12.0			---	---	20.0	18.0	25.0	21.0
10	11.0	10.0	13.0	11.5			15.5	15.0	20.0	18.5	24.5	22.0
11	11.0	11.0	12.5	11.5			16.0	15.0	20.0	19.0	24.0	22.0
12	11.5	11.0	12.0	11.5			16.0	15.0	20.5	19.5	24.5	22.5
13	11.5	11.0	12.0	11.0			16.0	15.0	20.5	19.5	24.5	21.5
14	12.0	11.0	12.0	11.0			16.0	15.0	20.5	20.0	25.0	21.5
15	12.0	11.5	12.0	11.0			16.0	15.0	21.0	20.0	24.5	20.5
16	12.0	12.0	12.0	11.5			16.5	15.5	21.0	20.0	23.5	21.0
17	12.5	12.0	12.5	11.5			16.5	15.0	21.5	20.5	23.5	22.0
18	12.5	12.0	12.5	11.0			16.5	15.5	22.0	20.5	23.0	22.0
19	12.5	12.5	12.5	11.0			16.5	15.5	22.0	20.0	23.5	22.0
20	13.0	12.5	12.5	11.5			16.5	15.5	22.5	20.5	23.5	22.0
21	13.0	12.5	13.0	11.5			17.0	15.5	22.5	21.0	23.0	22.5
22	12.5	12.0	13.0	12.0			17.0	16.0	22.5	21.0	23.0	21.5
23	12.0	11.5	13.0	12.5			17.0	16.0	23.0	20.5	23.5	21.0
24	12.0	11.5	13.0	11.0			17.0	16.0	23.0	21.0	23.5	20.5
25	11.5	11.0	13.0	11.5			17.5	16.0	23.0	21.0	25.0	20.0
26	11.5	11.0	---	---			17.5	16.0	23.0	21.5	24.0	19.0
27	12.0	11.0	---	---			17.5	16.0	23.5	23.0	23.5	19.5
28	12.0	11.0	---	---			17.5	16.5	23.5	22.5	23.5	19.5
29	12.0	11.5	---	---			18.0	16.0	23.5	21.5	23.0	19.5
30	12.0	11.5	---	---			18.0	16.0	24.0	22.5	23.0	20.0
31	---	---	---	---			18.0	16.0	24.5	21.5	---	---
MONTH	13.0	9.5	13.0	11.0			---	---	24.5	16.5	25.0	19.0

11211300 DRY CREEK NEAR LEMONCOVE, CA

LOCATION.--Lat 36°26'51", long 119°01'38", in NE¼SE¼ 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.--21 years, 21.6 ft³/s (0.612 m³/s), 15,650 acre-ft/yr (19.3 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. 12	1830	2,570 72.8	6.69 2.039	Apr. 5	1830	210 5.95	3.33 1.015
Jan. 18	1200	255 7.22	3.54 1.079	Apr. 23	0215	63 1.78	2.39 0.728
Feb. 20	0145	*2,800 79.3	6.89 2.100	May 10	1330	96 2.72	2.65 0.808
Mar. 3	1245	370 10.5	3.92 1.195	May 14	0400	88 2.49	2.59 0.789
Mar. 5	1715	470 13.3	4.17 1.271				

Minimum, no flow for many days.

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	4.2	38	46	113	64	40	26	8.1	2.2	.20
2		0	4.1	19	45	107	63	38	25	8.0	2.0	.18
3		0	3.7	13	41	279	62	36	24	8.0	1.7	.17
4		0	3.4	10	41	203	58	35	23	8.5	1.5	.14
5		.03	3.4	8.6	40	275	110	34	23	8.1	1.4	.07
6		.41	3.7	7.8	39	306	95	33	23	7.7	1.6	0
7		.44	3.8	7.3	38	255	68	33	22	7.5	1.5	0
8		.53	3.8	6.7	38	202	64	31	21	7.2	1.1	0
9		.56	3.8	9.1	35	178	60	31	20	7.0	.87	0
10		.57	4.0	156	34	160	57	68	19	7.0	.69	0
11		.57	4.9	226	32	147	57	47	18	7.1	.55	.15
12		.57	5.5	671	32	135	54	39	18	6.1	.37	.23
13		.57	5.5	993	32	126	52	37	18	5.6	.22	.25
14		.57	5.8	1030	34	120	50	55	18	5.3	.18	.22
15		.57	6.0	337	71	113	49	42	17	4.9	.21	.24
16		.57	6.0	184	173	105	49	37	17	4.2	.38	.35
17		1.7	6.0	138	626	99	46	34	16	3.5	.57	.37
18		8.0	6.2	205	638	101	43	31	15	3.3	.65	.34
19		7.3	6.5	143	638	95	41	29	14	3.1	.70	.32
20		4.2	6.5	116	1290	89	40	27	13	3.0	.78	.37
21		3.0	8.3	102	829	88	45	26	13	2.5	.84	.44
22		2.8	14	90	519	87	46	26	13	2.4	.83	.51
23		2.7	17	80	313	81	52	27	13	2.4	.71	.55
24		2.5	16	73	236	80	46	28	12	2.3	.60	.44
25		2.6	28	67	193	79	44	30	9.2	2.2	.49	.25
26		3.2	20	60	164	77	41	29	9.2	2.1	.39	.15
27		4.4	11	57	144	75	40	28	9.0	2.1	.28	.04
28		7.0	8.3	55	135	72	39	28	8.6	2.0	.18	0
29		5.3	7.2	53	121	68	43	28	8.1	1.9	.14	0
30		4.6	6.7	50	---	67	42	26	7.9	1.7	.14	0
31		---	19	48	---	66	---	26	---	2.3	.16	---
TOTAL	0	65.26	252.3	5053.5	6617	4048	1620	1059	493.0	147.1	23.93	5.98
MEAN	0	2.18	8.14	163	228	131	54.0	34.2	16.4	4.75	.77	.20
MAX	0	8.0	28	1030	1290	306	110	68	26	8.5	2.2	.55
MIN	0	0	3.4	6.7	32	66	39	26	7.9	1.7	.14	0
AC-FT	0	129	500	10020	13120	8030	3210	2100	978	292	47	12
CAL YR 1979	TOTAL	6145.32	MEAN 16.8	MAX 322	MIN 0	AC-FT 12190						
WTR YR 1980	TOTAL	19385.07	MEAN 53.0	MAX 1290	MIN 0	AC-FT 38450						

TULARE LAKE BASIN

11211790 COTTONWOOD CREEK NEAR ELDERWOOD, CA

LOCATION.--Lat 36°31'47", long 119°07'33", in SE&SE¼ 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 except those for January and February, which are poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--9 years, 12.4 ft³/s (0.351 m³/s), 8,980 acre-ft/yr (11.1 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. 13	1615	Unknown --	4.76 1.451	Mar. 3	0945	309 8.75	3.79 1.155
Jan. 18	1145	Unknown --	3.49 1.064	Mar. 5	1415	309 8.75	3.79 1.155
Feb. 17	0515	Unknown --	3.78 1.152	Apr. 5	1700	79 2.24	2.83 0.863
Feb. 20	0030	*888 25.1	7.65 2.332				

Minimum, no flow many days.

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	.15	3.5	10	14	47	30	19	8.9	2.5	1.1	.02
2	0	.13	3.5	7.4	14	46	29	18	9.1	2.5	1.0	.02
3	0	.11	3.3	6.5	13	145	28	18	8.3	2.5	.97	.02
4	0	.09	3.2	6.1	13	81	28	17	8.9	2.6	.82	.03
5	0	.45	3.5	5.8	13	126	45	16	8.6	2.5	.79	.09
6	0	1.5	3.6	5.7	12	151	36	16	7.7	2.5	.76	.13
7	0	3.6	3.8	5.6	12	106	30	15	7.7	2.5	.62	.16
8	0	3.6	3.4	5.4	12	81	29	16	7.0	2.5	.74	.16
9	0	3.5	3.3	6.8	12	69	28	15	6.4	2.8	.82	.16
10	0	3.5	3.5	41	12	64	28	20	7.5	2.7	.77	.17
11	0	3.5	3.3	54	12	57	27	16	6.8	2.4	.59	.21
12	0	3.5	3.0	149	12	52	26	15	6.4	2.5	.66	.24
13	0	3.5	3.0	358	12	49	25	16	6.5	2.7	.99	.28
14	0	3.5	3.0	434	13	47	24	16	6.4	2.6	1.2	.30
15	0	3.5	3.0	140	15	46	23	15	6.2	2.7	1.6	.30
16	0	3.5	3.0	62	39	42	23	15	5.3	2.7	1.1	.32
17	0	6.1	3.0	48	191	42	21	14	4.8	2.6	1.0	.37
18	0	5.7	3.0	120	117	42	21	13	4.3	2.1	.76	.76
19	0	3.9	2.8	63	277	40	21	13	3.9	2.0	.81	1.3
20	0	3.4	2.7	43	522	38	20	12	4.3	1.8	.63	1.4
21	0	3.3	3.2	34	405	38	21	11	3.4	1.6	.26	1.4
22	0	3.2	4.6	28	180	36	21	12	3.7	1.5	.20	1.5
23	0	3.2	3.7	22	115	35	22	11	4.6	1.5	.17	1.5
24	0	3.2	3.3	19	86	34	21	11	4.3	1.4	.11	1.6
25	.01	3.6	5.7	18	72	33	20	11	3.7	1.4	.10	1.3
26	.07	4.0	4.8	17	64	33	19	11	3.2	1.3	.02	1.3
27	.47	3.7	3.3	17	58	33	19	11	2.7	1.3	0	1.3
28	.37	3.5	3.0	16	54	32	19	10	2.8	1.2	0	1.5
29	.30	3.4	3.0	16	50	31	19	8.8	2.5	1.1	0	1.6
30	.25	3.5	3.0	15	---	31	19	8.3	2.6	1.0	.03	1.5
31	.18	---	8.1	15	---	30	---	9.3	---	1.0	.03	---
TOTAL	1.65	91.33	110.1	1788.3	2421	1737	742	429.4	168.5	64.0	18.65	20.94
MEAN	.053	3.04	3.55	57.7	83.5	56.0	24.7	13.9	5.62	2.06	.60	.70
MAX	.47	6.1	8.1	434	522	151	45	20	9.1	2.8	1.6	1.6
MIN	0	.09	2.7	5.4	12	30	19	8.3	2.5	1.0	0	.02
AC-FT	3.3	181	218	3550	4800	3450	1470	852	334	127	37	42

CAL YR 1979 TOTAL 3909.53 MEAN 10.7 MAX 222 MIN 0 AC-FT 7750
WTR YR 1980 TOTAL 7592.87 MEAN 20.7 MAX 522 MIN 0 AC-FT 15060

NOTE.--Stage-discharge relationship indeterminate Jan. 13 to Feb. 20.

TULARE LAKE BASIN

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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. Construction of flood control dam 2.9 mi (4.7 km) upstream began May 14, 1980.

AVERAGE DISCHARGE.--19 years (water years 1945-54, 1972-80), 3.23 ft³/s (0.091 m³/s), 2,340 acre-ft/yr (2.89 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.--Peak discharges above base of 20 ft³/s (0.57 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)
Jan. 13	1400	253 7.16	4.28 1.305	Mar. 3	1000	124 3.51	3.65 1.113
Jan. 18	unknown	unknown --	unknown --	Mar. 6	1315	166 4.70	3.89 1.186
Feb. 17	0315	131 3.71	3.73 1.137	Apr. 5	1630	46 1.30	2.92 0.890
Feb. 20	0030	*463 13.10	4.86 1.481				

Minimum, no flow for several months.

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	1.8	4.7	7.2	16	10	5.8	3.2	.96	.07	
2		0	1.8	3.6	6.9	17	9.7	5.6	2.8	.86	.04	
3		0	1.7	3.2	6.6	63	9.3	5.5	3.0	.87	.02	
4		0	1.6	3.0	6.4	32	9.3	5.3	2.8	.94	0	
5		.17	1.8	2.9	6.2	49	21	4.9	2.7	.84	0	
6		.27	1.9	2.8	6.0	92	14	5.0	2.6	.79	0	
7		.34	2.0	2.8	5.8	57	11	5.0	2.5	.76	0	
8		.40	1.8	2.5	5.6	38	9.8	4.8	2.3	.75	0	
9		.47	1.8	3.1	5.5	31	9.3	4.7	2.2	.97	0	
10		.56	1.9	11	5.3	28	9.0	6.5	1.9	.64	0	
11		.63	2.2	14	5.1	25	8.6	5.8	1.7	.69	0	
12		.69	2.1	40	5.0	22	7.8	4.9	2.0	.71	0	
13		.76	2.0	120	5.0	20	7.7	4.6	2.0	.67	0	
14		.86	2.0	63	5.4	19	7.5	5.4	2.0	.68	0	
15		.97	2.2	35	19	18	7.6	4.4	1.8	.67	0	
16		1.0	2.2	25	45	17	7.6	4.5	1.6	.58	0	
17		3.1	2.2	16	94	16	7.2	4.2	1.5	.49	0	
18		2.9	2.2	32	86	16	7.0	3.9	1.3	.44	0	
19		2.0	2.2	23	75	15	6.7	3.7	1.3	.37	0	
20		1.7	2.2	19	235	14	6.4	3.5	1.2	.38	0	
21		1.6	2.6	17	209	14	6.6	3.4	1.1	.50	0	
22		1.6	3.3	15	69	13	6.6	3.3	.92	.65	0	
23		1.6	2.7	13	44	13	7.2	3.3	1.1	.47	0	
24		1.6	2.7	12	34	12	6.8	3.4	1.2	.37	0	
25		1.8	3.1	11	27	12	6.5	3.0	1.1	.29	0	
26		2.0	2.8	9.8	23	12	6.2	3.0	1.0	.22	0	
27		1.9	2.5	9.2	21	12	6.0	3.6	.91	.18	0	
28		1.8	2.5	8.6	20	12	5.9	3.7	.84	.14	0	
29		1.8	2.5	8.2	18	11	6.2	4.1	.72	.12	0	
30		1.8	2.8	8.0	---	11	6.0	3.5	.72	.11	0	
31		---	5.3	7.6	---	10	---	3.2	---	.11	0	---
TOTAL	0	34.32	72.4	546.0	1101.0	737	250.5	135.5	52.01	17.22	.13	0
MEAN	0	1.14	2.34	17.6	38.0	23.8	8.35	4.37	1.73	.56	.004	0
MAX	0	3.1	5.3	120	235	92	21	6.5	3.2	.97	.07	0
MIN	0	0	1.6	2.5	5.0	10	5.9	3.0	.72	.11	0	0
AC-FT	0	68	144	1080	2180	1460	497	269	103	34	.3	0
CAL YR 1979	TOTAL	1551.16	MEAN 4.25	MAX 142	MIN 0	AC-FT 3080						
WTR YR 1980	TOTAL	2946.08	MEAN 8.05	MAX 235	MIN 0	AC-FT 5840						

NOTE.--No gage-height record Jan. 14 to Feb. 20.

TULARE LAKE BASIN

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV											
28...	1030	--	7.1	3.5	10.6	--	--	--	--	--	--
28...	1430	42	7.1	3.5	10.6	1	.5	10	4.0	.0	3.0
APR											
23...	1130	27	7.3	4.0	11.5	4	.8	8	3.0	.0	2.0
MAY											
21...	1110	--	7.2	10.0	10.3	--	--	--	--	--	--
JUN											
25...	1130	13	7.2	8.0	10.2	--	--	2	1.0	.0	1.0
JUL											
23...	1130	--	7.2	14.0	9.1	--	--	--	--	--	--
SEP											
24...	0845	40	7.2	19.0	9.8	--	--	10	4.0	.0	3.0

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
NOV											
28...	--	--	--	--	--	--	.03	.00	.10	.00	.00
28...	.6	11	5.0	2.0	26	0	--	--	--	--	--
APR											
23...	.5	8	1.0	1.0	20	4	.03	.01	.10	.01	.00
MAY											
21...	--	--	--	--	--	--	.02	.00	.20	.06	.00
JUN											
25...	.3	4	.0	.0	12	--	.03	.00	.00	.04	.00
JUL											
23...	--	--	--	--	--	--	.01	.00	.00	.01	.00
SEP											
24...	.6	10	3.0	2.0	30	--	.02	.00	.00	.00	.00

DATE	TIME	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV							
28...	1430	0	0	0	0	0	0
APR							
23...	1130	0	0	0	0	0	0
MAY							
21...	1110	--	--	--	--	--	--
JUN							
25...	1130	--	0	0	0	0	0
SEP							
24...	0845	0	0	0	10	0	0

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV							
28...	10	0	0	.0	10	3.6	.00
APR							
23...	20	0	0	.0	10	--	.00
MAY							
21...	--	--	--	--	--	1.9	--
JUN							
25...	0	0	0	.0	0	--	--
SEP							
24...	20	0	0	.0	10	--	--

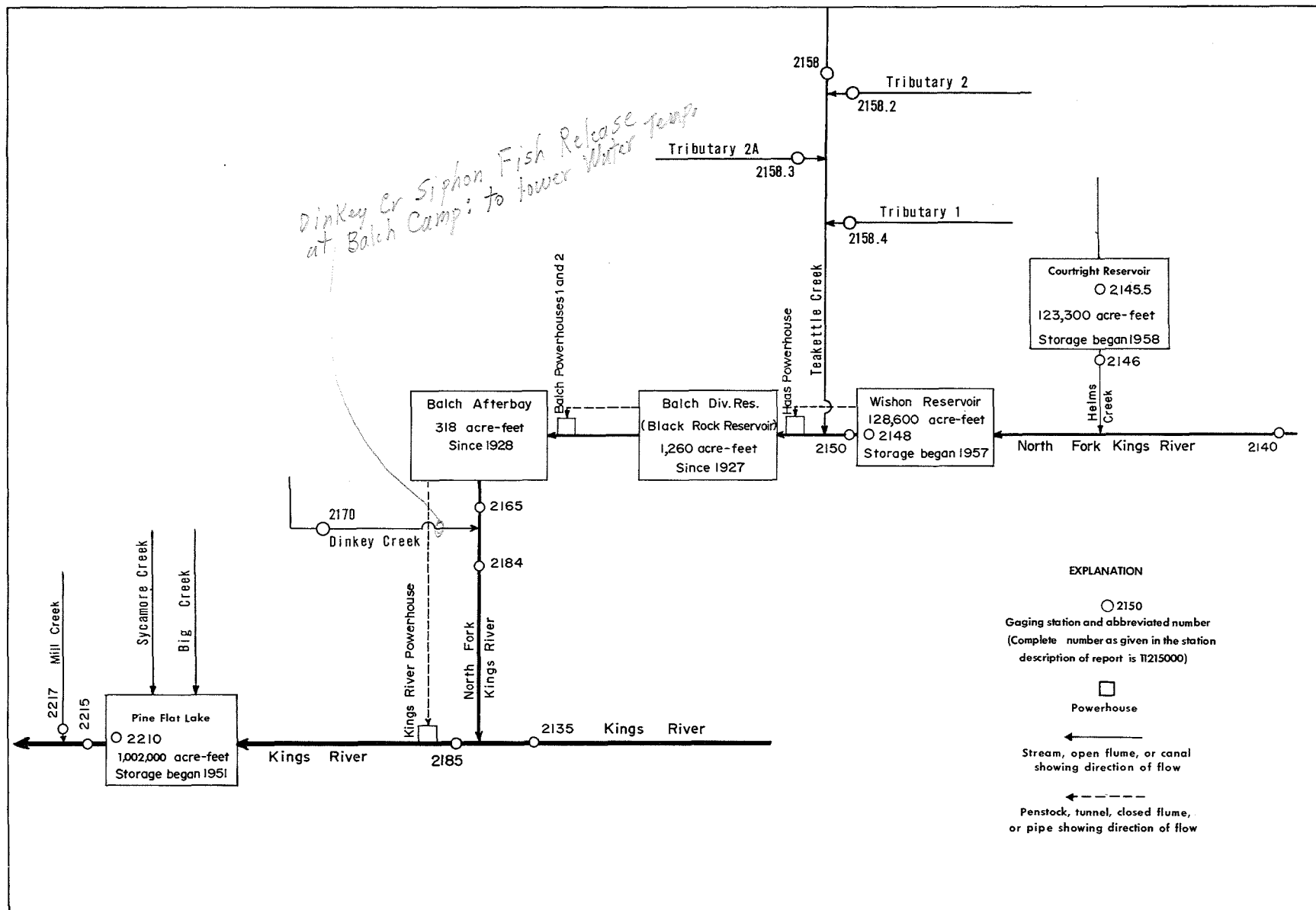


FIGURE 7.--Schematic diagram showing diversions and storage in Kings River basin.

TULARE LAKE 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.--51 years, 1,444 ft³/s (40.89 m³/s), 1,046,000 acre-ft/yr (1.29 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.--Peak discharges above base of 6,300 ft³/s (178 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. 13	1545	*20,700 586	11.71 3.569	May 21	0100	8,720 247	8.17 2.490
Feb. 18	1045	10,500 297	8.87 2.704	June 21	0300	10,900 309	9.01 2.746
May 7	0100	6,880 195	7.52 2.292	July 2	0300	10,800 306	8.99 2.740

Minimum daily, 215 ft³/s (6.09 m³/s) Dec. 23.

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	353	353	317	671	899	1810	1410	4290	3880	8870	3480	624
2	378	332	307	512	880	1800	1370	4150	4270	9300	3470	616
3	350	326	298	456	863	2260	1340	4840	5140	8320	3290	622
4	322	387	291	421	874	2060	1360	5530	5330	7350	2900	630
5	300	386	285	396	921	2260	1660	6110	5040	6630	2710	623
6	283	380	282	384	966	2310	1580	6120	5180	5750	2440	680
7	268	364	283	378	961	2090	1480	6290	5730	5770	2180	687
8	260	349	284	370	917	1910	1430	5780	6690	5870	2110	722
9	256	341	283	396	868	1790	1530	5610	7760	5780	2070	672
10	243	327	282	1450	837	1720	1700	4700	8370	5210	1920	687
11	238	320	280	2440	812	1650	1900	3790	8610	5450	1830	642
12	233	311	254	10100	796	1550	2000	3260	7550	5540	1790	592
13	229	302	251	15500	780	1500	2220	3140	6850	5570	1720	558
14	227	296	253	11500	968	1500	2420	3030	6530	5400	1610	538
15	226	290	245	5180	1390	1490	2550	2890	7080	5400	1420	506
16	222	284	239	3410	1890	1460	2770	3160	7930	5220	1280	475
17	222	319	233	2740	3470	1450	3130	4170	8750	6020	1210	441
18	224	344	230	2540	8630	1540	3600	5530	8910	6500	1210	439
19	229	302	226	2080	6460	1440	3950	6680	9250	6040	1160	453
20	1100	270	230	1810	5500	1420	4240	7750	9680	4910	1100	442
21	624	264	243	1630	5730	1450	4150	7980	9690	4860	1050	424
22	520	275	243	1490	3700	1380	3320	7530	9160	5000	1020	409
23	465	294	215	1380	2950	1340	2880	7190	8490	5530	994	392
24	457	299	341	1300	2580	1350	2650	5450	8190	5590	932	377
25	482	300	523	1260	2290	1290	2810	4310	8520	5400	870	360
26	614	393	340	1200	2150	1250	3250	3720	8580	5040	820	350
27	595	385	358	1130	2070	1230	3730	3370	8470	4510	798	341
28	509	349	353	1090	2020	1230	3790	3250	8550	4280	774	341
29	459	338	354	1040	1890	1280	3660	3250	9070	4220	728	336
30	403	327	400	953	---	1360	3990	3910	9310	3610	677	326
31	374	---	786	924	---	1420	---	3750	---	3250	645	---
TOTAL	11665	9807	9509	76131	65062	49590	77870	150530	226560	176190	50208	15305
MEAN	376	327	307	2456	2244	1600	2596	4856	7552	5684	1620	510
MAX	1100	393	786	15500	8630	2310	4240	7980	9690	9300	3480	722
MIN	222	264	215	370	780	1230	1340	2890	3880	3250	645	326
AC-FT	23140	19450	18860	151000	129100	98360	154500	298600	449400	349500	99590	30360
CAL YR 1979 TOTAL	522752			1432	MAX	8210	MIN 200	AC-FT	1037000			
WTR YR 1980 TOTAL	918427			MEAN	2509	MAX	15500	MIN 215	AC-FT	1822000		

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 current year. 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.--38 years, 74.1 ft³/s (2.099 m³/s), 53,690 acre-ft/yr (66.2 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)
Jan. 12	2400	475	13.5	4.11	1.253	June 28	2100	896	25.4	4.72	1.439
May 20	1900	681	19.3	4.43	1.350	July 1	2130	*1,100	31.2	4.97	1.515
June 19	2030	994	28.2	4.84	1.475						

Minimum daily discharge, 2.4 ft³/s (0.068 m³/s) Sept. 30.

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	6.9	10	12	22	19	21	28	245	193	703	149	11
2	6.2	9.8	11	22	19	21	26	277	257	712	156	11
3	5.4	9.4	10	18	19	22	25	313	325	597	131	10
4	4.8	12	9.9	16	20	23	26	337	316	524	109	10
5	4.6	16	10	15	24	23	25	338	311	457	96	10
6	4.1	15	11	13	26	24	24	355	351	415	79	11
7	3.8	12	12	12	25	24	23	372	425	421	68	11
8	3.7	12	12	12	22	22	25	353	520	431	64	13
9	3.4	11	13	12	21	20	32	304	590	387	60	13
10	3.0	10	12	22	20	20	45	213	631	384	55	12
11	2.9	11	9.5	36	19	19	55	160	629	396	54	11
12	2.7	9.6	8.7	94	18	19	64	132	558	403	50	9.6
13	2.6	9.5	8.8	202	18	18	80	123	517	396	46	8.7
14	2.6	9.1	7.9	226	19	19	89	111	525	385	41	7.0
15	2.6	8.9	7.3	123	21	20	101	118	599	377	35	6.3
16	2.6	8.9	7.0	75	27	20	120	185	679	383	31	5.7
17	2.8	9.8	6.7	57	37	20	158	302	735	434	28	5.4
18	2.8	9.7	6.3	41	93	22	180	388	723	429	27	5.0
19	9.9	9.5	6.4	35	92	22	191	476	726	352	25	4.8
20	43	9.2	6.3	31	75	22	194	529	728	297	24	4.5
21	29	9.6	6.3	28	63	23	163	499	724	296	23	4.5
22	24	9.1	7.2	26	57	21	108	469	672	317	22	4.5
23	20	9.5	8.1	25	56	20	87	412	608	319	22	4.2
24	23	11	11	25	40	21	91	259	619	287	20	4.0
25	24	11	16	25	28	21	133	197	635	253	19	3.5
26	33	12	18	25	25	20	174	158	646	257	17	3.3
27	25	15	22	25	24	19	196	139	634	224	16	3.1
28	19	15	25	23	23	20	198	136	673	214	15	2.9
29	15	14	31	21	22	24	193	157	692	198	14	2.6
30	12	13	23	20	---	29	234	170	655	160	13	2.4
31	12	---	18	20	---	30	---	162	---	150	12	---
TOTAL	356.4	331.6	373.4	1347	972	669	3088	8389	16896	11558	1521	215.0
MEAN	11.5	11.1	12.0	43.5	33.5	21.6	103	271	563	373	49.1	7.17
MAX	43	16	31	226	93	30	234	529	735	712	156	13
MIN	2.6	8.9	6.3	12	18	18	23	111	193	150	12	2.4
AC-FT	707	658	741	2670	1930	1330	6130	16640	33510	22930	3020	426

CAL YR 1979	TOTAL	28638.4	MEAN	78.5	MAX	697	MIN	1.9	AC-FT	56800
WTR YR 1980	TOTAL	45716.4	MEAN	125	MAX	735	MIN	2.4	AC-FT	90680

TULARE LAKE BASIN

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, 82,700 acre-ft (102 hm³) July 31, elevation, 8,155.68 ft (2,485.851 m); minimum, 186 acre-ft (229,300 m³) Oct. 1, elevation, 7,944.44 ft (2,421.465 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, 129,000 acre-ft (159 hm³) July 19, elevation, 6,550.39 ft (1,996.559 m); minimum, 9,790 acre-ft (12.1 hm³) Apr. 8, elevation, 6,380.65 ft (1,944.822 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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.....	7,944.6	188	--	6,412.8	24,600	--
Oct. 31.....	7,964.7	580	+392	6,408.5	22,500	-2,100
Nov. 30.....	7,970.0	736	+156	6,407.2	21,800	-700
Dec. 31.....	7,971.0	767	+31	6,399.4	18,100	-3,700
CAL YR 1979.....	--	--	-50,400	--	--	-2,100
Jan. 31.....	7,971.9	799	+32	6,400.1	18,400	+300
Feb. 29.....	7,971.0	771	-28	6,395.9	16,500	-1,900
Mar. 31.....	7,972.8	829	+58	6,386.5	12,200	-4,300
Apr. 30.....	8,053.0	10,300	+9,470	6,402.2	19,400	+7,200
May 31.....	8,112.8	40,500	+30,200	6,460.5	52,200	+32,800
June 30.....	8,150.0	75,900	+35,400	6,543.2	121,700	+69,500
July 31.....	8,155.5	82,500	+6,600	6,543.0	121,600	-100
Aug. 31.....	8,107.5	36,500	-46,000	6,544.1	122,700	+1,100
Sept. 30.....	7,978.2	1,030	-35,500	6,530.4	109,400	-13,300
WTR YR 1980.....	--	--	+842	--	--	+84,800

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.

REVISED RECORDS.--WSP 1715: 1959. WSP 2130: 1959.

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, 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, 846 ft³/s (24.0 m³/s) Aug. 7, gage height, 7.23 ft (2.204 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Apr. 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.6	8.5	2.4	42	69	69	3.3	5.9	6.0	307	802
2	3.0	3.6	6.2	2.5	42	69	69	4.0	5.9	6.0	347	803
3	3.1	3.6	4.0	2.6	42	39	69	4.1	5.9	6.2	343	805
4	3.1	3.6	8.5	3.3	42	9.5	69	4.3	6.0	6.2	380	800
5	3.1	3.6	8.5	6.5	42	9.5	69	4.6	6.0	6.4	505	798
6	3.1	3.6	8.7	6.5	42	9.5	69	4.9	6.0	6.4	633	792
7	3.1	3.6	8.7	6.5	42	49	64	4.9	6.2	6.5	734	789
8	3.1	3.6	8.7	6.5	42	80	60	4.9	6.2	6.5	841	788
9	3.1	3.6	8.7	6.5	42	80	60	4.7	6.4	6.7	837	790
10	3.1	3.6	8.7	6.5	42	50	60	4.7	6.4	6.7	830	782
11	3.1	3.6	8.7	11	42	29	73	4.6	6.0	6.9	825	777
12	3.1	3.6	8.7	38	42	29	90	4.6	5.9	6.9	821	780
13	3.1	3.6	8.7	352	29	29	90	4.6	4.6	7.1	814	786
14	3.1	3.6	8.9	597	9.5	29	139	4.6	4.6	7.1	808	776
15	3.1	3.6	8.9	220	9.5	29	189	4.7	4.7	7.2	808	776
16	3.1	3.6	8.9	57	9.5	29	160	5.4	4.7	7.2	812	779
17	3.1	3.6	8.9	44	9.5	29	121	5.9	4.9	7.2	805	772
18	3.1	3.6	8.9	67	84	29	2.9	6.0	4.9	7.4	809	477
19	3.6	3.6	8.9	90	179	29	2.0	6.0	5.1	7.4	820	329
20	4.4	5.2	8.9	90	179	29	2.1	6.0	5.1	7.6	812	328
21	3.6	8.5	8.9	40	179	29	1.7	6.2	5.2	7.6	809	315
22	3.6	8.5	8.9	9.5	110	29	1.3	6.2	5.2	7.8	805	233
23	3.6	8.5	8.9	42	34	29	1.1	6.2	5.4	7.8	801	104
24	3.6	8.5	8.9	84	34	29	1.3	6.0	5.4	8.0	797	90
25	3.6	8.5	8.9	77	34	41	1.9	5.7	5.5	8.0	793	51
26	3.6	8.5	7.1	69	34	50	2.5	5.5	5.5	8.1	800	12
27	3.6	8.5	1.8	69	55	50	2.5	5.7	5.7	8.1	813	11
28	3.6	8.5	1.9	54	69	50	2.1	5.7	5.7	8.3	807	11
29	3.6	8.5	2.0	39	69	50	2.5	5.9	5.9	8.3	809	9.1
30	3.6	8.5	2.1	39	---	50	2.5	5.9	5.9	8.3	810	6.9
31	3.6	---	2.2	39	---	58	---	5.9	---	76	806	---
TOTAL	103.2	158.6	229.2	2177.3	1631.0	1219.5	1546.4	161.7	166.8	291.9	2274.1	15372.0
MEAN	3.33	5.29	7.39	70.2	56.2	39.3	51.5	5.22	5.56	9.42	734	512
MAX	4.4	8.5	8.9	597	179	80	189	6.2	6.4	76	841	805
MIN	3.0	3.6	1.8	2.4	9.5	50	1.1	3.3	4.6	6.0	307	6.9
AC-FT	205	315	455	4320	3240	2420	3070	321	331	579	45110	30490
WTR YR 1979	TOTAL	52128.70	MEAN	143	MAX	796	MIN	.60	AC-FT	103400		
MTR YR 1980	TOTAL	45798.60	MEAN	125	MAX	841	MIN	1.1	AC-FT	90840		

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 WSP 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.

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 (prior to regulation by Wishon Reservoir).--Maximum discharge, 14,000 ft³/s (596 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, 1,220 ft³/s (34.6 m³/s) July 3, gage height, 7.31 ft (2.228 m); minimum daily, 9.4 ft³/s (0.27 m³/s) Dec. 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	15	15	19	15	25	24	31	25	98	26	26
2	15	14	15	15	16	23	23	35	24	430	26	26
3	15	15	13	13	17	22	25	36	24	965	25	26
4	15	16	10	13	19	23	23	36	24	950	25	26
5	14	15	10	12	21	22	26	36	24	603	25	26
6	14	15	10	12	21	20	27	36	24	46	25	26
7	14	15	10	13	19	18	26	32	24	29	25	26
8	14	15	9.9	13	17	19	30	31	24	28	25	26
9	15	15	10	15	16	19	37	33	25	29	25	26
10	16	14	10	18	15	19	43	34	25	29	26	26
11	16	14	10	69	15	18	46	31	25	29	26	26
12	16	14	9.8	312	14	17	46	31	25	29	26	26
13	16	14	9.8	348	14	20	45	37	25	29	26	26
14	16	14	9.8	204	18	22	45	34	25	29	26	26
15	15	14	9.8	47	23	23	44	30	25	29	26	26
16	15	14	9.8	35	36	22	47	29	25	28	26	26
17	15	16	9.8	29	137	24	51	30	26	28	26	26
18	15	15	9.7	25	294	23	50	31	26	28	26	26
19	17	15	9.5	22	63	20	49	31	27	28	26	26
20	22	15	9.6	20	35	23	46	31	27	28	26	26
21	16	15	9.8	20	28	22	37	30	27	28	26	26
22	16	15	9.5	20	26	20	29	29	28	28	26	26
23	15	15	9.4	19	24	23	25	29	28	28	26	25
24	15	15	11	19	24	22	24	28	28	28	26	25
25	16	15	10	19	22	19	29	28	28	28	26	25
26	16	21	10	18	24	18	34	27	28	28	26	25
27	15	16	9.8	17	24	19	39	26	28	27	26	25
28	15	15	9.6	17	31	22	37	25	28	26	26	25
29	15	15	9.8	16	28	26	35	25	29	26	26	25
30	15	15	21	15	---	28	31	25	29	26	26	25
31	15	---	32	15	---	26	---	25	---	26	26	---
TOTAL	479	451	352.4	1449	1056	667	1073	952	780	3791	799	772
MEAN	15.5	15.0	11.4	46.7	36.4	21.5	35.8	30.7	26.0	122	25.8	25.7
MAX	22	21	32	348	294	28	51	37	29	965	26	26
MIN	14	14	9.4	12	14	17	23	25	24	26	25	25
AC-FT	950	895	699	2870	2090	1320	2130	1890	1550	7520	1580	1530
CAL YR 1979	TOTAL	7625.4	MEAN 20.9	MAX 85	MIN 9.4	AC-FT	15120					
WTR YR 1980	TOTAL	12621.4	MEAN 34.5	MAX 965	MIN 9.4	AC-FT	25030					

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.

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 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47 ft³/s (1.33 m³/s) Jan. 14, gage height, 3.07 ft (0.936 m); minimum daily, 0.40 ft³/s (0.011 m³/s) on several days during October.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.59	.67	1.2	2.4	3.7	2.7	6.3	7.8	5.3	2.2	1.2
2	.47	.56	.67	.99	2.3	3.6	2.5	6.8	8.1	5.0	2.1	1.2
3	.47	.59	.64	.89	2.3	4.0	2.6	7.8	8.2	5.0	2.1	1.2
4	.45	.73	.62	.82	2.4	3.4	2.5	8.2	8.1	4.7	2.0	1.1
5	.45	.67	.62	.79	2.5	3.5	2.6	8.9	8.2	4.5	2.0	1.1
6	.42	.70	.62	.79	2.6	3.2	2.6	9.2	8.5	4.3	1.9	1.1
7	.42	.67	.62	.76	2.5	3.1	2.6	8.9	8.6	4.2	1.9	1.1
8	.42	.67	.59	.73	2.4	3.1	2.6	8.9	9.0	4.0	1.9	1.1
9	.42	.67	.59	.73	2.3	3.1	3.0	8.5	9.6	3.9	1.8	1.3
10	.40	.67	.59	.73	2.3	3.0	3.2	7.8	9.8	3.8	1.8	1.3
11	.40	.64	.56	3.7	2.2	3.0	3.5	7.0	9.6	3.6	1.7	1.1
12	.40	.62	.56	17	2.2	2.9	3.8	6.7	9.3	3.5	1.6	1.1
13	.40	.62	.56	25	2.2	2.9	4.1	6.6	8.9	3.5	1.6	1.1
14	.40	.59	.54	22	2.2	2.9	4.3	6.5	8.8	3.4	1.6	1.1
15	.40	.59	.54	8.8	2.2	2.8	4.5	6.3	8.6	3.3	1.6	1.0
16	.40	.56	.54	6.7	2.2	2.8	4.9	6.6	8.6	3.2	1.6	.98
17	.42	.67	.52	5.6	4.4	2.8	5.3	7.3	8.6	3.2	1.5	.97
18	.42	.64	.52	4.9	14	2.7	5.7	8.2	8.6	3.1	1.5	.97
19	4.2	.56	.52	4.4	7.4	2.7	6.2	9.2	8.4	3.0	1.5	.99
20	9.3	.56	.54	4.0	5.9	2.8	6.5	10	8.1	2.9	1.4	.96
21	2.0	.62	.56	3.7	5.5	2.9	6.0	11	7.9	2.7	1.4	.92
22	1.7	.62	.54	3.5	4.8	3.0	5.4	11	7.5	2.8	1.4	.90
23	1.3	.67	.54	3.4	4.7	3.0	5.0	9.7	7.2	2.7	1.4	.86
24	.96	.67	.52	3.2	4.5	2.6	5.0	8.8	6.9	2.7	1.3	.83
25	.82	.67	.64	3.1	4.2	2.5	5.3	8.1	6.6	2.6	1.3	.82
26	.70	1.5	.62	3.0	4.0	2.4	5.6	7.9	6.4	2.5	1.3	.81
27	.62	.82	.59	2.8	3.9	2.4	6.3	7.5	6.0	2.4	1.3	.80
28	.59	.76	.59	2.7	3.9	2.5	6.6	7.3	5.8	2.4	1.3	.78
29	.59	.73	.59	2.6	3.8	2.7	6.6	7.8	5.6	2.3	1.3	.76
30	.59	.70	1.4	2.5	---	2.7	6.3	7.6	5.5	2.2	1.3	.75
31	.59	---	2.2	2.4	---	2.8	---	7.8	---	2.2	1.3	---
TOTAL	31.61	20.33	20.42	143.43	108.2	91.5	133.8	250.2	238.8	104.9	49.9	30.20
MEAN	1.02	.68	.66	4.63	3.73	2.95	4.46	8.07	7.96	3.38	1.61	1.01
MAX	9.3	1.5	2.2	25	14	4.0	6.6	11	9.8	5.3	2.2	1.3
MIN	.40	.56	.52	.73	2.2	2.4	2.5	6.3	5.5	2.2	1.3	.75
AC-FT	63	40	41	284	215	181	265	496	474	208	99	60
CAL YR 1979	TOTAL	625.20	MEAN	1.71	MAX	9.3	MIN	.40	AC-FT	1240		
WTR YR 1980	TOTAL	1223.29	MEAN	3.34	MAX	25	MIN	.40	AC-FT	2430		

TULARE LAKE BASIN

11215820 TEAKETTLE CREEK TRIBUTARY NO. 2 NEAR DINKEY CREEK, CA

LOCATION.--Lat 36°57'32", long 119°02'00", in SE¼NW¼ 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 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.--15 years (water years 1958-69, 1978-80), 1.44 ft³/s (0.041 m³/s), 1,040 acre-ft/yr (1.28 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, 34 ft³/s (0.96 m³/s) Jan. 14, gage height, 2.86 ft (0.872 m); minimum daily, 0.31 ft³/s (0.009 m³/s) Nov. 20.

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	.38	.47	.47	.82	1.8	2.4	1.8	4.4	6.6	6.3	1.8	.82
2	.38	.42	.45	.64	1.7	2.2	1.8	5.0	7.1	5.9	1.8	.80
3	.36	.42	.45	.59	1.7	2.4	1.7	5.6	7.4	5.7	1.7	.78
4	.34	.51	.45	.54	1.7	2.2	1.7	6.1	7.1	5.3	1.7	.76
5	.34	.47	.45	.51	1.7	2.1	1.9	6.6	7.4	4.9	1.6	.75
6	.32	.47	.45	.51	1.8	2.1	1.8	6.9	7.7	4.6	1.5	.76
7	.34	.45	.45	.51	1.8	2.1	1.8	6.7	8.1	4.4	1.5	.74
8	.34	.47	.42	.49	1.7	2.0	1.8	6.7	8.6	4.2	1.5	.85
9	.34	.47	.42	.42	1.7	2.1	2.0	6.3	9.5	4.0	1.4	.74
10	.32	.47	.42	.51	1.6	2.0	2.1	5.9	10	3.9	1.4	.71
11	.34	.45	.38	2.4	1.6	2.0	2.2	5.3	10	3.7	1.3	.71
12	.34	.45	.35	13	1.6	2.0	2.5	5.0	9.9	3.6	1.3	.70
13	.34	.42	.38	22	1.6	2.0	2.6	4.8	9.6	3.6	1.3	.67
14	.34	.42	.36	11	1.5	2.0	2.8	4.7	9.6	3.4	1.2	.65
15	.34	.42	.36	5.4	1.5	1.9	2.9	4.7	9.9	3.3	1.2	.64
16	.34	.42	.36	4.2	2.5	1.9	3.1	5.1	10	3.1	1.2	.64
17	.34	.49	.36	3.7	5.8	1.9	3.4	5.8	11	3.0	1.1	.65
18	.34	.45	.36	3.2	9.2	1.9	3.7	6.8	11	2.9	1.1	.62
19	3.1	.38	.36	2.9	5.3	1.8	3.9	7.7	11	2.7	1.1	.59
20	1.6	.31	.36	2.7	4.0	1.8	4.2	8.9	11	2.7	1.1	.58
21	.61	.32	.32	2.6	4.2	1.8	4.0	9.1	10	2.5	1.1	.56
22	.54	.33	.38	2.4	3.4	1.8	3.6	9.1	9.8	2.4	1.1	.54
23	.49	.34	.36	2.3	3.0	1.8	3.2	8.3	9.2	2.4	1.0	.53
24	.47	.47	.32	2.2	2.9	1.8	3.2	7.5	8.8	2.2	1.0	.52
25	.56	.45	.42	2.1	2.8	1.7	3.5	6.8	8.4	2.2	.99	.50
26	.51	1.0	.40	2.1	2.7	1.7	3.7	6.5	8.1	2.1	.94	.49
27	.49	.59	.35	2.0	2.7	1.7	4.1	6.2	7.6	2.1	.89	.49
28	.49	.51	.35	2.0	2.5	1.7	4.4	6.0	7.4	2.0	.90	.47
29	.49	.49	.38	1.9	2.5	1.8	4.4	6.3	7.1	2.0	.88	.46
30	.47	.49	.85	1.8	---	1.9	4.4	6.3	6.8	1.9	.88	.45
31	.47	---	1.5	1.8	---	1.8	---	6.5	---	1.9	.86	---
TOTAL	16.47	13.82	13.69	99.24	78.5	60.3	88.2	197.6	265.7	104.9	38.34	19.17
MEAN	.53	.46	.44	3.20	2.71	1.95	2.94	6.37	8.86	3.38	1.24	.64
MAX	3.1	1.0	1.5	22	9.2	2.4	4.4	9.1	11	6.3	1.8	.85
MIN	.32	.31	.32	.42	1.5	1.7	1.7	4.4	6.6	1.9	.86	.45
AC-FT	33	27	27	197	156	120	175	392	527	208	76	38

CAL YR 1979 TOTAL 543.95 MEAN 1.49 MAX 10 MIN .31 AC-FT 1080
WTR YR 1980 TOTAL 995.93 MEAN 2.72 MAX 22 MIN .31 AC-FT 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.13	.14	.34	.62	1.1	.86	1.9	2.5	1.4	.47	.25
2	.07	.12	.13	.24	.62	1.1	.82	2.2	2.6	1.4	.47	.24
3	.07	.12	.13	.20	.59	1.1	.82	2.4	2.6	1.3	.45	.23
4	.07	.14	.12	.18	.62	1.1	.79	2.7	2.5	1.3	.42	.22
5	.07	.14	.12	.17	.64	1.2	.86	3.0	2.6	1.2	.42	.22
6	.07	.13	.12	.16	.64	1.1	.86	3.0	2.6	1.1	.40	.22
7	.07	.13	.12	.16	.64	1.0	.82	3.0	2.7	1.1	.40	.22
8	.07	.13	.12	.15	.62	.99	.86	3.1	2.8	1.0	.38	.22
9	.07	.13	.11	.15	.59	.96	.99	2.9	3.1	.99	.36	.30
10	.06	.13	.11	.17	.59	.96	1.1	2.6	3.2	.96	.36	.25
11	.06	.13	.10	1.3	.59	.96	1.2	2.4	3.2	.92	.34	.22
12	.07	.12	.10	6.6	.56	.92	1.3	2.2	3.0	.89	.34	.21
13	.07	.12	.09	9.1	.56	.92	1.3	2.1	2.9	.89	.32	.21
14	.07	.12	.09	6.9	.54	.89	1.4	2.1	2.7	.86	.32	.21
15	.07	.12	.09	2.2	.56	.89	1.4	2.1	2.7	.82	.32	.20
16	.07	.12	.09	1.6	.59	.89	1.5	2.3	2.8	.79	.32	.20
17	.08	.13	.09	1.3	2.0	.89	1.7	2.6	2.8	.76	.31	.20
18	.08	.12	.09	1.2	5.9	.89	1.8	2.9	2.7	.73	.31	.20
19	.87	.11	.08	1.0	2.4	.82	1.9	3.2	2.7	.73	.31	.20
20	1.2	.11	.10	.96	1.8	.86	1.9	3.7	2.6	.70	.29	.20
21	.20	.11	.09	.89	2.2	.86	1.7	3.8	2.4	.67	.27	.20
22	.16	.11	.10	.86	1.4	.79	1.5	3.9	2.3	.64	.29	.19
23	.14	.13	.10	.79	1.3	.82	1.4	3.4	2.2	.62	.27	.18
24	.14	.13	.09	.76	1.3	.82	1.4	3.0	2.1	.59	.26	.17
25	.15	.13	.11	.76	1.3	.76	1.6	2.8	2.0	.59	.26	.16
26	.15	.54	.11	.73	1.2	.76	1.8	2.6	1.8	.56	.27	.16
27	.14	.20	.10	.70	1.2	.76	1.9	2.5	1.7	.54	.24	.16
28	.14	.17	.10	.67	1.2	.79	2.0	2.4	1.6	.54	.24	.16
29	.14	.15	.10	.64	1.2	.86	2.0	2.5	1.6	.52	.25	.15
30	.14	.15	.43	.62	---	.89	1.9	2.5	1.5	.52	.25	.14
31	.13	---	.78	.62	---	.89	---	2.5	---	.49	.25	---
TOTAL	4.96	4.32	4.25	42.12	33.97	28.54	41.38	84.3	74.5	26.12	10.16	6.09
MEAN	.16	.14	.14	1.36	1.17	.92	1.38	2.72	2.48	.84	.33	.20
MAX	1.2	.54	.78	9.1	5.9	1.2	2.0	3.9	3.2	1.4	.47	.30
MIN	.06	.11	.08	.15	.54	.76	.79	1.9	1.5	.49	.24	.14
AC-FT	9.8	8.6	8.4	84	67	57	82	167	148	52	20	12
WTR YR 1979	TOTAL	185.56	MEAN	.51	MAX	3.3	MIN	.06	AC-FT	368		
CAL YR 1980	TOTAL	360.71	MEAN	.99	MAX	9.1	MIN	.06	AC-FT	715		

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, 8,630 ft³/s (244 m³/s) Jan. 14, gage height, 7.79 ft (2.374 m); minimum daily, 6.2 ft³/s (0.18 m³/s) Feb. 4.

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	15	18	8.1	8.6	6.8	14	8.8	368	341	355	17	17
2	16	17	7.9	8.0	6.5	14	9.2	401	345	578	17	17
3	16	14	7.8	7.9	6.4	33	8.8	453	374	1070	17	17
4	16	14	7.7	7.7	6.2	21	8.5	481	363	1160	17	17
5	15	13	7.3	7.8	6.3	33	11	505	352	768	17	17
6	15	14	7.3	7.9	6.4	47	9.7	403	369	339	17	17
7	15	15	7.6	7.9	7.4	36	9.1	122	405	230	17	17
8	15	16	7.7	7.7	7.5	25	8.7	106	438	142	17	17
9	15	15	7.7	8.3	7.5	20	8.5	375	506	49	17	17
10	15	15	7.7	19	7.5	19	8.2	509	491	39	17	17
11	15	16	7.7	56	7.5	17	8.1	335	490	174	17	17
12	15	16	7.5	1430	7.5	15	8.1	293	465	177	17	17
13	15	14	7.5	4060	7.5	15	7.8	295	446	171	17	17
14	16	14	7.5	3410	7.7	14	7.6	328	438	122	17	17
15	16	16	7.5	742	11	14	22	279	451	106	17	17
16	15	16	7.6	492	21	14	201	302	477	118	17	17
17	16	14	7.7	366	165	13	321	365	500	27	17	17
18	16	14	7.7	339	1840	13	401	443	509	22	17	17
19	16	14	7.7	212	209	13	420	500	513	20	17	17
20	17	14	7.8	29	190	12	425	540	501	19	17	17
21	16	14	8.2	19	252	12	411	541	447	22	17	17
22	15	15	8.0	14	55	12	290	531	473	23	17	17
23	15	15	7.9	18	39	11	215	418	444	22	17	17
24	14	14	7.8	18	31	10	197	393	435	21	17	17
25	14	14	8.2	8.5	31	9.8	245	338	423	20	17	17
26	14	16	7.6	8.0	31	9.6	318	112	412	19	17	17
27	14	16	7.7	7.7	31	148	378	255	400	18	17	17
28	14	16	7.7	7.6	31	175	405	275	402	17	17	17
29	15	16	7.6	7.4	20	11	397	298	402	17	17	17
30	15	15	8.0	7.2	---	8.8	367	332	373	17	17	17
31	17	---	9.5	6.9	---	8.8	---	316	---	17	17	---
TOTAL	473	450	241.2	11349.1	3055.7	818.0	5135.1	11212	12985	5899	527	510
MEAN	15.3	15.0	7.78	366	105	26.4	171	362	433	190	17.0	17.0
MAX	17	18	9.5	4060	1840	175	425	541	513	1160	17	17
MIN	14	13	7.3	6.9	6.2	8.8	7.6	106	341	17	17	17
AC-FT	938	893	478	22510	6060	1620	10190	22240	25760	11700	1050	1010
CAL YR 1979 TOTAL	4641.0		MEAN	12.7	MAX	63	MIN	6.9	AC-FT	9210		
WTR YR 1980 TOTAL	52655.1		MEAN	144	MAX	4060	MIN	6.2	AC-FT	104400		

11217000 DINKEY CREEK AT DINKEY MEADOW, NEAR SHAVER LAKE, CA

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.

DRAINAGE AREA.--50.7 mi² (131.3 km²).

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.--17 years (water years 1922-35, 1978-80), 106 ft³/s (3,002 m³/s), 76,800 acre-ft/yr (94.7 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)
Oct. 20	0315	1,080 30.6	5.81 1.771	May 6	1915	1,050 29.7	5.77 1.759
Jan. 13	2345	*7,020 199	10.44 3.182	May 20	1900	1,210 34.3	6.02 1.835
Feb. 18	0200	3,360 95.2	8.29 2.527	June 9	2015	1,030 29.2	5.73 1.747
Apr. 19	1915	869 24.6	5.45 1.661	June 17	1945	923 26.1	5.55 1.692

Minimum daily, 2.9 ft³/s (0.082 m³/s) Oct. 7, 11.

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	3.8	8.7	24	117	91	177	170	611	437	377	36	8.3
2	3.4	8.2	22	73	93	170	153	638	486	360	33	8.1
3	3.4	11	20	59	98	172	151	705	501	317	30	7.8
4	3.2	23	19	49	108	165	156	714	462	285	27	7.6
5	3.0	20	18	43	122	159	175	754	473	244	25	7.4
6	3.0	17	19	41	128	148	177	793	527	216	22	7.2
7	2.9	16	20	40	117	134	166	696	580	202	19	7.0
8	3.0	16	19	38	103	130	180	635	656	187	18	7.0
9	3.1	15	19	56	96	134	233	585	726	169	17	7.0
10	3.1	15	18	78	92	136	307	466	729	154	16	6.7
11	2.9	14	16	387	88	126	364	367	688	148	16	6.6
12	3.0	14	14	2210	84	121	399	312	624	144	15	6.5
13	3.0	13	15	3700	83	130	419	337	574	138	15	6.4
14	3.1	12	13	2430	129	143	444	321	557	131	15	6.4
15	3.2	12	13	661	141	147	487	308	593	124	14	6.4
16	3.2	11	12	448	235	146	532	373	643	113	14	6.3
17	3.3	27	12	325	750	155	595	493	685	113	14	6.2
18	3.4	21	11	248	1900	156	641	639	689	109	13	6.2
19	64	16	12	198	737	139	662	767	666	97	13	6.3
20	296	13	13	175	457	150	645	868	625	85	12	6.4
21	30	12	16	164	382	149	561	873	606	78	12	6.3
22	19	13	13	154	278	131	393	832	549	74	12	6.1
23	15	17	13	145	246	137	306	642	500	70	11	5.9
24	14	17	17	140	224	143	306	461	486	66	11	5.7
25	14	21	21	138	201	124	434	383	479	62	11	5.4
26	27	101	22	131	199	120	532	327	465	81	10	5.2
27	17	50	19	120	193	123	604	305	437	69	10	5.0
28	13	34	18	112	223	138	591	286	447	64	9.6	5.0
29	11	30	19	106	194	169	581	350	455	50	9.2	4.9
30	9.4	27	62	95	---	191	621	413	403	43	8.8	4.7
31	9.1	---	232	92	---	184	---	404	---	41	8.5	---
TOTAL	595.5	624.9	781	12773	7792	4547	11985	16658	16748	4411	497.1	192.0
MEAN	19.2	20.8	25.2	412	269	147	400	537	558	142	16.0	6.40
MAX	296	101	232	3700	1900	191	662	873	729	377	36	8.3
MIN	2.9	8.2	11	38	83	120	151	286	403	41	8.5	4.7
AC-FT	1180	1240	1550	25340	15460	9020	23770	33040	33220	8750	986	381
CAL YR 1979 TOTAL	48792.4		MEAN 134	MAX 1000	MIN 2.9	AC-FT 96780						
WTR YR 1980 TOTAL	77604.5		MEAN 212	MAX 3700	MIN 2.9	AC-FT 153900						

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 discharge, 16,400 ft³/s (464 m³/s) Jan. 14, gage height, 14.77 ft (4.502 m); minimum daily, 31 ft³/s (0.88 m³/s) on several days during October.

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	37	42	64	275	281	560	443	1630	1260	1030	121	59
2	37	41	60	160	284	578	419	1750	1320	1310	114	58
3	34	41	56	128	289	701	399	1980	1420	1890	107	57
4	32	64	53	110	306	606	421	2030	1330	1970	102	55
5	31	62	51	99	332	727	501	2130	1310	1460	99	54
6	31	53	51	93	344	696	487	2050	1460	802	94	54
7	31	54	53	90	325	583	449	1590	1570	625	90	53
8	31	57	53	89	296	538	452	1410	1740	512	88	53
9	31	55	53	114	279	522	520	1700	1950	383	86	52
10	31	54	52	425	269	515	628	1700	1950	348	85	60
11	31	54	50	960	261	488	741	1210	1880	460	82	58
12	31	53	44	5830	253	457	807	1060	1740	460	82	56
13	31	50	44	8720	248	460	862	1100	1630	443	81	54
14	32	49	43	7530	417	479	894	1140	1570	389	79	53
15	33	49	42	2520	485	477	990	1030	1630	352	79	53
16	32	48	41	1700	890	463	1290	1130	1740	347	78	53
17	33	61	41	1280	2610	470	1550	1410	1830	255	77	51
18	33	75	40	1110	5330	488	1730	1760	1860	246	76	51
19	34	58	40	818	2990	437	1800	2060	1830	227	74	51
20	576	50	42	538	1850	448	1810	2280	1740	207	75	51
21	102	47	51	495	1740	456	1660	2300	1630	194	72	51
22	64	50	46	460	1020	416	1190	2220	1560	187	69	51
23	53	54	42	435	870	410	968	1810	1430	178	68	50
24	47	57	61	418	772	430	908	1430	1370	169	68	48
25	45	60	97	398	683	393	1150	1210	1330	161	66	47
26	64	77	61	383	652	379	1430	863	1290	150	65	46
27	56	97	59	359	627	525	1650	978	1220	193	63	46
28	47	94	54	339	676	546	1690	969	1200	169	62	45
29	45	84	55	327	599	436	1650	1060	1230	147	61	44
30	42	76	77	297	---	473	1680	1240	1120	132	60	43
31	42	---	360	289	---	465	---	1170	---	128	59	---
TOTAL	1799	1766	1936	36789	25978	15622	31169	47400	46140	15524	2482	1557
MEAN	58.0	58.9	62.5	1187	896	504	1039	1529	1538	501	80.1	51.9
MAX	576	97	360	8720	5330	727	1810	2300	1950	1970	121	60
MIN	31	41	40	89	248	379	399	863	1120	128	59	43
AC-FT	3570	3500	3840	72970	51530	30990	61820	94020	91520	30790	4920	3090
CAL YR 1979	TOTAL	103570	MEAN 284	MAX 1700	MIN 31	AC-FT 205400						
WTR YR 1980	TOTAL	228162	MEAN 623	MAX 8720	MIN 31	AC-FT 452600						

TULARE LAKE BASIN

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).--29 years, 2,212 ft³/s (62.64 m³/s), 1,603,000 acre-ft/yr (1,976 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, 33,500 ft³/s (949 m³/s) Jan. 13; minimum daily, 260 ft³/s (7.36 m³/s) Oct. 18.

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	696	416	397	1070	1620	3310	2760	7020	6280	11500	4630	1540
2	874	483	402	883	1570	3270	2450	6940	6680	12400	4640	1460
3	713	387	395	703	1340	3720	2380	7850	7600	11700	4450	1530
4	715	472	351	632	1730	3380	2280	8530	7740	10700	4000	1540
5	372	467	341	632	1830	3660	2850	9330	7430	9410	3790	1530
6	318	447	423	495	1900	3710	2670	9280	7650	7880	3500	1580
7	304	427	365	599	1870	3430	2710	9010	8240	7450	3190	1590
8	297	411	351	583	1750	3330	2540	8120	9590	7410	3100	1630
9	291	448	365	851	1450	3180	2460	8330	11000	7190	3060	1600
10	342	381	410	2590	1420	3000	3050	7400	11800	6600	2910	1620
11	329	372	409	4360	1540	2850	3340	6180	12000	6860	2790	1580
12	269	437	356	17100	1580	2580	3410	5520	10700	7060	2750	1530
13	267	345	457	25700	1560	2190	3790	5360	9710	7110	2690	1510
14	265	371	425	21100	1940	2340	4050	5300	9260	6870	2570	1480
15	296	343	303	9020	2370	2560	4240	4980	9980	6890	2270	1450
16	272	391	351	6290	3220	2470	4950	5390	11100	6630	2190	1420
17	261	455	512	5070	6510	2220	5640	6680	12300	7380	2110	1390
18	260	427	575	4690	16700	2460	6420	8260	12500	7760	2110	1340
19	330	527	670	3910	10900	2400	6810	9960	12900	7360	2050	1390
20	2200	535	725	3350	8540	2240	7120	11500	13300	6160	1970	1380
21	792	368	536	3110	8700	2260	6960	11800	13200	5960	1940	1360
22	620	326	553	2560	5690	2250	5690	11200	12500	6110	1920	1340
23	550	351	387	2420	4710	2190	4930	10400	11500	6660	1880	1320
24	535	358	653	2330	4080	2460	4570	7980	10900	6690	1830	1300
25	745	360	630	2260	3750	1860	4930	6710	11300	6520	1760	1280
26	709	762	526	2160	3440	1640	5750	5290	11300	6220	1720	1280
27	677	819	646	1820	3640	1760	6430	5520	11100	5780	1700	1280
28	584	489	611	1860	3610	1900	6600	5480	11200	5510	1670	1280
29	533	547	469	1780	3410	2100	6390	5430	11900	5410	1630	1270
30	470	544	696	1760	---	2200	6770	6280	12100	4750	1580	1250
31	438	---	1500	1780	---	2490	---	6060	---	4410	1550	---
TOTAL	16324	13466	15790	133468	112370	81410	134940	233090	314760	226340	79950	43050
MEAN	527	449	509	4305	3875	2626	4498	7519	10490	7301	2579	1435
MAX	2200	819	1500	25700	16700	3720	7120	11800	13300	12400	4640	1630
MIN	260	326	303	495	1340	1640	2280	4980	6280	4410	1550	1250
AC-FT	32380	26710	31320	264700	222900	161500	267700	462300	624300	448900	158600	85390
MEAN ‡	495	445	449	4311	3841	2559	4777	8543	12256	7405	1850	616
AC-FT ‡	30420	26460	27590	265100	220900	157300	284200	525300	729300	455300	113800	36640

CAL YR 1979 TOTAL 854332 MEAN 2341 MAX 11400 MIN 260 AC-FT 1695000 MEAN ‡ 2268 AC-FT ‡ 1642000
WTR YR 1980 TOTAL 1404958 MEAN 3839 MAX 25700 MIN 260 AC-FT 2787000 MEAN ‡ 3957 AC-FT ‡ 2873000

‡ 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 Jan. 14 to Mar. 25 and May 22 to Sept. 3.

COOPERATION.--The letter "A" following a date indicates chemical-quality records furnished by California Department of Water Resources.

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, 20.0°C Oct. 5, 6; minimum recorded, 3.0°C Dec. 27, Jan. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (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 CACO3)
OCT , 1979										
18...	1300	161	49	7.1	16.5	.40	9.6	K2	K2	17
NOV										
15...	1130	325	48	6.9	7.0	.20	11.4	K6	K2	16
DEC										
12...	1030	320	48	6.9	6.0	.40	11.8	K3	K1	18
JAN , 1980										
11...	1200	2790	48	6.9	11.0	15	11.0	40	100	17
23...A	1330	1810	44	7.0	7.0	--	11.7	--	--	16
FEB										
06...	1400	1300	41	6.8	8.5	.80	11.2	15	<1	17
MAR										
13...	1700	1939	54	6.9	10.0	1.3	10.9	K3	K2	21
APR										
08...	0800	903	44	6.8	8.0	.80	11.4	17	K2	14
MAY										
09...	1215	7440	21	6.7	9.0	3.4	11.4	K3	K2	7
JUN										
10...	1130	9630	19	6.7	10.0	5.2	10.8	27	16	7
JUL										
09...	1200	10600	15	6.7	12.0	1.3	10.4	K10	--	5
23...A	0825	6400	15	7.4	16.0	--	9.4	--	--	5
AUG										
07...	1200	2430	23	6.6	17.5	.90	8.8	K3	K7	7
SEP										
09...	1430	650	34	7.1	14.0	.10	8.7	K1	K2	12

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT , 1979										
18...	0	5.4	.8	3.5	34	.4	1.0	20	6.0	1.7
NOV										
15...	0	5.2	.8	3.7	37	.4	.8	16	6.4	1.6
DEC										
12...	0	5.9	.9	3.8	34	.4	.8	22	2.7	1.7
JAN , 1980										
11...	0	5.6	.7	3.3	28	.4	1.2	20	6.2	1.5
23...A	--	5.0	1.0	3.0	27	.3	.9	17	--	--
FEB										
06...	1	5.7	.7	3.3	28	.3	.9	16	2.0	1.0
MAR										
13...	0	6.5	1.1	3.7	27	.4	1.1	22	4.6	.8
APR										
08...	0	4.7	.6	2.9	29	.3	.8	18	1.2	1.0
MAY										
09...	0	2.4	.3	1.5	29	.2	.5	9	.5	.3
JUN										
10...	0	2.2	.3	1.5	30	.3	.6	8	1.7	.4
JUL										
09...	0	1.8	.2	1.0	27	.2	.4	6	.6	.3
23...A	--	2.0	.0	1.0	29	.2	.3	4	1.0	--
AUG										
07...	0	2.3	.2	1.4	30	.2	.5	7	1.0	.7
SEP										
09...	0	3.8	.5	2.1	27	.3	.7	12	2.1	.8

TULARE LAKE BASIN

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT , 1979									
18...	.1	9.8	44	40	.06	.02	.00	.00	.01
NOV									
15...	.0	11	41	39	.06	.01	.00	.00	.01
DEC									
12...	.1	12	37	41	.05	.01	.01	.00	.00
JAN , 1980									
11...	.1	14	48	45	.07	.13	.13	.04	.01
23...A	--	--	45	--	--	--	--	--	--
FEB									
06...	.0	13	30	36	.04	.04	.04	--	.04
MAR									
13...	.1	18	56	49	.08	.04	.05	.00	.00
APR									
08...	.0	15	43	38	.06	.03	.00	.06	.00
MAY									
09...	.1	8.3	19	19	.03	.03	.03	.01	.00
JUN									
10...	.4	5.7	17	18	.02	.01	.00	.00	.01
JUL									
09...	.2	4.8	13	13	.02	.01	.03	.03	.00
23...A	--	--	--	--	--	--	--	--	--
AUG									
07...	.4	5.0	14	16	.02	.05	.05	.00	.00
SEP									
09...	.1	8.2	31	26	.04	.10	.00	.02	.03

DATE	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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979								
18...	--	.34	--	.35	--	.35	.00	.01
NOV								
15...	.74	.21	.74	.22	.75	.22	.01	.02
DEC								
12...	.43	.32	.43	.32	.44	.33	.01	.01
JAN , 1980								
11...	.91	.87	.95	.88	1.1	1.0	.08	.03
23...A	--	--	--	--	--	--	--	--
FEB								
06...	--	.34	--	.38	--	.42	.01	.01
MAR								
13...	.49	.38	.49	.38	.53	.43	.04	.01
APR								
08...	--	.91	--	.91	--	.91	.01	.01
MAY								
09...	.43	.32	.44	.32	.47	.35	.05	.03
JUN								
10...	.92	.30	.92	.31	.93	.31	.04	.01
JUL								
09...	.77	.44	.80	.44	.81	.47	.07	.00
23...A	--	--	--	--	--	--	--	--
AUG								
07...	.79	.44	.79	.44	.84	.49	.03	.01
SEP								
09...	.28	.26	.30	.29	.40	.29	.01	.00

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											
18...	1300	2	1	200	20	0	2	0	0	0	<3
JAN											
11...	1200	2	2	200	10	2	<1	0	0	2	<3
APR											
08...	0800	2	2	0	10	0	<1	0	0	0	<3
JUL											
09...	1200	1	1	300	20	1	1	0	10	1	<3

See footnotes at end of table.

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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 18...	0	0	100	90	5	1	0	4	.0	.0
JAN 11...	12	0	1600	90	5	2	60	4	.1	.0
APR 08...	11	2	110	20	1	0	0	2	.1	.0
JUL 09...	3	3	650	20	5	0	20	2	.0	.0

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (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)
OCT 18...	3	0	0	0	0	0	0	0	10	3.1
JAN 11...	3	0	0	0	0	0	0	50	7	6.8
APR 08...	4	1	0	0	0	0	0	30	7	3.8
JUL 09...	0	3	0	0	0	0	0	40	9	6.2

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.

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	NOV 15,79 1130	JAN 11,80 1200	APR 8,80 0800	JUL 9,80 1200	AUG 7,80 1200	SEP 9,80 1430
TOTAL CELLS/ML	64	1300	200	610	39	140
DIVERSITY: DIVISION	0.0	1.0	0.4	1.0	0.9	0.0
..CLASS	0.0	1.0	0.4	1.0	0.9	0.0
..ORDER	0.7	1.6	0.7	1.1	0.9	0.7
..FAMILY	0.7	3.0	2.7	1.1	0.9	2.5
....GENUS	0.7	3.4	3.0	1.1	0.9	2.5

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
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODES MUS	--	-	35	3	5	3	14	2	--	-	--	-
....CHLORELLA	--	-	--	-	10	5	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	17	1	--	-	--	-	--	-	--	-
...ULOTRICHIALES												
...CHAEETOPHORACEAE												
...STIGEOCLONIUM	--	-	--	-	--	-	170#	27	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	13#	33	--	-
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
....CYCLOTETRA	--	-	87	7	10	5	--	-	--	-	--	-
....MELOSIRA	52#	80	52	4	--	-	--	-	--	-	26#	18
...PENNIALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	360#	29	45#	23	--	-	26#	67	26#	18
....COCCONEIS	--	-	17	1	--	-	--	-	--	-	--	-
...CYMBELLACEAE												
....CYMBELLA	13#	20	69	5	10	5	--	-	--	-	39#	27
...EUNOTIACEAE												
....EUNOTIA	--	-	--	-	5	3	--	-	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	--	-	--	-	14	2	--	-	--	-
...FRAGILARIA	--	-	26	2	--	-	--	-	--	-	--	-
....HANNAEA	--	-	9	1	30#	15	--	-	--	-	--	-
....SYNEDRA	--	-	69	5	15	8	--	-	--	-	13	9
...GOMPHONEMATACEAE												
....GOMPHONEMA	--	-	140	11	5	3	--	-	--	-	13	9
...NAVICULACEAE												
....NAVICULA	--	-	52	4	15	8	--	-	--	-	26#	18
...NITZSCHIAEAE												
....NITZSCHIA	--	-	52	4	45#	23	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL SATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

CYANOPHYCEAE															
..CHROOCOCCALES															
...CHROOCOCCACEAE															
....AGMENELLUM															
..HORMOGONALES															
...OSCILLATORIACEAE															
....OSCILLATORIA															
.....SCHIZOTHRIX															

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	Sampling method
NOV 15...	28	.470	.470	.170	.000	.00	Polyethylene strip
MAY 09...	30	.079	.079	.000	.000	--	do

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	17.0	11.0	9.0	---	--?	---	--?	---	---	---	---
2	18.5	17.0	11.0	8.5	---	--?	---	--?	---	---	---	---
3	19.0	17.0	10.5	9.5	---	--?	5.5	3.0	---	---	---	---
4	19.5	17.0	11.0	8.5	---	--?	5.5	3.5	---	---	---	---
5	20.0	17.0	10.5	8.5	---	--?	5.5	4.5	---	---	---	---
6	20.0	17.5	10.5	8.5	---	--?	---	---	---	---	---	---
7	19.5	17.0	10.5	8.5	---	--?	---	---	---	---	---	---
8	19.0	17.0	10.5	9.0	---	--?	---	---	---	---	---	---
9	18.5	16.0	10.5	8.5	---	--?	---	---	---	---	---	---
10	18.0	15.5	10.5	8.5	---	--?	---	---	---	---	---	---
11	18.0	16.0	9.5	8.0	---	--?	---	---	---	---	---	---
12	18.5	16.0	8.5	7.0	---	--?	---	---	---	---	---	---
13	17.0	15.5	8.5	6.5	---	--?	---	---	---	---	---	---
14	18.0	15.5	8.0	6.5	---	--?	---	---	---	---	---	---
15	18.0	15.5	9.0	6.5	---	--?	---	---	---	---	---	---
16	18.0	16.0	---	---	---	--?	---	---	---	---	---	---
17	18.5	16.5	---	---	---	--?	---	---	---	---	---	---
18	17.5	16.0	---	---	---	--?	---	---	---	---	---	---
19	16.5	15.0	---	---	---	--?	---	---	---	---	---	---
20	15.0	13.0	---	---	---	--?	---	---	---	---	---	---
21	14.0	12.0	---	---	---	--?	---	---	---	---	---	---
22	13.0	11.0	---	---	---	--?	---	---	---	---	---	---
23	13.5	11.0	---	---	---	--?	---	---	---	---	---	---
24	14.0	11.5	---	---	---	--?	---	---	---	---	---	---
25	12.5	11.0	---	---	---	--?	---	---	---	---	---	---
26	13.5	11.5	---	---	5.5	4.5	---	---	---	---	9.0	6.0
27	13.5	11.0	---	---	5.0	3.0	---	---	---	---	9.0	7.0
28	13.0	11.0	---	---	---	---	---	---	---	---	10.5	7.5
29	12.5	10.0	---	---	---	---	---	---	---	---	11.0	8.0
30	11.5	9.0	---	---	---	---	---	---	---	---	10.0	8.0
31	11.0	8.5	---	---	---	---	---	---	---	---	9.5	8.5
MONTH	20.0	8.5	---	---	---	--?	---	---	---	---	---	---

TULARE LAKE BASIN

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11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	10.0	8.5							---	---
2	---	---	11.0	8.0							---	---
3	---	---	11.5	9.5							---	---
4	---	---	11.0	8.5							14.0	13.0
5	---	---	11.5	8.0							14.0	13.0
6	---	---	11.0	9.0							14.5	13.5
7	---	---	11.0	8.0							14.5	14.0
8	---	---	11.0	8.0							14.5	13.5
9	---	---	11.0	8.5							14.0	13.5
10	---	---	8.5	7.0							14.5	13.5
11	10.0	7.5	---	---							15.0	14.0
12	10.5	7.5	---	---							15.0	14.0
13	10.0	8.0	9.0	8.0							15.0	14.0
14	11.5	7.5	8.5	7.5							14.5	13.5
15	10.5	7.5	9.5	8.0							14.0	13.0
16	10.5	8.0	10.5	9.0							14.5	13.0
17	10.5	8.5	10.5	8.0							15.0	14.0
18	11.0	8.5	12.0	8.0							17.0	14.0
19	11.0	7.5	12.0	9.0							15.0	14.0
20	10.5	8.0	11.5	8.5							15.0	14.0
21	10.0	8.0	10.5	8.0							14.5	13.5
22	---	---	---	---							14.5	13.5
23	---	---	---	---							14.5	13.5
24	---	---	---	---							15.0	13.5
25	9.5	7.5	---	---							15.0	13.5
26	10.5	8.5	---	---							14.5	13.5
27	11.0	8.0	---	---							15.0	13.5
28	10.5	9.0	---	---							14.5	14.0
29	10.0	9.0	---	---							15.0	13.5
30	10.0	9.0	---	---							15.0	14.0
31	---	---	---	---							---	---
MONTH	---	---	---	---							17.0	13.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (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						
18...	1300	161	16.5	2	.87	77
NOV						
15...	1130	325	7.0	1	.88	50
DEC						
12...	1030	320	6.0	1	.86	55
JAN						
11...	1200	2790	11.0	61	460	65
FEB						
06...	1400	1300	8.5	2	7.0	66
MAR						
13...	1700	1939	10.0	4	21	50
APR						
08...	0800	903	8.0	2	4.9	52
MAY						
09...	1215	7440	9.0	53	1070	22
JUN						
10...	1130	9630	10.0	119	3090	28
JUL						
09...	1200	10600	12.0	28	801	31
AUG						
07...	1200	2430	17.5	9	59	44
SEP						
09...	1430	650	14.0	2	3.5	73

TULARE LAKE BASIN

11221000 PINE FLAT LAKE NEAR PIEDRA, CA

LOCATION.--Lat 36°49'58", long. 119°19'29", in SE¼NE¼ 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 (1.23 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, 991,374 acre-ft (1.22 km³) July 14, elevation, 949.87 ft (289.520 m); minimum, 483,605 acre-ft (596 hm³) Oct. 1, elevation, 846.63 ft (258.053 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	483605	509038	534385	565121	746918	866987	677964	628725	743055	972770	928940	731533
2	484845	509859	535101	566854	745713	860821	671973	631337	745060	979045	923254	727714
3	485966	510598	535859	568156	744910	858537	665871	635842	748878	983989	917534	723759
4	487168	511380	536490	569243	745260	854626	659609	641567	753060	986526	911439	720257
5	487811	512203	537081	570417	746265	853109	655388	648668	756597	987058	905145	716962
6	488212	513026	537883	571244	747521	853218	650345	655810	760550	986348	898151	713823
7	488574	513685	538474	572289	748885	851756	644996	662570	765685	985877	890521	711023
8	488976	514511	539108	573161	753313	849267	639258	667523	773193	987176	883427	708394
9	489297	515254	539784	574952	756194	845598	633449	673112	783215	988180	876863	705762
10	489740	515914	540504	581614	759079	841239	628634	677154	794351	988357	870272	703183
11	490262	516658	541308	592745	762022	836197	624429	678536	805733	989421	863711	700804
12	490544	517362	541985	633221	765023	830053	620376	678584	814619	990487	857232	698477
13	490826	517982	542792	693402	767979	823244	617016	678250	821812	991196	850781	696590
14	491148	518686	543598	743155	772066	816626	614208	677916	828667	991374	843982	695430
15	491511	519308	544149	760145	777965	810196	611814	676916	837107	991137	836572	694320
16	491793	520096	544829	767163	786728	803533	610552	676536	847378	989776	829199	693210
17	492115	521050	545765	771248	804056	795965	610912	678584	853591	988831	821706	691657
18	492438	521881	546786	775602	840434	788333	612582	683744	869067	988357	814198	690464
19	492923	522879	547936	777245	867425	780124	614978	691903	879452	987412	806729	690367
20	497250	523961	549300	777296	887802	771095	618059	702649	890133	983576	798986	690512
21	498671	524587	550453	776732	903408	762124	620921	714067	900777	980104	791494	690656
22	499727	525212	551393	775089	905538	753010	621422	724450	910145	976638	784816	690560
23	500581	525838	552078	772988	904024	743456	620421	733472	918100	973648	778941	689886
24	501394	526547	553148	770634	900665	734516	618694	738305	925299	970487	772928	688828
25	502698	527257	554434	768489	896142	725093	617605	740603	933160	966926	767265	687579
26	503841	528888	555335	766093	890743	716325	618059	740152	939627	962847	761758	686427
27	505025	530563	556537	763089	885364	708883	619739	740102	945716	958026	756092	685372
28	506007	531612	557612	760094	879618	702017	621832	739853	951772	953102	750539	684558
29	506907	532619	558343	756952	873345	695479	623517	739553	959302	948252	745311	683983
30	507644	533628	559721	753616	---	688972	625844	740903	967158	941864	740352	683552
31	508341	534637	562915	750237	---	683025	---	741853	---	934989	735711	---
MAX	508341	533628	562915	777296	905538	866987	677964	741853	967158	991374	928940	731533
MIN	483605	509038	534385	565121	744910	683025	610552	628725	743055	934989	735711	683552
†	852.74	858.83	865.70	905.78	929.18	892.09	879.86	904.11	945.75	940.18	902.88	892.20
‡	+24296	+25287	+29287	+187322	+123108	-190320	-57181	+116009	+225305	-32169	-199278	-52159
††	1589	656	444	292	492	944	1229	2064	3360	4593	3927	2788

CAL YR 1979 ‡ -95708

WTR YR 1980 ‡ +199507

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

TULARE LAKE BASIN

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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).--27 years, 2,285 ft³/s (64.71 m³/s), 1,655,000 acre-ft/yr (2.04 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, 9,700 ft³/s (275 m³/s) July 10, gage height, 8.52 ft (2.597 m); minimum daily, 22 ft³/s (0.62 m³/s) Nov. 26.

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	822	80	24	58	3670	7020	5540	5570	5590	8300	7750	3580	
2	255	78	35	72	2460	7050	5540	5570	5590	8760	7580	3360	
3	169	78	35	84	2020	6340	5530	5540	5590	8830	7380	3400	
4	99	79	49	86	1740	6080	5550	5570	5590	8990	7140	3230	
5	101	68	44	90	1490	5950	5480	5570	5590	8700	6990	3030	
6	104	52	34	89	1430	5520	5480	5580	5590	8190	7060	3000	
7	103	52	34	115	815	5310	5530	5590	5590	7440	7080	2930	
8	103	52	33	166	148	5430	5530	5580	5550	6620	6710	2840	
9	103	48	33	165	152	5650	5540	5580	5570	6540	6340	2820	
10	104	44	32	75	158	5740	5540	5560	5680	6400	6170	2780	
11	103	44	33	26	170	5890	5540	5540	5850	6280	6090	2670	
12	102	42	33	25	170	6060	5540	5540	5840	6440	5970	2570	
13	104	42	34	32	171	6110	5540	5540	5810	6610	5880	2260	
14	104	42	34	30	175	6120	5540	5540	5630	6670	5960	1950	
15	103	42	36	1280	103	6120	5540	5540	5360	6840	6010	1880	
16	104	42	34	3100	62	6210	5540	5540	5420	7210	5910	1810	
17	103	40	38	3350	62	6360	5540	5540	6110	7450	5900	1890	
18	104	40	54	3190	456	6700	5540	5540	6650	7880	5870	1980	
19	104	39	52	3460	1490	6890	5540	5570	7120	8120	5830	1300	
20	103	26	52	3630	1490	7120	5540	5590	7420	8060	5880	1190	
21	103	25	66	3700	3170	7200	5560	5570	7320	7780	5730	1210	
22	102	27	91	3730	5810	7180	5560	5570	7280	7910	5270	1290	
23	104	26	92	3790	6350	7250	5540	5580	7170	8170	4830	1560	
24	102	26	88	3740	6620	7230	5540	5540	6930	8380	4790	1720	
25	102	25	85	3670	6720	6870	5540	5540	6890	8420	4600	1770	
26	103	22	84	3670	6780	6260	5540	5550	7750	8280	4480	1710	
27	104	25	86	3700	6990	5700	5540	5540	7750	8280	4520	1650	
28	104	24	86	3730	7080	5520	5540	5540	7740	8030	4440	1570	
29	88	24	86	3820	7140	5520	5550	5560	7720	7940	4240	1450	
30	77	24	86	3910	---	5540	5570	5570	7750	8030	4000	1300	
31	76	---	83	3960	---	5540	---	5560	---	8000	3800	---	
TOTAL	4062	1278	1686	60543	75092	193480	166140	172310	191440	239550	180200	65700	
MEAN	131	42.6	54.4	1953	2589	6241	5538	5558	6381	7727	5813	2190	
MAX	822	80	92	3960	7140	7250	5570	5590	7750	8990	7750	3580	
MIN	76	22	24	25	62	5310	5480	5540	5360	6280	3800	1190	
AC-FT	8060	2530	3340	120100	148900	383800	329500	341800	379700	475100	357400	130300	
MEAN ‡	520	474	477	5010	4703	3094	4877	8503	11990	7382	1906	541	
AC-FT ‡	31980	28220	29340	308100	270500	190300	290200	522900	713300	453900	117200	32180	
CAL YR 1979 TOTAL	919154	MEAN	2518	MAX	7960	MIN	22	AC-FT	1823000	MEAN ‡	2345	AC-FT ‡	1698000
WTR YR 1980 TOTAL	1351481	MEAN	3693	MAX	8990	MIN	22	AC-FT	2681000	MEAN ‡	4117	AC-FT ‡	2989000

‡ Adjusted for change in contents in Wishon and Courtright Reservoirs, Pine Flat Lake, and evaporation from Pine Flat Lake.

TULARE LAKE BASIN

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.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 18.5°C on several days during July and August; minimum recorded, 7.0°C Apr. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	14.0	16.5	12.0	15.0	10.5	13.5	9.5	8.5	8.5	11.0	11.0
2	17.5	14.5	16.5	12.0	14.5	10.5	13.0	10.5	9.0	8.5	11.0	10.5
3	17.5	14.5	15.0	13.5	14.5	11.0	12.5	9.5	8.5	8.5	11.5	10.5
4	18.5	14.5	16.5	12.5	13.5	12.0	12.5	8.5	9.0	8.5	11.0	10.5
5	18.5	15.0	16.5	12.0	12.5	12.0	12.5	9.0	9.0	8.5	11.5	10.0
6	17.5	14.5	17.0	12.5	12.5	11.5	11.0	10.0	8.5	8.5	11.0	10.5
7	18.0	14.5	15.5	12.5	12.5	11.5	12.5	10.0	9.5	8.0	11.0	10.5
8	17.5	14.0	17.0	13.0	13.0	12.0	11.5	10.0	11.0	7.5	11.0	10.0
9	18.0	13.5	17.0	12.5	13.0	12.0	11.5	10.5	11.0	7.5	11.5	10.0
10	17.5	13.5	16.5	12.5	12.5	12.0	11.0	10.0	11.0	7.5	11.0	8.0
11	18.0	14.0	16.0	12.0	12.5	11.5	12.0	10.0	11.0	7.5	8.0	7.5
12	18.0	14.0	16.5	12.0	12.0	11.5	12.5	11.5	11.0	7.5	8.0	7.5
13	17.0	14.0	16.0	11.5	11.5	11.0	13.0	11.5	9.5	7.5	8.0	7.5
14	17.5	14.0	16.0	11.5	11.5	11.0	14.0	11.0	9.5	8.0	8.0	7.5
15	18.0	14.0	16.5	12.0	11.5	11.0	11.5	9.0	10.0	8.5	8.0	7.5
16	18.0	14.0	15.5	12.0	12.0	11.0	9.0	9.0	10.0	8.5	8.0	7.5
17	18.0	14.5	15.5	13.0	12.0	11.0	9.0	8.5	10.0	9.0	8.0	7.5
18	17.5	14.0	16.0	12.0	12.0	11.0	8.5	8.5	11.5	8.5	7.5	7.5
19	16.5	14.5	15.5	11.0	12.0	11.5	8.5	8.5	11.0	8.0	7.5	7.5
20	17.5	14.0	15.0	11.0	12.5	11.5	9.0	8.5	11.0	10.5	8.0	7.5
21	17.0	12.5	14.0	8.0	13.0	10.0	9.0	8.5	11.0	11.0	7.5	7.5
22	16.5	13.0	13.5	10.5	13.0	10.0	9.0	8.5	11.0	11.0	7.5	7.5
23	17.0	13.0	15.5	12.0	11.5	9.5	8.5	8.5	11.0	10.5	8.0	7.5
24	17.0	13.0	16.0	12.0	11.5	10.5	8.5	8.0	11.0	10.0	7.5	7.5
25	16.0	13.0	15.5	11.5	12.5	9.5	8.5	8.0	11.0	10.5	7.5	7.5
26	16.5	13.5	15.5	12.0	10.5	9.0	8.5	8.5	11.0	10.5	7.5	7.5
27	17.0	13.5	15.0	11.0	13.0	8.5	8.5	8.5	11.0	11.0	7.5	7.5
28	17.0	13.0	15.0	11.0	12.0	8.5	8.5	8.5	11.0	10.0	8.0	7.5
29	16.5	12.5	15.0	11.0	13.0	10.0	8.5	8.5	11.0	10.5	8.0	7.5
30	17.0	11.5	15.0	10.5	12.0	9.5	8.5	8.5	---	---	8.0	7.5
31	17.0	12.0	---	---	12.5	11.0	8.5	8.5	---	---	7.5	7.5
MONTH	18.5	11.5	17.0	8.0	15.0	8.5	14.0	8.0	11.5	7.5	11.5	7.5

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.5	7.0	8.5	8.5	10.0	9.5	15.5	14.0	18.5	16.5	---	---
2	7.5	7.5	9.0	8.5	9.5	9.5	14.0	13.0	18.5	17.0	---	---
3	7.5	7.5	9.0	8.5	10.0	9.5	14.0	13.0	---	---	---	---
4	7.5	7.5	9.0	8.5	10.0	9.5	14.5	13.5	---	---	---	---
5	7.5	7.5	9.0	8.5	10.0	9.5	15.0	13.5	---	---	---	---
6	7.5	7.5	9.0	8.5	10.0	9.5	15.5	14.0	---	---	---	---
7	7.5	7.5	9.0	8.5	10.0	9.5	15.0	14.0	---	---	---	---
8	7.5	7.5	9.0	8.5	10.0	10.0	14.5	14.0	---	---	12.0	11.0
9	8.0	7.5	9.0	8.5	10.5	10.0	15.0	14.0	---	---	12.0	11.5
10	8.0	7.5	9.0	8.5	10.5	10.0	15.5	14.0	---	---	12.0	11.5
11	8.0	7.5	9.0	8.5	10.0	10.0	16.0	14.0	---	---	12.0	11.5
12	8.0	7.5	9.0	8.5	10.0	10.0	16.0	13.5	---	---	12.0	11.5
13	8.0	7.5	9.0	9.0	10.5	10.0	15.5	14.0	---	---	12.0	11.5
14	8.0	7.5	9.5	8.5	10.5	10.0	16.0	14.0	---	---	12.0	11.5
15	8.0	7.5	9.5	8.5	10.5	10.0	16.0	14.0	---	---	12.0	11.5
16	8.0	8.0	9.5	9.0	16.5	10.0	16.0	14.5	---	---	12.0	11.5
17	8.0	8.0	9.5	9.0	17.5	15.5	16.0	14.5	---	---	12.0	12.0
18	8.0	8.0	9.5	9.0	17.0	15.0	16.5	14.0	---	---	12.5	12.0
19	8.0	8.0	9.5	9.0	16.5	14.5	16.0	14.5	---	---	12.5	12.0
20	8.0	7.5	10.0	9.0	15.5	14.0	17.0	15.0	---	---	12.5	12.0
21	8.0	7.5	9.5	9.0	16.0	14.0	17.0	15.0	---	---	12.5	12.0
22	8.0	7.5	9.5	9.0	15.5	13.5	17.0	15.5	---	---	12.5	12.0
23	8.0	7.5	9.5	9.0	15.0	13.5	17.5	16.0	---	---	12.5	12.0
24	8.0	8.0	9.5	9.0	15.0	13.5	17.5	15.5	---	---	12.5	12.0
25	8.5	8.0	10.0	9.0	14.5	13.5	17.5	16.5	---	---	12.5	12.0
26	8.5	8.0	9.5	9.0	14.5	13.0	17.5	17.0	---	---	12.0	11.5
27	8.5	8.0	9.5	9.0	15.5	14.0	18.0	17.0	---	---	12.5	12.0
28	8.5	8.5	9.5	9.0	16.0	14.5	18.0	16.5	---	---	12.5	12.0
29	8.5	8.0	9.5	9.0	15.5	14.5	18.5	17.0	---	---	12.5	12.0
30	8.5	8.5	9.5	9.5	15.5	14.5	18.5	16.0	---	---	12.5	12.0
31	---	---	9.5	9.5	---	---	18.0	16.5	---	---	---	---
MONTH	8.5	7.0	10.0	8.5	17.5	9.5	18.5	13.0	---	---	---	---

TULARE LAKE BASIN

11221700 MILL CREEK NEAR PIEDRA, CA

LOCATION.--Lat 36°49'07", long 119°20'27", in NE¼NE¼ sec.10, T.13 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.--23 years (water year 1958-80), 42.2 ft³/s (1.195 m³/s), 30,570 acre-ft/yr (37.7 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	1230	*6,050 171	7.02 2.140	Mar. 3	1030	888 25.1	4.23 1.289
Jan. 18	0900	631 17.9	3.94 1.201	Mar. 6	1415	1,010 28.6	4.35 1.326
Feb. 17	0245	1,280 36.2	4.60 1.402	Apr. 5	1915	299 8.47	3.49 1.064
Feb. 19	2230	5,270 149	6.73 2.051				

Minimum, no flow for several months.

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	87	169	89	67	29	9.0	.16	
2		0	4.8	21	84	167	88	63	27	8.8	.08	
3		0	4.8	16	80	553	84	62	26	8.6	0	
4		.05	4.5	14	77	348	82	58	25	8.8	0	
5		3.3	4.3	13	75	470	144	55	24	8.5	0	
6		2.2	4.7	11	72	774	139	53	24	8.1	0	
7		.46	4.8	11	71	511	104	52	23	7.9	0	
8		3.0	4.8	11	69	350	94	52	22	7.5	0	
9		2.9	4.8	12	67	272	89	50	20	7.0	0	
10		2.3	4.8	277	63	225	86	78	19	6.8	0	
11		2.5	5.0	393	62	199	85	69	18	6.3	0	
12		2.5	5.4	815	52	178	82	59	18	5.6	0	
13		2.5	5.4	2680	53	165	79	55	18	4.8	0	
14		2.6	5.4	1370	63	155	77	67	18	4.3	0	
15		2.3	5.4	590	135	146	77	62	17	3.9	0	
16		2.5	5.4	276	259	139	76	56	16	3.9	0	
17		7.0	5.4	212	960	132	74	51	15	3.5	0	
18		13	5.4	429	829	132	71	45	14	3.5	0	
19		7.6	5.4	241	1650	126	74	39	13	3.3	0	
20		5.7	5.4	185	2000	119	75	34	13	3.1	0	
21		4.8	6.3	163	1520	116	80	33	12	2.8	0	
22		4.3	8.9	148	739	115	82	30	12	2.8	0	
23		4.3	8.2	136	462	110	78	33	11	2.2	0	
24		4.3	8.2	127	332	106	74	34	11	2.0	0	
25		4.3	14	120	262	104	71	37	11	1.8	0	
26		4.7	17	115	220	104	69	37	11	1.3	0	
27		6.2	12	109	198	101	67	33	10	1.2	0	
28		6.2	10	105	194	97	67	34	10	.80	0	
29		5.4	9.4	102	181	94	68	34	9.1	.74	0	
30		5.3	10	98	---	91	70	30	8.8	.55	0	
31		---	24	92	---	90	---	29	---	.33	0	---
TOTAL	0	112.21	228.7	8927	10916	6458	2495	1491	504.9	139.72	.24	0
MEAN	0	3.74	7.38	288	376	208	83.2	48.1	16.8	4.51	.008	0
MAX	0	13	24	2680	2000	774	144	78	29	9.0	.16	0
MIN	0	0	4.3	11	52	90	67	29	8.8	.33	0	0
AC-FT	0	223	454	17710	21650	12810	4950	2960	1000	277	.5	0
CAL YR 1979	TOTAL	12821.35	MEAN 35.1	MAX 836	MIN 0	AC-FT 25430						
WTR YR 1980	TOTAL	31272.77	MEAN 85.4	MAX 2680	MIN 0	AC-FT 62030						

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	POTASSIUM, DIS-SOLVED (MG/L AS K)
NOV 28...	0935	123	7.4	10.0	9.9	2	.7	46	10	5.0	7.0	--
JAN 23...	1120	44	7.0	7.5	11.3	--	--	14	4.0	1.0	2.0	--
MAY 21...	0745	40	7.7	12.0	12.0	6	1.4	14	4.0	1.0	2.0	.7
JUN 25...	1415	26	7.4	14.0	10.5	--	--	8	3.0	.0	2.0	.8
JUL 23...	0630	20	7.4	17.0	9.3	--	--	5	2.0	.0	1.0	.4
SEP 24...	1300	25	7.3	14.0	11.2	4	.5	5	2.0	.0	2.0	.5

DATE	ALKALINITY (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED PENDED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
NOV 28...	43	5.0	8.0	--	73	0	--	.00	.20	.01	.01
JAN 23...	13	.0	.0	--	42	--	.10	.00	.30	.04	.01
MAY 21...	14	.0	1.0	--	31	2	--	--	--	--	--
JUN 25...	10	.0	1.0	--	23	--	.00	.00	.10	.01	.00
JUL 23...	6	1.0	.0	7.3	17	--	.01	.01	.10	.01	.00
SEP 24...	8	.0	.0	--	23	0	.02	.00	.10	.00	.00

DATE	TIME	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV 28...	0935	--	--	0	--	--	--
JAN 23...	1120	--	--	0	--	--	--
MAY 21...	0745	0	0	0	0	0	0
JUN 25...	1415	--	--	0	--	--	--
JUL 23...	0630	0	0	0	0	0	0
SEP 24...	1300	--	--	0	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 28...	--	--	--	--	--	2.7	.00
JAN 23...	--	--	--	--	--	--	--
MAY 21...	20	0	10	.0	10	1.4	.00
JUN 25...	--	--	--	--	--	--	--
JUL 23...	20	0	0	.0	0	--	--
SEP 24...	--	--	--	--	--	1.4	.00

TULARE LAKE BASIN

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA

LOCATION.--Lat 36°12'53", long 120°28'11", in NW¼SE¼ 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.--35 years, 5.08 ft³/s (0.144 m³/s), 3,680 acre-ft/yr (4.54 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. 11	0800	444 12.6	3.94 1.201	Feb. 19	1145	766 21.7	4.36 1.329
Jan. 12	0630	158 4.47	3.17 0.966	Feb. 21	0430	233 6.60	3.03 .924
Feb. 16	1515	*1,440 40.8	5.55 1.692	Mar. 3	0800	222 6.29	2.99 .911
Feb. 17	2230	989 28.0	4.78 1.457	Mar. 5	1015	150 4.25	2.72 .829

Minimum, no flow many days.

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	.08	.24	.57	2.2	23	12	7.0	2.5	.05	.05	
2	0	.10	.22	.51	2.1	45	11	6.2	2.2	.15	.04	
3	0	.13	.23	.47	1.9	91	11	4.9	2.1	.52	.03	
4	0	.16	.24	.41	1.9	41	11	4.2	2.3	.24	.03	
5	0	.16	.24	.39	1.8	61	22	3.9	2.3	.16	.01	
6	0	.17	.24	.38	1.7	67	16	3.9	2.1	.13	0	
7	0	.18	.24	.34	1.5	49	13	3.8	1.9	.36	0	
8	0	.19	.24	.34	1.6	44	11	3.6	1.7	.44	0	
9	0	.19	.24	.42	1.6	41	10	3.8	1.4	.43	0	
10	0	.19	.24	.79	1.5	38	9.5	6.3	1.3	.43	0	
11	0	.21	.26	85	1.4	36	8.8	6.0	1.2	.36	0	
12	0	.21	.27	50	1.4	32	7.6	4.7	1.3	.30	0	
13	0	.21	.25	19	1.5	30	7.2	4.6	1.5	.30	0	
14	0	.21	.25	30	1.9	28	7.0	4.6	1.4	.28	0	
15	0	.19	.25	16	6.3	26	7.1	3.9	1.2	.24	0	
16	0	.19	.25	7.7	269	24	6.8	3.2	.97	.20	0	
17	0	.22	.24	5.4	262	23	6.0	2.8	.80	.18	0	
18	0	.23	.24	4.3	287	23	5.6	2.4	.60	.16	0	
19	0	.23	.24	3.3	275	21	5.6	2.1	.51	.15	0	
20	0	.24	.25	2.5	139	19	5.3	1.6	.53	.14	0	
21	0	.24	.27	2.0	166	19	6.1	1.4	.48	.12	0	
22	0	.23	.27	1.6	75	18	9.3	3.0	.45	.10	0	
23	0	.24	.27	1.3	66	17	10	3.2	.53	.09	0	
24	0	.24	1.9	1.1	57	16	8.0	3.7	.57	.08	0	
25	0	.24	3.3	.96	46	18	6.7	3.7	.53	.07	0	
26	0	.24	1.3	.81	37	18	5.9	3.8	.46	.06	0	
27	0	.24	.70	.71	31	16	5.3	3.2	.38	.06	0	
28	0	.24	.54	.66	30	15	10	3.0	.31	.06	0	
29	0	.24	.44	1.0	26	14	10	2.9	.36	.05	0	
30	.01	.24	.41	1.7	---	13	7.4	2.6	.04	.05	0	
31	.06	---	.48	2.3	---	12	---	2.4	---	.05	0	---
TOTAL	.07	6.08	14.75	241.96	1796.3	938	272.2	116.4	33.92	6.01	.16	0
MEAN	.002	.20	.48	7.81	61.9	30.3	9.07	3.75	1.13	.19	.005	0
MAX	.06	.24	3.3	85	287	91	22	7.0	2.5	.52	.05	0
MIN	0	.08	.22	.34	1.4	12	5.3	1.4	.04	.05	0	0
AC-FT	.1	12	29	480	3560	1860	540	231	67	12	.3	0
CAL YR 1979	TOTAL	1389.49	MEAN	3.81	MAX	155	MIN	0	AC-FT	2760		
WTR YR 1980	TOTAL	3425.85	MEAN	9.36	MAX	287	MIN	0	AC-FT	6800		

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)
NOV 28...	0935	123	7.4	10.0	9.9	2	.7	46	10	5.0	7.0	--
JAN 23...	1120	44	7.0	7.5	11.3	--	--	14	4.0	1.0	2.0	--
MAY 21...	0745	40	7.7	12.0	12.0	6	1.4	14	4.0	1.0	2.0	.7
JUN 25...	1415	26	7.4	14.0	10.5	--	--	8	3.0	.0	2.0	.8
JUL 23...	0630	20	7.4	17.0	9.3	--	--	5	2.0	.0	1.0	.4
SEP 24...	1300	25	7.3	14.0	11.2	4	.5	5	2.0	.0	2.0	.5

DATE	ALKALINITY (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)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED PENDED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
NOV 28...	43	5.0	8.0	--	73	0	--	.00	.20	.01	.01
JAN 23...	13	.0	.0	--	42	--	.10	.00	.30	.04	.01
MAY 21...	14	.0	1.0	--	31	2	--	--	--	--	--
JUN 25...	10	.0	1.0	--	23	--	.00	.00	.10	.01	.00
JUL 23...	6	1.0	.0	7.3	17	--	.01	.01	.10	.01	.00
SEP 24...	8	.0	.0	--	23	0	.02	.00	.10	.00	.00

DATE	TIME	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV 28...	0935	--	--	0	--	--	--
JAN 23...	1120	--	--	0	--	--	--
MAY 21...	0745	0	0	0	0	0	0
JUN 25...	1415	--	--	0	--	--	--
JUL 23...	0630	0	0	0	0	0	0
SEP 24...	1300	--	--	0	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 28...	--	--	--	--	--	2.7	.00
JAN 23...	--	--	--	--	--	--	--
MAY 21...	20	0	10	.0	10	1.4	.00
JUN 25...	--	--	--	--	--	--	--
JUL 23...	20	0	0	.0	0	--	--
SEP 24...	--	--	--	--	--	1.4	.00

TULARE LAKE BASIN

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA

LOCATION.--Lat 36°12'53", long 120°28'11", in NW¼SE¼ 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.--35 years, 5.08 ft³/s (0.144 m³/s), 3,680 acre-ft/yr (4.54 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. 11	0800	444 12.6	3.94 1.201	Feb. 19	1145	766 21.7	4.36 1.329
Jan. 12	0630	158 4.47	3.17 0.966	Feb. 21	0430	233 6.60	3.03 .924
Feb. 16	1515	*1,440 40.8	5.55 1.692	Mar. 3	0800	222 6.29	2.99 .911
Feb. 17	2230	989 28.0	4.78 1.457	Mar. 5	1015	150 4.25	2.72 .829

Minimum, no flow many days.

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	.08	.24	.57	2.2	23	12	7.0	2.5	.05	.05	
2	0	.10	.22	.51	2.1	45	11	6.2	2.2	.15	.04	
3	0	.13	.23	.47	1.9	91	11	4.9	2.1	.52	.03	
4	0	.16	.24	.41	1.9	41	11	4.2	2.3	.24	.03	
5	0	.16	.24	.39	1.8	61	22	3.9	2.3	.16	.01	
6	0	.17	.24	.38	1.7	67	16	3.9	2.1	.13	0	
7	0	.18	.24	.34	1.5	49	13	3.8	1.9	.36	0	
8	0	.19	.24	.34	1.6	44	11	3.6	1.7	.44	0	
9	0	.19	.24	.42	1.6	41	10	3.8	1.4	.43	0	
10	0	.19	.24	.79	1.5	38	9.5	6.3	1.3	.43	0	
11	0	.21	.26	85	1.4	36	8.8	6.0	1.2	.36	0	
12	0	.21	.27	50	1.4	32	7.6	4.7	1.3	.30	0	
13	0	.21	.25	19	1.5	30	7.2	4.6	1.5	.30	0	
14	0	.21	.25	30	1.9	28	7.0	4.6	1.4	.28	0	
15	0	.19	.25	16	6.3	26	7.1	3.9	1.2	.24	0	
16	0	.19	.25	7.7	269	24	6.8	3.2	.97	.20	0	
17	0	.22	.24	5.4	262	23	6.0	2.8	.80	.18	0	
18	0	.23	.24	4.3	287	23	5.6	2.4	.60	.16	0	
19	0	.23	.24	3.3	275	21	5.6	2.1	.51	.15	0	
20	0	.24	.25	2.5	139	19	5.3	1.6	.53	.14	0	
21	0	.24	.27	2.0	166	19	6.1	1.4	.48	.12	0	
22	0	.23	.27	1.6	75	18	9.3	3.0	.45	.10	0	
23	0	.24	.27	1.3	66	17	10	3.2	.53	.09	0	
24	0	.24	1.9	1.1	57	16	8.0	3.7	.57	.08	0	
25	0	.24	3.3	.96	46	18	6.7	3.7	.53	.07	0	
26	0	.24	1.3	.81	37	18	5.9	3.8	.46	.06	0	
27	0	.24	.70	.71	31	16	5.3	3.2	.38	.06	0	
28	0	.24	.54	.66	30	15	10	3.0	.31	.06	0	
29	0	.24	.44	1.0	26	14	10	2.9	.36	.05	0	
30	.01	.24	.41	1.7	---	13	7.4	2.6	.04	.05	0	
31	.06	---	.48	2.3	---	12	---	2.4	---	.05	0	---
TOTAL	.07	6.08	14.75	241.96	1796.3	938	272.2	116.4	33.92	6.01	.16	0
MEAN	.002	.20	.48	7.81	61.9	30.3	9.07	3.75	1.13	.19	.005	0
MAX	.06	.24	3.3	85	287	91	22	7.0	2.5	.52	.05	0
MIN	0	.08	.22	.34	1.4	12	5.3	1.4	.04	.05	0	0
AC-FT	.1	12	29	480	3560	1860	540	231	67	12	.3	0
CAL YR 1979	TOTAL	1389.49	MEAN 3.81	MAX 155	MIN 0	AC-FT 2760						
WTR YR 1980	TOTAL	3425.85	MEAN 9.36	MAX 287	MIN 0	AC-FT 6800						

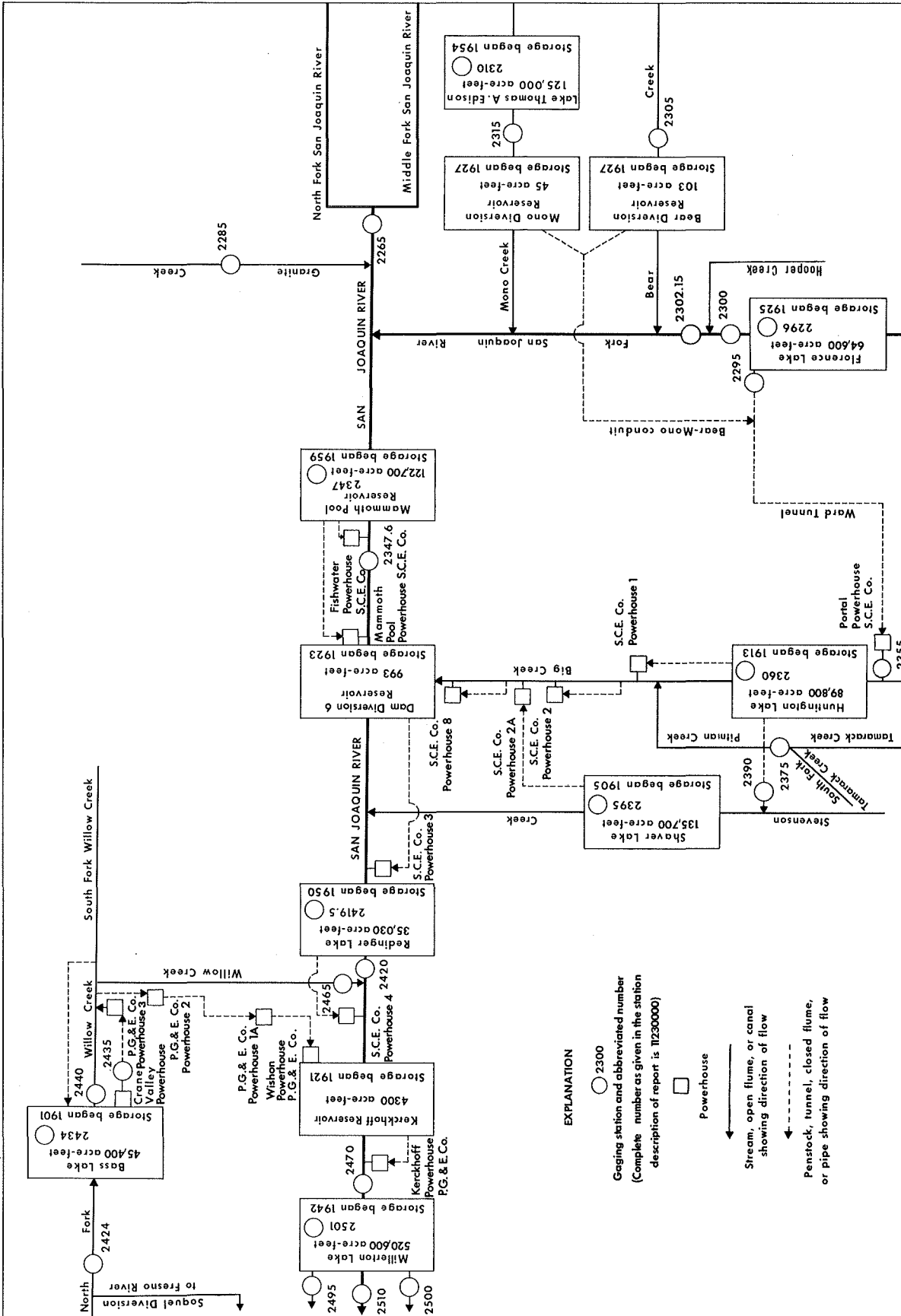


FIGURE 8.-- Schematic diagram showing diversions and storage in San Joaquin River basin.

SAN JOAQUIN RIVER BASIN

11226500 SAN JOAQUIN RIVER AT MILLER CROSSING, CA

LOCATION.--Lat 37°30'38", long 119°11'47", in SE¼NE¼ 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 except those for period of no gage-height record, which are fair. No regulation or diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and two discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--36 years, 599 ft³/s (16.96 m³/s), 434,000 acre-ft/yr (535 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)
Jan. 13	0600	*8,940 253	18.68 5.694	May 20	2100	4,530 128	16.29 4.965
Feb. 18	0900	2,620 74.2	14.79 4.508	June 10	2030	4,370 124	16.18 4.932
Apr. 19	2115	2,050 58.1	14.21 4.331	June 19	2115	5,320 151	16.79 5.118
May 6	2115	3,400 96.3	15.46 4.712	June 29	2100	5,430 154	16.86 5.139

Minimum daily, 56 ft³/s (1.59 m³/s) Oct. 13, 16.

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	66	87	180	300	249	389	386	1890	1560	4290	1450	234
2	65	85	170	250	248	367	355	2130	1790	4260	1340	241
3	64	94	160	220	245	383	345	2410	1770	3620	1250	241
4	64	101	150	200	259	364	353	2430	1610	3140	1110	233
5	63	117	140	190	297	380	403	2690	1530	2760	959	231
6	63	114	150	180	319	353	396	2780	1720	2500	843	231
7	63	109	160	170	300	338	363	2690	2120	2400	770	245
8	63	107	170	200	271	330	387	2390	2790	2300	813	246
9	63	103	180	300	251	330	491	2150	3370	2170	787	228
10	60	100	150	450	248	330	593	1640	3650	2100	718	215
11	58	105	130	1000	242	330	628	1310	3500	2180	697	197
12	57	98	140	2500	238	330	636	1150	3070	2230	663	199
13	56	99	130	6000	236	330	809	1090	2740	2220	628	200
14	58	96	110	3500	270	320	928	1040	2640	2170	555	185
15	57	94	100	2100	333	320	1030	1090	3040	2160	492	168
16	56	92	94	1800	390	320	1180	1390	3600	2180	462	157
17	59	100	90	1300	771	320	1420	1860	4110	2390	457	154
18	57	120	88	1000	2040	320	1590	2390	4290	2380	444	170
19	223	110	86	900	1170	310	1690	3010	4330	2090	435	185
20	465	98	85	800	749	310	1750	3540	4310	1900	401	176
21	190	100	83	700	750	310	1540	3460	4280	1890	391	171
22	157	110	80	600	602	310	1140	3280	3940	1970	393	153
23	132	120	85	550	518	310	906	2760	3420	2020	363	145
24	132	140	98	500	470	300	899	1830	3330	1960	338	138
25	133	180	120	430	429	300	1200	1470	3550	1820	324	135
26	159	280	130	400	422	300	1460	1310	3590	1860	306	134
27	141	230	140	350	420	301	1620	1240	3390	1800	299	131
28	122	220	150	320	454	316	1680	1230	3760	1750	286	128
29	104	200	160	300	411	357	1570	1320	4440	1610	261	124
30	91	190	200	282	---	433	1740	1500	4280	1590	241	122
31	95	---	350	256	---	435	---	1470	---	1720	236	---
TOTAL	3236	3799	4259	28048	13602	10446	29488	61940	95520	71430	18712	5517
MEAN	104	127	137	905	469	337	983	1998	3184	2304	604	184
MAX	465	280	350	6000	2040	435	1750	3540	4440	4290	1450	246
MIN	56	85	80	170	236	300	345	1040	1530	1590	236	122
AC-FT	6420	7540	8450	55630	26980	20720	58490	122900	189500	141700	37120	10940
CAL YR 1979 TOTAL	215360	MEAN 590	MAX 3980	MIN 56	AC-FT 427200							
WTR YR 1980 TOTAL	345997	MEAN 945	MAX 6000	MIN 56	AC-FT 686300							

NOTE.--No gage-height record Nov. 15 to Jan. 30.

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.

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 four 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, 3,530 ft³/s (100 m³/s) Jan. 13, gage height, 9.73 ft (2.966 m); minimum daily 1.2 ft³/s (0.034 m³/s) Sept. 30.

REVISIONS.--The maximum discharge for water year 1975 has been revised to 1,000 ft³/s (28.3 m³/s) June 1, 1975, gage height 7.80 ft (2.377 m); revised daily discharges, in cubic feet per second, are given below. These figures supersede those published in the 1975 report.

May 9.....300	May 23.....400	June 6.....840
May 10.....350	May 24.....560	June 7.....780
May 11.....400	May 25.....640	June 8.....700
May 12.....450	May 26.....680	June 9.....730
May 13.....480	May 27.....700	June 10.....760
May 14.....500	May 28.....690	June 11.....700
May 15.....530	May 29.....630	June 12.....600
May 16.....560	May 30.....700	June 13.....510
May 17.....590	May 31.....760	June 14.....540
May 18.....630	June 1.....880	June 15.....560
May 19.....700	June 2.....850	June 16.....480
May 20.....560	June 3.....800	June 17.....360
May 21.....400	June 4.....760	June 18.....290
May 22.....320	June 5.....800	June 19.....240

MONTH	TOTAL	MEAN	MAX	MIN	ACRE-FEET
May	14,035	453	760	149	27,840
June	14,911	497	880	219	29,580

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	1.9	9.4	26	---	---	62	100	715	313	868	119	3.0
2	1.9	8.5	21	---	---	59	90	755	583	921	100	2.8
3	1.9	8.9	19	---	---	60	83	792	568	695	86	2.5
4	1.9	11	---	---	---	56	86	755	449	608	73	2.5
5	1.9	15	---	---	---	57	83	799	416	506	60	2.3
6	1.9	14	---	---	---	60	77	872	555	450	50	2.1
7	1.9	14	---	---	---	59	73	831	730	423	41	2.3
8	1.9	14	---	---	---	54	81	749	952	396	40	2.5
9	1.9	12	---	---	---	52	114	619	1040	358	40	4.3
10	1.9	10	---	---	---	54	156	380	1070	354	34	15
11	1.9	12	---	---	---	52	183	261	909	380	29	11
12	1.7	11	---	340	---	50	220	223	761	369	28	10
13	1.7	11	---	948	---	51	284	213	699	365	26	8.7
14	1.7	11	---	832	---	57	323	206	730	358	21	6.4
15	1.7	9.8	---	327	---	59	354	256	919	340	19	5.2
16	1.7	9.4	---	199	---	57	407	476	1030	333	17	4.5
17	2.1	10	---	145	---	62	475	738	1110	369	15	3.6
18	3.0	17	---	113	301	67	539	971	1110	340	14	3.3
19	13	21	---	91	181	61	583	1130	1130	267	14	3.0
20	62	21	---	---	130	65	568	1230	1060	240	13	3.0
21	36	49	---	---	95	64	445	1120	1070	243	11	2.7
22	29	35	---	---	81	60	264	1080	882	253	9.8	2.5
23	22	14	---	---	73	60	208	776	766	235	9.4	2.5
24	27	17	---	---	69	69	240	420	777	213	8.5	2.3
25	27	26	---	---	62	64	441	284	801	192	7.6	1.8
26	39	31	---	---	60	59	535	248	773	227	6.4	1.6
27	30	36	---	---	63	59	578	278	743	427	5.5	1.4
28	22	32	---	---	60	70	568	313	896	213	5.1	1.4
29	15	30	---	---	62	86	502	433	985	166	4.7	1.4
30	13	27	---	---	---	111	619	507	820	139	4.0	1.2
31	10	---	---	---	---	119	---	449	---	137	3.3	---
TOTAL	379.5	547.0	---	---	---	1975	9279	18879	24647	11385	914.3	116.8
MEAN	12.2	18.2	---	---	---	63.7	309	609	822	367	29.5	3.89
MAX	62	49	---	---	---	119	619	1230	1130	921	119	15
MIN	1.7	8.5	---	---	---	50	73	206	313	137	3.3	1.2
AC-FT	753	1080	---	---	---	3920	18400	37450	48890	22580	1810	232

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.--55 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	543	34	34	44	76	132	145	571	513	1610	605	552
2	535	34	34	44	75	120	129	615	485	746	656	392
3	561	36	34	44	76	122	123	642	287	584	700	7.3
4	573	36	34	44	82	121	128	671	239	485	729	314
5	562	44	29	44	96	120	123	504	123	606	638	532
6	554	47	29	44	106	121	115	211	121	744	554	565
7	543	44	29	44	98	121	115	344	119	646	765	522
8	535	43	29	44	86	115	129	503	89	294	704	475
9	559	38	29	44	76	111	172	489	62	428	687	425
10	607	34	29	48	73	110	227	458	60	508	703	407
11	611	34	29	64	71	106	260	458	60	443	593	494
12	578	32	29	264	70	95	266	559	225	426	542	539
13	554	31	29	484	68	97	320	644	345	122	413	536
14	519	30	29	542	72	106	345	661	345	366	504	534
15	489	29	29	541	74	112	362	649	343	512	616	530
16	506	28	29	516	89	108	387	527	342	506	304	525
17	489	26	29	482	111	113	423	433	343	525	304	387
18	372	26	22	430	289	122	462	217	339	408	358	443
19	107	26	18	421	274	111	492	205	310	562	394	697
20	111	26	18	421	234	114	522	98	323	559	393	693
21	108	26	18	421	272	118	542	5.0	432	526	391	641
22	93	26	16	421	270	108	536	5.2	563	572	260	542
23	82	26	14	370	293	103	508	89	902	618	193	534
24	79	26	22	131	255	109	478	269	1600	623	297	530
25	72	26	25	126	197	97	470	363	1640	586	379	527
26	50	26	25	121	166	92	483	382	1620	520	394	523
27	39	26	34	110	154	92	505	414	1610	498	325	520
28	30	26	44	103	143	100	526	515	1610	497	292	517
29	17	26	44	96	128	116	536	534	1610	497	381	512
30	12	26	44	80	---	144	550	446	1610	620	509	186
31	31	---	44	76	---	160	---	475	---	643	556	---
TOTAL	10521	938	901	6664	4074	3516	10379	12956.2	18270	17280	15139	14601.3
MEAN	339	31.3	29.1	215	140	113	346	418	609	557	488	487
MAX	611	47	44	542	293	160	550	671	1640	1610	765	697
MIN	12	26	14	44	68	92	115	5.0	60	122	193	7.3
AC-FT	20870	1860	1790	13220	8080	6970	20590	25700	36240	34270	30030	28960
CAL YR 1979 TOTAL	118447.0			MEAN 325	MAX 1170	MIN 12	AC-FT 234900					
WTR YR 1980 TOTAL	115239.5			MEAN 315	MAX 1640	MIN 5.0	AC-FT 228600					

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, 65,000 acre-ft (80.1 hm³) July 18, elevation, 7,328.10 ft (2,233.605 m); minimum, 1,140 acre-ft (1.41 hm³) Dec. 21, elevation, 7,231.60 ft (2,204.192 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18227	1178	1161	1195	1239	1266	1310	3273	31844	64137	64782	59339
2	17288	1178	1161	1195	1230	1266	1302	3648	32487	64079	64744	58777
3	16261	1187	1161	1195	1217	1266	1302	4361	33907	64378	64570	59020
4	15213	1187	1170	1195	1209	1266	1302	5042	35484	64108	64628	58720
5	14177	1195	1170	1195	1200	1275	1302	6150	37089	63877	64724	57936
6	13153	1195	1161	1195	1195	1275	1293	7533	38813	64204	64705	57118
7	12143	1195	1161	1195	1195	1275	1302	8945	40932	64667	64407	56340
8	11158	1195	1161	1195	1195	1275	1319	9881	43819	64734	64329	55814
9	10108	1187	1161	1195	1195	1275	1364	10682	47345	64561	64301	55271
10	8970	1178	1161	1204	1195	1275	1391	11102	51262	64667	64127	54739
11	7837	1178	1161	1257	1195	1269	1400	11213	55207	64541	64041	54043
12	6743	1178	1161	1976	1195	1262	1428	10851	57750	64512	64069	53224
13	5701	1178	1161	2933	1195	1262	1456	10622	58430	64724	64262	52383
14	4648	1170	1161	3166	1195	1266	1466	10156	58739	64541	64252	51512
15	3628	1170	1161	2819	1195	1275	1485	9741	59386	64484	63820	50638
16	2605	1170	1161	2471	1204	1275	1578	9845	60413	64734	63887	49760
17	1696	1170	1153	2088	1204	1275	1795	10704	61255	64763	64050	49169
18	1391	1161	1153	1666	1204	1284	2077	12648	62081	64821	64079	48468
19	1284	1161	1153	1419	1212	1278	2388	15213	62529	64416	63820	47241
20	1239	1161	1153	1364	1212	1278	2690	18523	62586	64551	63590	46019
21	1212	1161	1144	1337	1368	1284	2690	21943	63149	64474	63360	44867
22	1204	1161	1144	1328	1402	1275	2400	24952	63503	64628	63341	43987
23	1195	1161	1153	1319	1386	1275	2043	27566	64146	64695	63436	42913
24	1195	1161	1161	1310	1339	1275	1849	28932	64416	64618	63341	41998
25	1187	1161	1161	1302	1294	1266	1891	29654	64551	64676	63101	41039
26	1187	1170	1178	1293	1276	1257	2100	30090	64435	64628	62624	40170
27	1178	1170	1195	1284	1266	1257	2377	30345	64243	64647	62348	39136
28	1178	1161	1195	1275	1266	1275	2556	30412	64464	64686	62100	38192
29	1178	1161	1195	1266	1266	1302	2690	30488	64782	64474	61644	37256
30	1178	1161	1195	1257	---	1328	2947	30957	64493	64493	60952	36914
31	1178	---	1195	1248	---	1332	---	31328	---	64792	60148	---
MAX	18227	1195	1195	3166	1402	1332	2947	31328	64782	64821	64782	59339
MIN	1178	1161	1144	1195	1195	1257	1293	3273	31844	63877	60148	36914
†	7231.80	7231.70	7231.90	7232.20	7232.30	7232.67	7239.90	7289.16	7327.59	7327.90	7323.03	7296.35
‡	-18000	-17	+34	+53	+18	+66	+1620	+28400	+33200	+299	-4640	-23200

CAL YR 1979 ‡ +48
WTR YR 1980 ‡ +17700

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

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

SAN JOAQUIN RIVER BASIN

11230000 SOUTH FORK SAN JOAQUIN RIVER NEAR FLORENCE LAKE, CA

LOCATION.--Lat 37°16'24", long 118°57'54", in SE¼ sec.36, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 0.1 mi (0.2 km) downstream from spillway of Florence Lake Dam, 6 mi (10 km) upstream from Bear Creek, and 14.7 mi (23.7 km) east of Big Creek.

DRAINAGE AREA.--171 mi² (443 km²).

PERIOD OF RECORD.--October 1921 to September 1980 (discontinued). Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1925, published as "near Lake Florence."

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Altitude of gage is 7,200 ft (2,195 m), from topographic map.

REMARKS.--Records good. Beginning in 1925, flow regulated by Florence Lake (station 11229600) 0.1 mi (0.2 km) upstream and by diversion into Ward tunnel (station 11229500). See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and nine discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (combined flow of South Fork San Joaquin River and Ward tunnel at intake).--59 years, 321 ft³/s (9.091 m³/s), 232,600 acre-ft/yr (287 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,800 ft³/s (193 m³/s) Sept. 5, 1978, gage height, 17.55 ft (5.349 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,380 ft³/s (95.7 m³/s) July 2, gage height, 14.99 ft (4.569 m); minimum daily, 3.9 ft³/s (0.11 m³/s) Oct. 24.

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	5.7	15	15	15	15	15	15	16	26	1500	574	23
2	5.7	15	15	15	15	15	15	16	26	2220	509	23
3	5.6	15	15	15	15	15	15	16	26	1930	477	23
4	5.5	16	15	15	15	15	15	16	26	1830	224	22
5	5.5	15	15	15	15	15	15	16	27	1310	173	22
6	5.5	15	15	15	15	15	15	16	27	658	186	22
7	5.5	15	15	15	15	15	15	18	28	632	84	22
8	5.5	15	15	15	15	15	15	19	28	1230	40	22
9	5.3	15	15	15	15	15	15	19	32	1160	21	22
10	5.1	15	15	15	15	15	15	19	35	847	14	23
11	5.1	15	15	15	15	15	15	19	36	1150	15	23
12	4.9	15	15	19	15	15	15	19	208	1200	15	23
13	4.8	15	15	19	15	15	15	20	724	1370	15	22
14	4.7	15	15	18	15	15	15	19	826	1310	18	22
15	4.6	15	15	17	15	15	15	19	985	1120	23	22
16	4.6	15	15	16	15	15	15	19	1140	925	23	22
17	4.3	15	15	16	15	15	15	19	1590	1410	23	21
18	4.1	15	15	16	16	15	15	19	1780	1660	23	22
19	4.3	15	15	16	15	15	15	19	2130	1350	24	22
20	4.3	15	15	16	15	15	15	20	2390	885	24	23
21	4.0	15	15	16	15	15	16	21	2040	994	24	22
22	4.0	15	15	16	15	15	16	22	1890	904	24	22
23	4.0	15	15	16	15	15	16	22	1040	937	24	22
24	3.9	15	15	16	15	15	15	23	503	944	24	22
25	26	15	15	16	15	15	15	23	660	914	26	23
26	47	16	15	16	15	15	15	24	794	1090	23	24
27	47	15	15	16	15	15	15	24	836	959	23	24
28	47	15	15	15	15	15	15	24	764	918	24	23
29	47	15	15	15	15	15	16	24	1070	900	24	23
30	28	15	16	15	---	15	16	25	1570	528	24	23
31	16	---	15	15	---	15	---	26	---	477	23	---
TOTAL	374.5	452	466	490	436	465	455	621	23257	35262	2768	674
MEAN	12.1	15.1	15.0	15.8	15.0	15.0	15.2	20.0	775	1137	89.3	22.5
MAX	47	16	16	19	16	15	16	26	2390	2220	574	24
MIN	3.9	15	15	15	15	15	15	16	26	477	14	21
AC-FT	743	897	924	972	865	922	902	1230	46130	69940	5490	1340

CAL YR 1979 TOTAL 4021.0 MEAN 11.0 MAX 425 MIN 3.9 AC-FT 7980
WTR YR 1980 TOTAL 65720.5 MEAN 180 MAX 2390 MIN 3.9 AC-FT 130400

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 fair. 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 11 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,670 ft³/s (75.6 m³/s) June 20; minimum daily, 3.9 ft³/s (0.11 m³/s) Oct. 24.

EXTREMES FOR PERIOD OF RECORD.--Max dischg, 2,670 cfs June 20, 1980; min daily, 3.9 cfs Oct. 24

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	6.0	16	16	16	21	29	33	48	48	1680	645	28
2	5.6	15	16	16	21	28	31	47	48	2480	573	28
3	5.5	16	16	16	21	28	31	49	47	2150	537	28
4	5.4	17	16	16	21	26	31	48	48	2040	257	28
5	5.2	14	16	16	23	26	30	46	48	1460	201	28
6	5.3	15	16	17	24	26	30	46	49	741	213	28
7	5.4	15	16	17	24	25	31	46	50	713	101	30
8	5.2	15	16	17	23	24	35	47	52	1370	51	29
9	5.1	16	15	17	22	24	42	48	58	1290	42	29
10	5.1	16	16	17	21	25	49	49	63	949	26	28
11	4.9	16	16	18	21	25	51	48	70	1280	28	28
12	5.1	16	16	18	21	24	52	46	246	1340	29	28
13	5.0	16	16	18	20	24	56	46	813	1530	29	27
14	4.4	16	16	18	21	26	56	46	925	1460	29	27
15	4.5	16	16	18	21	28	56	43	1100	1250	29	27
16	4.4	16	16	18	23	28	59	42	1280	1040	29	26
17	4.4	16	16	18	31	29	62	43	1780	1570	29	26
18	4.0	16	16	18	76	31	62	44	1990	1850	30	26
19	4.2	16	16	18	48	28	62	45	2380	1500	29	26
20	6.9	16	16	18	37	30	62	47	2670	991	28	28
21	4.2	16	16	18	34	31	55	49	2280	1110	28	27
22	4.6	16	16	19	33	28	46	52	2110	1010	28	27
23	5.9	16	15	20	30	28	44	53	1170	1050	28	27
24	3.9	16	15	20	28	30	49	53	580	1060	29	27
25	9.9	16	15	20	27	27	53	52	755	1020	32	27
26	20	18	15	20	27	26	53	52	903	1220	30	28
27	20	17	15	20	28	26	53	51	947	1070	27	28
28	20	16	15	21	29	28	50	51	872	1030	28	28
29	20	16	15	21	28	32	50	50	1210	1010	28	28
30	17	16	15	21	---	36	49	51	1760	595	28	27
31	17	---	15	21	---	36	---	50	---	538	28	---
TOTAL	244.1	478	486	566	804	862	1423	1488	26352	39397	3249	827
MEAN	7.87	15.9	15.7	18.3	27.7	27.8	47.4	48.0	878	1271	105	27.6
MAX	20	18	16	21	76	36	62	53	2670	2480	645	30
MIN	3.9	14	15	16	20	24	30	42	47	538	26	26
AC-FT	484	948	964	1120	1590	1710	2820	2950	52270	78140	6440	1640
CAL YR 1979 TOTAL	6772.8			18.6	115	3.9	AC-FT	13430				
WTR YR 1980 TOTAL	76176.1			208	2670	3.9	AC-FT	151100				

NOTE.--No gage-height record June 12 to Aug. 2.

SAN JOAQUIN RIVER BASIN

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 four discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--59 years, 90.8 ft³/s (2.571 m³/s), 65,780 acre-ft/yr (81.1 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)
Jan. 12	2000	470 13.3	5.12 1.561	June 20	2145	1000 28.3	5.98 1.823
May 21	2015	612 17.3	5.39 1.643	June 29	2030	*1080 30.6	6.08 1.853
June 10	2200	718 20.3	5.57 1.698	July 26	2215	589 16.7	5.35 1.631

Minimum daily discharge, 7.2 ft³/s (0.20 m³/s) Oct. 13-16.

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	13	14	18	200	27	36	40	198	161	869	340	44
2	12	15	16	110	25	33	36	214	196	904	334	43
3	11	14	15	80	24	33	35	269	240	712	316	44
4	10	14	15	60	26	34	36	270	235	573	273	44
5	9.9	18	15	50	31	33	34	270	216	495	253	44
6	9.2	17	15	40	32	34	33	283	245	438	216	44
7	8.8	15	15	34	31	36	34	281	304	438	191	47
8	8.8	15	15	30	30	35	37	254	416	442	187	57
9	8.6	15	15	50	30	33	46	220	512	433	183	54
10	8.0	15	15	90	27	32	60	171	569	428	170	48
11	7.6	15	14	150	26	30	66	134	543	447	166	44
12	7.5	14	15	300	26	29	69	112	447	461	152	41
13	7.2	14	13	400	26	29	86	107	402	466	147	39
14	7.2	13	13	200	23	31	91	99	394	438	135	36
15	7.2	13	13	120	23	31	101	96	472	461	115	33
16	7.2	13	13	70	28	31	123	131	592	470	99	30
17	8.0	13	13	58	41	33	152	222	700	547	93	29
18	8.5	13	12	52	69	35	173	327	744	565	90	29
19	15	14	12	47	55	33	185	397	758	493	86	29
20	35	12	11	41	64	33	187	470	786	440	82	28
21	29	16	10	39	63	33	149	453	797	447	79	27
22	26	18	15	38	65	32	103	411	727	464	79	27
23	22	17	18	38	54	31	88	379	599	505	77	26
24	23	18	30	38	51	32	97	240	617	480	71	24
25	23	17	68	37	42	30	134	180	669	461	67	24
26	22	17	94	36	40	31	167	155	690	476	61	23
27	21	19	110	34	42	29	183	140	674	444	58	22
28	19	18	125	29	41	31	173	137	724	481	56	22
29	16	18	140	28	37	36	161	145	851	426	53	22
30	16	18	155	31	---	42	182	156	903	354	48	21
31	15	---	170	29	---	44	---	146	---	332	45	---
TOTAL	441.7	462	1218	2559	1099	1025	3061	7067	16183	15390	4322	1045
MEAN	14.2	15.4	39.3	82.5	37.9	33.1	102	228	539	496	139	34.8
MAX	35	19	170	400	69	44	187	470	903	904	340	57
MIN	7.2	12	10	28	23	29	33	96	161	332	45	21
AC-FT	876	916	2420	5080	2180	2030	6070	14020	32100	30530	8570	2070
CAL YR 1979	TOTAL	36752.7	MEAN 101	MAX 671	MIN 7.2	AC-FT	72900					
WTR YR 1980	TOTAL	53872.7	MEAN 147	MAX 904	MIN 7.2	AC-FT	106900					

11230540 SOUTH FORK SAN JOAQUIN RIVER AT MONO HOT SPRINGS, CA

LOCATION.--Lat 37°19'34", long 119°00'45", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, at bridge on Mono Hot Springs Road, 700 ft (213 m) east of Mono Hot Springs.

DRAINAGE AREA.--253 mi² (655 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)
OCT 10...	1130	71	7.4	11.0	10.2	--	--	10	4.0	.0	9.0
JUN 11...	1145	19	7.2	8.0	9.2	6	.7	5	2.0	.0	2.0
JUL 22...	1315	10	8.2	14.0	7.5	1	.6	2	1.0	.0	1.0
AUG 26...	1130	--	7.0	13.0	8.1	2	.2	--	--	--	--
SEP 11...	1320	59	7.2	12.0	8.9	--	--	8	3.0	.0	8.0

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
OCT 10...	.7	13	5.0	10	63	--	.00	.00	.10	.00	.00
JUN 11...	.4	5	1.0	1.0	13	2	.02	.01	.20	.00	.00
JUL 22...	.2	1	1.0	.0	8	2	.04	.00	.20	.01	.00
AUG 26...	--	--	--	--	--	0	.01	.00	.10	.00	.00
SEP 11...	.5	9	2.0	8.0	34	--	.00	.00	.10	.00	.00

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
OCT 10...	1130	--	--	100	--	--	--
JUN 11...	1145	--	--	0	--	--	--
JUL 22...	1315	0	0	0	0	0	0
AUG 26...	1130	0	0	--	0	0	0
SEP 11...	1320	--	--	0	--	--	--

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 10...	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	2.5	.00
JUL 22...	30	0	0	.0	0	2.3	.00
AUG 26...	60	0	0	.0	0	1.0	.00
SEP 11...	--	--	--	--	--	--	--

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, 125,100 acre-ft (154 hm³) Aug. 4, elevation, 7,642.54 ft (2,329.446 m); minimum, 11,800 acre-ft (14.5 hm³) Apr. 9, elevation, 7,562.85 ft (2,305.157 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101801	96468	96328	70227	54023	33577	13914	16805	45713	104572	125054	124424
2	101801	95716	95489	69390	53267	32925	13343	17496	46520	107271	124979	124479
3	101783	95716	94636	68538	52472	32303	12343	18396	47452	109586	124998	124498
4	101748	95804	93923	67756	51712	32444	12000	19470	48416	111714	125091	124350
5	101748	95821	92969	67084	50927	32432	11984	20597	49348	113579	125016	124313
6	101748	95839	92173	66265	50204	31755	11925	21655	50340	115251	124998	124331
7	101730	95856	91188	65416	49429	31004	11859	22784	51519	116781	124979	124350
8	101712	95874	90359	64577	48592	30250	11810	23765	52988	118353	124961	124368
9	101677	95891	89517	63815	47826	29513	11794	24706	54757	119892	125035	124405
10	101659	95909	88658	63136	47051	28806	11794	25561	56722	121344	125035	124424
11	101659	95926	87733	62547	46269	28094	11819	26208	58632	122558	124979	124442
12	101659	95926	86912	63061	45463	27353	11843	26807	60495	123555	124813	124442
13	101659	95943	86027	63679	44702	26644	11942	27441	62055	124479	124850	124424
14	101659	95943	85125	64225	44049	25906	12059	27895	63649	124535	124961	124368
15	101588	95961	84262	64592	43361	25164	12201	28426	65325	124479	124924	124350
16	101624	95978	83432	64699	42741	24344	12410	29019	67428	124424	124979	124405
17	101641	96013	82557	64302	42073	23754	12677	29807	69721	124591	124998	124479
18	101694	96013	81665	63800	41484	23073	12898	30854	72095	124609	124979	124535
19	101482	96031	80778	63287	41115	22350	13198	32163	74597	124387	124924	124572
20	101571	96031	79909	62698	40492	21686	13531	33767	77163	124276	124979	124609
21	101624	96031	79096	62114	40026	20976	13757	35425	79843	124239	125016	124628
22	101641	95996	78167	61428	39459	20228	13914	36865	82355	124257	124794	124665
23	101482	95996	77344	60701	38834	19529	14028	38323	84668	124572	124424	124720
24	101482	96066	76734	60008	38173	18877	14115	39774	86946	124757	124276	124776
25	101305	96136	75917	59288	37481	18243	14281	40797	89379	124739	124109	124794
26	100863	96206	75051	58574	36729	17609	14536	41497	91706	124628	124387	124813
27	100385	96275	74224	57818	35912	16731	14831	42330	94010	124535	124442	124850
28	99821	96328	73381	57097	35185	16490	15090	42934	96433	124442	124257	124868
29	99081	96345	72545	56336	34448	15795	15549	43608	99151	124368	124146	124905
30	98290	96363	71789	55565	---	15135	16177	44322	101871	124535	124202	124942
31	97448	---	71072	54785	---	14519	---	45004	---	124831	124313	---
MAX	101801	96468	96328	70227	54023	33577	16177	45004	101871	124831	125091	124942
MIN	97448	95716	71072	54785	34448	14519	11794	16805	45713	104572	124109	124313
†	7627.21	7627.21	7611.55	7600.72	7585.13	7566.06	7567.90	7593.53	7629.72	7642.39	7642.11	7642.45
‡	-4320	-1080	-25300	-16300	-20300	-19900	+1660	+28800	+56900	+23000	-518	+629

CAL YR 1979 † -31300

WTR YR 1980 ‡ +23100

† 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 nine discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for storage).--59 years, 152 ft³/s (4.305 m³/s), 110,100 acre-ft/yr (136 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, 854 ft³/s (24.2 m³/s) July 14, gage height, 7.73 ft (2.234 m); minimum daily, 7.1 ft³/s (0.20 m³/s) Oct. 13-17.

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	17	427	93	440	434	427	389	100	20	18	416	18
2	17	398	436	438	436	426	370	103	20	18	502	52
3	17	20	436	436	436	366	368	79	20	18	398	77
4	17	18	440	436	436	48	253	32	20	18	334	142
5	17	17	448	374	434	121	124	31	19	18	380	82
6	17	17	433	444	431	407	124	32	19	18	309	68
7	17	17	431	444	431	407	124	30	19	18	308	68
8	17	17	431	442	431	407	124	139	18	18	295	68
9	13	17	431	440	429	405	124	86	18	18	239	68
10	7.4	17	431	440	427	405	124	26	18	62	252	68
11	7.4	17	429	418	432	407	124	24	18	165	272	67
12	7.3	17	430	18	438	409	126	23	18	251	303	66
13	7.1	17	436	18	440	410	127	22	18	328	174	66
14	7.1	17	436	17	440	411	129	22	18	690	144	66
15	7.1	17	436	17	439	411	130	22	18	749	193	34
16	7.1	17	433	142	436	411	132	24	18	750	133	16
17	7.1	17	437	354	438	411	157	27	18	750	159	16
18	27	17	445	364	440	407	202	29	18	793	153	16
19	258	17	448	362	438	407	204	30	18	793	182	16
20	29	17	448	360	434	410	204	29	18	681	112	16
21	19	17	448	360	395	415	202	28	18	654	119	17
22	19	17	448	395	388	419	201	27	18	644	238	17
23	101	17	445	420	391	418	200	26	18	554	279	18
24	147	17	444	423	399	415	199	23	18	600	161	18
25	181	17	444	423	405	413	203	22	18	676	101	18
26	247	17	444	423	420	411	206	21	18	704	58	18
27	273	57	441	420	426	409	207	21	18	715	80	18
28	273	20	440	422	427	407	208	21	18	698	163	18
29	351	18	440	423	427	405	179	21	18	625	110	18
30	411	18	440	426	---	403	99	21	18	439	43	15
31	421	---	440	428	---	402	---	21	---	344	18	---
TOTAL	2963.6	1350	13262	10967	12378	12030	5563	1162	551	12827	6628	1265
MEAN	95.6	45.0	428	354	427	388	185	37.5	18.4	414	214	42.2
MAX	421	427	448	444	440	427	389	139	20	793	502	142
MIN	7.1	17	93	17	388	48	99	21	18	18	18	15
AC-FT	5880	2680	26310	21750	24550	23860	11030	2300	1090	25440	13150	2510

CAL YR 1979 TOTAL 67316.6 MEAN 184 MAX 464 MIN 7.1 AC-FT 133500
WTR YR 1980 TOTAL 80946.6 MEAN 221 MAX 793 MIN 7.1 AC-FT 160600

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 4,580 acre-ft (5.65 hm³) Apr. 5, 1973, elevation, 3,139.87 ft (957.032 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 124,100 acre-ft (153 hm³) June 20, elevation, 3,333.75 ft (1,016.127 m); minimum, 27,100 acre-ft (33.4 hm³) Oct. 19, elevation, 3,212.30 ft (979.109 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35520	28671	39962	37778	100691	120992	96939	122194	121370	123424	120505	75471
2	35003	28681	40120	38005	99979	121069	96240	122473	121670	123738	120394	74644
3	34589	29165	39069	37784	99241	121258	95458	122741	121526	122965	120217	73525
4	34259	29626	38005	37903	98569	121080	94736	122607	121314	122775	119470	72866
5	33969	30116	36982	37272	98065	121459	94556	122708	121247	122205	118394	72395
6	33718	30594	35486	36864	97717	121158	94300	122920	121526	121759	117467	71984
7	33294	31018	35049	36663	97284	120958	93769	123021	121882	121559	116271	71625
8	32841	31434	34969	36227	96776	120947	93249	122831	122417	121882	114712	71209
9	32258	31848	34729	36111	96001	120870	93211	122473	122741	121381	113106	70487
10	31744	32236	34667	38400	95201	120660	94034	122004	122808	121737	111343	69628
11	31163	32637	34684	42090	94376	119405	95002	121604	122574	121770	109471	68710
12	30562	33012	34572	59608	93504	118480	95849	121459	122361	121859	107530	67781
13	29979	33389	34521	88651	92617	116612	97159	121437	122540	122049	105479	66944
14	29447	33695	34443	112675	92448	114871	98871	121381	122674	121915	103269	66274
15	28868	34008	33924	118578	92778	113275	101008	121481	122987	121871	100958	65390
16	28294	34209	33957	120881	94414	111364	103490	121882	123446	122238	98501	64511
17	27812	34695	33907	120870	99940	109264	107162	122529	123795	122216	96326	63593
18	27344	35117	33941	120394	116718	109388	111825	122976	123738	122216	94025	62774
19	27227	35532	33952	119612	122562	108266	117146	123413	123941	121837	91658	61764
20	28666	35687	33902	118329	121793	107223	121893	123694	123896	121481	89095	60554
21	28531	36077	33902	116815	121737	106338	121459	123300	123884	121526	86804	58901
22	28037	36466	34186	115114	121236	105096	121003	123345	123379	121570	85882	57936
23	27981	36923	34281	113254	121114	103841	120582	122574	122753	121548	84919	56433
24	28042	37361	34947	111280	121047	103379	120637	121982	122596	121514	83879	55110
25	28248	37689	35738	109398	121025	102360	121292	121737	122864	121437	82762	53941
26	28397	38544	35373	107437	121025	101235	121637	121570	122842	121693	81669	53020
27	28624	39372	35629	105328	121069	100088	121871	121514	122652	121570	80618	52111
28	28604	39871	35384	103179	121169	99017	121770	121514	123110	121381	79527	51404
29	28712	39767	34975	102540	121069	98190	121737	121192	123503	121214	78750	50438
30	28547	39627	34818	102091	---	97775	122004	121292	123267	120748	77772	49838
31	28583	---	36530	101384	---	97505	---	121236	---	120648	76414	---
MAX	35520	39871	40120	120881	122562	121459	122004	123694	123941	123738	120505	75471
MIN	27227	28671	33902	36111	92448	97505	93211	121192	121247	120648	76414	49838
†	3215.21	3234.89	3229.71	3312.13	3331.02	3308.17	3331.86	3331.17	3332.99	3330.64	3285.07	3250.76
	-7400	+11000	-3100	+64900	+19700	-23600	+24500	-768	+2030	-2620	-44200	-26600
CAL YR 1979	†	+18200										
WTR YR 1980	†	+13900										

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

† Change in contents, in acre-feet, rounded to Geological Survey standards.

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA

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.

DRAINAGE AREA.--1,003 mi² (2,598 km²).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,865.50 ft (873.404 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

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.

COOPERATION.--Gage-height record and 13 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

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, 9,410 ft³/s (266 m³/s) June 20, gage height, 14.50 ft (4.420 m); minimum daily, 12 ft³/s (0.34 m³/s) many days.

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	30	19	12	14	193	679	807	4660	1530	6310	447	22
2	30	12	12	13	193	609	811	5050	1880	7430	494	22
3	30	14	12	13	193	733	807	5770	2190	6560	275	22
4	30	14	12	12	159	737	807	5930	1790	5160	63	22
5	30	13	12	12	193	790	816	6040	1320	4520	32	22
6	30	13	12	12	193	939	811	6150	1620	3290	25	22
7	30	13	12	12	193	618	807	6130	2200	2610	25	21
8	30	13	12	12	195	482	807	5520	3210	2420	23	21
9	30	13	12	15	195	429	811	5280	4250	2660	22	21
10	30	13	12	20	195	494	811	4120	4770	2000	22	20
11	30	13	12	32	193	352	816	3030	4680	2210	22	19
12	30	13	12	45	193	297	903	2420	3940	2610	22	19
13	30	13	12	48	193	300	1100	2310	4270	2740	22	19
14	30	13	12	43	201	297	1100	2190	4220	2930	22	25
15	30	13	12	26	204	297	1110	2130	4980	3160	22	26
16	30	12	12	209	213	297	1100	2550	5760	2690	22	27
17	30	13	12	613	236	199	1130	3300	7010	3320	21	27
18	31	12	12	318	238	49	1130	4760	7880	3740	21	27
19	34	12	12	56	2990	49	1140	5770	7850	3550	21	27
20	31	12	12	50	3530	49	1810	6840	8320	2400	22	27
21	28	12	13	50	3300	49	3990	7170	8090	2160	22	27
22	27	12	12	49	2100	49	2850	6460	7560	2260	22	27
23	27	12	12	49	1320	49	2060	5910	5920	2310	22	28
24	27	12	17	42	1110	421	1780	3790	4570	2310	22	28
25	27	12	14	14	863	811	2310	2820	4730	2140	22	28
26	27	13	12	14	778	807	3270	2290	5040	2060	22	27
27	27	12	12	14	766	807	3770	2060	5010	2550	22	28
28	27	12	12	14	799	803	4260	2060	4830	1990	22	28
29	27	12	12	14	741	807	3850	1470	6130	1760	22	28
30	27	12	15	89	---	807	4160	1570	6950	1200	22	29
31	27	---	18	195	---	807	---	1560	---	778	22	---
TOTAL	904	384	389	2119	21870	14913	51734	127110	142500	93828	1887	736
MEAN	29.2	12.8	12.5	68.4	754	481	1724	4100	4750	3027	60.9	24.5
MAX	34	19	18	613	3530	939	4260	7170	8320	7430	494	29
MIN	27	12	12	12	159	49	807	1470	1320	778	21	19
AC-FT	1790	762	772	4200	43380	29580	102600	252100	282600	186100	3740	1460
CAL YR 1979 TOTAL		80652		221	5800	12	AC-FT	160000				
WTR YR 1980 TOTAL		458374		1252	8320	12	AC-FT	909200				

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.--53 years, 484 ft³/s (13.71 m³/s), 350,700 acre-ft/yr (432 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559	483	93	561	539	609	606	696	710	1690	1080	581
2	551	489	446	562	543	609	551	696	719	855	1150	507
3	575	148	530	552	543	593	525	744	722	636	1200	203
4	589	52	529	616	543	237	496	770	587	543	1180	399
5	575	0	537	576	575	259	253	479	436	631	1140	643
6	571	112	515	560	594	602	251	224	487	789	1120	659
7	574	74	513	553	585	570	310	415	557	867	1140	620
8	555	57	515	544	563	567	236	695	716	848	1100	584
9	576	90	517	501	545	552	367	573	707	887	1100	544
10	597	76	499	516	544	571	422	503	707	988	1060	522
11	605	57	495	591	543	567	448	490	704	956	1040	585
12	584	48	498	449	554	543	489	613	573	942	911	607
13	558	62	506	682	550	545	557	711	422	757	718	618
14	527	70	569	693	554	565	592	706	453	937	658	604
15	494	0	473	700	561	577	596	709	472	1030	860	572
16	505	80	436	728	627	564	670	717	469	1080	518	649
17	500	62	502	925	600	576	697	718	464	1050	517	382
18	433	44	509	945	863	586	673	712	498	968	572	420
19	420	21	514	703	871	576	682	710	464	1100	641	724
20	169	82	518	641	705	568	732	712	514	1090	511	727
21	83	40	508	583	715	581	771	580	611	1070	542	681
22	147	97	514	582	793	572	755	584	665	1080	565	517
23	158	0	499	604	824	565	709	603	929	1130	563	577
24	309	132	516	612	736	571	711	589	1670	1140	520	576
25	251	0	511	600	702	565	716	622	1670	1120	505	576
26	305	83	520	580	671	513	720	594	1690	1050	474	569
27	372	109	538	558	669	542	771	612	1680	1030	496	569
28	326	76	556	579	648	556	828	710	1680	1040	469	572
29	426	77	569	573	618	584	693	708	1680	1010	519	666
30	346	77	559	570	---	705	696	710	1660	1120	573	473
31	472	---	559	546	---	656	---	709	---	1160	594	---
TOTAL	13712	2798	15563	18985	18378	17246	17523	19614	25316	30594	24036	16926
MEAN	442	93.3	502	612	634	556	584	633	844	987	775	564
MAX	605	489	569	945	871	705	828	770	1690	1690	1200	727
MIN	83	0	93	449	539	237	236	224	422	543	469	203
AC-FT	27200	5550	30870	37660	36450	34210	34760	38900	50210	60680	47680	33570
CAL YR 1979	TOTAL	226618	MEAN	621	MAX	1740	MIN	0	AC-FT	449500		
WTR YR 1980	TOTAL	220691	MEAN	603	MAX	1690	MIN	0	AC-FT	437700		

SAN JOAQUIN RIVER BASIN

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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, 89,200 acre-ft (110 hm³) July 12, elevation, 6,950.02 ft (2,118.366 m); minimum, 45,500 acre-ft (56.1 hm³) Apr. 13, elevation, 6,915.16 ft (2,107.741 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88279	80283	83637	81504	83944	64770	53359	54300	51273	88222	88994	88651
2	88222	80201	84322	81491	83916	63258	53416	55215	50790	88923	89009	88823
3	88222	80583	84378	81463	83874	61748	53027	56265	50534	89109	89095	88523
4	88222	80843	84238	81504	83847	59326	52209	57443	50234	88994	89166	88179
5	88222	80830	84154	81463	83888	57525	51037	58226	49889	88923	89195	88322
6	88194	81050	84028	81408	83958	56817	49733	58643	49922	89080	89095	88465
7	88122	81201	83888	81339	83972	55950	48588	58881	50323	89152	89123	88551
8	88065	81339	83763	81256	83958	55088	47488	59242	51318	89095	89166	88623
9	88008	81518	83637	81325	83902	54208	46842	59494	52527	89080	89166	88594
10	88008	81683	83469	81628	83847	53359	46304	59109	53875	89166	89123	88508
11	88079	81821	83275	82152	83763	52538	45878	58405	55238	89152	89095	88537
12	88051	81917	83109	83958	83874	51700	45579	57774	56254	89166	89080	88623
13	87965	82041	82970	84420	83791	51149	45590	57313	57077	89080	89166	88694
14	87865	82110	82901	84518	83888	51262	45643	56747	57869	88966	88966	88751
15	87679	82096	82734	82942	84000	51441	45750	56207	58989	89009	89109	88751
16	87509	82277	82457	82193	84322	51509	46070	55833	60228	89066	89095	88880
17	87339	82471	82290	83123	84601	51610	46572	55751	61503	89080	88966	88523
18	87027	82568	82110	83805	84615	51756	47456	56102	62814	88923	88966	88351
19	87112	82485	81959	83944	83247	51846	48011	56853	64086	88966	89123	88480
20	86700	82443	81849	83902	81201	51914	48687	57952	65344	89009	89066	88737
21	85881	82596	81766	83833	79178	52027	49447	58738	66966	88980	89052	88909
22	85064	82623	81615	83902	77258	52186	49833	59566	68388	88952	89080	88751
23	84238	82623	81463	84154	75958	52243	49922	59746	70066	89009	89109	88723
24	83693	82901	81656	84406	74443	52356	50056	58869	73256	89052	89052	88666
25	83026	82804	81573	84476	72849	52459	50323	57881	76465	89037	88980	88594
26	82651	83039	81408	84308	71231	52436	50745	56652	79191	89080	88794	88537
27	82152	83345	81325	84056	69553	52447	51329	55506	81325	89123	88723	88537
28	81532	83400	81256	83972	68082	52481	52175	54497	83067	89052	88580	88437
29	81146	83442	81243	84028	66461	52572	52731	53588	84867	88952	88508	88537
30	80720	83539	81325	84014	---	52958	53485	52811	86416	89037	88537	88451
31	80487	---	81477	84000	---	53175	---	52004	---	89454	88594	---
MAX	88279	83539	84378	84518	84615	64770	53485	59746	86416	89454	89195	88909
MIN	80487	80201	81243	81256	66461	51149	45579	52004	49889	88222	88508	88179
†	6943.81	6946.02	6944.53	6946.35	6933.14	6922.09	6922.36	6921.06	6948.07	6950.20	6949.60	6949.50
‡	-7790	+3050	-2060	+2520	-17500	-13300	+310	-1480	+34400	+3040	-860	-143

CAL YR 1979 † -1450

WTR YR 1980 † +172

† 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 17 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--53 years, 40.5 ft³/s (1.147 m³/s), 29,340 acre-ft/yr (36.2 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)
Jan. 13	1715	*1010 28.6	7.92 2.414	May 6	1945	507 14.4	6.64 2.024
Feb. 18	1430	382 10.8	6.18 1.884	May 20	1900	726 20.6	7.08 2.158
Apr. 19	2045	328 9.29	5.94 1.811	June 9	1930	474 13.4	6.49 1.978

Minimum daily discharge, 0.84 ft³/s (0.024 m³/s) Oct. 1-18.

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	.84	1.7	3.9	8.0	45	51	56	279	243	102	8.8	2.5
2	.84	1.7	3.5	9.0	42	49	54	297	275	96	8.0	2.3
3	.84	2.0	3.4	7.6	41	47	53	314	273	87	7.3	2.2
4	.84	2.8	3.3	7.0	43	45	56	321	249	76	7.1	2.1
5	.84	2.6	3.4	6.5	45	45	55	346	259	64	6.7	1.9
6	.84	2.6	3.5	5.9	46	44	54	372	279	55	6.4	1.9
7	.84	2.6	3.6	5.5	50	44	57	341	298	51	6.0	2.0
8	.84	2.6	3.5	5.3	46	44	59	313	327	45	5.6	2.4
9	.84	2.6	3.5	5.2	44	42	68	263	349	40	5.6	2.6
10	.84	2.5	3.4	5.0	46	41	86	201	335	36	5.3	2.4
11	.84	2.6	3.3	7.8	46	40	106	168	308	35	5.0	2.1
12	.84	2.5	2.7	213	43	43	123	152	276	33	5.0	1.9
13	.84	2.5	3.5	610	44	40	138	150	252	31	4.8	1.9
14	.84	2.3	3.8	610	35	40	151	148	238	29	4.7	2.0
15	.84	2.4	3.8	216	35	39	166	154	246	27	4.7	1.8
16	.84	2.3	3.7	144	34	40	186	192	256	24	4.7	1.7
17	.84	2.9	3.6	115	44	41	212	271	264	23	4.6	1.6
18	.84	3.4	3.4	91	269	41	233	374	254	21	4.6	1.5
19	3.5	3.5	3.3	75	186	39	250	454	237	19	4.7	1.6
20	36	6.0	3.5	68	136	40	256	495	215	17	4.2	1.7
21	4.5	5.6	3.4	64	97	42	222	428	201	16	3.7	1.7
22	4.1	6.0	3.5	61	79	41	157	460	179	14	3.6	1.7
23	3.6	2.6	3.4	59	72	40	131	346	161	13	3.9	1.6
24	3.2	2.7	3.4	58	66	43	134	239	154	12	3.5	1.5
25	3.1	2.6	3.7	56	62	45	177	199	148	11	3.2	1.3
26	3.3	6.9	3.9	55	59	47	220	184	141	12	3.0	1.3
27	2.6	6.5	3.4	55	58	40	251	182	129	17	2.9	1.2
28	2.2	4.5	3.1	49	55	42	255	169	127	12	2.8	1.2
29	1.9	2.3	3.9	47	53	48	266	203	126	11	2.6	1.1
30	1.8	3.8	3.3	52	---	55	280	232	112	9.8	2.5	1.1
31	1.8	---	7.0	54	---	57	---	234	---	9.8	2.5	---
TOTAL	86.72	97.6	111.6	2824.8	1921	1355	4512	8481	6911	1048.6	148.0	53.8
MEAN	2.80	3.25	3.60	91.1	66.2	43.7	150	274	230	33.8	4.77	1.79
MAX	36	6.9	7.0	610	269	57	280	495	349	102	8.8	2.6
MIN	.84	1.7	2.7	5.0	34	39	53	148	112	9.8	2.5	1.1
AC-FT	172	194	221	5600	3810	2690	8950	16820	13710	2080	294	107
CAL YR 1979 TOTAL	19842.83			54.4	555	.55	39360					
WTR YR 1980 TOTAL	27551.12			75.3	610	.84	54650					

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 six discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--52 years, 224 ft³/s (6.344 m³/s), 162,300 acre-ft/yr (200 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.

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	2.9	2.2	3.7	8.2	114	997	109	756	1310	996	704	3.5
2	2.9	2.2	3.5	8.7	113	981	105	786	1330	717	653	3.3
3	2.9	2.3	3.4	7.6	113	969	312	814	1330	634	653	2.6
4	2.9	2.7	3.3	7.0	114	953	496	826	1190	624	639	3.1
5	2.9	2.8	3.4	6.5	117	759	490	861	1050	611	590	3.7
6	2.9	2.6	3.5	5.7	119	582	482	884	1060	602	616	3.5
7	2.9	2.6	3.6	5.3	119	572	477	1080	1090	646	649	3.5
8	2.9	2.7	3.5	5.1	116	565	384	1170	1130	672	591	3.9
9	2.9	2.6	3.6	5.0	113	557	327	1140	1160	667	582	4.1
10	2.9	2.6	3.5	5.0	112	555	339	1070	1170	663	588	3.9
11	2.9	2.6	2.9	7.8	111	547	354	1020	1110	661	564	3.7
12	2.9	2.5	2.6	169	110	540	370	989	959	659	402	3.7
13	2.9	2.5	2.8	1560	110	366	386	979	837	461	133	3.5
14	2.9	2.4	2.7	1590	109	96	402	971	828	674	300	3.5
15	2.6	2.4	2.5	1500	109	97	422	971	844	672	248	3.5
16	1.3	2.4	2.4	897	108	96	448	1010	863	670	39	3.5
17	1.3	2.4	2.3	252	112	99	478	1090	878	668	39	3.3
18	1.3	2.6	2.3	330	928	100	549	1180	878	667	32	3.3
19	3.6	2.3	2.4	311	1480	96	600	1240	870	665	4.5	3.3
20	37	2.1	2.4	303	1460	98	615	1220	795	663	4.8	3.3
21	6.2	2.0	2.4	280	1440	99	588	1110	675	661	4.5	3.3
22	3.9	2.1	2.5	163	1370	97	554	1040	658	659	4.3	2.8
23	3.2	2.3	2.4	91	1110	95	555	1200	644	658	4.3	2.4
24	2.9	2.5	2.5	89	1100	99	562	1330	645	657	4.3	2.2
25	2.7	2.6	2.5	170	1080	95	615	1300	650	656	3.9	2.2
26	3.3	6.7	2.8	273	1060	94	667	1370	764	584	3.9	2.2
27	2.8	6.6	2.9	269	1050	94	703	1290	1010	583	3.7	2.1
28	2.5	4.6	3.0	181	1030	95	711	1260	1130	627	3.7	2.1
29	2.4	4.1	2.9	119	1010	102	730	1300	1140	595	3.7	2.1
30	2.2	3.9	3.1	113	---	108	750	1330	1140	611	3.5	2.0
31	2.2	---	6.5	116	---	111	---	1320	---	634	3.5	---
TOTAL	122.0	86.9	93.8	8847.9	16037	10714	14580	33907	29138	20217	8074.6	93.1
MEAN	3.94	2.90	3.03	285	553	346	486	1094	971	652	260	3.10
MAX	37	6.7	6.5	1590	1480	997	750	1370	1330	996	704	4.1
MIN	1.3	2.0	2.3	5.0	108	94	105	756	644	461	3.5	2.0
AC-FT	242	172	186	17550	31810	21250	28920	67250	57800	40100	16020	185
CAL YR 1979 TOTAL	109643.9			MEAN 300	MAX 1540	MIN 1.3	AC-FT 217500					
WTR YR 1980 TOTAL	141911.3			MEAN 388	MAX 1590	MIN 1.3	AC-FT 281500					

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, 135,800 acre-ft (167 hm³) July 18, elevation, 5,370.25 ft (1,636.852 m); minimum, 58,100 acre-ft (71.6 hm³) Feb. 16, elevation, 5,328.07 ft (1,623.996 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	76,700
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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87435	71423	71213	63669	69802	82693	73294	75123	112860	135437	135656	113672
2	87002	71278	71213	63321	68912	84061	72478	75707	114424	135656	135656	112941
3	86553	71439	70618	63003	68030	85264	71972	76541	116018	135678	135656	112535
4	86051	71487	70183	62852	67121	86320	71907	77196	117333	135678	135634	111403
5	85549	71503	69738	62716	66270	87217	72087	77937	118300	135634	135524	110274
6	85122	71519	69484	62731	65375	87544	72087	78545	119294	135590	135437	109090
7	84662	71519	69039	62278	64491	87726	72038	79858	120330	135590	135546	108328
8	84202	71535	68500	62158	63624	87853	71809	81217	121455	135656	135546	107154
9	83831	71552	68500	62308	62731	87998	71471	82553	122645	135678	135502	106021
10	83322	71552	68312	62761	61843	88107	71213	83831	123820	135722	135480	104857
11	82763	71552	68061	63896	60927	88234	70988	84981	124935	135765	135437	103698
12	82204	71552	67842	65946	60018	88362	70827	85764	125716	135787	135066	102720
13	81700	71552	67607	71535	59112	88180	70666	86751	126181	135612	134196	101572
14	81148	71568	67340	76241	58743	87363	70505	87671	126858	135678	133565	100390
15	80614	71568	66625	78614	58344	86607	70328	88561	127347	135722	132957	99215
16	80131	71568	66054	79705	58388	86051	70425	89512	127899	135787	131836	98062
17	79602	71729	65853	79296	59260	85246	70489	90652	128452	135809	130759	96894
18	79091	71745	65637	79040	61903	84486	70682	92233	129006	135831	129711	95749
19	78886	71503	65436	78903	65436	83672	70988	93681	129519	135831	128601	94778
20	78784	71342	65238	78682	68077	82868	71342	95120	129904	135831	127411	93813
21	78291	71197	65086	78190	70730	82099	71632	96206	130054	135831	126287	93001
22	77449	71197	65086	77466	72772	81252	71793	97066	130161	135831	125167	92177
23	76758	71230	65086	76591	74199	80614	71923	98868	130246	135831	124009	91376
24	75990	71230	65497	75690	75540	79824	72021	100564	130310	135831	122855	90578
25	75623	71133	65528	74925	76825	78989	72250	102096	130374	135809	121726	89788
26	75024	71230	64979	74380	78072	78140	72609	103776	130674	135678	120580	89126
27	74364	71262	64842	74001	79313	77348	73049	105291	131469	135809	119419	88489
28	73704	71278	64552	73310	80579	76541	73539	106736	132483	135765	118259	87962
29	72935	71278	64110	72478	81648	75690	74051	108228	133587	135678	117107	87599
30	72445	71246	63881	71552	---	74892	74611	109752	134696	135590	115957	87290
31	71923	---	63972	70682	---	74100	---	111323	---	135546	114812	---
MAX	87435	71745	71213	79705	81648	88362	74611	111323	134696	135831	135656	113672
MIN	71923	71133	63881	62158	58344	74100	70328	75123	112860	135437	114812	87290
†	5337.08	5336.66	5332.01	5336.31	5342.88	5338.41	5338.72	5358.57	5369.73	5370.12	5360.29	5346.07
‡	-15900	-677	-7270	+6710	+11000	-7550	+511	+36700	+23400	+850	-20700	-27500

CAL YR 1979 † -11800
WTR YR 1980 ‡ -490

† 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) northeast 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, 26,200 acre-ft (32.3 hm³) Mar. 11, elevation, 1,403.19 ft (427.692 m); minimum, 11,900 acre-ft (14.7 hm³) Dec. 2, elevation, 1,367.25 ft (416.738 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18623	24847	12638	24906	21473	24479	25851	25538	25474	25722	25630	25218
2	20258	24636	12035	24278	21413	24591	25777	25515	25392	25736	25726	24997
3	21046	24140	13759	24056	21413	25547	25675	25105	25365	25164	25717	24753
4	21702	23786	15077	23909	21426	25856	25575	25010	25483	25538	26064	24600
5	22421	23482	16986	23887	21392	25791	25879	25397	25278	25383	25934	24605
6	22918	23005	18775	24542	21367	25529	25570	25087	25515	25465	25777	24569
7	23790	22426	20068	25250	21333	25588	25114	25200	25625	25643	25643	24233
8	24506	21860	20648	25105	21329	25570	25232	25333	25173	25786	25666	24448
9	24515	21252	21265	24645	21337	25786	25447	25584	25177	25524	25689	24744
10	25374	20623	21223	23636	21341	25726	25675	25346	24578	25598	25699	25255
11	25689	19957	21126	22771	21350	26027	25920	25438	25214	25800	25685	25561
12	25227	19397	21937	25237	21134	25916	26017	25566	25200	25492	25671	25639
13	24852	18972	22840	25069	21109	25957	25925	25851	25438	25800	25708	25699
14	24605	18803	23658	23985	21126	25736	25851	25662	25369	25273	25782	25652
15	24816	18376	24452	24479	21147	25694	25823	25456	25547	25575	25851	25392
16	24942	18139	24636	25552	22215	25538	25809	25570	25369	25502	25925	25392
17	25028	17770	24176	24992	25634	25006	25902	25392	24829	25786	25879	25438
18	25141	17454	24493	24748	23936	25128	25851	24775	25042	25639	25874	25598
19	25191	17040	24735	24897	24439	25456	25837	25232	25310	25337	25740	25401
20	24327	16649	24605	24906	22741	25726	25442	25699	24685	25355	25634	25355
21	25010	16383	24793	25060	25314	25888	25745	25722	24847	25657	25561	25346
22	25620	16071	24884	25132	24367	25634	25625	25620	25006	25465	25360	25319
23	25287	15687	24893	25024	23812	25046	24915	25355	25680	25616	25433	25630
24	25465	15292	24685	24979	24140	24632	25186	25323	25195	25547	25712	25369
25	24884	14632	23596	24834	24542	24735	25657	25365	25630	25805	25593	23119
26	24820	14403	24524	24640	25092	24771	25740	25301	25346	25768	25662	21122
27	24816	14094	24434	24825	24983	24947	25406	25754	25237	25749	25547	18944
28	24811	13448	24789	25200	23980	25159	25497	25520	25497	25552	25593	16357
29	24640	13016	24920	24452	24309	25355	25584	25588	25010	25796	25438	14090
30	24712	12882	24748	23136	---	25543	25529	25616	25073	25634	25333	12648
31	24676	---	24852	21936	---	25731	---	25611	---	25699	25630	---
MAX	25689	24847	24920	25552	25634	26027	26017	25851	25680	25805	26064	25699
MIN	18623	12882	12035	21936	21109	24479	24915	24775	24578	25164	25333	12648
†	1399.84	1370.07	1400.23	1393.57	1399.02	1402.16	1401.72	1401.90	1400.72	1402.09	1401.94	1369.38
‡	+7520	-11800	+12000	-2920	+2380	+1420	-202	+82	-538	+626	-69	-13000
CAL YR 1979	†	+703										
WTR YR 1980	‡	-4510										

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

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

SAN JOAQUIN RIVER BASIN

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 ten discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--29 years, 445 ft³/s (12.60 m³/s), 322,400 acre-ft/yr (398 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, 11,900 ft³/s (337 m³/s) Jan. 14, gage height, 21.25 ft (6.477 m); minimum daily, 2.1 ft³/s (0.059 m³/s) Feb. 12, 13.

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	20	16	14	15	21	155	49	3690	1760	6040	747	16
2	19	17	14	15	21	148	155	4080	1950	7380	674	16
3	18	16	14	15	21	141	152	4880	2270	7220	546	15
4	18	17	12	15	21	420	150	5110	1900	5310	154	15
5	18	17	15	15	21	1020	147	4890	1620	5030	259	15
6	18	17	15	15	21	1190	408	5200	1570	3650	22	16
7	18	17	16	15	16	551	418	5090	2120	2720	15	16
8	18	17	16	15	8.1	216	84	4500	3460	2420	15	18
9	18	17	16	15	2.2	3.3	24	4290	4360	3000	15	17
10	18	17	16	16	2.2	2.9	24	3440	5240	2180	15	17
11	18	17	16	32	2.2	375	24	1910	4700	2150	15	17
12	20	16	15	1430	2.1	354	102	1270	4290	2870	16	17
13	20	16	18	3020	2.1	647	442	1190	4320	2580	16	17
14	20	16	17	6550	3.3	812	497	1440	4980	3270	16	17
15	20	16	17	1360	3.3	605	493	1340	4970	3290	16	17
16	20	16	17	593	3.4	727	485	1460	5730	2910	16	17
17	19	16	17	1640	14	802	645	2600	7050	3190	16	17
18	18	15	17	1290	3430	219	544	4100	7620	3990	16	17
19	18	15	16	561	4630	153	519	4670	7550	4010	16	17
20	11	15	16	560	5730	158	922	5610	8620	2590	18	17
21	12	15	25	560	3450	175	2960	6390	7970	2110	17	17
22	16	15	13	562	4140	370	2090	5810	7420	2440	16	17
23	16	15	15	589	1580	538	1630	5540	5840	2290	16	17
24	16	15	15	545	788	150	883	3300	5120	2440	16	17
25	16	15	15	545	446	25	1070	2000	4750	2130	16	17
26	16	15	15	542	151	25	2100	1440	5360	2120	16	17
27	16	15	15	198	457	25	2930	981	5300	2760	16	16
28	16	14	15	191	1010	25	3240	1300	4810	2270	16	17
29	16	14	15	79	155	25	2860	1440	6260	1780	16	17
30	16	14	15	22	---	25	3170	1720	6920	1510	16	16
31	16	---	15	21	---	24	---	1770	---	951	16	---
TOTAL	539	473	487	21041	26151.9	10106.2	29217	102451	145830	98601	2800	499
MEAN	17.4	15.8	15.7	679	902	326	974	3305	4861	3181	90.3	16.6
MAX	20	17	25	6550	5730	1190	3240	6390	8620	7380	747	18
MIN	11	14	12	15	2.1	2.9	24	981	1570	951	15	15
AC-FT	1070	938	966	41730	51870	20050	57950	203200	289300	195600	5550	990
CAL YR 1979	TOTAL	91102.9	MEAN	250	MAX	6040	MIN	3.0	AC-FT	180700		
WTR YR 1980	TOTAL	438196.1	MEAN	1197	MAX	8620	MIN	2.1	AC-FT	869200		

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.--15 years, 22.6 ft³/s (0.640 m³/s), 16,370 acre-ft/yr (20.2 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.--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)
Oct. 20	0330	119 3.37	3.80 1.158	Mar. 3	2300	152 4.30	3.71 1.131
Jan. 13	2015	*2,750 77.90	7.41 2.259	May 20	1915	157 4.45	3.73 1.137
Feb. 19	0630	358 10.10	4.33 1.320	June 18	0015	143 4.05	3.67 1.119

Minimum daily, 3.0 ft³/s (0.085 m³/s) Oct. 10.

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	3.5	5.1	7.5	53	44	126	57	60	107	81	15	8.3
2	3.4	5.1	7.3	29	43	127	55	63	95	79	16	7.9
3	3.4	7.0	7.0	16	43	144	54	74	92	72	15	7.8
4	3.3	8.5	6.8	14	43	150	39	77	88	67	15	7.6
5	3.3	6.8	6.7	13	44	148	46	77	87	63	14	7.1
6	3.2	6.2	6.6	13	44	144	43	82	91	58	13	6.2
7	3.2	6.0	6.5	13	42	133	33	79	107	54	12	6.3
8	3.1	6.0	6.4	12	40	122	31	72	120	51	11	6.4
9	3.1	5.8	6.4	42	38	115	34	75	130	48	11	6.3
10	3.0	5.7	6.3	51	38	111	37	69	137	45	11	6.0
11	3.2	5.6	6.1	161	37	103	42	56	136	42	11	5.8
12	3.3	5.4	6.0	672	36	94	43	53	132	38	10	5.8
13	3.4	5.3	6.0	1360	36	88	46	59	128	35	10	5.7
14	3.5	5.2	5.9	650	80	85	49	65	125	31	9.7	5.7
15	3.6	5.1	5.8	217	108	81	52	84	128	30	10	5.7
16	3.6	5.1	5.7	174	129	78	57	101	134	28	10	5.5
17	3.8	16	5.7	137	239	75	62	107	138	27	10	5.5
18	3.8	8.3	5.6	128	284	74	62	113	139	25	10	5.5
19	15	6.5	5.8	95	278	68	60	124	138	24	10	5.7
20	39	5.7	6.1	84	160	65	59	136	135	23	10	5.7
21	8.9	5.7	6.5	76	193	63	54	139	130	22	9.3	5.4
22	7.0	6.3	5.6	69	165	59	46	139	125	20	9.1	5.3
23	5.9	7.5	6.2	63	147	60	37	124	116	20	9.3	5.2
24	5.4	6.8	7.8	59	137	60	35	109	109	19	8.8	5.0
25	6.6	7.9	10	57	128	57	40	101	104	18	8.5	4.8
26	8.2	27	8.1	54	122	56	49	96	100	17	8.3	4.6
27	5.8	12	6.9	51	121	56	57	93	96	17	8.1	4.4
28	5.3	9.4	6.6	50	128	56	62	96	90	17	7.9	4.4
29	5.1	8.5	6.3	50	129	58	60	95	86	16	7.9	4.3
30	5.0	8.0	6.8	46	---	60	61	104	84	15	7.7	4.3
31	5.0	---	52	44	---	58	---	105	---	14	7.8	---
TOTAL	182.9	229.5	249.0	4553	3076	2774	1462	2827	3427	1116	326.4	174.2
MEAN	5.90	7.65	8.03	147	106	89.5	48.7	91.2	114	36.0	10.5	5.81
MAX	39	27	52	1360	284	150	62	139	139	81	16	8.3
MIN	3.0	5.1	5.6	12	36	56	31	53	84	14	7.7	4.3
AC-FT	363	455	494	9030	6100	5500	2900	5610	6800	2210	647	346
CAL YR 1979	TOTAL	9832.1	MEAN 26.9	MAX 153	MIN 3.0	AC-FT 19500						
WTR YR 1980	TOTAL	20397.0	MEAN 55.7	MAX 1360	MIN 3.0	AC-FT 40460						

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) southeast 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, 45,210 acre-ft (55.7 hm³) July 5, elevation, 3,376.22 ft (1,029.072 m); minimum, 19,390 acre-ft (23.9 hm³) Dec. 21, elevation, 3,349.62 ft (1,020.964 m).

MONTHEND CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Contents
Sept. 30.....	26,610
Oct. 31.....	22,210
Nov. 30.....	22,360
Dec. 31.....	21,330
Jan. 31.....	33,680
Feb. 29.....	33,980
Mar. 31.....	33,450
Apr. 30.....	34,580
May 31.....	41,590
June 30.....	44,980
July 31.....	40,360
Aug. 31.....	31,740
Sept. 30.....	23,040

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.--40 years, 69.9 ft³/s (1.980 m³/s), 50,640 acre-ft/yr (62.4 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	144	.03	1.0	150	152	152	154	150	132	153	155
2	.03	60	.03	1.0	150	151	152	155	150	120	153	155
3	.03	.04	53	1.0	150	152	152	155	150	120	153	155
4	.02	.03	94	1.1	150	152	152	155	150	119	153	155
5	0	.03	93	1.1	150	152	152	155	150	119	153	155
6	0	.03	93	1.1	151	152	152	156	150	119	153	155
7	0	.03	41	1.2	146	152	152	151	150	135	153	154
8	0	6.7	.57	1.2	149	152	137	138	150	151	154	154
9	0	.03	.26	18	151	152	150	126	150	151	154	154
10	0	.03	54	38	151	152	150	118	150	150	154	154
11	0	.03	94	38	151	152	149	122	151	151	154	154
12	9.7	.03	94	38	151	152	151	137	151	149	154	154
13	.30	31	94	39	152	152	151	140	151	151	154	154
14	72	55	118	73	151	152	151	133	151	151	154	154
15	133	.48	150	114	152	152	151	131	151	151	154	154
16	144	.49	150	120	152	152	151	138	152	151	154	154
17	144	.57	150	137	152	152	152	135	152	151	154	154
18	144	.57	150	149	152	152	152	130	152	151	154	154
19	144	73	150	150	152	152	152	129	152	151	154	154
20	144	144	150	150	152	152	152	126	152	151	154	155
21	144	64	70	150	152	152	152	126	152	151	154	156
22	144	.11	.03	150	152	152	152	126	149	152	154	153
23	144	.55	.06	150	153	152	152	130	151	154	154	156
24	144	.68	.27	150	153	152	152	138	151	154	154	156
25	144	.76	.22	150	152	152	153	140	151	154	155	155
26	144	72	.22	149	152	152	153	145	151	154	155	156
27	144	120	.22	149	152	152	154	151	151	151	155	157
28	144	93	.23	149	152	152	154	149	151	149	155	157
29	144	93	.28	149	151	152	154	144	152	153	155	143
30	144	44	.31	149	---	152	154	147	152	153	155	145
31	144	---	2.9	149	---	152	---	150	---	153	155	---
TOTAL	2519.11	1004.19	1803.63	2716.7	4384	4711	4543	4330	4526	4502	4774	4621
MEAN	81.3	33.5	58.2	87.6	151	152	151	140	151	145	154	154
MAX	144	144	150	150	153	152	154	156	152	154	155	157
MIN	0	.03	.03	1.0	146	151	137	118	149	119	153	143
AC-FT	5000	1990	3580	5390	8700	9340	9010	8590	8980	8930	9470	9170
CAL YR 1979	TOTAL	33852.22	MEAN	92.7	MAX 151	MIN 0	AC-FT	67150				
WTR YR 1980	TOTAL	44434.63	MEAN	121	MAX 157	MIN 0	AC-FT	88140				

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'20", long 119°31'45", in SE¼ 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). Sequel 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 21,100 acre-ft (26.0 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.--40 years, 12.5 ft³/s (0.354 m³/s), 9,060 acre-ft/yr (11.2 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 discharge, 1,040 ft³/s (29.5 m³/s) Feb. 20, gage height, 5.09 ft (1.551 m); minimum daily, 0.29 ft³/s (0.008 m³/s) Dec. 19, 20.

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	.32	.33	.32	.56	1.6	63	.88	1.6	1.6	1.6	1.0	.49
2	.32	.33	.32	.42	1.4	50	.87	1.6	1.6	1.6	.99	.49
3	.32	.45	.32	.38	1.3	76	.87	1.7	1.6	1.6	.97	.45
4	.32	.38	.31	.35	1.2	134	.87	1.6	1.6	1.5	.95	.45
5	.33	.34	.31	.33	1.1	126	1.7	1.7	1.6	1.5	.94	.45
6	.32	.33	.31	.33	.97	280	1.3	1.7	1.7	1.5	.92	.42
7	.33	.33	.31	.32	1.4	306	1.1	1.7	1.6	1.5	.91	.42
8	.33	.32	.31	.32	1.6	194	23	1.7	1.6	1.4	.90	.42
9	.33	.32	.30	.64	.84	117	1.1	1.8	1.6	1.4	.88	.42
10	.33	.32	.30	2.3	.80	80	1.0	2.0	1.6	1.4	.87	.41
11	.33	.32	.30	4.1	.78	60	.99	1.8	1.6	1.4	.85	.40
12	.33	.32	.30	5.6	.76	49	.96	1.8	1.5	1.3	.87	.40
13	.33	.31	.32	11	.76	32	.95	1.6	1.6	1.3	.85	.39
14	.34	.30	.30	319	.81	25	.93	1.3	1.6	1.3	.81	.39
15	.34	.30	.30	631	2.3	21	.92	1.3	1.6	1.3	.80	.39
16	.34	.31	.30	455	32	15	.92	1.3	1.6	1.3	.78	.39
17	.33	.47	.30	311	341	12	.89	1.3	1.6	1.4	.76	.39
18	.33	.34	.30	202	682	12	.89	1.3	1.7	1.5	.73	.39
19	.37	.32	.29	116	812	8.9	.89	1.3	1.7	1.5	.72	.39
20	.49	.32	.29	69	938	6.6	.89	1.7	1.6	1.5	.70	.39
21	.34	.32	.34	41	740	5.0	.91	1.8	1.6	1.4	.69	.38
22	.34	.31	.33	21	690	4.3	.92	1.8	1.6	1.2	.67	.38
23	.33	.32	.31	9.4	484	2.8	.90	1.8	1.6	1.2	.65	.38
24	.33	.32	.72	4.0	306	1.8	.90	1.9	1.6	1.2	.62	.38
25	.34	.31	.58	1.9	198	1.4	.89	1.7	1.6	1.3	.61	.38
26	.33	.32	.39	1.2	134	1.1	.89	1.4	1.6	1.3	.59	.38
27	.33	.32	.35	1.0	99	1.0	.89	1.4	1.6	1.2	.56	.38
28	.33	.32	.33	1.1	84	.96	.91	1.4	1.6	1.2	.54	.38
29	.33	.32	.32	1.9	80	.92	.96	1.4	1.6	1.1	.54	.38
30	.33	.32	.49	2.6	---	.90	1.3	1.4	1.6	1.1	.51	.38
31	.33	---	1.0	2.1	---	.88	---	1.4	---	1.0	.51	---
TOTAL	10.44	9.94	11.27	2216.85	5637.62	1688.56	51.39	49.2	48.2	42.0	23.69	12.14
MEAN	.34	.33	.36	71.5	194	54.5	1.71	1.59	1.61	1.35	.76	.40
MAX	.49	.47	1.0	631	938	306	23	2.0	1.7	1.6	1.0	.49
MIN	.32	.30	.29	.32	.76	.88	.87	1.3	1.5	1.0	.51	.38
AC-FT	21	20	22	4400	11180	3350	102	98	96	83	47	24
CAL YR 1979 TOTAL	291.75			MEAN .80	MAX	3.3	MIN .29	AC-FT 579				
WTR YR 1980 TOTAL	9801.30			MEAN 26.8	MAX	938	MIN .29	AC-FT 19440				

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA

LOCATION.--Lat 37°09'03", long 119°27'34", in SE¼NE¼ 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.

DRAINAGE AREA.--130 mi² (337 km²).

PERIOD OF RECORD.--January 1952 to current year.

REVISED RECORDS.--WSP 2130: 1956-58(M).

GAGE.--Water-stage recorder. Concrete control since Oct. 22, 1964. Datum of gage is 1,174.69 ft (358.046 m) National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Records good. Flow regulated by Bass Lake (station 11243400) 10 mi (16 km) upstream and diversion into Pacific Gas and Electric Co. conduit No. 1. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and 16 discharge measurements furnished by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--28 years, 59.7 ft³/s (1.691 m³/s), 43,250 acre-ft/yr (53.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Dec. 23, 1955, gage height, 28.5 ft (8.69 m), from floodmarks, from rating curve extended above 4,700 ft³/s (133 m³/s); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,860 ft³/s (166 m³/s) Jan. 12, gage height, 17.00 ft (5.182 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Sept. 28.

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	4.9	3.4	7.4	80	45	339	145	111	35	14	4.9	2.6
2	4.3	7.7	6.7	25	43	329	90	112	35	13	4.2	2.5
3	4.0	6.6	6.3	18	41	567	85	117	39	13	4.0	4.1
4	3.9	11	6.0	15	40	539	89	124	34	13	3.9	3.0
5	3.7	8.2	5.8	13	39	828	201	122	32	12	3.9	2.6
6	3.6	6.6	5.8	12	39	1030	207	124	31	11	3.9	2.3
7	3.7	5.9	5.6	12	38	720	137	110	29	11	3.8	2.3
8	3.9	5.6	5.4	12	35	539	166	86	28	10	3.6	2.3
9	4.7	5.5	5.0	15	33	434	195	73	26	10	3.6	2.3
10	5.1	5.4	5.0	265	32	383	192	113	25	9.9	3.3	2.2
11	4.4	5.1	5.1	691	30	343	214	67	40	9.5	3.1	2.0
12	3.1	4.9	5.0	2640	29	309	202	61	36	9.1	3.0	2.5
13	2.7	4.8	4.8	2990	28	281	212	73	24	9.1	3.2	3.3
14	2.2	5.3	4.7	3930	65	274	214	99	22	8.9	3.2	3.3
15	2.3	5.6	4.7	1730	277	264	219	69	21	8.8	3.0	3.5
16	2.0	4.5	4.5	1160	467	251	230	72	20	8.2	3.2	3.4
17	2.0	12	4.3	744	2170	235	234	80	19	8.2	3.6	3.1
18	2.0	12	4.4	626	2860	243	249	66	19	7.6	3.2	2.7
19	2.3	7.6	4.4	451	2690	221	245	69	18	7.4	3.0	2.9
20	4.1	17	4.5	329	2040	217	245	67	17	7.1	3.3	3.2
21	9.5	7.6	5.6	255	2060	210	226	68	23	6.7	3.4	3.2
22	5.7	6.0	6.8	220	1340	194	192	67	25	6.4	3.4	3.1
23	4.5	6.4	5.6	177	928	186	173	57	23	5.9	3.6	2.9
24	3.9	6.6	9.0	166	708	192	153	52	24	4.9	3.5	2.7
25	3.6	6.4	14	144	572	179	98	54	18	5.1	3.4	2.7
26	4.1	28	10	132	477	167	110	46	18	5.0	3.2	2.3
27	4.0	17	8.0	71	431	161	119	41	17	4.7	2.9	2.0
28	3.6	11	7.1	56	439	161	138	70	14	5.8	2.7	1.7
29	3.3	9.3	7.1	56	383	164	128	41	13	7.2	2.6	1.6
30	3.1	8.2	11	52	---	176	121	37	13	5.3	2.7	4.1
31	3.2	---	83	47	---	164	---	35	---	5.4	2.6	---
TOTAL	154.3	251.2	272.6	17134	18379	10300	5229	2383	738	263.2	104.9	96.8
MEAN	4.98	8.37	8.79	553	634	332	174	76.9	24.6	8.49	3.38	3.23
MAX	41	28	83	3930	2860	1030	249	124	40	14	4.9	16
MIN	2.0	3.4	4.3	12	28	161	85	35	13	4.7	2.6	1.7
AC-FT	306	498	541	33990	36450	20430	10370	4730	1460	522	208	192
CAL YR 1979	TOTAL	15437.61	MEAN	42.3	MAX	716	MIN	.91	AC-FT	30620		
WTR YR 1980	TOTAL	55306.00	MEAN	151	MAX	3930	MIN	1.7	AC-FT	109700		

SAN JOAQUIN RIVER BASIN

11247000 SAN JOAQUIN RIVER BELOW KERCKHOFF POWERHOUSE, NEAR PRATHER, CA

LOCATION.--Lat 37°04'45", long 119°33'36", in NE¼NW¼ 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).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1910 to September 1914, December 1936 to December 1937, December 1942 to current year. 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 Water and Power Resources Service). 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.--41 years (water years 1911-14, 1944-80), 2,373 ft³/s (67.20 m³/s), 1,719,000 acre-ft/yr (2.12 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, 22,400 ft³/s (634 m³/s) Jan. 14, gage height, 28.82 ft (8.784 m); minimum daily, 175 ft³/s (5.10 m³/s) Nov. 16, 24.

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	433	1060	366	1610	3160	4010	3670	6960	5290	9000	4360	2380
2	209	1170	490	1610	2870	4010	3720	7300	5440	10100	4130	2050
3	748	790	577	1610	2860	4380	3700	8030	5690	10200	4150	1870
4	828	379	827	1610	2860	4420	3710	8280	5480	8130	3770	1870
5	707	236	970	1220	2870	5360	3810	8110	5230	7880	3760	2010
6	693	251	892	654	2860	5770	4090	8460	4960	6630	3500	1970
7	645	238	964	984	2860	5000	4120	8630	5590	5870	3390	1930
8	1040	403	775	1460	2850	4460	3780	7820	6500	5660	3270	1850
9	1170	233	960	1620	2830	4050	3690	7560	7310	6020	3270	1870
10	914	270	1090	2430	2830	3980	3720	7170	8140	5650	3250	1940
11	972	314	982	3360	2830	4180	3730	5870	7740	5450	3260	1950
12	1450	348	841	6660	2840	4290	3760	5110	7330	5970	3240	2040
13	1490	237	578	8780	2850	4370	4060	4900	7320	5840	3230	2060
14	1350	461	624	14500	2900	4630	4180	5090	7400	6370	3210	2070
15	1310	358	1100	6500	3670	4450	4180	5000	7900	6400	3210	2220
16	1320	175	1050	5060	3790	4450	4180	4980	8730	6260	3210	2100
17	1290	391	1220	5660	5400	4570	4100	5880	10200	6330	3140	2100
18	1310	341	1340	5510	8860	4100	4250	7170	10600	6980	3170	2050
19	1390	262	870	4450	9640	3910	4240	7640	10800	6970	3220	2170
20	1650	473	1040	4330	11400	3890	4560	8760	11500	6120	3340	2190
21	1650	823	1130	4240	8960	3910	6370	9700	11100	5570	3230	2220
22	1410	280	650	4220	7840	4000	5860	9050	10700	5810	2500	2100
23	1230	280	885	4220	6240	4220	5380	8750	9160	5730	2380	2100
24	1450	175	844	4160	5050	3940	4640	6780	8180	5730	2220	2210
25	1250	407	1520	4130	4580	3700	4640	5660	7760	5550	2460	3090
26	1500	485	574	4110	4210	3690	5560	5010	8360	5490	2330	2880
27	1270	651	946	3780	4360	3670	6350	4650	8270	5600	2380	2850
28	1180	566	1280	3690	4870	3670	6660	4670	7780	5770	2320	2950
29	1420	850	1350	3630	4050	3670	6450	4990	8960	5320	2260	2780
30	1490	587	1350	3500	---	3680	6580	5200	9700	5140	2260	2150
31	1310	---	1660	3470	---	3670	---	5290	---	4510	2280	---
TOTAL	36079	13494	29745	122768	133190	130100	137740	208470	239120	198050	95700	66020
MEAN	1164	450	960	3960	4593	4197	4591	6725	7971	6389	3087	2201
MAX	1650	1170	1660	14500	11400	5770	6660	9700	11500	10200	4360	3090
MIN	209	175	366	654	2830	3670	3670	4650	4960	4510	2220	1850
AC-FT	71560	26770	59000	243500	264200	258100	273200	413500	474300	392800	189800	131000
CAL YR 1979 TOTAL	884756	MEAN	2424	MAX	9260	MIN	175	AC-FT	1755000			
WTR YR 1980 TOTAL	1410476	MEAN	3854	MAX	14500	MIN	175	AC-FT	2798000			

11247000 SAN JOAQUIN RIVER BELOW KERCKHOFF POWERHOUSE, NEAR PRATHER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-68, 1970-74, 1978 to current year.

CHEMICAL ANALYSES: Water years 1978 to current year.

WATER TEMPERATURES: Water years 1961-68, 1970-74.

COOPERATION.--The letter "A" following a date indicates chemical-quality data furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 16...	1530	1660	26	6.8	18.0	--	--	--	--	--	--	--
FEB 05...	1700	2870	31	6.5	7.0	11.6	--	--	--	--	--	--
APR 09...A	1030	3720	37	7.2	8.0	12.3	4	1.0	12	3.0	1.0	3.0
JUN 09...	1645	7430	25	7.2	12.5	--	--	--	--	--	--	--
11...A	0800	7620	24	7.2	10.0	11.2	7	.8	5	2.0	.0	2.0
AUG 04...	1630	3590	19	6.8	16.0	9.2	--	--	--	--	--	--
13...A	0830	3250	--	7.1	14.0	10.5	6	.1	--	--	--	--
SEP 11...A	1030	1840	20	6.8	16.0	9.6	2	.4	5	2.0	.0	2.0

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT- Y (MG/L AS CACO3)	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, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	.03
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	.06
APR 09...A	34	.4	.7	34	.0	2.0	7.2	--	34	2	.05	--
JUN 09...	--	--	--	--	--	--	--	--	--	--	--	.02
11...A	44	.4	.5	11	.0	1.0	7.2	.0	11	4	.01	.02
AUG 04...	--	--	--	--	--	--	--	--	--	--	--	.02
13...A	--	--	--	--	--	--	7.1	.0	--	2	--	.02
SEP 11...A	44	.4	.4	18	.0	1.0	6.8	.0	18	2	.02	.02

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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL. (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 16...	--	.01	--	.44	--	.45	.48	.000	.07	.04	--
FEB 05...	.06	.04	--	.51	--	.55	.61	.010	.01	.01	--
APR 09...A	--	--	--	2.0	--	--	--	--	--	--	1.3
JUN 09...	.00	.04	2.3	1.2	2.3	1.2	1.2	.000	.02	.01	--
11...A	--	.01	--	--	.10	--	--	.010	--	.00	2.3
AUG 04...	.01	.00	.41	.28	.42	.28	.30	.003	.03	.01	--
13...A	--	.00	--	--	.10	--	--	.010	--	.00	1.5
SEP 11...A	--	.03	--	--	.10	--	--	.010	--	.00	1.4

SAN JOAQUIN RIVER BASIN

11247000 SAN JOAQUIN RIVER BELOW KERCKHOFF POWERHOUSE, NEAR PRATHER, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC	BARIUM,	BORON,	CADMIUM	CHRO-	COPPER,
		DIS- SOLVED (UG/L AS AS)	DIS- SOLVED (UG/L AS BA)	DIS- SOLVED (UG/L AS B)	DIS- SOLVED (UG/L AS CD)	MIUM, DIS- SOLVED (UG/L AS CR)	DIS- SOLVED (UG/L AS CU)
APR 09...A	1030	--	--	100	--	--	--
JUN 11...A	0800	--	--	--	--	--	--
AUG 13...A	0830	10	0	0	0	0	0
SEP 11...A	1030	0	0	0	0	0	0

DATE		IRON,	LEAD,	MANGA-	MERCURY	SELE-	CARBON,	METHY-
		DIS- SOLVED (UG/L AS FE)	DIS- SOLVED (UG/L AS PB)	NESE, DIS- SOLVED (UG/L AS MN)	TOTAL RECOV- ERABLE (UG/L AS HG)	NIUM, DIS- SOLVED (UG/L AS SE)	ORGANIC TOTAL (MG/L AS C)	LENE BLUE ACTIVE SUB- STANCE (MG/L)
APR 09...A	--	--	--	--	--	--	1.3	.00
JUN 11...A	--	--	--	--	--	--	2.3	.00
AUG 13...A	20	0	0	0	.0	10	1.5	.00
SEP 11...A	20	0	0	0	.0	20	1.4	.00

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 Water and Power Resources Service and reviewed by the Geological Survey, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--37 years, 312 ft³/s (8.836 m³/s), 226,000 acre-ft/yr (279 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202				0	645	1070	1280	1280	1190	1200	1050
2	199				0	642	1200	1270	1280	1190	1170	1040
3	148				0	661	1270	1280	1280	1160	1190	1040
4	0				0	900	1270	1260	1280	1110	1190	1030
5	0				0	898	1260	1240	1280	1060	1190	1020
6	0				0	899	1260	1260	1280	1040	1180	1020
7	0				0	1060	1260	1270	1280	1040	1230	1010
8	0				0	1150	1240	1280	1290	1030	1280	1080
9	0				0	1140	1220	1260	1300	1020	1210	997
10	0				0	908	1210	1260	1280	1030	1170	989
11	0				0	1090	1210	1260	1270	1030	1200	909
12	0				0	1150	1200	1250	1280	1050	1210	658
13	0				0	1140	1230	1250	1260	1060	1200	493
14	0				0	1130	1270	1240	1260	1130	1200	465
15	0				0	1130	1280	1240	1270	1200	1190	464
16	0				0	1120	1270	1170	1280	1220	1190	463
17	0				0	1120	1280	1180	1290	1220	1180	439
18	0				0	1180	1290	1200	1280	1220	1150	425
19	0				0	1250	1280	1210	1270	1220	1130	409
20	0				0	1270	1270	1250	1280	1200	1130	361
21	0				0	1260	1270	1280	1270	1190	1120	340
22	0				0	1260	1290	1270	1270	1190	1110	339
23	0				0	1260	1300	1260	1280	1220	1110	338
24	0				0	1250	1290	1270	1230	1230	1100	337
25	0				214	1270	1280	1280	1240	1250	1090	337
26	0				553	1280	1280	1280	1250	1270	1080	562
27	0				548	1270	1280	1280	1260	1270	1080	685
28	0				614	1270	1290	1280	1260	1240	1070	685
29	0				649	1160	1300	1280	1270	1260	1060	684
30	0				---	1080	1310	1280	1160	1280	1060	682
31	0	---			---	1070	---	1280	---	1250	1050	---
TOTAL	549	0	0	0	2578	33913	37730	38950	38060	36070	35720	20271
MEAN	17.7	0	0	0	88.9	1094	1258	1256	1269	1164	1152	676
MAX	202	0	0	0	649	1280	1310	1280	1300	1280	1280	1050
MIN	0	0	0	0	0	642	1070	1170	1160	1020	1050	337
AC-FT	1090	0	0	0	5110	67270	74840	77260	75490	71540	70850	40210
CAL YR 1979	TOTAL	180714.00	MEAN 495	MAX 1280	MIN 0	AC-FT 358400						
WTR YR 1980	TOTAL	243841.00	MEAN 666	MAX 1310	MIN 0	AC-FT 483700						

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 Water and Power Resources Service and reviewed by Geological Survey, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--31 years, 1,383 ft³/s (39.17 m³/s), 1,002,000 acre-ft/yr (1.24 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	455			1120	729	2500	1180	3760	3500	4230	2940
2	1080	423			1060	733	2580	945	3920	3520	4170	3120
3	1170	383			695	771	2610	950	3980	3360	4300	3260
4	1030	384			642	783	2670	1040	4040	3040	4560	3260
5	797	395			674	781	2610	1130	3690	2820	4550	3090
6	766	383			598	508	2690	1250	3200	2900	4420	2860
7	763	373			920	438	2760	1440	2750	3140	4320	2870
8	731	372			1380	496	2870	1430	2730	3330	4330	3050
9	724	339			1380	469	2700	1420	2900	3330	4400	3260
10	798	278			1410	486	2690	1270	2740	3310	4510	3290
11	794	284			1450	521	2660	1300	2820	3160	4390	2980
12	673	317			1570	550	2480	1400	2860	3050	4590	2380
13	586	375			1700	609	2490	1440	2810	3230	4670	2060
14	627	463			1790	673	2740	1480	2840	3480	4650	2080
15	677	518			1960	639	2880	1480	3260	3790	4610	2150
16	699	509			1400	677	2940	1770	3940	4210	4500	2200
17	744	353			567	985	2960	1950	4830	4570	4550	2520
18	779	290			460	1110	2680	2220	5130	4560	4590	2580
19	721	354			491	1180	2460	2560	5260	4400	4600	2470
20	595	363			275	932	2480	2750	5130	4520	4620	2290
21	564	342			467	970	2500	2880	4440	4650	4590	2300
22	562	342			544	1090	2450	2990	4130	4680	4330	2410
23	584	302			523	1090	2670	2980	4170	4680	4130	2520
24	564	271			570	1290	3230	3120	4320	4670	4300	2540
25	489	289			605	1530	3180	3300	4320	4560	4440	2520
26	451	341			678	1860	3040	3680	3790	4380	4190	2400
27	424	444			758	1910	3060	3880	3630	4500	3750	2250
28	429	309			826	2120	3090	3910	3440	4630	3470	2300
29	445	0			808	2210	2160	3910	3590	4630	3210	2350
30	445	0			---	2280	1390	3820	3540	4560	2940	2340
31	458	---			---	2380	---	3680	---	4480	2800	---
TOTAL	21259	10251	0	0	27321	32800	80220	68555	111960	121640	131710	78640
MEAN	686	342	0	0	942	1058	2674	2211	3732	3924	4249	2621
MAX	1170	518	0	0	1960	2380	3230	3910	5260	4680	4670	3290
MIN	424	0	0	0	275	438	1390	945	2730	2820	2800	2060
AC-FT	42170	20330	0	0	54190	65060	159100	136000	222100	241300	261200	156000
CAL YR 1979	TOTAL	742346.00	MEAN	2034	MAX	4130	MIN	0	AC-FT	1472000		
WTR YR 1980	TOTAL	684356.00	MEAN	1870	MAX	5260	MIN	0	AC-FT	1357000		

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
 CHEMICAL ANALYSES: Water years 1975 to current year.
 BIOLOGICAL DATA: Water years 1975 to current year.
 SEDIMENT RECORDS: Water years 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (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)
FEB , 1980										
05...	1500	674	35	6.5	12.0	14	11.5	K5	--	13
MAR										
14...	1600	673	36	6.6	9.5	6.6	11.5	K3	K1	11
APR										
07...	1400	2760	38	6.7	12.0	2.9	12.0	K3	<1	11
MAY										
06...	1200	1250	37	6.8	12.0	1.8	10.8	K8	K3	11
JUN										
09...	1330	2900	28	7.3	13.0	1.6	10.5	K1	K4	8
JUL										
08...	1230	3330	20	7.0	15.5	.90	10.7	--	<1	8
AUG										
04...	1315	4560	20	6.6	16.0	.80	9.8	K3	K6	6
SEP										
08...	1200	3050	20	6.5	17.5	1.0	9.5	K1	<1	6

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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
FEB , 1980										
05...	0	3.0	1.3	2.7	30	.3	.9	13	.3	2.6
MAR										
14...	0	3.3	.7	3.3	37	.4	.9	14	1.2	2.0
APR										
07...	0	3.3	.7	3.1	36	.4	.8	15	2.6	1.3
MAY										
06...	0	3.4	.7	3.3	37	.4	.8	15	1.4	1.6
JUN										
09...	0	2.3	.5	2.1	35	.3	.6	12	.3	1.4
JUL										
08...	0	2.8	.3	1.8	31	.3	.5	9	.5	.6
AUG										
04...	0	1.6	.4	1.6	36	.3	.5	8	.3	.8
SEP										
08...	0	1.8	.4	1.4	30	.2	.7	7	2.6	.9

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
FEB , 1980									
05...	.0	9.3	28	28	.04	.08	.10	--	.06
MAR									
14...	.1	10	--	30	--	.06	.06	--	.06
APR									
07...	.0	10	--	30	--	--	.02	.00	.00
MAY									
06...	.1	12	35	33	.05	--	.04	.01	.02
JUN									
09...	.1	10	27	25	.04	.03	.01	.00	.01
JUL									
08...	.1	7.9	21	20	.03	.00	.00	.03	.00
AUG									
04...	.2	6.9	21	18	.03	.00	.00	.00	.00
SEP									
08...	.1	6.3	19	18	.03	.27	.00	.04	.00

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, 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)
FEB , 1980									
05...	--	.51	--	.57	--	.67	.01	.00	2.4
MAR									
14...	--	.37	.41	.43	--	.49	.03	.02	5.3
APR									
07...	.27	.29	.27	.29	--	.31	.01	.01	--
MAY									
06...	1.1	.44	1.1	.46	--	.50	-	-	1.7
JUN									
09...	.52	.25	.52	.26	.55	.27	.01	.01	3.5
JUL									
08...	.33	.37	.36	.37	.36	.37	.09	.00	--
AUG									
04...	.60	.59	.60	.59	.60	.59	-	.03	2.5
SEP									
08...	.36	.39	.40	.39	.67	.39	.02	.03	1.8

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)	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)
APR , 1980											
07...	1400	0	2	100	10	1	<1	0	0	7	<3
JUL											
08...	1230	1	1	0	20	1	<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)
APR , 1980										
07...	7	4	200	40	1	0	0	3	.2	.1
JUL										
08...	2	0	120	20	3	0	10	<1	.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 (MG/L AS C)
APR , 1980										
07...	4	0	0	0	0	0	20	10	3.0	.1
JUL										
08...	0	3	0	0	0	0	60	20	6.3	.9

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 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	APR 7,80 1400	JUL 8,80 1230	AUG 4,80 1315	SEP 8,80 1200
TOTAL CELLS/ML	2600	1600	300	6100
DIVERSITY: DIVISION	0.6	0.5	0.4	0.0
..CLASS	0.6	0.5	0.4	0.0
...ORDER	1.3	0.6	0.4	0.0
...FAMILY	1.5	0.7	0.4	0.0
...GENUS	2.1	0.7	0.4	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	* 0		-- -		-- -		-- -	
....CHLORELLA	86 3		-- -		-- -		-- -	
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
....CYCLOTELLA	35 1		-- -		-- -		-- -	
....MELOSIRA	570# 22		58 4		-- -		-- -	
...PENNALES								
...CYMBELLACEAE								
....CYMBELLA	* 0		-- -		-- -		-- -	
...FRAGILARIACEAE								
....ASTERIONELLA	370 15		72 4		-- -		-- -	
....FRAGILARIA	1300# 49		43 3		-- -		-- -	
...NAVICULACEAE								
....NAVICULA	-- -		14 1		-- -		-- -	
...NITZSCHIAEAE								
....NITZSCHIA	40 2		-- -		-- -		-- -	
...TABELLARIAEAE								
....TABELLARIA	20 1		-- -		-- -		-- -	
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	-- -		-- -		26 9		* 0	
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	-- -		1400# 88		-- -		6100#100	
...HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	160 6		-- -		270# 91		-- -	

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PERIPHYTON

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	SAMPLING METHOD
MAR 14...	38	.470	.320	4.18	.000	35.9	Polyethylene strip
MAY 06...	29	.000	.000	.000	.000	--	do
AUG 04...	27	.157	.157	.000	.000	--	do

SAN JOAQUIN RIVER BASIN

11250000 FRIANT-KERN CANAL AT FRIANT, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB , 1980						
05...	1500	674	12.0	6	11	91
MAR						
14...	1600	673	9.5	6	11	71
APR						
07...	1400	2760	12.0	5	37	70
MAY						
06...	1200	1250	12.0	4	13	72
JUN						
09...	1330	2900	13.0	4	31	43
JUL						
08...	1230	3330	15.5	1	9.0	88
AUG						
04...	1315	4560	16.0	1	12	70
SEP						
08...	1200	3050	17.5	2	16	75

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).

WATER-DISCHARGE RECORDS

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 Water and Power Resources Service). 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 Water and Power Resources Service.

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, 524,000 acre-ft (646 hm³) July 19, elevation, 578.71 ft (176.391 m); minimum, 157,500 acre-ft (194 hm³) Oct. 7, elevation, 478.26 ft (145.774 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162300	189500	191900	250000	384400	406700	319400	273700	343300	512400	508100	354900
2	160100	190800	192700	253100	385200	402000	317100	280600	343800	514900	505100	350600
3	158700	191600	193800	256300	386600	398900	314700	288500	344500	517800	501800	345700
4	158300	191400	195300	259400	388200	395200	312100	296200	344800	516500	497300	340700
5	158100	191000	197200	261800	389700	394800	310500	303100	345100	516000	492800	336200
6	157800	190500	198900	263000	391100	396500	308700	309800	345600	515200	488100	332400
7	157500	190100	200600	264900	392700	395100	306900	315900	348500	515800	483300	328400
8	158100	190100	202000	267700	394600	391700	304100	319900	353400	517900	478200	323700
9	159000	189600	203700	271100	397400	387400	301300	322800	359500	520900	473200	318900
10	158900	189500	205700	276400	400100	383400	298200	325200	367900	522200	468000	314100
11	159100	189400	207600	283700	402700	379300	294900	324700	375400	522300	463100	310200
12	160600	189300	209200	298800	405000	375200	291600	322300	381900	523300	457700	307900
13	162200	188900	210200	318300	407000	371100	288300	319400	388400	523600	452000	306700
14	163500	188800	211400	352500	409300	367100	284300	316800	395000	523900	446400	305500
15	164600	188300	213400	366900	412600	363000	280200	314200	401800	523700	441000	304500
16	165700	187500	215200	377300	417000	359100	275900	311600	408900	522800	435600	303100
17	166700	187600	217700	386800	423300	355300	271500	310600	416900	522600	430200	301300
18	167600	187500	220100	392300	432400	350600	267900	312000	425300	523600	424500	299100
19	168800	187300	221700	393400	440700	345600	264700	313900	433500	524000	419300	297500
20	170800	187300	223500	394200	452200	341900	262100	318500	443600	522500	414300	296400
21	172800	188200	226000	394600	455500	339500	263300	325500	454100	520900	409100	295400
22	174300	188000	227200	394300	455800	337900	263600	332300	464600	520500	402900	293800
23	175500	187900	228800	392700	453000	336700	262400	339400	472000	519800	397100	292200
24	177000	187700	230300	391000	447300	334900	259100	343200	477400	519500	390500	290700
25	178400	187900	233300	389400	440100	332300	256600	345000	481600	518700	384500	290900
26	180300	187900	234400	387700	431300	329500	256300	345000	488600	518200	378400	290700
27	181800	188200	236000	385300	422500	327500	257800	343900	495000	517600	373400	290300
28	183200	188500	238400	382800	416500	325800	259800	342900	499400	517200	368900	290200
29	185000	190200	240900	381400	411500	323400	263200	342400	504200	515800	364900	289500
30	186800	191300	243400	381600	---	322900	267800	342600	510200	513800	361300	287600
31	188300	---	246800	383700	---	321200	---	343100	---	510800	358200	---
MAX	188300	191600	246800	394600	455800	406700	319400	345000	510200	524000	508100	354900
MIN	157500	187300	191900	250000	384400	321200	256300	273700	343300	510800	358200	287600
†	490.32	491.41	510.16	547.26	554.26	531.70	516.59	537.46	575.89	576.00	541.33	522.39
‡	+24000	+3000	+55500	+136900	+27800	-90300	-53400	+75300	+167100	+600	-152600	-70600
††	860	390	320	310	610	810	1050	1880	2730	3730	3100	1790

CAL YR 1979 ‡ -97700

WTR YR 1980 ‡ +123300

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

11250100 MILLERTON LAKE AT FRIANT, CA--Continued

WATER-QUALITY RECORDS

MILLERTON LAKE SITE NO. 3 OPPOSITE PINCUSHION MOUNTAIN, NEAR FRIANT, CA

LOCATION.--Lat 37°01'40", long 119°39'28", Fresno County, Hydrologic Unit 18040006, 1.1 mi (1.8 km) southwest of Pincushion Mountain, 4.0 mi (6.4 km) northeast of Friant.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAMPLE DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION)	LIGHT TRAN- SMIS- SION (PER- CENT 1 METER PATH- LENGTH (%))	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
AUG									
21...	1746	.50	29	8.1	27.8	7.8	101	10	2.32
21...	1747	1.0	29	8.0	27.6	8.1	105	10	2.32
21...	1748	2.0	29	7.9	27.0	8.5	109	7.0	2.62
21...	1749	3.0	29	7.8	26.6	8.8	112	5.0	2.94
21...	1750	4.0	29	7.8	26.3	9.1	115	4.0	3.11
21...	1751	5.0	28	7.4	24.5	9.3	114	4.0	3.28
21...	1752	6.0	24	7.0	20.7	9.8	112	5.0	2.94
21...	1753	7.0	22	7.0	19.4	10.5	116	7.0	2.69
21...	1754	8.0	20	6.9	18.8	10.4	114	8.0	2.54
21...	1755	9.0	21	6.8	18.3	9.8	106	11	2.18
21...	1756	10.0	21	6.7	18.0	9.7	104	15	1.91
21...	1757	11.0	21	6.7	17.7	9.9	106	14	1.98
21...	1758	12.0	20	6.7	17.5	9.7	103	15	1.91
21...	1759	13.0	20	6.7	17.3	9.9	105	12	2.11
21...	1800	14.0	20	6.7	17.1	9.8	104	12	2.11
21...	1801	15.0	20	6.7	17.1	9.6	102	11	2.25
21...	1802	16.0	20	6.7	17.0	9.7	102	9.0	2.39
21...	1803	17.0	20	6.7	16.9	9.5	100	9.0	2.46
21...	1804	18.0	20	6.7	16.8	9.4	99	7.0	2.69
21...	1805	19.0	20	6.7	16.8	9.2	97	5.0	2.94
21...	1806	20.0	20	6.7	16.7	9.2	94	4.0	3.11
21...	1807	21.0	20	6.7	16.5	9.1	95	4.0	3.11
21...	1808	22.0	20	6.7	16.4	9.1	95	4.0	3.28
21...	1809	23.0	20	6.7	16.3	9.0	94	4.0	3.28
21...	1810	24.0	21	6.7	16.1	9.0	93	4.0	3.11
21...	1811	25.0	21	6.7	16.0	9.0	93	4.0	3.11
21...	1812	26.0	21	6.6	15.8	9.0	93	5.0	2.94
21...	1813	27.0	20	6.6	15.6	9.0	92	6.0	2.85
21...	1814	28.0	20	6.6	15.2	9.1	92	5.0	2.94
21...	1815	29.0	20	6.6	15.0	9.1	92	6.0	2.77
21...	1816	30.0	20	6.6	14.7	9.0	90	5.0	2.94
21...	1817	31.0	20	6.6	14.4	9.0	90	5.0	3.02
21...	1818	32.0	20	6.6	14.2	9.0	89	4.0	3.11
21...	1819	33.0	20	6.6	14.0	9.0	89	4.0	3.11
21...	1820	34.0	22	6.6	13.8	8.9	88	3.0	3.47
21...	1821	35.0	22	6.5	13.5	8.6	84	3.0	3.47
21...	1822	36.0	23	6.5	13.3	8.6	84	3.0	3.57
21...	1823	37.0	23	6.5	13.2	8.5	83	3.0	3.47
21...	1824	38.0	24	6.6	13.1	8.6	83	4.0	3.19
21...	1825	39.0	24	6.6	13.0	8.8	85	4.0	3.28
21...	1826	40.0	24	6.6	12.8	9.0	87	4.0	3.11
21...	1827	41.0	25	6.6	12.8	9.0	87	4.0	3.11
21...	1828	42.0	25	6.6	12.7	9.1	87	4.0	3.28
21...	1829	43.0	25	6.6	12.6	9.0	86	4.0	3.28
21...	1830	44.0	25	6.6	12.6	9.0	86	4.0	3.28
21...	1831	45.0	25	6.6	12.5	8.9	85	4.0	3.19
21...	1832	46.0	27	6.6	12.4	8.8	84	3.0	3.38
21...	1833	47.0	27	6.6	12.4	8.7	84	4.0	3.19
21...	1834	48.0	27	6.6	12.3	8.6	82	4.0	3.19
21...	1835	49.0	27	6.6	12.2	8.5	81	3.0	3.38
21...	1836	50.0	27	6.6	12.1	8.4	80	3.0	3.38
21...	1837	55.0	30	6.5	11.6	7.1	66	4.0	3.19
21...	1838	60.0	33	6.3	10.9	4.9	45	2.1	3.87
21...	1839	65.0	37	6.3	10.3	3.6	33	.70	4.95
21...	1840	67.0	38	6.7	10.3	3.3	30	.60	5.09

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	TRANS- PAR- ENCY (SECCHI DISK) (M) 1/	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)
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AUG	21...	1845	13	13	2.20	.00	.00	.00	.67
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1. To convert meters to feet, multiply by 3.281.

11250100 MILLERTON LAKE AT FRIANT, CA--Continued

MILLERTON LAKE SITE NO. 3 OPPOSITE PINCUSHION MOUNTAIN, NEAR FRIANT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
AUG 21...	.21	.67	.21	.21	.00	.01	.00

MILLERTON LAKE SITE NO. 2 AT FRIANT DAM, NEAR FRIANT, CA

LOCATION.--Lat 37°00'25", long 119°41'45", Fresno County, Hydrologic Unit 18040006, 0.6 mi (1.0 km) northeast of Friant Dam, 1.7 mi (2.7 km) northeast of Friant.

PERIOD OF RECORD.--

CHEMICAL ANALYSES: Water years 1978 to September 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SAM- PLING DEPTH (M) 1/	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	ATENU- TION (PER- CENT SATUR- ATION)	LIGHT TRANSMISSION 1 METER PATH- LENGTH (%)	LIGHT, ATTENU- ATION COEFFI- CIENT (ALPHA/ METER)
AUG										
21...	1510	.50	29	8.4	27.4	7.9	102	4.5	3.11	
21...	1511	1.0	29	8.4	26.8	8.1	104	4.5	3.11	
21...	1512	2.0	29	8.3	26.4	8.3	105	4.5	3.11	
21...	1513	3.0	29	8.3	25.8	8.5	107	4.1	3.19	
21...	1514	4.0	29	8.2	25.5	8.5	106	3.8	3.28	
21...	1515	5.0	25	9.1	23.0	11.6	138	3.1	3.47	
21...	1516	6.0	22	8.5	20.2	11.2	126	2.6	3.67	
21...	1517	7.0	21	7.7	19.3	10.6	117	9.8	2.32	
21...	1518	8.0	22	7.2	18.6	9.7	106	19	1.66	
21...	1519	9.0	21	7.0	18.1	9.4	102	24	1.43	
21...	1520	10.0	21	6.9	17.8	9.1	98	28	1.26	
21...	1521	11.0	21	6.9	17.5	8.9	95	28	1.26	
21...	1522	12.0	21	6.9	17.3	8.9	94	32	1.15	
21...	1523	13.0	21	6.8	17.1	8.9	94	30	1.20	
21...	1524	14.0	20	6.8	17.0	8.9	94	28	1.26	
21...	1525	15.0	20	6.8	16.9	9.0	95	24	1.43	
21...	1526	16.0	20	6.8	16.8	9.0	95	19	1.66	
21...	1527	17.0	20	6.8	16.7	9.1	95	16	1.85	
21...	1528	18.0	20	6.8	16.7	9.1	95	13	2.04	
21...	1529	19.0	20	6.8	16.6	9.1	95	14	1.98	
21...	1530	20.0	20	6.8	16.5	9.1	95	13	2.04	
21...	1531	21.0	20	6.8	16.5	9.1	95	13	2.04	
21...	1532	22.0	20	6.8	16.4	9.1	95	12	2.11	
21...	1533	23.0	20	6.8	16.4	9.0	94	11	2.18	
21...	1534	24.0	21	6.7	16.2	9.0	93	11	2.25	
21...	1535	25.0	21	6.7	16.0	9.0	93	11	2.25	
21...	1536	26.0	20	6.7	15.8	9.0	93	10	2.32	
21...	1537	27.0	21	6.7	15.4	8.9	91	11	2.25	
21...	1538	28.0	21	6.7	15.3	9.0	92	9.0	2.39	
21...	1539	29.0	20	6.7	15.0	9.0	91	9.0	2.39	
21...	1540	30.0	20	6.7	14.9	9.0	90	7.0	2.62	
21...	1541	31.0	20	6.7	14.8	9.1	92	8.0	2.54	
21...	1542	32.0	20	6.7	14.5	9.1	91	6.0	2.77	
21...	1543	33.0	20	6.7	14.3	9.3	93	5.0	2.94	
21...	1544	34.0	20	6.7	14.1	9.2	91	7.0	2.62	
21...	1545	35.0	20	6.7	13.9	9.3	92	6.0	2.77	
21...	1546	36.0	22	6.7	13.6	9.2	90	6.0	2.77	
21...	1547	37.0	23	6.7	13.4	9.1	89	7.0	2.69	
21...	1548	38.0	23	6.7	13.2	9.1	88	7.0	2.62	
21...	1549	39.0	23	6.7	13.1	9.2	89	7.0	2.62	
21...	1550	40.0	24	6.7	13.0	9.3	90	7.0	2.62	
21...	1551	41.0	25	6.7	13.0	9.3	90	7.0	2.69	
21...	1552	42.0	25	6.7	12.8	9.1	88	6.0	2.77	
21...	1553	43.0	25	6.7	12.8	9.0	87	6.0	2.77	
21...	1554	44.0	26	6.7	12.6	9.0	86	7.0	2.69	
21...	1555	45.0	26	6.7	12.6	9.0	86	7.0	2.69	
21...	1556	46.0	27	6.7	12.5	9.2	88	7.0	2.69	
21...	1557	47.0	27	6.8	12.5	9.3	89	7.0	2.69	
21...	1558	48.0	27	6.8	12.4	9.3	89	6.0	2.77	
21...	1559	49.0	27	6.8	12.3	9.2	88	6.0	2.77	
21...	1600	50.0	27	6.8	12.3	9.1	87	6.0	2.77	
21...	1601	53.0	28	6.8	12.0	8.8	83	--	--	

1. To convert meters to feet, multiply by 3.281.

SAN JOAQUIN RIVER BASIN

11250100 MILLERTON LAKE AT FRIANT, CA--Continued

MILLERTON LAKE SITE NO. 2 AT FRIANT DAM, NEAR FRIANT, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	TRANS- PAR- ENCY (SECCHI DISK) (M) <u>1</u> /	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)
AUG							
21...	1635	13	13	2.50	.00	.00	.01
21...	1640	98	98	--	.00	.00	.00

DATE	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)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL. (MG/L AS P)
AUG							
21...	.67	.35	.67	.36	.36	.01	.00
21...	.47	.23	.47	.23	.23	.01	.00

1. To convert meters to feet, multiply by 3.281.

SAN JOAQUIN RIVER BASIN

247

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 Water and Power Resources Service). 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. 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).--73 years, 2,375 ft³/s (67.26 m³/s), 1,721,000 acre-ft/yr (2.12 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, 8,060 ft³/s (228 m³/s) Feb. 21, gage height 10.11 ft (3.082 m); minimum daily, 44 ft³/s (1.25 m³/s) Jan. 12.

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	103	105	60	66	1750	5270	1180	1810	211	3880	239	99
2	88	95	60	66	1540	5260	1180	1830	151	4670	237	122
3	77	97	60	66	1550	5300	1180	1990	149	4910	235	152
4	77	97	60	67	1550	5080	1180	2360	185	5200	235	151
5	77	96	60	68	1540	5120	1190	2620	214	4780	235	151
6	77	95	61	68	1540	5240	1190	2860	214	3650	233	151
7	77	95	66	67	1220	5130	1180	3160	214	1840	233	151
8	77	95	74	67	587	5090	1180	3430	214	498	230	151
9	76	97	74	69	101	5070	1320	3660	214	498	229	151
10	77	97	74	70	99	5050	1510	3930	217	821	228	151
11	76	97	74	57	104	5030	1650	3990	220	1320	226	151
12	90	97	74	44	146	5020	1920	3980	228	1440	226	151
13	104	97	74	59	161	5070	2200	3970	236	1670	225	151
14	104	97	74	80	153	5110	2340	3960	245	1740	223	151
15	105	89	74	62	152	5090	2330	3950	253	1790	223	151
16	106	83	74	51	457	4930	2330	3870	261	1400	223	151
17	108	87	74	1120	2680	4680	2320	3700	270	715	228	151
18	109	86	74	3420	4850	4530	2310	3580	278	955	248	151
19	109	82	74	4490	6910	4320	2310	3440	286	1430	221	151
20	112	71	74	4470	7830	3930	2300	3380	275	1330	217	150
21	112	71	69	4460	7980	3270	2300	2890	242	602	210	149
22	113	71	62	4850	7930	2770	2310	1850	242	286	174	149
23	113	71	62	5350	7530	2680	2310	1180	242	256	149	149
24	112	72	65	5330	7540	2560	2260	688	245	242	149	149
25	113	72	65	5310	7550	2450	1700	288	245	242	149	149
26	114	72	64	5290	7520	2200	1490	150	245	239	149	124
27	115	71	63	5270	7510	1700	1490	125	456	239	148	104
28	115	71	63	5260	6690	1270	1500	106	1260	239	122	103
29	115	67	64	4740	5410	1180	1500	121	2120	239	100	102
30	115	60	64	3750	---	1180	1740	103	2580	239	99	103
31	115	---	65	2630	---	1180	---	132	---	239	99	---
TOTAL	3081	2553	2095	66767	100580	121760	52900	73103	12412	47599	6182	4220
MEAN	99.4	85.1	67.6	2154	3468	3928	1763	2358	414	1535	199	141
MAX	115	105	74	5350	7980	5300	2340	3990	2580	5200	268	152
MIN	76	60	60	44	99	1180	1180	103	149	239	99	99
AC-FT	6110	5060	4160	132400	199500	241500	104900	145000	24620	94410	12260	8370
MEAN ‡	1207	484	975	4385	4993	4624	4815	7082	8269	6694	3168	2282
AC-FT ‡	74230	28780	59980	269600	287200	284300	286500	435500	492000	411600	194800	135800
CAL YR 1979 TOTAL	55392		MEAN	152	MAX	1030	MIN	36	AC-FT	109900	MEAN ‡	2571
WTR YR 1980 TOTAL	493252		MEAN	1348	MAX	7980	MIN	44	AC-FT	978400	MEAN ‡	4070
											AC-FT ‡	1861000
												2955000

‡ Adjusted for change in contents and evaporation from Millerton Lake and for diversion to Madera Friant-Kern Canals.

SAN JOAQUIN RIVER BASIN

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA

LOCATION.--Lat 36°24'08", long 120°25'57", in SE4SE4 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 fair. Some small dams for stock use above station.

AVERAGE DISCHARGE.--14 years, 2.94 ft³/s (0.083 m³/s), 2,130 acre-ft/yr (2.63 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.--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. 11	Unknown	100	2.83	2.80	0.853	Feb. 17	2345	295	8.35	3.56	1.085
Feb. 16	1430	*847	24.0	5.06	1.542	Mar. 3	0645	110	3.12	2.86	.872

Minimum, no flow for several months.

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	.60	1.9	11	5.5	5.8	2.9	1.2	.13	
2			0	.50	1.8	20	6.2	5.0	2.8	1.4	.09	
3			0	.42	1.7	48	6.7	4.2	2.8	1.7	.08	
4			0	.38	1.6	20	6.9	4.0	2.9	1.4	.09	
5			0	.35	1.6	30	9.9	3.9	3.0	1.2	.12	
6			0	.33	1.5	27	8.5	3.7	2.7	1.1	.20	
7			0	.30	1.4	25	7.1	3.7	2.5	1.1	.19	
8			0	.30	1.5	19	6.8	3.6	2.4	1.1	.14	
9			0	.45	1.5	17	6.4	3.7	2.3	1.1	.07	
10			0	.70	1.4	15	6.2	4.5	2.2	1.0	0	
11			0	55	1.5	14	5.9	4.9	2.1	.95	0	
12			0	30	1.5	13	5.6	4.2	2.2	.88	0	
13			0	18	1.5	12	5.3	4.0	2.3	.84	0	
14			0	27	1.8	11	5.3	4.6	2.3	.84	0	
15			0	13	8.5	11	5.3	3.8	2.1	.79	0	
16			0	7.0	110	10	5.1	3.5	2.0	.69	0	
17			0	5.0	56	10	4.8	3.3	1.9	.62	0	
18			0	3.8	79	9.8	4.7	3.2	1.8	.59	0	
19			0	3.0	54	9.8	4.7	3.1	1.7	.55	0	
20			0	2.4	36	9.4	4.4	3.0	1.7	.55	0	
21			0	1.9	41	9.0	4.7	2.9	.59	.51	0	
22			0	1.5	26	8.9	6.0	2.8	.87	.43	0	
23			0	1.2	18	8.5	6.1	3.0	.98	.36	0	
24			1.2	1.0	16	8.0	5.3	3.4	1.1	.32	0	
25			7.3	.84	14	7.8	4.8	3.3	1.1	.25	0	
26			2.1	.75	14	8.7	4.6	3.3	1.1	.23	0	
27			.95	.65	13	7.9	4.4	3.3	1.0	.20	0	
28			.70	.60	13	7.4	5.0	3.3	1.0	.14	0	
29			.60	.90	11	6.8	5.2	3.1	.95	.12	0	
30			.52	1.3	---	6.5	4.7	3.0	1.0	.13	0	
31		---	.56	1.9	---	6.1	---	3.0	---	.15	0	---
TOTAL	0	0	13.93	181.07	531.7	427.6	172.1	114.1	56.29	22.44	1.11	0
MEAN	0	0	.45	5.84	18.3	13.8	5.74	3.68	1.88	.72	.036	0
MAX	0	0	7.3	55	110	48	9.9	5.8	3.0	1.7	.20	0
MIN	0	0	0	.30	1.4	6.1	4.4	2.8	.59	.12	0	0
AC-FT	0	0	28	359	1050	848	341	226	112	45	2.2	0
CAL YR 1979	TOTAL	900.68	MEAN	2.47	MAX	52	MIN	0	AC-FT	1790		
WTR YR 1980	TOTAL	1520.34	MEAN	4.15	MAX	110	MIN	0	AC-FT	3020		

SAN JOAQUIN RIVER BASIN

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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.

COOPERATION.--Records furnished by Water and Power Resources Service.

AVERAGE DISCHARGE.--33 years, 174 ft³/s (4.928 m³/s), 126,100 acre-ft/yr (155 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.

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	1950	4740	1910	1340	800	0		
2				0	1960	4810	1700	1360	739	0		
3				0	1830	4830	1440	1370	631	571		
4				0	981	4810	1270	1380	508	1380		
5				0	593	4770	1280	1320	478	1630		
6				0	414	4740	1360	1260	462	1870		
7				0	75	4720	1680	1250	405	2000		
8				0	70	4710	1870	1180	369	1730		
9				0	50	4610	1920	1060	343	1060		
10				0	60	4510	1760	1140	282	249		
11				0	40	4520	1710	1260	280	297		
12				0	15	4540	1590	1460	237	265		
13				0	10	4470	1540	1570	193	180		
14				0	5.0	4540	1520	1550	130	172		
15				72	0	4520	1510	1520	107	84		
16				674	0	4510	1390	1470	63	63		
17				644	0	4400	1180	1430	20	38		
18				1500	87	4240	1070	1400	15	10		
19				1810	455	4180	920	1340	10	10		
20				1970	492	4150	803	1240	5.0	3.0		
21				1980	1650	4110	733	1070	3.0	3.0		
22				2000	2500	4010	763	790	2.0	5.0		
23				1990	3130	4030	771	506	2.0	10		
24				2000	4480	3980	760	416	2.0	15		
25				2040	4490	3930	739	427	25	20		
26				2080	4640	3730	861	641	25	7.0		
27				2070	4630	3410	1110	892	15	4.0		
28				2020	4590	2820	1330	969	5.0	4.0		
29				2020	4670	2140	1340	906	5.0	4.0		
30				1990	---	1880	1320	903	5.0	0		
31		---		1970	---	1890	---	864	---	0		---
TOTAL	0	0	0	28830	43867.0	127250	39150	35284	6166.0	11684.0	0	0
MEAN	0	0	0	930	1513	4105	1305	1138	206	377	0	0
MAX	0	0	0	2080	4670	4830	1920	1570	800	2000	0	0
MIN	0	0	0	0	0	1880	733	416	2.0	0	0	0
AC-FT	0	0	0	57180	87010	252400	77650	69990	12230	23180	0	0
CAL YR 1979	TOTAL	5930.00	MEAN	16.2	MAX	984	MIN	0	AC-FT	11760		
WTR YR 1980	TOTAL	292231.00	MEAN	798	MAX	4830	MIN	0	AC-FT	579600		

SAN JOAQUIN RIVER BASIN

11254000 SAN JOAQUIN RIVER NEAR MENDOTA, CA

LOCATION.--Lat 36°48'38", long 120°22'38", in SE¼SW¼ 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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 14...	1400	434	8.2	16.0	11.7	--	--	98	21	11	47	2.5
JAN 08...	1315	598	7.6	13.0	10.5	4	3.2	128	28	14	68	--
APR 09...	1130	--	7.3	16.0	10.0	7	1.2	--	--	--	--	--
MAY 06...	0945	56	7.3	17.0	11.0	10	1.2	23	6.0	2.0	3.0	.8
JUN 10...	1200	--	7.3	20.0	10.8	19	1.5	--	--	--	--	--
JUL 22...	0630	231	7.3	23.0	10.9	12	.8	55	12	6.0	23	1.4
AUG 12...	0800	--	7.8	24.0	7.8	21	.7	--	--	--	--	--
SEP 10...	0900	392	7.8	22.0	8.5	--	--	--	22	--	26	2.1

DATE	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC 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, ORTHOPH OSPATE DISSOL. (MG/L AS P)
NOV 14...	71	48	56	256	--	--	--	56	--	--	--
JAN 08...	89	74	80	374	28	.50	.04	--	.70	.10	.03
APR 09...	--	--	--	--	34	--	--	--	--	--	--
MAY 06...	22	2.0	2.0	44	24	.02	.01	--	.30	.06	.01
JUN 10...	--	--	--	--	59	.40	.01	--	.50	.17	.07
JUL 22...	38	26	28	138	51	.40	.00	--	.30	.11	.04
AUG 12...	--	--	--	--	46	1.3	.01	--	.50	.24	.16
SEP 10...	77	40	45	227	--	.40	.00	--	.50	.16	.08

SAN JOAQUIN RIVER BASIN

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11254000 SAN JOAQUIN RIVER NEAR MENDOTA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 14...	1400	0	0	200	0	0	0
JAN 08...	1315	--	--	300	--	--	--
APR 09...	1130	--	--	--	--	--	--
MAY 06...	0945	--	--	0	--	--	--
JUN 10...	1200	--	--	--	--	--	--
JUL 22...	0630	--	--	100	--	--	--
AUG 12...	0800	--	--	--	--	--	--
SEP 10...	0900	--	--	200	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 14...	20	0	110	.0	0	--	--
JAN 08...	--	--	--	--	--	5.7	.00
APR 09...	--	--	--	--	--	2.1	.00
MAY 06...	--	--	--	--	--	2.0	.00
JUN 10...	--	--	--	--	--	--	.00
JUL 22...	--	--	--	--	--	3.5	.00
AUG 12...	--	--	--	--	--	6.4	.00
SEP 10...	--	--	--	--	--	--	--

LOCATION.--Lat 37°23'37", long 119°39'12", in NE¼SE¼ sec.22, T.6 S., R.21 E., Madera County, Hydrologic Unit 18040007, Sierra National Forest, on left bank 200 ft (61 m) downstream from county road bridge, and 4.6 mi (7.4 km) north of Oakhurst.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,500 ft (1,070 m), from topographic map.

REMARKS.--No known diversions above station.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--20 years, 8.88 ft³/s (0.251 m³/s), 6,430 acre-ft/yr (7.93 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 804 ft³/s (22.8 m³/s) Feb. 1, 1963, gage height, 9.08 ft (2.768 m); no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 774 ft³/s (21.9 m³/s) Jan. 13, gage height, 8.94 ft (2.725 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Oct. 2-7, 11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.6	3.7	18	14	41	24	17	15	7.7	4.8	3.8
2	1.5	2.5	3.6	9.5	14	41	23	16	15	8.1	4.6	3.8
3	1.5	3.4	3.4	7.2	14	56	22	16	14	8.0	4.6	3.6
4	1.5	5.9	3.3	6.2	13	58	22	15	14	8.4	4.5	3.6
5	1.5	4.3	3.3	5.6	12	83	47	15	14	8.4	4.5	3.4
6	1.5	3.3	3.3	5.4	12	75	39	15	13	8.2	4.5	3.3
7	1.5	3.0	3.1	5.2	12	58	30	15	13	7.9	4.5	3.3
8	1.6	3.1	3.1	5.2	11	51	27	14	13	7.9	4.4	3.4
9	1.8	3.1	3.1	15	11	49	25	16	13	7.9	4.3	3.4
10	1.6	3.1	3.1	50	11	46	24	28	12	7.7	4.2	3.6
11	1.5	3.0	3.0	119	11	43	23	23	13	7.5	4.1	3.6
12	1.6	2.9	3.0	253	11	40	22	22	13	7.1	3.8	3.6
13	1.6	3.0	3.0	282	11	38	21	23	12	6.9	3.8	3.4
14	1.7	2.8	2.9	220	29	37	20	24	11	6.7	3.8	3.4
15	1.8	2.8	2.8	80	67	37	19	24	11	6.7	3.8	3.4
16	1.8	2.8	2.8	57	57	35	19	23	10	6.5	3.8	3.4
17	1.8	7.2	2.8	46	181	34	18	21	9.4	6.3	3.8	3.4
18	1.8	5.8	2.8	43	161	34	18	19	10	6.2	3.8	3.3
19	2.5	4.3	2.8	31	212	32	17	18	10	6.1	3.8	3.4
20	9.3	3.9	2.9	26	134	31	17	16	9.8	6.0	3.8	3.4
21	4.6	3.7	3.5	23	198	31	19	15	9.5	5.8	3.9	3.4
22	3.4	3.6	3.5	21	110	29	20	15	8.9	5.8	3.9	3.4
23	2.9	4.2	3.3	19	73	28	19	15	8.7	5.6	3.9	3.4
24	2.6	4.0	6.1	18	60	28	19	16	10	5.4	3.8	3.3
25	2.9	3.9	7.5	17	53	28	19	17	11	5.4	3.8	3.4
26	4.9	8.4	5.4	16	48	27	18	17	9.0	5.2	3.8	3.3
27	5.7	6.0	4.8	15	45	26	17	16	8.0	5.0	3.8	3.2
28	4.1	4.7	4.4	16	49	25	17	16	7.7	5.1	3.7	3.1
29	2.9	4.2	4.3	18	44	25	19	16	7.1	5.2	3.6	3.1
30	2.7	3.9	9.1	16	---	25	18	15	6.7	5.0	3.6	3.1
31	2.6	---	28	15	---	25	---	15	---	4.8	3.6	---
TOTAL	80.3	119.4	141.7	1478.3	1678	1216	662	553	331.8	204.5	124.6	102.2
MEAN	2.59	3.98	4.57	47.7	57.9	39.2	22.1	17.8	11.1	6.60	4.02	3.41
MAX	9.3	8.4	28	282	212	83	47	28	15	8.4	4.8	3.8
MIN	1.5	2.5	2.8	5.2	11	25	17	14	6.7	4.8	3.6	3.1
AC-FT	159	237	281	2930	3330	2410	1310	1100	658	406	247	203
CAL YR 1979	TOTAL	4285.4	MEAN 11.7	MAX 109	MIN 1.5	AC-FT 8500						
WTR YR 1980	TOTAL	6691.8	MEAN 18.3	MAX 282	MIN 1.5	AC-FT 13270						

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 Jan. 9 and Aug. 14 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.--65 years (water years 1912, 1917-80), 80.9 ft³/s (2.291 m³/s), 58,610 acre-ft/yr (72.3 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.--Peak discharges above base of 590 ft³/s (16.7 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)
Jan. 14	0015	*6,680 189	8.99 2.740	Feb. 21	0745	1,550 43.9	4.79 1.460
Feb. 17	1115	1,690 47.9	4.99 1.521	Mar. 6	0215	1,860 52.7	5.22 1.591
Feb. 19	2200	2,540 71.9	6.02 1.835	Apr. 5	1945	594 16.8	3.07 0.936

Minimum daily, 2.2 ft³/s (0.062 m³/s) Oct. 12.

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	2.9	10	30	196	81	275	198	210	108	68	19	12
2	3.1	9.3	29	68	77	272	192	206	104	68	18	11
3	3.0	10	28	34	71	524	184	205	102	65	18	11
4	3.2	19	28	24	67	501	186	203	103	62	18	11
5	2.9	18	28	18	63	959	408	202	105	56	16	10
6	2.9	12	28	16	91	1420	355	198	107	51	16	8.8
7	2.5	10	29	14	99	717	267	197	104	49	16	9.0
8	3.5	12	31	14	96	518	247	189	105	47	15	9.0
9	3.9	13	28	17	91	439	237	194	103	46	15	8.9
10	2.8	13	27	292	89	393	230	276	99	45	15	8.6
11	2.6	13	28	542	87	360	228	229	94	43	15	8.3
12	2.2	13	28	1470	85	330	223	220	95	41	15	8.1
13	2.4	13	27	1620	83	310	218	216	97	42	15	8.1
14	3.7	17	29	2280	102	297	218	213	96	42	14	8.0
15	4.5	16	29	661	357	287	215	211	93	44	15	8.0
16	4.4	15	29	428	352	275	213	170	92	42	15	7.8
17	5.1	43	28	300	1120	267	209	160	83	42	15	7.8
18	5.9	56	28	237	833	271	207	153	80	41	15	7.8
19	6.0	26	28	194	1550	258	214	146	84	42	15	7.8
20	17	19	29	173	1530	247	212	138	83	41	15	7.9
21	18	20	34	159	1340	241	218	131	82	39	14	7.7
22	7.6	20	51	148	878	235	223	129	82	37	14	7.5
23	6.6	22	37	136	567	226	222	133	80	32	14	7.3
24	6.4	31	89	129	450	224	218	133	77	25	14	7.1
25	6.7	31	150	122	376	222	216	146	78	24	14	6.9
26	8.4	60	66	117	335	217	214	140	76	24	13	6.7
27	11	76	43	114	308	212	210	132	72	23	13	6.4
28	9.6	40	36	120	337	207	212	125	69	23	13	6.2
29	8.1	34	32	140	294	205	218	123	67	22	13	6.0
30	7.2	32	38	101	---	206	214	117	66	21	12	6.0
31	8.4	---	187	89	---	201	---	110	---	20	11	---
TOTAL	182.5	723.3	1332	9973	11809	11316	6826	5355	2686	1267	460	246.7
MEAN	5.89	24.1	43.0	322	407	365	228	173	89.5	40.9	14.8	8.22
MAX	18	76	187	2280	1550	1420	408	276	108	68	19	12
MIN	2.2	9.3	27	14	63	201	184	110	66	20	11	6.0
AC-FT	362	1430	2640	19780	23420	22450	13540	10620	5330	2510	912	489

CAL YR 1979 TOTAL 31365.4 MEAN 85.9 MAX 1270 MIN 2.2 AC-FT 62210
WTR YR 1980 TOTAL 52176.5 MEAN 143 MAX 2280 MIN 2.2 AC-FT 103500

NOTE.--Backwater from beaver dam Oct. 1 to Jan. 9 and Aug. 14 to Sept. 30.

SAN JOAQUIN RIVER BASIN

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.

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, 32.0°C July 28, 29; minimum recorded, 3.5°C Dec. 28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	8.5	15.5	12.5	17.5	13.0	22.5	19.0	31.5	24.0	26.0	19.0
2	12.5	9.0	16.0	11.0	17.5	14.0	23.5	20.5	31.0	23.0	26.5	19.5
3	12.0	8.5	17.0	13.0	17.0	13.0	24.0	20.0	30.0	22.0	26.5	19.5
4	11.5	10.5	18.0	14.0	16.5	12.5	24.0	20.0	29.5	21.5	27.0	19.5
5	11.5	11.0	17.0	14.0	17.0	12.5	23.0	19.0	28.5	21.5	27.0	20.0
6	12.5	9.5	17.5	13.5	17.0	12.5	23.5	19.5	28.5	20.5	27.0	20.5
7	12.5	9.5	17.0	13.0	18.0	13.5	23.0	20.0	29.0	21.5	23.0	20.0
8	13.0	10.0	16.5	12.5	18.5	14.5	23.5	19.0	29.5	20.5	25.0	18.0
9	14.0	11.0	15.5	12.0	19.5	15.5	23.5	18.5	30.0	21.5	25.5	18.5
10	14.5	11.0	13.0	10.5	19.0	16.0	24.0	18.5	30.0	22.0	25.5	19.5
11	15.0	11.5	11.5	9.0	19.0	15.5	25.0	19.5	30.0	22.0	25.5	19.0
12	15.5	12.0	11.5	8.0	18.0	15.0	25.0	20.0	29.5	22.0	26.0	19.0
13	15.0	12.0	13.0	10.0	17.5	14.5	25.0	19.5	28.5	21.0	23.5	18.0
14	15.5	12.0	13.0	11.0	18.0	14.0	25.5	19.5	27.0	20.0	21.0	16.0
15	15.5	12.0	14.5	10.5	19.0	15.0	26.0	20.0	27.0	20.0	20.5	15.0
16	16.5	12.5	17.0	11.0	20.0	16.5	27.0	20.0	27.5	20.5	22.5	15.0
17	16.5	12.5	18.0	13.5	20.5	15.5	27.5	20.0	28.0	21.0	23.0	17.0
18	16.5	13.0	19.0	15.0	21.0	17.5	28.0	20.0	27.5	21.0	22.0	18.0
19	17.0	13.5	20.0	15.5	21.0	18.0	27.5	20.0	27.0	21.0	23.5	17.0
20	15.5	13.5	20.5	16.0	21.0	18.0	28.0	21.5	27.5	20.0	23.0	16.5
21	14.0	11.5	20.0	17.0	21.0	17.0	28.5	22.0	28.0	21.0	22.5	15.5
22	12.0	9.5	19.0	15.5	20.0	17.0	29.5	23.0	27.0	20.5	22.5	15.5
23	10.0	8.5	17.0	13.0	19.5	15.5	30.0	23.5	26.5	20.0	23.0	15.5
24	12.0	9.0	14.0	11.0	20.0	16.5	31.0	23.5	27.0	20.0	23.5	16.5
25	14.5	11.0	13.0	8.5	20.5	17.0	31.0	23.0	26.5	19.5	23.5	16.5
26	15.5	12.0	14.5	10.5	21.0	17.5	31.5	23.5	26.5	19.5	23.0	15.5
27	17.0	11.5	15.5	11.5	21.0	17.5	31.5	24.0	26.5	19.5	23.0	15.5
28	16.0	13.5	15.0	11.0	22.0	19.0	32.0	25.5	25.0	19.0	22.5	16.5
29	13.0	12.5	16.0	11.0	22.0	20.0	32.0	25.0	25.5	18.5	23.5	16.5
30	14.5	11.5	17.0	13.5	21.5	20.0	30.0	24.5	25.0	17.5	23.5	17.0
31	---	---	17.0	14.0	---	---	31.0	24.5	25.5	18.5	---	---
MONTH	17.0	8.5	20.5	8.0	22.0	12.5	32.0	18.5	31.5	17.5	27.0	15.0

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, 26,012 acre-ft (32.1 hm³) Dec. 24, 1979, elevation, 487.02 ft (148.444 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 77,096 acre-ft (95.1 hm³) June 5, elevation, 531.28 ft (161.934 m); minimum, 26,012 acre-ft (32.1 hm³) Dec. 24, elevation, 487.02 ft (148.444 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33392	30069	27283	26370	27489	30980	52272	67131	76617	69742	54446	39907
2	33306	30033	27121	26630	27704	30980	52745	67526	76805	69230	53893	39602
3	33096	29997	26952	26740	27902	32197	53110	67936	76980	68788	53305	39277
4	32896	30015	26782	26833	28067	33115	53562	68321	77023	68472	52708	38932
5	32668	29988	26622	26918	28215	35695	54484	68692	77096	68156	52115	38579
6	32413	29897	26563	27019	28415	38227	55550	69050	77067	67841	51524	38300
7	32122	29826	26471	27053	28861	36919	56249	69312	77052	67499	50950	38155
8	31822	29781	26362	27113	28846	36566	56752	69562	77067	67172	50425	38104
9	31552	29682	26345	27241	29040	36586	57357	69936	77009	66804	49904	38104
10	31302	29547	26362	27721	29280	37489	57890	70478	76791	66384	49385	38104
11	31044	29485	26395	28793	29396	38610	58361	71051	76559	65897	48880	38001
12	30787	29414	26420	32103	29628	39636	58872	71471	76313	65398	48355	37642
13	30568	29262	26437	35220	29763	40660	59359	71892	76024	64888	47793	37295
14	30349	29182	26504	41636	30006	41560	59784	72329	75750	64433	47244	37000
15	30132	29049	26513	40841	30760	42383	60275	72724	75491	63966	46739	36707
16	29960	28961	26555	37499	31692	43127	60742	73021	75146	63500	46282	36385
17	29897	28934	26597	34008	34105	43878	61172	73347	74759	62984	45839	36074
18	29844	28908	26588	30805	35319	44612	61551	73631	74330	62443	45421	35755
19	29835	28819	26530	28241	39686	45297	61970	73902	73930	61904	45016	35438
20	29862	28740	26370	27292	44635	46009	62377	74130	73560	61355	44601	35121
21	29906	28591	26287	27070	45726	46636	62826	74301	73234	60808	44166	34817
22	29924	28477	26211	27087	41323	47244	63288	74387	72922	60249	43700	34504
23	29951	28328	26086	26977	36828	47740	63700	74544	72484	59668	43237	34202
24	29960	28197	26012	26892	33882	48367	64139	74773	72033	59064	42798	33892
25	29979	28110	26020	26774	32479	48927	64499	75031	71737	58475	42372	33593
26	30006	27963	26037	26630	31748	49479	65008	75261	71443	57864	41971	33296
27	30024	27876	26028	26420	31655	49975	65398	75534	71191	57281	41592	32991
28	30042	27773	26070	26504	31543	50413	65816	75779	71023	56689	41216	32696
29	30015	27626	26045	26765	31321	50961	66242	75981	70729	56111	40852	32404
30	30069	27463	26078	27045	---	51441	66723	76197	70270	55550	40532	32093
31	30042	---	26170	27266	---	51837	---	76400	---	55003	40203	---
MAX	33392	30069	27283	41636	45726	51837	66723	76400	77096	69742	54446	39907
MIN	29835	27463	26012	26370	27489	30980	52272	67131	70270	55003	40203	32093
†	491.67	488.74	487.21	488.51	493.07	512.29	523.90	530.80	526.48	514.88	502.02	493.90
‡	-3475	-2579	-1293	+1096	+4055	+20516	+14886	+9677	-6130	-15267	-14800	-8110
††	486	205	127	54	133	283	462	800	1090	1303	1113	750

CAL YR 1979 † +768
WTR YR 1980 ‡ -1424

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

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. Flow completely regulated by Hensley Lake (station 11257950) since October 1975.

AVERAGE DISCHARGE.--39 years, 109 ft³/s (3.087 m³/s), 78,970 acre-ft/yr (97.4 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, 2,840 ft³/s (80.4 m³/s) Feb. 14, 15, 1978, gage height, 8.27 ft (2.521 m); no flow for many days in 1975-78.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 3, 1938, reached a discharge of 15,000 ft³/s (425 m³/s), furnished by Water and Power Resources Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,720 ft³/s (105 m³/s) Feb. 21, gage height, 8.67 ft (2.643 m); minimum daily, 0.21 ft³/s (0.006 m³/s) Oct. 29-31, May 19, 20.

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	62	11	98	19	.65	528	.53	.93	.25	317	271	137
2	34	25	100	11	.56	383	.58	1.3	.24	314	271	138
3	96	25	100	.79	.53	306	.58	.58	15	279	284	150
4	96	25	99	.47	.51	307	.58	.42	53	204	290	124
5	104	25	84	.40	.48	310	.83	.40	93	197	290	144
6	117	41	61	.36	.44	1430	.59	.38	221	197	290	130
7	128	52	60	.34	.43	1810	.51	55	98	195	281	72
8	134	52	60	.30	.42	1040	.48	49	87	195	262	29
9	123	56	39	.38	.38	706	.46	14	124	209	252	6.2
10	117	59	1.3	.65	.37	199	.43	.88	195	250	252	.84
11	117	59	.78	.98	9.5	2.0	.48	.43	188	274	250	46
12	117	59	.68	1.7	1.1	1.2	.46	.34	199	279	249	170
13	108	66	.52	3.0	.58	.97	.43	.30	233	279	266	165
14	102	71	.44	310	.53	.80	.42	.28	212	268	266	139
15	102	75	.41	1320	.59	.73	.39	.29	225	261	247	138
16	86	79	.38	2020	.65	.64	.38	.27	260	259	227	149
17	37	62	.36	2000	246	.81	.38	.25	274	277	201	154
18	25	49	14	1990	475	1.0	18	.23	290	288	193	157
19	19	55	37	1510	483	.95	17	.21	283	287	187	151
20	1.5	64	85	715	494	.91	.96	.21	257	287	183	151
21	.67	76	91	319	1440	.85	.60	24	228	290	188	150
22	.47	79	77	202	3510	.78	22	63	217	298	217	150
23	.40	79	76	202	2970	.51	31	35	284	306	223	149
24	.33	79	76	202	1950	.51	5.6	5.7	323	306	208	148
25	.29	79	77	202	1210	.50	1.3	.88	216	303	199	148
26	.30	86	49	200	816	.53	.94	.45	195	303	192	144
27	.26	87	20	199	535	.53	.76	.37	188	298	175	143
28	.24	87	19	92	532	.53	.70	.32	140	295	172	141
29	.21	87	19	1.5	530	.49	.87	.29	184	290	164	140
30	.21	92	19	.90	---	.47	.92	.27	300	280	150	149
31	.21	---	19	.74	---	.51	---	.26	---	274	148	---
TOTAL	1729.09	1841	1383.87	11525.51	15208.72	7035.22	109.16	256.24	5582.49	8359	7048	3813.04
MEAN	55.8	61.4	44.6	372	524	227	3.64	8.27	186	270	227	127
MAX	134	92	100	2020	3510	1810	31	63	323	317	290	170
MIN	.21	11	.36	.30	.37	.47	.38	.21	.24	195	148	.84
AC-FT	3430	3650	2740	22860	30170	13950	217	508	11070	16580	13980	7560

CAL YR 1979 TOTAL 41013.26 MEAN 112 MAX 1020 MIN .20 AC-FT 81350 MEAN ‡ 124 AC-FT ‡ 89700
WTR YR 1980 TOTAL 63891.34 MEAN 175 MAX 3510 MIN .21 AC-FT 126700 MEAN ‡ 183 AC-FT ‡ 132600

‡ Adjusted for change in contents and evaporation from Hensley Lake.

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.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 31.0°C May 20; minimum recorded, 8.0°C Mar. 16.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.5	17.5	18.5	10.0	14.0	14.0	---	---	14.0	10.0	11.5	11.0
2	19.5	15.5	18.5	17.0	14.0	14.0	---	---	13.5	11.5	11.5	11.0
3	18.0	17.0	18.0	17.5	14.0	13.5	13.0	10.0	12.5	11.5	12.0	11.0
4	18.0	17.0	19.0	17.5	14.0	13.5	12.0	9.0	13.0	10.5	11.5	11.0
5	18.0	17.5	18.5	17.0	14.0	13.5	13.0	10.0	13.0	11.0	11.5	11.0
6	18.5	17.5	18.5	17.0	---	---	11.5	11.0	13.5	10.0	12.0	11.0
7	18.5	18.0	18.0	17.5	---	---	14.0	10.5	15.5	9.0	12.0	11.0
8	18.5	18.0	18.5	17.0	---	---	13.5	10.5	---	---	11.5	11.0
9	19.0	18.0	18.0	17.0	---	---	13.0	12.0	---	---	11.0	10.5
10	19.0	18.5	18.0	17.0	---	---	12.5	11.0	---	---	13.5	9.0
11	19.0	18.5	17.5	17.0	---	---	13.5	11.0	---	---	16.0	12.5
12	19.0	18.5	17.5	16.5	---	---	15.5	13.5	---	---	19.0	10.5
13	19.0	18.5	17.5	16.5	---	---	15.5	15.0	---	---	19.5	11.0
14	19.5	18.5	17.0	16.5	---	---	16.0	11.5	---	---	20.5	12.0
15	19.5	18.5	17.0	16.5	---	---	11.5	11.5	---	---	18.5	14.0
16	19.5	18.5	16.5	16.5	---	---	11.5	11.5	---	---	18.5	8.0
17	19.5	17.0	16.5	16.0	---	---	11.5	11.5	---	---	20.5	10.0
18	18.5	17.0	16.5	15.5	---	---	11.5	11.5	---	---	18.5	12.5
19	18.5	17.0	16.0	15.5	---	---	11.5	11.5	---	---	20.0	12.0
20	18.0	16.0	16.0	15.0	---	---	11.5	11.0	---	---	20.5	13.5
21	17.0	13.5	15.5	15.0	---	---	11.0	10.5	---	---	19.0	13.0
22	16.5	13.0	15.0	15.0	---	---	10.5	10.5	11.5	11.0	20.0	9.5
23	16.5	13.0	15.0	15.0	---	---	10.5	10.0	11.5	8.5	21.5	13.5
24	16.5	13.0	15.0	14.5	---	---	10.5	10.0	11.5	11.0	19.5	14.0
25	14.5	13.5	15.0	14.5	---	---	10.0	10.0	11.5	11.0	16.0	12.0
26	16.5	13.0	15.0	14.5	---	---	10.5	10.0	11.5	10.0	17.0	11.0
27	16.5	12.5	14.5	14.5	---	---	10.0	10.0	11.0	11.0	19.0	13.0
28	14.5	12.0	14.5	14.0	---	---	12.0	10.0	12.0	10.5	21.0	12.5
29	13.0	10.0	14.5	14.0	---	---	14.0	9.5	11.5	11.0	22.5	14.5
30	13.0	9.0	14.5	14.0	---	---	14.0	9.0	---	---	20.0	15.5
31	13.5	10.0	---	---	---	---	13.5	8.5	---	---	20.5	13.0
MONTH	20.5	9.0	19.0	10.0	---	---	16.0	8.5	---	---	22.5	8.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.5	13.5	26.0	19.0	29.0	20.0	15.5	12.5	15.0	14.0	16.5	16.0
2	22.0	15.0	27.0	19.5	28.0	20.0	13.5	12.5	15.0	14.0	16.5	15.5
3	22.0	13.0	27.5	19.0	22.0	12.0	14.0	12.5	15.0	14.0	16.5	16.0
4	19.0	15.5	29.5	20.0	12.5	12.0	14.0	12.0	15.0	14.0	17.0	16.0
5	19.0	14.5	25.5	20.5	13.0	11.5	14.0	12.5	15.0	14.0	17.0	16.0
6	21.0	13.5	26.0	18.0	13.0	11.5	14.5	12.0	15.0	14.5	17.0	16.0
7	22.0	14.0	20.0	11.0	13.0	12.0	14.0	13.0	15.0	14.5	17.5	15.0
8	23.0	15.0	14.0	11.0	13.5	12.0	14.0	13.0	15.0	14.5	19.0	15.0
9	23.5	16.5	14.0	11.0	13.0	11.5	14.0	13.0	15.0	14.5	20.5	14.5
10	25.0	16.0	21.0	12.0	12.5	11.5	14.0	13.5	15.5	14.5	23.5	17.0
11	25.0	16.5	20.5	14.0	13.0	11.0	14.0	13.5	15.5	14.5	19.5	15.5
12	26.5	17.5	22.0	14.5	13.0	11.5	14.0	13.0	15.5	14.5	17.0	15.5
13	25.0	18.5	23.0	16.5	14.0	11.5	14.5	12.5	15.5	14.5	17.0	16.5
14	24.0	18.5	24.5	17.0	13.5	11.5	15.0	12.0	15.5	15.0	17.0	16.5
15	26.0	16.5	26.5	17.5	13.5	11.5	14.0	13.5	15.5	14.5	17.0	16.5
16	28.0	18.5	27.0	19.0	13.5	11.0	15.0	12.5	16.0	15.0	17.5	16.5
17	28.0	19.0	28.5	19.5	13.5	10.5	14.5	11.0	15.5	15.0	17.5	17.0
18	22.5	11.5	30.0	21.5	13.5	11.0	15.5	11.5	15.5	15.0	17.5	16.5
19	23.5	11.0	30.5	22.0	15.5	11.0	14.5	13.5	15.5	15.0	18.0	17.0
20	24.5	15.5	31.0	22.5	13.0	12.0	14.5	12.5	16.0	15.0	18.0	17.0
21	23.0	14.0	25.0	11.5	13.0	11.5	15.5	12.0	16.0	15.0	18.0	17.0
22	17.5	11.0	12.5	11.0	14.5	11.5	14.5	13.5	16.0	15.0	18.0	17.0
23	15.0	9.5	16.0	11.0	13.5	11.5	14.5	13.0	16.0	15.5	18.5	17.5
24	17.5	11.5	17.0	10.5	15.5	11.5	14.5	13.0	16.0	15.5	18.5	17.5
25	24.0	13.5	22.5	12.0	13.5	12.5	14.5	13.0	16.0	15.5	18.5	17.5
26	26.0	15.5	24.5	15.0	14.0	12.5	15.0	12.0	16.0	15.5	18.5	18.0
27	26.0	18.0	25.5	17.0	13.5	11.5	14.5	12.5	16.0	15.5	19.0	18.0
28	22.0	18.0	25.5	17.5	14.5	12.0	14.5	13.5	16.0	15.5	19.0	18.0
29	22.5	16.5	26.5	18.0	14.5	11.5	14.5	13.5	16.5	15.5	19.0	18.5
30	24.5	18.0	27.0	19.0	14.0	12.0	14.5	13.5	16.5	15.5	19.5	18.5
31	---	---	27.0	19.5	---	---	14.5	13.5	16.5	15.5	---	---
MONTH	28.0	9.5	31.0	10.5	29.0	10.5	15.5	11.0	16.5	14.0	23.5	14.5

SAN JOAQUIN RIVER BASIN

11258900 WEST FORK CHOWCHILLA RIVER NEAR MARIPOSA, CA

LOCATION.--Lat 37°25'14", long 119°52'25", in SW&SE& sec.10, T.6 S., R.19 E., Mariposa County, Hydrologic Unit 18040007, on left bank 15 ft (5 m) downstream from bridge on Indian Peak Road, 0.5 mi (0.8 km) downstream from Humbug Creek, and 6.7 mi (10.8 km) southeast of Mariposa.

DRAINAGE AREA.--33.6 mi² (87.0 km²).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft (512 m), from topographic map.

REMARKS.--No known diversions above station.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--23 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, 4,350 ft³/s (123 m³/s) Jan. 25, 1969, gage height, 8.93 ft (2.722 m) in gage well, 11.1 ft (3.38 m) from floodmarks; no flow many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) Jan. 13, gage height, 6.9 ft (2.10 m) from floodmarks; no flow many days.

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	.10	1.0	6.6	15	45	28	18	8.1	2.5		
2	0	.10	1.0	3.9	14	46	27	16	7.9	2.2		
3	0	.20	1.0	3.1	13	146	26	15	7.5	2.3		
4	0	.20	1.0	2.6	13	130	25	14	7.3	2.1		
5	0	.10	1.0	2.3	13	308	88	13	7.5	1.9		
6	0	.30	1.0	2.1	12	353	44	13	7.1	1.7		
7	0	.50	1.0	2.0	12	174	33	12	6.5	1.6		
8	0	.50	1.0	2.0	11	123	30	12	6.1	1.5		
9	0	.40	.90	9.6	10	101	28	13	5.8	1.4		
10	0	.40	1.0	60	10	89	27	30	5.4	1.4		
11	0	.50	1.0	200	10	80	25	18	5.0	1.3		
12	0	.50	.90	580	9.8	71	24	15	4.9	1.2		
13	0	.50	.90	670	10	65	23	15	4.8	1.1		
14	0	.50	.50	410	16	60	22	14	4.7	1.0		
15	0	.50	.50	134	142	56	22	13	4.4	.90		
16	0	.50	.50	97	189	52	21	12	4.1	.70		
17	0	3.5	.50	131	535	48	20	11	3.8	.60		
18	0	2.9	.50	125	294	47	19	10	3.5	.50		
19	0	1.6	.50	54	762	43	19	9.7	3.3	.40		
20	0	1.1	.90	38	457	40	19	8.8	3.1	.30		
21	0	1.0	1.3	32	726	39	20	8.4	2.9	.30		
22	0	.90	1.7	27	306	38	22	8.4	2.8	.20		
23	0	1.0	1.6	24	151	36	23	8.4	2.7	.10		
24	0	1.1	7.4	21	108	36	21	8.8	2.6	.10		
25	.10	1.1	11	20	83	35	20	9.7	2.5	0		
26	0	1.9	4.2	18	68	34	19	9.4	2.4	0		
27	0	1.9	2.8	16	58	33	18	8.7	2.4	0		
28	0	1.4	2.3	18	63	32	18	8.6	2.2	0		
29	0	1.2	2.0	27	50	30	18	9.1	2.0	0		
30	.10	1.1	2.9	20	---	29	19	8.5	2.1	0		
31	.10	---	9.7	16	---	28	---	7.9	---	0		---
TOTAL	.30	27.50	63.50	2772.2	4160.8	2447	768	378.4	135.4	27.30	0	0
MEAN	.010	.92	2.05	89.4	143	78.9	25.6	12.2	4.51	.88	0	0
MAX	.10	3.5	11	670	762	353	88	30	8.1	2.5	0	0
MIN	0	.10	.50	2.0	9.8	28	18	7.9	2.0	0	0	0
AC-FT	.6	55	126	5500	8250	4850	1520	751	269	54	0	0
CAL YR 1979	TOTAL	7464.90	MEAN 20.5	MAX 372	MIN 0	AC-FT 14810						
WTR YR 1980	TOTAL	10780.40	MEAN 29.5	MAX 762	MIN 0	AC-FT 21380						

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LOCATION.--Lat 37°16'23", long 119°52'49", in NE¼ 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.

WATER-DISCHARGE RECORDS

EXTREMES FOR PERIOD.--Maximum daily discharge, 1.8 ft³/s (0.051 m³/s) Aug. 22, Sept. 22; minimum daily, 1.0 ft³/s (0.028 m³/s) Sept. 7, 8.

[illegible]

SAN JOAQUIN RIVER BASIN

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July to September 1980.

INSTRUMENTATION.--Temperature recorder since July 9, 1980.

EXTREMES FOR PERIOD.--

WATER TEMPERATURES: Maximum recorded, 36.0°C July 28; minimum recorded, 14.0°C Sept. 15.

TEMPERATURE (DEG. C) OF WATER, JULY TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1							---	---	34.5	25.0	29.5	19.0
2							---	---	34.5	23.5	29.5	19.5
3							---	---	33.5	22.0	29.5	19.0
4							---	---	33.0	21.5	29.5	19.0
5							---	---	32.0	21.5	30.0	19.5
6							---	---	32.0	21.0	29.5	20.5
7							---	---	33.0	22.5	24.5	17.5
8							---	---	33.5	22.5	27.5	17.0
9							---	---	34.0	22.0	29.0	18.5
10							30.0	21.0	34.5	22.5	28.0	18.5
11							30.5	22.0	34.5	22.0	27.5	18.0
12							30.0	22.0	34.0	22.0	28.0	19.0
13							30.0	21.5	33.0	20.5	24.5	17.0
14							30.5	21.5	---	---	23.0	14.5
15							31.5	22.5	---	---	23.0	14.0
16							32.0	23.0	31.5	21.0	25.0	14.5
17							32.0	23.5	31.5	21.5	25.5	17.5
18							32.5	23.0	31.0	21.5	23.5	17.5
19							32.0	22.0	30.0	20.5	25.0	16.0
20							32.5	22.5	31.0	20.0	25.0	15.5
21							33.0	23.5	31.5	21.5	24.5	15.0
22							34.0	24.0	30.0	21.0	25.0	15.5
23							34.5	25.0	29.5	19.5	25.0	15.5
24							35.0	25.0	30.0	20.0	26.0	16.5
25							34.5	24.5	30.0	19.5	26.0	16.5
26							35.0	25.0	30.0	19.5	25.5	16.5
27							35.5	25.0	30.0	19.5	25.0	16.0
28							36.0	27.0	28.0	18.0	24.5	15.5
29							35.5	26.0	28.0	17.5	25.5	16.0
30							33.0	25.5	28.0	17.0	25.5	16.0
31							35.0	25.5	28.5	17.5	---	---
MONTH							---	---	34.5	17.0	30.0	14.0

11258980 CHOWCHILLA RIVER NEAR RAYMOND, CA

LOCATION.--Lat 37°15'36", long 119°56'43", in SE¼SE¼ sec.1, T.8 S., R.18 E., Madera County, Hydrologic Unit 18040007, on right bank 20 ft (6 m) downstream from County Road 613 bridge, 2,300 ft (701 m) downstream from Chapman Creek, and 3.8 mi (6.1 km) northwest of Raymond.

DRAINAGE AREA.--201 mi² (521 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to September 1980 (discontinued). December 1958 to September 1970 in files of California Department of Water Resources.

REVISED RECORDS.--WDR CA-73-2: 1972(M).

GAGE.--Water-stage recorder and concrete improved control. Datum of gage is 565.67 ft (172.416 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Station is affected by backwater from H. V. Eastman Lake at times in most years. No large storage or diversions above station.

AVERAGE DISCHARGE.--9 years, 95.6 ft³/s (2.707 m³/s), 69,260 acre-ft/yr (85.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) Mar. 4, 1978, gage height, 15.92 ft (4.852 m); maximum gage height, 18.55 ft (5.654 m) June 3, 1979 (backwater from H. V. Eastman Lake); minimum daily, 0.01 ft³/s (<0.001 m³/s) on several days in 1974 and 1977.

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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 12	1800	5,150 146	11.05 3.368	Feb. 17	0900	2,750 77.9	8.38 2.554
Jan. 13	2200	*8,210 233	14.13 4.307	Mar. 6	0400	3,390 96.0	9.17 2.795

Minimum daily, 0.36 ft³/s (0.010 m³/s) Sept. 29.

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	.40	4.0	11	44	84	298	100	92	43	16	1.4	.70
2	.44	4.4	10	25	78	283	92	90	42	16	1.5	.68
3	.44	5.2	10	15	73	601	88	90	41	15	1.4	.67
4	.48	7.4	9.7	10	69	569	90	89	42	15	1.4	.64
5	.53	6.8	9.7	8.2	66	1180	200	89	43	14	1.3	.60
6	.53	5.2	9.3	7.0	89	2140	170	88	44	13	1.2	.53
7	.53	4.6	8.9	7.2	100	942	150	86	42	12	1.1	.54
8	.53	5.1	8.6	8.4	98	634	125	84	43	11	1.1	.55
9	.53	5.4	8.6	14	94	557	118	84	42	11	1.0	.54
10	.57	5.4	8.2	476	90	523	112	83	39	10	.97	.52
11	.57	5.4	8.6	1000	89	441	111	82	38	9.2	.92	.50
12	.89	5.4	8.6	2500	88	384	110	82	39	8.4	.88	.50
13	1.1	5.4	8.2	1950	88	337	108	80	39	7.6	.86	.49
14	1.2	6.5	8.2	1300	115	310	107	78	39	7.0	.84	.49
15	1.3	6.3	8.4	720	300	289	105	75	38	6.2	.86	.48
16	1.2	5.9	8.5	500	500	272	104	73	37	5.7	.87	.46
17	1.3	8.0	8.6	320	1800	255	101	70	33	5.2	.86	.46
18	1.3	37	8.6	250	1040	238	100	67	32	4.6	.84	.47
19	1.5	20	8.8	200	1840	221	98	64	31	4.2	.82	.48
20	3.0	9.4	9.4	170	2100	205	97	61	29	3.7	.81	.48
21	4.5	9.9	11	160	1820	192	97	58	27	3.3	.80	.46
22	3.8	10	13	150	1200	182	98	57	25	3.0	.79	.45
23	2.3	11	11	140	841	172	98	58	22	2.8	.79	.44
24	1.8	12	17	130	699	162	97	60	21	2.6	.74	.42
25	2.0	13	34	125	636	155	95	64	21	2.3	.73	.41
26	5.4	14	16	121	565	148	93	59	20	2.1	.71	.40
27	9.7	17	12	118	452	140	93	55	19	2.0	.69	.38
28	9.3	16	11	122	421	132	94	51	18	1.9	.68	.38
29	6.9	14	9.6	142	350	126	94	49	16	1.7	.68	.36
30	3.8	12	11	121	---	118	94	47	16	1.6	.67	.37
31	3.5	---	13	95	---	108	---	44	---	1.4	.69	---
TOTAL	71.34	291.7	338.5	10948.8	15785	12314	3239	2209	981	219.5	28.90	14.85
MEAN	2.30	9.72	10.9	353	544	397	108	71.3	32.7	7.08	.93	.50
MAX	9.7	37	34	2500	2100	2140	200	92	44	16	1.5	.70
MIN	.40	4.0	8.2	7.0	66	108	88	44	16	1.4	.67	.36
AC-FT	142	579	671	21720	31310	24420	6420	4380	1950	435	57	29
CAL YR 1979	TOTAL	39358.47	MEAN 108	MAX 2250	MIN .16	AC-FT 78070						
WTR YR 1980	TOTAL	46441.59	MEAN 127	MAX 2500	MIN .36	AC-FT 92120						

11258980 CHOWCHILLA RIVER NEAR RAYMOND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD. --

WATER TEMPERATURES: October 1971 to March 1980 (discontinued).

INSTRUMENTATION.--Temperature recorder from Oct. 1, 1971, to March 31, 1980.

REMARKS.--Temperature not shown for periods when in backwater from Buchanan Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 34.5°C June 28, 1973; minimum recorded, 1.0°C Dec. 12, 1972.

EXTREMES FOR PERIOD. --

WATER TEMPERATURES: Maximum recorded, 24.0°C Oct. 1-4, 12; minimum recorded, 4.0°C Dec. 18.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1979 TO MARCH 1980

[illegible]

11258990 H. V. EASTMAN LAKE NEAR RAYMOND, CA

LOCATION.--Lat 37°13'00", long 119°59'04", in SW¼SE¼ sec.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, 130,986 acre-ft (162 hm³) June 11, elevation, 575.59 ft (175.440 m); minimum, 98,779 acre-ft (122 hm³) Sept. 29, 30; elevation, 554.75 ft (169.088 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103438	99471	99934	100689	107838	107523	123520	128450	130490	127388	116574	108891
2	102953	99601	99934	100761	108018	107463	123793	128598	130556	127094	116044	108876
3	102601	99659	99934	100834	108168	108273	123841	128729	130606	126834	115438	108860
4	101971	99645	99920	100849	108288	108966	123793	128844	130656	126557	114787	108845
5	101475	99659	99934	100878	108469	111469	124485	128909	130722	126297	114138	108830
6	100979	99659	99934	100907	108635	114000	125244	128975	130771	126005	113568	108755
7	100456	99674	99934	100921	108770	112769	125665	128975	130837	125729	113061	108725
8	100007	99674	99934	100907	108876	112171	126005	128909	130887	125535	112702	108680
9	99804	99674	99934	100936	108996	111927	126314	128893	130937	125325	112417	108665
10	99790	99674	99963	101475	109117	112554	126606	128975	130970	125147	112126	108635
11	99775	99688	99949	102909	109223	113460	126866	129123	130986	124969	111698	108619
12	99746	99674	99992	108033	109328	114293	127127	129271	130953	124695	111408	108288
13	99732	99674	99963	112616	109434	115035	127388	129386	130804	124372	111088	107568
14	99717	99674	99963	118264	109616	115717	127551	129485	130672	124098	110768	106834
15	99717	99674	99963	117981	110116	116356	127616	129649	130556	123825	110449	106103
16	99688	99746	99963	116979	111118	116948	127730	129781	130440	123552	110161	105404
17	99674	99819	99963	116137	114138	117480	127730	129913	130325	123279	109585	104722
18	99645	99819	99963	115935	114308	118044	127714	130044	130177	122993	109540	103968
19	99601	99891	99963	114695	116527	118547	127665	130160	130028	122637	109233	103247
20	99601	99891	99963	113199	119650	119003	127616	130160	129347	122382	109177	102527
21	99558	99905	100065	111973	122350	119445	127551	130044	129698	122111	109162	101825
22	99558	99891	100079	111271	120156	119903	127502	129995	129534	121760	109132	101125
23	99558	99891	100108	110556	116511	120299	127420	129979	129353	121139	109117	100442
24	99558	99876	100195	109797	113045	120695	127437	129962	129188	120647	109117	99775
25	99558	99891	100311	108860	111164	121107	127567	129995	129024	120188	109102	99139
26	99543	99905	100413	108063	110161	121490	127747	130028	128794	119681	109087	98851
27	99558	99934	100456	107223	109374	121856	127894	130077	128549	119145	109057	98822
28	99515	99949	100398	106954	108619	122207	128025	130160	128319	118625	109011	98793
29	99500	99963	100413	107223	107973	122526	128172	130243	128074	118122	108966	98779
30	99486	99963	100471	107478	---	122830	128336	130309	127812	117605	108921	98779
31	99471	---	100529	107657	---	123135	---	130375	---	117089	108891	---
MAX	103438	99963	100529	118264	122350	123135	128336	130375	130986	127388	116574	108891
MIN	99471	99471	99920	100689	107838	107463	123520	128450	127812	117089	108891	98779
†	555.23	555.57	555.96	560.79	561.00	570.77	573.98	575.22	573.66	566.95	561.61	554.75
‡	-4513	+492	+566	+7128	+316	+15162	+5201	+2039	-2563	-10723	-8198	-10112
††	606	254	154	115	176	346	491	772	1069	1318	1187	883

CAL YR 1979 ‡ -7189
WTR YR 1980 ‡ -5205

† 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).--49 years (water years 1922-23, 1931-72, 1976-80), 99.2 ft³/s (2.809 m³/s), 71,870 acre-ft/yr (88.6 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, 3,100 ft³/s (87.8 m³/s) Feb. 22, gage height, 8.55 ft (2.606 m); no flow for several days.

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	226	0	5.2	5.4	.20	527	.20	18	.10	122	249	0
2	226	0	5.2	5.4	.20	379	.20	19	.10	123	234	0
3	226	.10	5.2	5.4	.20	299	100	19	.10	123	273	0
4	226	.10	5.2	5.3	.10	297	154	20	.10	122	304	0
5	226	.10	5.2	5.3	.10	301	53	21	.10	123	286	0
6	226	.10	5.2	5.3	.10	1450	.40	21	.10	122	276	0
7	226	.10	6.8	5.3	.10	1780	.20	49	.10	109	241	0
8	191	.10	6.4	25	.10	992	.20	72	.10	80	150	0
9	82	.10	5.4	28	.10	702	.20	72	.10	89	134	1.0
10	.40	.10	5.2	5.9	.10	209	.10	72	.10	80	123	.10
11	.20	.10	5.2	5.9	.10	.80	.10	43	.10	80	117	0
12	.20	.10	5.2	5.8	.10	.60	.10	21	18	130	114	137
13	.20	.10	5.2	6.1	1.0	.50	.10	21	73	143	120	292
14	.10	.10	5.2	159	.20	.40	23	17	73	121	123	328
15	.10	.10	5.2	991	.20	.40	74	5.8	73	123	122	329
16	.10	5.6	5.2	998	.30	.40	74	5.7	74	128	119	330
17	.10	6.6	5.2	999	424	.40	74	5.7	74	129	120	328
18	.10	5.1	5.2	999	1010	.40	100	5.7	74	129	124	331
19	.10	5.2	5.2	995	1010	.40	124	5.7	74	127	95	334
20	.20	5.2	5.2	995	1020	.30	123	50	74	127	33	331
21	.20	5.2	5.6	830	1100	.20	123	75	74	127	.40	330
22	.10	5.2	5.4	509	2990	.20	126	47	74	168	.20	330
23	.10	5.2	5.2	508	3000	.20	128	26	74	298	.20	330
24	.10	5.2	5.5	508	2470	.20	104	26	75	217	.10	328
25	.10	5.2	5.6	506	1470	.20	41	26	75	213	.10	311
26	.10	5.2	5.6	505	875	.20	18	26	111	231	.10	137
27	.10	5.2	5.6	505	739	.20	20	18	125	240	.10	.40
28	.10	5.2	5.3	235	741	.20	19	.50	123	244	0	.20
29	.10	5.2	5.2	.50	654	.20	16	.30	123	245	0	.20
30	.10	5.2	5.4	.40	---	.20	17	.20	122	240	0	.20
31	.10	---	5.4	.30	---	.20	---	.20	---	232	0	---
TOTAL	1858.00	81.00	166.8	10357.30	17506.20	6942.80	1512.80	808.80	1584.10	4776	3358.20	4508.10
MEAN	59.9	2.70	5.38	334	604	224	50.4	26.1	52.8	154	108	150
MAX	226	6.6	6.8	999	3000	1780	154	75	125	298	304	334
MIN	.10	0	5.2	.30	.10	.20	.10	.20	.10	80	0	0
AC-FT	3690	161	331	20540	34720	13770	3000	1600	3140	9470	6660	8940
CAL YR 1979 TOTAL	44126.60		MEAN 121	MAX 1430	MIN 0	AC-FT 87530		MEAN ‡ 122	AC-FT ‡ 88470			
WTR YR 1980 TOTAL	53460.10		MEAN 146	MAX 3000	MIN 0	AC-FT 106000		MEAN ‡ 149	AC-FT ‡ 108200			

‡ 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.

EXTREMES FOR PERIOD OF DAILY 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, 31.0°C Sept. 5; minimum recorded, 6.5°C Jan. 31, Feb. 1, 8-10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	11.0	17.5	9.5	12.5	9.5	13.0	10.0	11.5	6.5	10.0	9.5
2	11.5	11.0	16.0	10.0	12.0	10.0	12.5	10.5	10.5	8.5	10.0	10.0
3	11.5	11.0	14.0	12.0	12.5	10.0	12.5	10.0	11.0	9.0	10.5	10.0
4	11.5	11.0	18.5	12.0	12.5	9.5	12.0	10.0	11.0	9.0	10.5	9.5
5	11.5	10.5	16.5	10.5	12.0	9.5	12.0	10.5	11.0	8.5	10.5	9.5
6	11.5	10.5	16.5	10.0	12.0	9.5	---	---	10.5	8.0	10.5	10.0
7	11.5	10.5	15.0	10.5	12.0	9.5	---	---	11.5	7.5	10.0	10.0
8	11.5	10.5	17.5	11.0	12.5	10.0	---	---	12.5	6.5	10.0	10.0
9	12.5	11.0	16.5	10.0	12.5	10.0	---	---	14.0	6.5	10.0	10.0
10	18.5	11.0	16.0	9.0	11.5	10.0	---	---	13.5	6.5	14.5	10.0
11	20.5	12.5	16.0	9.5	11.0	9.5	---	---	13.5	7.0	14.5	11.0
12	21.0	13.0	16.0	9.0	11.0	9.5	---	---	14.0	7.0	16.0	9.0
13	21.0	14.5	15.0	8.0	12.0	9.5	---	---	11.0	7.0	16.0	9.5
14	22.0	15.5	14.0	7.5	12.0	9.5	---	---	11.0	9.5	16.0	10.5
15	23.5	15.5	15.0	7.5	12.0	9.5	---	---	12.5	10.0	16.5	12.0
16	23.0	15.5	11.5	8.5	12.0	9.5	---	---	11.0	10.0	17.0	10.0
17	23.5	15.5	12.5	10.0	12.0	9.5	---	---	12.5	9.5	18.0	11.0
18	20.0	14.5	12.5	9.5	12.5	9.5	11.0	11.0	9.5	9.5	16.5	11.5
19	19.5	16.0	12.0	8.5	11.5	10.0	---	---	10.0	9.5	18.5	11.5
20	20.0	15.0	12.0	9.0	11.5	10.0	---	---	10.0	10.0	18.0	12.5
21	20.0	12.0	12.0	9.0	11.5	8.5	---	---	10.0	9.5	17.0	11.5
22	19.5	12.0	11.5	9.5	11.5	9.5	---	---	10.0	9.5	18.0	11.0
23	20.0	12.0	12.0	9.5	10.5	9.5	---	---	9.5	9.5	19.5	12.5
24	20.5	12.5	12.5	10.0	10.5	10.0	---	---	10.0	9.5	18.0	12.5
25	15.5	12.5	11.5	10.0	12.0	9.5	---	---	10.0	9.5	14.0	11.0
26	20.0	12.5	13.0	9.5	11.0	9.5	---	---	10.0	9.5	16.0	10.0
27	20.0	12.0	12.0	9.5	12.0	9.5	---	---	10.0	9.5	16.5	11.5
28	18.5	11.0	12.5	9.5	11.5	9.5	---	---	10.0	9.5	19.0	11.0
29	17.0	9.5	12.5	9.5	12.0	10.0	---	---	10.0	9.5	21.5	13.0
30	17.0	9.0	12.0	9.5	12.0	10.0	11.5	7.0	---	---	19.5	14.0
31	17.5	9.5	---	---	12.0	11.0	10.5	6.5	---	---	19.5	12.0
MONTH	23.5	9.0	18.5	7.5	12.5	8.5	---	---	14.0	6.5	21.5	9.0

SAN JOAQUIN RIVER BASIN

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.5	12.5	13.5	11.5	27.5	18.5	12.5	11.5	12.0	11.5	29.5	19.0
2	21.0	14.0	14.0	11.0	26.5	18.5	12.5	11.5	12.0	11.5	29.5	19.5
3	15.5	11.0	13.5	11.0	26.0	18.0	12.5	11.5	12.0	11.5	29.5	18.5
4	11.5	11.0	14.0	11.0	23.0	18.0	12.5	11.5	12.0	11.5	30.5	19.0
5	14.5	11.0	13.0	11.0	26.0	17.0	12.5	11.5	12.0	11.5	31.0	20.0
6	17.5	11.0	13.5	11.0	26.5	17.5	12.5	11.5	12.0	11.5	29.0	20.0
7	19.5	12.0	12.5	11.0	27.5	18.0	12.5	11.5	12.0	11.5	25.0	18.0
8	21.0	13.0	12.5	11.0	27.5	18.5	12.5	11.5	12.5	11.5	28.5	18.0
9	21.0	15.0	11.5	11.0	28.5	19.0	12.5	11.5	12.5	11.5	23.0	16.5
10	22.5	15.0	12.0	11.0	28.0	19.5	12.5	11.5	12.5	11.5	28.0	18.5
11	23.5	15.5	13.0	10.5	28.0	19.0	12.5	11.5	12.5	11.5	28.0	18.0
12	24.0	16.0	13.5	10.5	26.5	11.5	12.5	11.5	12.5	11.5	22.0	12.0
13	24.5	17.0	13.0	11.0	12.5	11.5	12.5	11.5	12.5	12.0	12.5	12.0
14	22.5	11.5	14.0	11.0	12.5	11.5	12.5	11.5	12.5	11.5	12.5	12.0
15	12.5	11.5	17.5	10.5	12.5	11.5	12.5	11.5	12.5	11.5	12.5	12.0
16	12.5	11.0	17.5	11.0	12.5	11.5	12.5	11.5	12.5	12.0	12.5	12.0
17	12.5	11.0	18.0	11.0	12.5	11.5	12.5	11.5	12.5	11.5	12.5	12.0
18	12.5	10.5	18.0	11.5	12.5	11.5	12.5	11.5	12.5	11.5	12.5	12.0
19	12.5	10.5	18.5	11.5	12.5	11.5	12.5	11.5	13.0	11.5	12.5	12.0
20	12.0	11.0	12.5	11.5	12.5	11.5	12.5	11.5	20.0	12.0	12.5	12.0
21	12.0	11.0	12.5	11.5	12.5	11.5	12.5	11.5	25.5	16.0	12.5	12.0
22	12.0	11.0	13.5	11.0	12.5	11.5	12.5	11.5	26.5	18.0	12.5	12.0
23	11.5	10.5	13.0	11.0	12.5	11.5	12.0	11.5	26.5	18.0	12.5	12.0
24	12.0	11.0	13.0	10.5	12.5	11.5	12.5	11.5	28.0	19.0	12.5	12.0
25	12.5	11.0	13.0	10.0	12.5	11.5	12.5	11.5	29.0	19.0	12.5	12.0
26	14.0	11.0	13.5	10.5	12.5	11.5	12.0	11.5	29.5	19.0	18.0	12.0
27	13.5	11.0	17.0	11.0	12.5	11.5	12.0	11.5	29.0	19.5	21.0	14.0
28	13.0	11.0	23.0	13.5	12.5	11.5	12.0	11.5	27.5	18.0	22.0	15.0
29	13.0	11.0	24.5	15.5	12.5	11.5	12.0	11.5	27.5	17.0	24.0	16.5
30	13.0	11.5	25.5	17.0	12.0	11.5	12.0	11.5	28.0	17.5	25.0	17.0
31	---	---	25.5	18.0	---	---	12.0	11.5	28.5	17.5	---	---
MONTH	24.5	10.5	25.5	10.0	28.5	11.5	12.5	11.5	29.5	11.5	31.0	12.0

11260480 MARIPOSA CREEK NEAR CATHEYS VALLEY, CA

LOCATION.--Lat 37°23'56", long 120°00'10", in SW¼NE¼ sec.21, T.6 S., R.18 E., Mariposa County, Hydrologic Unit 18040007, on downstream side of bridge on White Rock Road, 0.3 mi (0.5 km) downstream from China Gulch, and 5.7 mi (9.2 km) southeast of town of Catheys Valley.

DRAINAGE AREA.--65.7 mi² (170 km²).

PERIOD OF RECORD.--October 1958 to current year. Prior to October 1963, published as "near Cathay."

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,230 ft (375 m), from topographic map.

REMARKS.--Probably minor diversions above the station for irrigation.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--22 years, 30.2 ft³/s (0.855 m³/s), 21,880 acre-ft/yr (27.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,460 ft³/s (211 m³/s) Feb. 24, 1969, gage height, 11.63 ft (3.545 m); no flow many days in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3, 1958, reached a stage of 11.62 ft (3.542 m), discharge, 7,180 ft³/s (203 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,770 ft³/s (107 m³/s) Feb. 21, gage height, 9.40 ft (2.865 m); no flow many days.

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	.40	2.7	10	21	62	29	15	6.4	1.4		
2	0	.50	2.6	8.4	19	68	27	14	6.2	1.5		
3	0	.80	2.4	6.4	18	309	26	13	5.9	1.4		
4	0	2.4	2.3	5.8	17	159	26	12	5.6	1.4		
5	0	1.6	2.3	5.3	16	684	123	12	5.5	1.3		
6	0	1.3	2.3	5.0	15	1340	66	11	5.1	1.2		
7	0	1.2	2.3	4.8	14	430	42	11	4.8	1.1		
8	0	1.1	2.2	4.5	14	243	36	11	4.5	1.1		
9	0	1.1	2.2	14	12	177	34	11	4.0	1.0		
10	0	1.4	2.3	119	12	144	32	24	3.6	.90		
11	0	1.7	2.4	352	12	121	31	15	3.3	.80		
12	0	2.1	2.4	1360	11	102	29	13	3.1	.70		
13	0	2.2	2.4	927	11	88	28	13	2.9	.60		
14	0	2.4	2.4	862	17	80	27	12	2.7	.60		
15	0	2.6	2.4	408	138	70	25	11	2.5	.50		
16	0	3.0	2.4	257	318	63	24	10	2.4	.50		
17	0	16	2.4	379	868	57	22	9.8	2.4	.40		
18	0	6.4	2.4	462	437	54	21	9.5	2.1	.30		
19	0	4.2	2.4	165	1710	49	20	9.4	2.0	.30		
20	0	3.6	2.5	106	1300	45	20	8.7	2.0	.20		
21	0	3.1	3.4	76	1870	44	20	8.5	2.0	.20		
22	0	2.9	5.8	58	617	42	23	8.4	1.8	.10		
23	0	2.9	4.0	46	277	39	23	8.1	1.7	.10		
24	0	2.8	24	38	179	37	21	8.0	1.7	.10		
25	0	2.7	38	33	134	38	19	7.9	1.7	0		
26	.10	5.2	13	29	107	37	18	7.7	1.6	0		
27	.50	5.1	8.2	26	91	34	17	7.7	1.6	0		
28	.40	3.7	6.3	27	91	33	16	7.2	1.5	0		
29	.40	3.1	5.4	37	69	31	16	7.0	1.5	0		
30	.40	2.8	5.9	29	---	30	16	7.0	1.5	0		
31	.40	---	12	23	---	29	---	6.5	---	0		---
TOTAL	2.20	90.30	173.7	5883.2	8415	4739	877	329.4	93.6	17.70	0	0
MEAN	.071	3.01	5.60	190	290	153	29.2	10.6	3.12	.57	0	0
MAX	.50	16	38	1360	1870	1340	123	24	6.4	1.5	0	0
MIN	0	.40	2.2	4.5	11	29	16	6.5	1.5	0	0	0
AC-FT	4.4	179	345	11670	16690	9400	1740	653	186	35	0	0
CAL YR 1979	TOTAL	13229.00	MEAN	36.2	MAX	902	MIN	0	AC-FT	26240		
WTR YR 1980	TOTAL	20621.10	MEAN	56.3	MAX	1870	MIN	0	AC-FT	40900		

SAN JOAQUIN RIVER BASIN

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV											
14...	1200	1960	7.6	13.5	8.1	--	--	380	78	44	270
DEC											
12...	1000	2340	8.0	7.0	11.9	--	--	450	93	54	370
FEB											
14...	1000	1500	7.5	11.0	8.6	17	--	310	72	32	190
APR											
09...	0900	635	7.7	16.0	9.3	--	--	140	35	14	67
MAY											
07...	1045	--	7.6	20.0	9.5	22	2.5	--	--	--	--
JUN											
10...	0900	622	7.8	22.0	8.0	24	2.3	140	31	14	70
JUL											
23...	0930	--	7.7	25.0	8.6	27	3.5	--	--	--	--
AUG											
13...	1200	--	7.7	25.0	7.1	30	4.2	--	--	--	--
SEP											
11...	1015	770	7.7	22.0	7.1	--	2.5	170	40	18	91

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	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, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
NOV											
14...	--	200	270	350	1200	--	--	--	--	--	--
DEC											
12...	--	230	300	450	1430	--	--	--	--	--	--
FEB											
14...	--	120	--	220	961	51	--	--	--	--	--
APR											
09...	2.4	84	66	90	372	--	--	--	--	--	--
MAY											
07...	--	--	--	--	--	84	.30	.02	.80	.24	.08
JUN											
10...	2.7	83	74	93	356	72	.40	.02	.80	.28	.13
JUL											
23...	--	--	--	--	--	117	1.1	.10	1.4	.36	.13
AUG											
13...	--	--	--	--	--	96	1.1	.00	1.4	.36	.13
SEP											
11...	3.4	120	110	100	470	94	8.0	.08	.80	.32	.17

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, NEAR STEVINSON, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
NOV 14...	1200	--	--	1000	--	--	--
DEC 12...	1000	--	--	900	--	--	--
FEB 14...	1000	--	--	1600	--	--	--
APR 09...	0900	--	--	300	--	--	--
MAY 07...	1045	--	--	--	--	--	--
JUN 10...	0900	--	--	300	--	--	--
JUL 23...	0930	--	--	--	--	--	--
AUG 13...	1200	--	--	--	--	--	--
SEP 11...	1015	0	0	500	0	0	0

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 14...	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	9.7	.00
APR 09...	--	--	--	--	--	--	--
MAY 07...	--	--	--	--	--	3.1	.00
JUN 10...	--	--	--	--	--	6.4	.00
JUL 23...	--	--	--	--	--	9.3	.00
AUG 13...	--	--	--	--	--	11	.00
SEP 11...	10	0	40	.0	10	9.2	.00

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 excellent except those for period of no gage-height record, which are fair. Up to 5 ft³/s (0.142 m³/s) can be diverted above station for Yosemite Valley water supply.

AVERAGE DISCHARGE.--65 years, 344 ft³/s (9.742 m³/s), 249,200 acre-ft/yr (307 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.--Peak discharges above base of 1,900 ft³/s (53.8 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. 13	unknown	*4,040 114	7.68 2.341	June 11	0200	2,440 69.1	6.48 1.975
May 6	2330	1,970 55.8	6.01 1.832	June 18	0245	2,820 79.9	6.82 2.079
May 21	0130	2,870 81.3	6.86 2.091	July 2	0130	3,090 87.5	7.04 2.146

Minimum daily, 8.0 ft³/s (0.227 m³/s) Oct. 5, 6, 16, 17.

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	8.3	42	78	135	172	235	247	1490	956	2480	632	64
2	8.8	35	76	110	167	228	229	1650	1030	2600	554	60
3	8.3	40	72	94	163	233	218	1790	1140	2180	485	61
4	8.3	52	66	84	163	228	221	1610	1070	1790	420	64
5	8.0	57	62	79	177	231	235	1780	945	1560	358	64
6	8.0	55	63	76	192	229	224	1780	1090	1320	312	65
7	8.3	53	70	74	183	215	213	1770	1320	1180	276	67
8	8.8	52	73	71	178	206	220	1670	1720	1050	282	75
9	8.8	50	75	100	159	202	262	1520	2080	975	290	87
10	8.5	47	75	140	154	203	322	1140	2200	944	262	89
11	8.3	47	66	230	150	200	367	860	2140	1070	247	76
12	8.3	45	57	700	146	186	418	728	1900	1100	240	64
13	8.3	43	59	2000	142	187	555	690	1680	1120	226	60
14	8.3	41	52	1400	155	192	616	649	1580	1040	202	59
15	8.5	40	48	950	176	189	656	651	1880	1070	175	54
16	8.0	38	43	700	200	184	753	844	2130	1010	154	47
17	8.0	50	40	550	400	193	903	1270	2360	1160	143	42
18	8.8	58	38	470	900	206	1070	1710	2500	1170	146	38
19	20	50	39	410	700	193	1188	2090	2440	1000	142	39
20	188	41	37	360	500	203	1230	2440	2460	850	133	45
21	143	41	38	330	430	200	1090	2570	2390	877	122	44
22	96	46	36	300	370	190	793	2460	2330	904	123	41
23	77	52	36	270	320	189	633	2150	2020	977	124	36
24	72	60	48	250	290	195	620	1350	1900	939	111	32
25	74	74	50	240	260	181	788	974	2030	847	106	30
26	120	129	54	230	255	173	1040	808	2000	834	94	28
27	98	100	57	220	252	173	1170	723	1850	1240	87	27
28	79	89	63	210	250	182	1270	689	1890	982	84	26
29	64	87	63	200	237	209	1160	700	2400	813	80	25
30	51	83	68	190	---	251	1310	883	2590	686	73	25
31	48	---	150	181	---	261	---	904	---	644	67	---
TOTAL	1280.6	1697	1852	11354	7841	6347	20013	42343	56021	36412	6750	1534
MEAN	41.3	56.6	59.7	366	270	205	667	1366	1867	1175	218	51.1
MAX	188	129	150	2000	900	261	1310	2570	2590	2600	632	89
MIN	8.0	35	36	71	142	173	213	649	945	644	67	25
AC-FT	2540	3370	3670	22520	15650	12590	39700	83990	111100	72220	13390	3040

CAL YR 1979 TOTAL 131118.3 MEAN 359 MAX 2930 MIN 7.4 AC-FT 260100
WTR YR 1980 TOTAL 193444.6 MEAN 529 MAX 2600 MIN 8.0 AC-FT 383700

NOTE.--No gage-height record Jan. 9-30.

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.

COOPERATION.--The letter "A" following a date indicates chemical-quality data furnished by California Department of Water Resources.

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 Aug. 1, 10-12; minimum recorded, 0.0°C on several days during November, January, and March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-HF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT												
09... A	1040	9.3	33	7.0	4.0	--	9.0	.6	1	--	--	--
24...	1600	75	26	7.0	6.0	--	10.6	--	--	K4	K1	--
DEC												
06...	0855	62	21	7.1	4.0	--	11.4	--	--	14	K1	<1
JAN												
31...	1030	168	40	7.0	.5	--	12.6	--	--	22	<1	K2
FEB												
26...	1300	249	21	6.7	3.0	--	10.7	--	--	10	<1	<1
MAR												
27...	1100	167	28	6.9	1.0	--	11.0	--	--	10	<1	<1
MAY												
15...	1130	621	25	6.5	4.0	--	10.8	--	--	--	K1	<1
JUN												
10... A	1030	2170	8	7.0	8.5	--	10.1	1.2	9	--	--	--
JUL												
01...	1330	2270	10	6.9	9.5	--	10.0	--	--	K2	K3	K1
31...	0930	649	10	6.9	14.5	--	8.7	--	--	10	K6	K7
AUG												
27...	1200	87	16	6.6	12.0	658	9.0	--	--	40	K10	K1
SEP												
30...	1100	25	24	6.5	11.0	678	9.4	--	--	11	K4	K7

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT												
09... A	8	--	3.0	.0	3.0	44	.5	--	.6	7	.0	4.0
24...	7	0	2.0	.4	1.9	37	.3	2.2	.3	8	1.6	3.6
DEC												
06...	7	0	2.5	.3	2.4	43	.4	2.9	.5	7	.8	3.6
JAN												
31...	8	2	2.3	.5	1.7	31	.3	2.1	.4	6	.8	2.4
FEB												
26...	5	0	2.0	.1	2.8	51	.5	3.2	.4	7	.9	2.6
MAR												
27...	6	0	2.1	.1	2.0	39	.4	--	.8	7	1.5	2.5
MAY												
15...	4	0	1.3	.1	1.1	37	.3	--	.3	4	.8	.5
JUN												
10... A	2	0	1.0	.0	1.0	44	.3	--	.2	2	.0	.0
JUL												
01...	--	--	1.6	--	1.0	--	--	--	.1	8	.2	.1
31...	3	0	1.0	.1	.6	28	.2	--	.2	6	.2	.4
AUG												
27...	5	0	1.6	.2	1.1	31	.2	--	.4	5	.5	1.3
SEP												
30...	7	1	2.4	.2	1.9	36	.3	--	.4	6	.9	3.0

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 1979 TO SEPTEMBER 1980

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	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, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
OCT 09... A	--	24	--	--	.03	.00	--	.02	.000	.20	.00	.00
24...	.0	17	--	20	.02	--	.01	.01	--	--	.01	.01
DEC 06...	.0	19	--	22	.03	--	.06	.04	--	--	--	.01
JAN 31...	.1	21	--	21	.03	--	.01	.03	--	--	.01	.02
FEB 26...	.1	19	--	22	.03	--	.01	--	--	--	.00	.00
MAR 27...	.0	24	--	23	.03	--	.03	.04	--	--	.02	.00
MAY 15...	.1	15	--	14	.02	--	.04	.05	--	--	.03	.04
JUN 10... A	--	11	5	--	--	--	--	.02	.000	.10	.01	.00
JUL 01...	.2	10	--	--	.01	--	.00	.00	--	--	--	--
31...	.1	9	--	9	.01	--	.02	.03	--	--	.01	.03
AUG 27...	.1	--	--	13	.03	--	.02	.00	--	--	.04	.05
SEP 30...	.1	--	--	19	.04	--	.00	.00	--	--	.07	.01

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)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	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)
JUN 10... A	1030	--	0	--	0	--	0	--	0	--	0
JUL 31...	0930	1	1	0	10	<1	--	0	<1	10	0
AUG 27...	1200	1	1	0	10	<1	--	0	<1	10	0

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	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)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUN 10... A	--	--	0	--	100	--	0	--	--	0
JUL 31...	<3	20	<10	180	28	13	17	<4	10	2
AUG 27...	<3	2	<10	100	42	3	<10	<4	10	1

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	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)
JUN 10... A	--	--	--	20	--	--	--	--	--	--
JUL 31...	.0	<10	0	0	0	0	9	<6.0	40	17
AUG 27...	.0	<10	0	0	0	0	19	<6.0	20	5

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, TOTAL (UG/L AS U-NAT)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, TOTAL (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L CS-137)	GROSS BETA, TOTAL (PCI/L CS-137)	RADIUM 226, DIS- SOLVED (PCI/L METHOD PC/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
AUG 27...	1200	.5	<.4	.3	<.3	.9	<.4	.9	<.4	.07	.36

See footnotes at end of table.

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PCB TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)
JUN 10...	1030	3.1	--	.00	--	--	--	--	--	--	--
JUL 31...	0930	--	.00	--	--	--	--	--	--	--	--
AUG 27...	1200	--	.00	--	.00	0	.00	.0	.0	0	.00

DATE	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 10...	--	--	--	--	--	--	--	--	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
JUN 10...	--	--	--	--	--	--	--	--	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 10...	--	--	--	--	--	--	--	--	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	.00	.00	.0	.00	.00	0	0	.00	.00	.01	.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.

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

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

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT					
24...	1600	75	6.0	1	.20
DEC					
06...	0800	65	--	1	.18
JAN					
31...	0900	167	.5	2	.90
FEB					
26...	1200	241	3.0	1	.65
MAR					
27...	1100	167	1.0	2	.90
MAY					
15...	1030	659	4.0	3	5.3
JUL					
01...	1330	2270	9.5	9	55
31...	0930	649	14.5	3	5.3
AUG					
27...	1030	85	12.0	1	.23
SEP					
30...	1100	25	11.0	0	.00

SAN JOAQUIN RIVER BASIN

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.--64 years, 604 ft³/s (17.11 m³/s), 437,600 acre-ft/yr (540 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	Unknown	*11,000 312	13.01 3.965	June 18	0230	4,390 124	8.40 2.560
May 7	0045	3,930 111	7.98 2.432	July 2	0330	4,320 122	8.34 2.542

Minimum daily, 21 ft³/s (0.59 m³/s) Oct. 15-17.

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	25	76	148	270	445	619	599	2930	1960	3400	767	96
2	25	69	140	240	430	605	557	3230	2020	3720	672	91
3	25	73	128	210	419	624	535	3500	2110	3070	602	89
4	24	92	119	190	418	605	545	3230	2020	2500	532	90
5	24	104	114	175	445	629	581	3430	1830	2180	467	89
6	23	97	118	160	481	608	556	3510	2010	1890	416	88
7	23	95	135	155	454	565	526	3490	2330	1710	374	89
8	23	92	138	150	431	543	535	3260	2960	1540	365	95
9	23	91	138	220	398	527	615	3030	3530	1420	372	100
10	23	85	138	350	392	529	743	2330	3720	1340	346	148
11	22	84	123	700	380	527	846	1820	3650	1430	324	116
12	22	81	101	2000	373	479	924	1560	3300	1450	316	101
13	22	78	107	5500	365	487	1180	1480	2950	1460	300	92
14	22	75	95	3500	409	499	1340	1400	2710	1360	275	89
15	21	72	88	2500	450	494	1420	1400	3080	1380	244	85
16	21	69	82	1800	487	469	1600	1700	3460	1300	219	78
17	21	93	78	1500	733	491	1890	2280	3760	1410	204	71
18	22	111	74	1300	2070	521	2170	3020	3940	1430	204	67
19	32	94	76	1100	1630	484	2370	3680	3820	1260	202	64
20	351	78	74	1000	1200	511	2510	4290	3810	1110	189	68
21	222	77	78	900	1080	500	2240	4570	3630	1110	174	69
22	166	80	77	840	914	480	1710	4450	3510	1110	168	66
23	133	92	80	770	811	474	1390	3900	3100	1170	173	63
24	120	100	90	700	771	494	1340	2610	2880	1130	159	59
25	120	144	100	650	707	448	1640	2000	3010	1040	155	55
26	247	281	110	600	675	442	2060	1710	2990	958	140	53
27	182	216	120	570	665	444	2300	1540	2740	1370	128	50
28	141	181	125	530	669	461	2530	1480	2710	1150	123	48
29	116	171	130	490	625	522	2400	1480	3280	992	117	47
30	94	160	180	460	---	622	2670	1780	3550	847	109	46
31	84	---	320	450	---	631	---	1880	---	767	101	---
TOTAL	2419	3211	3624	29980	19327	16334	42322	81970	90370	48004	8937	2362
MEAN	78.0	107	117	967	666	527	1411	2644	3012	1549	288	78.7
MAX	351	281	320	5500	2070	631	2670	4570	3940	3720	767	148
MIN	21	69	74	150	365	442	526	1400	1830	767	101	46
AC-FT	4800	6370	7190	59470	38340	32400	83950	162600	179200	95220	17730	4690
CAL YR 1979 TOTAL	239271		MEAN 656	MAX 5240	MIN 21	AC-FT 474600						
WTR YR 1980 TOTAL	348860		MEAN 953	MAX 5500	MIN 21	AC-FT 692000						

11269300 MAXWELL CREEK AT COULTERVILLE, CA

LOCATION.--Lat 37°42'58", long 120°11'20", in NW¼SE¼ sec.34, T.2 S., R.16 E., Mariposa County, Hydrologic Unit 18040008, on Dogtown Road bridge, 0.4 mi (0.6 km) downstream from Cuneo Creek, and 0.5 mi (0.8 km) northeast of Coulterville.

DRAINAGE AREA.--17.0 mi² (44.0 km²).

PERIOD OF RECORD.--October 1959 to September 1974, October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,740 ft (530 m), from topographic map.

REMARKS.--No diversion or storage above station.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey.

AVERAGE DISCHARGE.--20 years (water years 1960-74, 1976-80) 8.41 ft³/s (0.238 m³/s), 6,090 acre-ft/yr (7.51 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) Dec. 22, 1964, gage height, 5.71 ft (1.740 m); no flow many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) Jan. 13, gage height, 5.49 ft (1.673 m); no flow for several days July to September.

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	.10	.40	.70	11	7.7	22	5.0	2.9	1.6	.70	.10	.10
2	.10	.40	.70	4.2	7.3	21	4.8	2.6	1.5	.70	.10	.10
3	.10	1.0	.60	2.9	6.8	31	4.5	2.5	1.5	.70	.10	.10
4	.10	3.1	.60	2.3	6.5	45	4.6	2.5	1.6	.60	.10	.10
5	.10	1.1	.60	2.0	6.1	129	12	2.5	1.6	.50	.10	0
6	.10	.80	.60	1.8	5.7	166	7.8	2.5	1.4	.50	.10	.10
7	.10	.70	.60	1.6	5.7	79	5.9	2.4	1.3	.40	.10	.10
8	.10	.60	.60	1.6	5.4	48	5.3	2.3	1.4	.40	.10	.10
9	.10	.60	.60	45	5.1	34	5.3	4.2	1.4	.40	.10	.10
10	.10	.60	.70	100	5.1	27	5.1	6.8	1.3	.40	.10	.10
11	.10	.60	.60	309	4.8	23	5.0	3.5	1.3	.40	.10	.20
12	.10	.60	.60	475	4.8	19	4.7	3.1	1.2	.30	.10	0
13	.10	.60	.60	452	4.8	16	4.5	2.9	1.2	.30	.10	.10
14	.10	.60	.60	452	28	14	4.5	2.7	1.0	.30	.20	.20
15	.10	.50	.60	127	87	13	4.3	2.6	.90	.20	.20	.20
16	.10	.60	.60	79	153	11	4.2	2.4	.90	.20	.20	.20
17	.10	3.6	.60	108	200	10	4.0	2.3	.80	.10	.20	.10
18	.20	1.6	.60	113	115	9.6	3.9	2.2	.80	.10	.10	.10
19	.30	1.1	.60	52	653	8.8	3.8	2.1	.80	.10	.10	.20
20	.90	.90	.70	32	386	8.2	3.8	2.0	.80	.10	.10	.20
21	.40	.80	.90	23	478	7.6	3.9	2.0	.70	.10	0	0
22	.30	.80	1.4	17	162	7.1	4.0	2.0	.70	.10	0	.10
23	.20	.90	1.1	14	82	6.6	3.7	2.0	.70	.10	0	0
24	.20	.80	9.1	12	51	6.4	3.5	2.2	.60	.10	.10	.10
25	1.4	.80	8.8	11	38	6.2	3.4	2.0	.60	.10	.10	0
26	.70	2.4	4.7	9.5	29	5.9	3.3	2.0	.60	0	.10	0
27	.50	1.5	2.5	8.6	23	5.6	3.1	1.8	.60	0	.10	0
28	.50	1.1	1.8	8.6	46	5.0	3.2	1.8	.50	.10	.10	.10
29	.40	.90	1.6	12	29	4.8	3.2	1.8	.60	.10	.10	.10
30	.40	.80	5.0	9.5	---	4.7	2.9	1.7	.70	.10	.10	.10
31	.40	---	12	8.1	---	4.3	---	1.7	---	.10	.10	---
TOTAL	8.50	30.80	61.30	2504.7	2635.8	798.8	137.2	78.0	30.60	8.30	3.20	2.90
MEAN	.27	1.03	1.98	80.8	90.9	25.8	4.57	2.52	1.02	.27	.10	.097
MAX	1.4	3.6	12	475	653	166	12	6.8	1.6	.70	.20	.20
MIN	.10	.40	.60	1.6	4.8	4.3	2.9	1.7	.50	0	0	0
AC-FT	17	61	122	4970	5230	1580	272	155	61	16	6.3	5.8
CAL YR 1979	TOTAL	5135.00	MEAN 14.1	MAX 480	MIN 0	AC-FT 10190						
WTR YR 1980	TOTAL	6300.10	MEAN 17.2	MAX 653	MIN 0	AC-FT 12500						

11269500 LAKE McCLURE 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, 943,300 acre-ft (1,160 hm³) July 8-10, elevation, 855.2 ft (260.66 m); minimum, 596,700 acre-ft (736 hm³) Dec. 23, elevation, 793.8 ft (241.95 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	664600	623400	607600	601400	680500	784300	685200	692000	779100	924700	917500	804800
2	661000	622400	607100	602400	677400	779100	684200	696200	780300	930600	914900	800700
3	658000	621900	607100	602800	673800	776200	683100	701500	781400	935300	912300	796600
4	654000	621000	607100	602400	672800	773400	682600	706300	782600	938600	909000	791900
5	650500	620000	606600	601900	673300	774000	682600	711700	783200	940600	905100	789000
6	648000	619500	606100	601900	673800	777400	682600	717100	784300	941900	901900	784300
7	645000	619100	605200	601900	673800	778000	681600	723100	786700	942600	898600	779700
8	642000	618600	604700	601400	673800	775100	680000	727400	790200	943300	895400	776300
9	637600	618100	604300	602800	673300	771700	678500	731800	796000	943300	892200	772200
10	634600	617600	603800	606100	674300	767100	675900	734600	803100	943300	889000	768800
11	631700	617100	602800	617100	673800	762000	673800	735700	810200	942600	885800	764800
12	628300	616200	601900	639500	673300	756300	672300	735700	816100	941900	882700	760300
13	624400	614700	601400	675400	672800	751300	670700	735100	821500	941900	878900	756300
14	621900	614200	600900	737300	673300	745100	670200	734600	826300	941900	874400	751800
15	621000	613800	600900	749000	677900	739000	670200	734000	831200	941300	870700	747300
16	621500	613300	600900	757400	683100	732900	670200	733500	838500	941900	866900	743400
17	620500	613300	600500	761400	694600	726300	671200	734600	845200	941300	863100	740100
18	620500	612800	599500	762000	712800	719800	672800	737900	853200	939900	859400	735700
19	620500	611400	598600	759100	754600	714400	674800	743400	860600	939300	855700	731300
20	621000	610400	597700	754600	773400	710600	677400	751300	868100	938600	852000	727400
21	621900	610000	597200	749000	796000	707900	679500	759700	875700	937300	848300	722500
22	622400	610400	597200	743400	806000	704700	680000	767700	881400	935300	844000	718700
23	622400	609000	596700	737300	807800	701500	679500	774500	887100	934000	839700	714400
24	622900	609000	597200	730700	807800	699400	678500	777400	891600	932600	836000	710100
25	623400	609000	599100	723600	805400	696800	677900	778000	896100	931300	832400	706300
26	623900	607600	598600	716500	802500	694100	678500	778000	901200	929300	828700	702100
27	624400	608000	597700	709500	798900	691500	680500	776800	905100	928700	828700	698300
28	624400	608000	597700	702600	794800	689400	683100	775700	909000	927300	820300	695200
29	624900	607600	597700	695200	790200	688300	685700	775700	914200	924700	816700	690400
30	624900	607600	597700	688300	---	687300	688300	776800	920100	922100	813100	686200
31	624900	---	599100	683600	---	686800	---	778000	---	919400	808400	---
MAX	664600	623400	607600	762000	807800	784300	688300	778000	920100	943300	917500	804800
MIN	620500	607600	596700	601400	672800	686800	670200	692000	779100	919400	808400	686200
†	799.7	796.1	794.3	811.4	830.7	812.0	812.3	828.6	851.7	851.6	833.8	811.9
‡	-42200	-17300	-8500	+84500	+106600	-103400	+1500	+89700	+142100	-700	-111000	-122200
CAL YR 1979	†	+9400										
WTR YR 1980	†	+19100										

† 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 SE¼SW¼ 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 hm³).

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).--79 years, 1,338 ft³/s (37.89 m³/s), 969,400 acre-ft/yr (1.20 km³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1901-13, 1916-80): 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, 8,990 ft³/s (255 m³/s) Jan. 17, gage height, 12.22 ft (3.725 m); minimum daily, 148 ft³/s (4.19 m³/s) Oct. 29.

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	1610	156	458	416	2840	5170	1990	3160	2730	2040	2190	2210
2	1600	363	456	404	2860	5170	1960	3150	2740	2050	2180	2200
3	1600	471	455	409	2910	5190	1950	3120	2730	2070	2190	2210
4	1580	468	430	420	1860	5190	1930	3120	2740	2090	2200	2220
5	1580	474	416	421	1070	5340	1960	3120	2760	2100	2200	2200
6	1590	470	417	423	996	5290	1960	3110	2740	2090	2200	2200
7	1590	474	421	425	1000	5230	1960	3130	2730	2100	2200	2210
8	1600	472	429	420	1000	5220	1970	3150	2730	2080	2200	2220
9	1590	471	424	448	1000	5210	2260	3170	2520	2070	2190	2210
10	1590	466	429	450	1010	5220	2770	3180	2330	2100	2190	2210
11	1590	463	421	561	984	5220	2780	3180	2340	2110	2180	2190
12	1610	462	420	553	994	5230	2920	3170	2210	2100	2170	2210
13	1630	466	420	989	942	5220	2940	3160	2140	2090	2120	2210
14	1290	476	410	2290	919	5220	2930	3160	2150	2070	2210	2220
15	362	467	406	2880	956	5230	2950	3160	2140	2080	2190	2220
16	152	471	399	2980	1030	5220	2940	3150	2150	2110	2190	2230
17	161	472	406	3640	2190	5230	3050	3150	2140	2100	2190	2220
18	162	469	412	5350	2960	5230	3150	3150	2140	2130	2200	2220
19	160	468	419	5310	3210	4670	3140	3150	2140	2140	2180	2230
20	165	472	423	5290	3410	3660	3150	3160	2140	2130	2190	2230
21	157	475	426	5300	3530	3200	3160	3160	2140	2110	2200	2240
22	160	470	426	5300	4030	3210	3160	3160	2130	2100	2190	2240
23	154	465	409	5310	4270	3200	3170	3160	2140	2130	2220	2240
24	156	469	459	5300	4570	2990	3170	3170	2140	2150	2250	2230
25	159	460	428	5310	4550	2790	3170	3170	2140	2160	2200	2220
26	149	463	415	5290	4550	2790	3170	3170	2080	2200	2180	2220
27	153	470	423	5300	4870	2810	3180	3160	2040	2210	2170	2210
28	151	465	421	5290	5180	2240	3180	3150	2030	2210	2180	2200
29	148	466	421	5300	5170	1990	3180	2920	2040	2210	2190	2190
30	153	468	416	5270	---	2000	3170	2740	2040	2220	2200	887
31	160	---	414	3870	---	2010	---	2730	---	2230	2200	---
TOTAL	24912	13642	13129	90919	74861	131590	82370	96690	69360	65780	67940	65147
MEAN	804	455	424	2933	2581	4245	2746	3119	2312	2122	2192	2172
MAX	1630	476	459	5350	5180	5340	3180	3180	2760	2230	2250	2240
MIN	148	156	399	404	919	1990	1930	2730	2030	2040	2120	887
AC-FT	49410	27060	26040	180300	148500	261000	163400	191800	137600	130500	134800	129200
†	1320	220	220	129	0	61	3220	4060	4200	4390	4750	3100
CAL YR 1979 TOTAL	512022			MEAN 1403	MAX 3120	MIN 148	AC-FT 1016000	MEAN ‡ 1444	AC-FT ‡ 1045000			
WTR YR 1980 TOTAL	796340			MEAN 2176	MAX 5350	MIN 148	AC-FT 1580000	MEAN ‡ 2238	AC-FT ‡ 1625000			

† Diversion, in acre-feet, to North Side Canal, furnished by Merced Irrigation District.

‡ Adjusted for diversion to North Side 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 fair. 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	144							---	190	173	
2	---	157							---	178	152	
3	---	---							---	---	160	
4	---	---							---	---	170	
5	---	---							---	---	173	
6	---	---							---	200	178	
7	---	---							---	197	190	
8	---	---							---	197	178	
9	---	---							---	184	---	
10	---	---							---	181	---	
11	---	---							---	193	---	
12	---	---							---	197	---	
13	---	---							---	193	---	
14	---	---							---	197	---	
15	---	---							---	190	---	
16	---	---							---	193	---	
17	---	---							---	176	---	
18	187	---							---	165	---	
19	184	---							---	178	---	
20	---	---							187	176	---	
21	200	---							193	176	---	
22	184	---							---	154	---	
23	178	---							---	157	---	
24	173	---							---	152	---	
25	178	---							---	160	---	
26	176	---							---	154	---	
27	165	---							---	162	---	
28	157	---							184	165	---	
29	152	---							184	160	---	
30	149	---							193	162	---	
31	142	---							---	176	---	
TOTAL	---	---							---	---	---	
MEAN	---	---							---	---	---	
MAX	---	---							---	---	---	
MIN	---	---							---	---	---	
AC-FT	---	---							---	---	---	
†	22040	601	776	1010	1050	12420	77960	100000	102500	109900	106300	74870

† Diversion, in acre-feet, to Main Canal near diversion dam, near Merced Falls, furnished by Merced Irrigation District.

SAN JOAQUIN RIVER BASIN

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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.--14 years, 19.8 ft³/s (0.561 m³/s), 14,350 acre-ft/yr (17.7 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. 12	0030	1,810 51.3	9.78 2.981	Feb. 16	1700	2,820 79.9	11.69 3.563
Jan. 13	1700	3,620 103	12.98 3.956	Feb. 19	1645	3,180 90.1	12.30 3.749
Jan. 14	1730	*5,090 144	15.03 4.581	Feb. 21	0230	3,520 99.7	12.82 3.908
Jan. 17	1830	2,940 83.3	11.90 3.627	Mar. 5	2015	1,570 44.5	9.27 2.825
Feb. 15	1745	1,940 54.9	10.05 3.063				

Minimum, no flow for many months.

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	1.2	9.8	14	23	4.2	1.2	1.4			
2		0	1.1	6.5	12	21	4.0	.62	.56			
3		0	1.0	4.1	11	62	3.8	.38	.22			
4		0	.92	3.0	11	56	3.7	.15	.12			
5		0	.88	2.4	9.7	434	5.5	.07	.07			
6		0	.88	2.1	9.3	377	9.2	.70	.03			
7		0	.88	1.9	8.3	118	5.7	1.0	.01			
8		0	.88	1.7	7.1	68	4.4	.60	0			
9		0	.88	8.7	5.9	51	3.7	.47	0			
10		0	.88	247	4.9	41	3.3	.52	0			
11		0	.88	675	4.5	36	3.0	.56	0			
12		0	.78	684	4.1	32	2.9	2.0	0			
13		0	.70	851	3.9	26	2.6	1.2	0			
14		0	.70	1450	4.5	22	2.3	1.0	0			
15		0	.70	398	472	19	2.1	.53	0			
16		0	.70	256	776	17	2.1	.15	0			
17		0	.70	671	667	15	2.1	.43	0			
18		0	.70	374	264	13	1.9	.29	0			
19		0	.88	127	1180	12	1.8	.08	0			
20		.23	.88	78	1020	10	1.8	.06	0			
21		.98	1.1	55	1210	9.3	1.8	.03	0			
22		1.0	1.8	42	247	8.5	1.8	.01	0			
23		1.2	1.8	33	137	7.8	1.9	0	0			
24		1.2	33	27	80	7.2	3.6	0	0			
25		1.2	66	24	56	6.7	2.7	1.1	0			
26		1.3	14	21	44	7.2	2.1	3.9	0			
27		1.3	6.4	18	36	7.1	2.0	2.7	0			
28		1.2	4.1	17	39	6.2	1.9	1.8	0			
29		1.2	3.0	38	32	5.7	1.8	1.2	0			
30		1.2	2.5	27	---	5.1	1.7	1.2	0			
31		---	5.1	17	---	4.3	---	1.8	---			---
TOTAL	0	12.01	155.92	6170.2	6370.2	1528.1	91.4	25.75	2.41	0	0	0
MEAN	0	.40	5.03	199	220	49.3	3.05	.83	.080	0	0	0
MAX	0	1.3	66	1450	1210	434	9.2	3.9	1.4	0	0	0
MIN	0	0	.70	1.7	3.9	4.3	1.7	0	0	0	0	0
AC-FT	0	24	309	12240	12640	3030	181	51	4.8	0	0	0
CAL YR 1979	TOTAL	10707.76	MEAN 29.3	MAX 1230	MIN 0	AC-FT 21240						
WTR YR 1980	TOTAL	14355.99	MEAN 39.2	MAX 1450	MIN 0	AC-FT 28480						

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) north of Newman.

DRAINAGE AREA.--1,267 mi² (3,282 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 10...	0800	55	7.1	13.0	8.7	--	20	5.0	2.0	3.0	--
NOV 14...	1030	--	7.2	12.0	8.4	--	--	--	--	--	--
DEC 12...	0845	--	7.2	9.0	10.8	--	--	--	--	--	--
JAN 08...	1400	95	7.0	12.0	9.7	--	32	8.0	3.0	6.0	--
FEB 14...	0830	--	7.3	10.0	10.2	--	--	--	--	--	--
APR 09...	0800	83	7.3	14.0	9.9	--	30	7.0	3.0	4.0	1.0
MAY 06...	1100	--	7.2	15.5	10.0	--	--	--	--	--	--
JUN 10...	1030	--	7.3	18.0	9.3	--	--	--	--	--	--
JUL 22...	0900	148	7.2	23.0	8.9	--	44	11	4.0	12	1.4
AUG 13...	1030	--	7.3	23.0	7.6	8	--	--	--	--	--
SEP 11...	0900	--	7.1	18.0	8.9	4	--	--	--	--	--

DATE	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SUS- PENDED (MG/L)	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, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
OCT 10...	20	2.0	.0	39	--	.10	.00	.20	.03	.01
NOV 14...	--	--	--	--	--	.40	.04	.40	.03	.01
DEC 12...	--	--	--	--	--	.50	.02	.20	.04	.01
JAN 08...	34	5.0	3.0	63	--	.60	.03	.30	.06	.01
FEB 14...	--	--	--	--	--	.20	.02	.10	.03	.01
APR 09...	30	3.0	2.0	57	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	.10	.02	.20	.03	.01
JUN 10...	--	--	--	--	--	.30	.02	.30	.05	.01
JUL 22...	47	8.0	8.0	92	--	1.1	.04	.30	.08	.04
AUG 13...	--	--	--	--	10	.80	.02	.20	.06	.03
SEP 11...	--	--	--	--	6	.20	.01	.20	.04	.01

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B)
OCT 10...	0800	0
JAN 08...	1400	0
APR 09...	0800	100
JUL 22...	0900	0

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. 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.--40 years, 666 ft³/s (18.86 m³/s), 482,500 acre-ft/yr (595 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, 5,660 ft³/s (160 m³/s) Mar. 7, elevation, 70.04 ft (21.348 m); minimum daily, 199 ft³/s (5.64 m³/s) Nov. 2.

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	600	202	480	430	4260	4680	1760	1590	1090	383	246	668
2	669	199	470	430	3190	4700	1590	1550	1130	360	257	646
3	631	205	470	420	2960	4710	1350	1510	1080	390	239	675
4	591	313	460	430	2850	4760	1210	1480	1040	409	250	679
5	612	398	450	440	2440	4820	1160	1530	998	428	248	725
6	647	425	440	440	1630	5180	1350	1470	987	399	220	730
7	669	442	430	440	1360	5470	1350	1460	978	412	242	726
8	690	444	440	450	1260	5150	1310	1440	968	355	271	749
9	710	450	450	460	1190	5090	1270	1400	1010	316	332	742
10	720	456	450	520	1150	5000	1230	1470	925	327	360	767
11	731	457	440	694	1120	4930	1630	1590	686	312	371	780
12	729	455	440	1200	1080	4850	1740	1590	703	301	359	821
13	868	458	440	2200	1060	4800	1780	1560	635	373	339	856
14	1350	461	430	2800	1020	4770	1800	1590	593	436	338	951
15	1380	464	430	3300	992	4730	1740	1640	573	316	324	991
16	806	470	420	3500	1260	4720	1670	1660	569	262	323	971
17	544	484	410	4000	1860	4730	1650	1620	517	251	389	947
18	467	528	420	4800	2380	4030	1600	1650	490	263	423	959
19	418	504	430	5000	2650	4750	1600	1650	468	227	401	973
20	337	486	440	5060	3610	4540	1560	1590	436	273	390	1040
21	317	486	440	4940	4480	3900	1480	1510	394	310	430	1030
22	299	492	440	4820	4530	3420	1520	1420	430	268	438	1070
23	277	490	440	4750	4160	3350	1630	1370	445	222	449	1060
24	253	488	420	4760	4170	3300	1670	1360	407	201	467	1060
25	243	485	470	4780	4350	3150	1700	1390	366	202	529	1050
26	249	480	450	4800	4320	2770	1710	1400	412	228	515	1040
27	237	480	430	4810	4270	2490	1750	1360	414	268	523	1070
28	231	480	440	4820	4350	2430	1780	1320	392	312	507	1050
29	226	480	440	4830	4610	2260	1730	1290	373	272	517	1090
30	215	480	440	4850	---	1950	1680	1200	373	253	596	1100
31	208	---	430	4850	---	1880	---	1050	---	233	648	---
TOTAL	16924	13142	13680	90024	78562	127310	47000	45710	19882	9562	11941	27016
MEAN	546	438	441	2904	2709	4107	1567	1475	663	308	385	901
MAX	1380	528	480	5060	4610	5470	1800	1660	1130	436	648	1100
MIN	208	199	410	420	992	1880	1160	1050	366	201	220	646
AC-FT	33570	26070	27130	178600	155800	252500	93220	90670	39440	18970	23680	53590
CAL YR 1979	TOTAL	228570	MEAN	626	MAX	3680	MIN	157	AC-FT	453400		
WTR YR 1980	TOTAL	500753	MEAN	1368	MAX	5470	MIN	199	AC-FT	993200		

NOTE.--No gage-height record Nov. 25 to Jan. 19.

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.

REVISÉD 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.--68 years, 2,000 ft³/s (56.64 m³/s), 1,449,000 acre-ft/yr (1.79 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, 23,500 ft³/s (666 m³/s) Feb. 25, elevation, 65.26 ft (19.891 m); minimum daily, 389 ft³/s (11.0 m³/s) Nov. 2.

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	1120	421	708	925	11200	17600	5470	3190	2030	978	561	1130
2	1140	389	678	899	10300	16700	4520	3090	2040	1000	559	1120
3	1140	395	656	869	9280	15400	3720	3000	2000	984	527	1170
4	1030	512	639	840	8180	15000	3230	2930	1950	966	531	1190
5	1020	677	643	817	7020	14900	2930	2910	1870	1250	580	1200
6	1010	715	648	794	5540	14900	2850	2880	1840	1590	590	1220
7	1040	718	646	778	4490	15200	2880	2890	1820	2060	591	1210
8	1030	729	637	763	3720	17000	2880	3020	1780	2580	602	1230
9	1060	717	620	773	3130	18400	2960	3130	1820	2930	626	1230
10	1070	701	618	890	2650	17200	3160	3400	1780	3000	632	1280
11	1080	683	619	1110	2470	15900	3580	3710	1560	2660	683	1340
12	1030	694	610	1650	2370	14900	3640	3890	1470	1760	704	1340
13	1090	716	588	2480	2190	14300	3580	3980	1340	1250	688	1360
14	1530	724	585	3120	1990	13900	3620	3980	1220	1140	681	1390
15	1800	723	586	4910	1910	13500	3580	4150	1130	1130	647	1440
16	1390	736	602	6110	2120	13400	3430	4960	1120	1080	629	1480
17	957	753	592	6400	2950	13400	3390	5060	1150	1020	674	1450
18	780	803	587	6580	4320	13100	3430	5080	1160	946	710	1440
19	695	812	591	7710	5550	13200	3520	4990	1130	816	726	1430
20	602	796	582	9160	6830	12900	3420	4680	1090	772	745	1430
21	593	800	603	9900	9450	12100	3130	4310	1010	785	788	1390
22	620	790	639	10100	13000	11200	2860	3950	977	768	819	1430
23	565	794	669	10200	17500	10900	2800	3610	982	708	825	1470
24	509	856	734	10600	22100	10500	2800	3200	969	627	840	1480
25	462	838	867	10900	23300	10100	2970	2890	953	573	922	1470
26	460	813	925	11000	22100	9490	3220	2640	971	573	997	1400
27	475	794	922	11200	20000	8810	3390	2460	977	624	1030	1420
28	485	772	904	11500	18400	8390	3420	2410	936	660	992	1400
29	494	751	909	11600	17800	8060	3320	2420	921	633	950	1430
30	481	748	895	11700	---	7110	3290	2310	926	601	982	1460
31	472	---	900	11700	---	6340	---	2090	---	545	1070	---
TOTAL	27230	21370	21402	177978	261860	403800	100990	107210	40922	37009	22901	40430
MEAN	878	712	690	5741	9030	13030	3366	3458	1364	1194	739	1348
MAX	1800	856	925	11700	23300	18400	5470	5080	2040	3000	1070	1480
MIN	460	389	582	763	1910	6340	2800	2090	921	545	527	1120
AC-FT	54010	42390	42450	353000	519400	800900	200300	212700	81170	73410	45420	80190
CAL YR 1979	TOTAL	451180	MEAN	1236	MAX	6380	MIN	389	AC-FT	894900		
WTR YR 1980	TOTAL	1263102	MEAN	3451	MAX	23300	MIN	389	AC-FT	2505000		

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA

LOCATION.--Lat 37°18'48", long 121°07'32", in SE¼NE¼ 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.--48 years, 15.7 ft³/s (0.445 m³/s), 11,370 acre-ft/yr (14.0 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 11	1100	1,600 45.3	6.37 1.942	Feb. 21	0130	3,040 86.1	7.32 2.231
Jan. 14	0100	2,430 68.8	6.92 2.109	Mar. 3	0430	279 7.90	5.01 1.527
Feb. 16	1900	*5,210 148	8.48 2.585	Mar. 6	1600	292 8.27	5.04 1.536
Feb. 18	Unknown	Unknown --	Unknown --				

Minimum, no flow for several months.

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	3.6	84	24	5.9	.64			
2				0	3.3	86	23	5.3	.60			
3				0	3.1	183	22	4.9	.57			
4				0	3.2	119	21	4.7	.54			
5				0	3.1	147	29	4.2	.48			
6				0	3.0	226	27	4.0	.49			
7				0	2.8	163	22	3.8	.46			
8				0	2.3	124	20	3.4	.45			
9				0	2.0	102	19	3.5	.42			
10				0	1.9	89	17	4.5	.37			
11				526	1.9	79	16	4.3	.30			
12				430	2.0	71	15	3.0	.21			
13				544	2.2	65	14	2.8	.17			
14				1160	3.4	59	13	2.5	.11			
15				336	27	55	13	2.1	0			
16				142	1930	51	13	1.8	0			
17				87	1860	48	12	1.5	0			
18				79	2720	45	12	1.3	0			
19				46	2100	42	11	1.1	0			
20				32	1350	40	11	.89	0			
21				24	2070	39	11	.79	0			
22				19	717	38	11	.69	0			
23				14	356	36	12	.59	0			
24				12	218	35	12	.54	0			
25				10	159	35	11	.70	0			
26				8.4	125	36	10	1.0	0			
27				7.2	105	33	9.1	.95	0			
28				6.3	122	31	8.0	.83	0			
29				5.8	94	29	7.3	.74	0			
30				5.0	---	28	6.5	.72	0			
31		---		4.0	---	25	---	.68	---			---
TOTAL	0	0	0	3497.7	13990.8	2243	451.9	73.72	5.81	0	0	0
MEAN	0	0	0	113	482	72.4	15.1	2.38	.19	0	0	0
MAX	0	0	0	1160	2720	226	29	5.9	.64	0	0	0
MIN	0	0	0	0	1.9	25	6.5	.54	0	0	0	0
AC-FT	0	0	0	6940	27750	4450	896	146	12	0	0	0
CAL YR 1979	TOTAL	2149.43	MEAN	5.89	MAX	568	MIN	0	AC-FT	4260		
WTR YR 1980	TOTAL	20262.93	MEAN	55.4	MAX	2720	MIN	0	AC-FT	40190		

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 fair, except those for June and July, which are poor. Some stock ponds and small diversions above station.

AVERAGE DISCHARGE.--15 years, 5.43 ft³/s (0.154 m³/s), 3,930 acre-ft/yr (4.85 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.--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. 12	1645	120 3.40	2.93 0.893	Feb. 19	1345	*1,490 42.2	7.58 2.310
Jan. 14	0415	143 4.05	3.07 .936	Feb. 21	0230	689 19.5	5.19 1.582
Feb. 17	0115	777 22.0	5.49 1.673				

Minimum, no flow many days.

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	3.1	4.3	42	15	6.9	2.0	.19	.01	
2			0	3.3	4.0	42	14	6.2	1.8	.24	0	
3			0	3.5	4.1	85	14	6.1	1.7	.50	0	
4			0	3.5	4.0	60	14	6.0	1.8	.26	0	
5			0	3.5	4.0	75	20	5.8	1.9	.22	0	
6			0	3.5	3.9	100	16	5.6	1.8	.28	0	
7			0	3.1	3.7	75	14	5.6	1.6	.33	0	
8			0	3.3	3.6	60	13	5.0	1.5	.43	0	
9			0	3.7	3.3	50	12	5.1	1.4	.42	0	
10			0	2.8	3.3	45	12	7.8	1.2	.41	0	
11			0	54	3.3	40	11	7.8	1.1	.39	0	
12			0	68	3.3	37	11	6.8	1.2	.36	0	
13			0	42	3.4	34	10	6.4	1.4	.33	0	
14			0	84	4.5	31	9.5	6.2	1.3	.31	0	
15			0	41	9.8	28	9.0	5.8	1.0	.30	0	
16			0	29	207	27	9.0	5.2	.85	.26	0	
17			0	22	352	25	9.0	4.7	.70	.23	0	
18			0	17	722	24	8.2	4.1	.55	.22	0	
19			0	13	767	23	8.0	3.8	.48	.20	0	
20			0	10	304	22	8.0	3.2	.48	.18	0	
21			0	8.6	457	21	8.0	2.9	.45	.17	0	
22			0	7.6	149	20	8.0	2.7	.48	.15	0	
23			0	6.8	110	20	8.6	2.8	.54	.14	0	
24			0	6.3	90	19	8.6	3.2	.58	.13	0	
25			7.8	6.1	70	21	8.6	3.3	.50	.12	0	
26			4.6	5.7	60	21	8.4	3.1	.44	.11	0	
27			3.6	5.3	55	19	7.7	3.0	.38	.10	0	
28			3.0	5.4	55	18	7.4	2.4	.32	.08	0	
29			2.3	5.5	60	17	7.7	2.2	.28	.06	0	
30			1.8	4.7	---	16	7.7	2.1	.20	.04	0	
31		---	2.1	4.4	---	15	---	2.3	---	.02	0	---
TOTAL	0	0	25.2	479.7	3520.5	1132	317.4	144.1	29.93	7.18	.01	0
MEAN	0	0	.81	15.5	121	36.5	10.6	4.65	1.00	.23	.0003	0
MAX	0	0	7.8	84	767	100	20	7.8	2.0	.50	.01	0
MIN	0	0	0	2.8	3.3	15	7.4	2.1	.20	.02	0	0
AC-FT	0	0	50	951	6980	2250	630	286	59	14	.02	0
CAL YR 1979	TOTAL	1132.72	MEAN	3.10	MAX	89	MIN	0	AC-FT	2250		
WTR YR 1980	TOTAL	5656.02	MEAN	15.5	MAX	767	MIN	0	AC-FT	11220		

NOTE.--No gage-height record June 1 to Aug. 1.

11274725 TUOLUMNE RIVER AT TUOLUMNE MEADOWS, CA

LOCATION.--Lat 37°52'34", long 119°21'15", in SW¼SE¼ sec.5, T.1 S., R.24 E., Tuolumne County, Hydrologic Unit 18040009, at bridge on Highway 120, 0.5 mi (0.8 km) east of Tuolumne Meadows.

DRAINAGE AREA.--72.8 mi² (188.6 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 09...	1230	53	7.0	10.0	8.6	1	.4	12	3.0	1.0	6.0
JUN 10...	1300	14	7.0	6.5	9.4	--	--	2	1.0	.0	1.0
JUL 23...	0900	11	7.6	8.0	9.1	1	.3	2	1.0	.0	1.0
SEP 11...	1240	27	7.2	13.0	8.3	--	--	5	2.0	.0	3.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	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, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
OCT 09...	.6	8	4.0	8.0	47	1	.00	.00	.10	.00	.00
JUN 10...	.3	4	1.0	1.0	--	--	.02	.00	.10	.01	.00
JUL 23...	.3	2	1.0	.0	9	2	.01	.00	.10	.01	.00
SEP 11...	.4	5	.0	3.0	24	--	.00	.00	.40	.01	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 09...	1230	0	0	100	0	0	0
JUN 10...	1300	--	--	0	--	--	--
JUL 23...	0900	0	0	0	0	0	0
SEP 11...	1240	--	--	0	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 09...	60	0	10	.0	0	.2	.00
JUN 10...	--	--	--	--	--	--	--
JUL 23...	20	0	0	.0	0	1.1	.00
SEP 11...	--	--	--	--	--	--	--

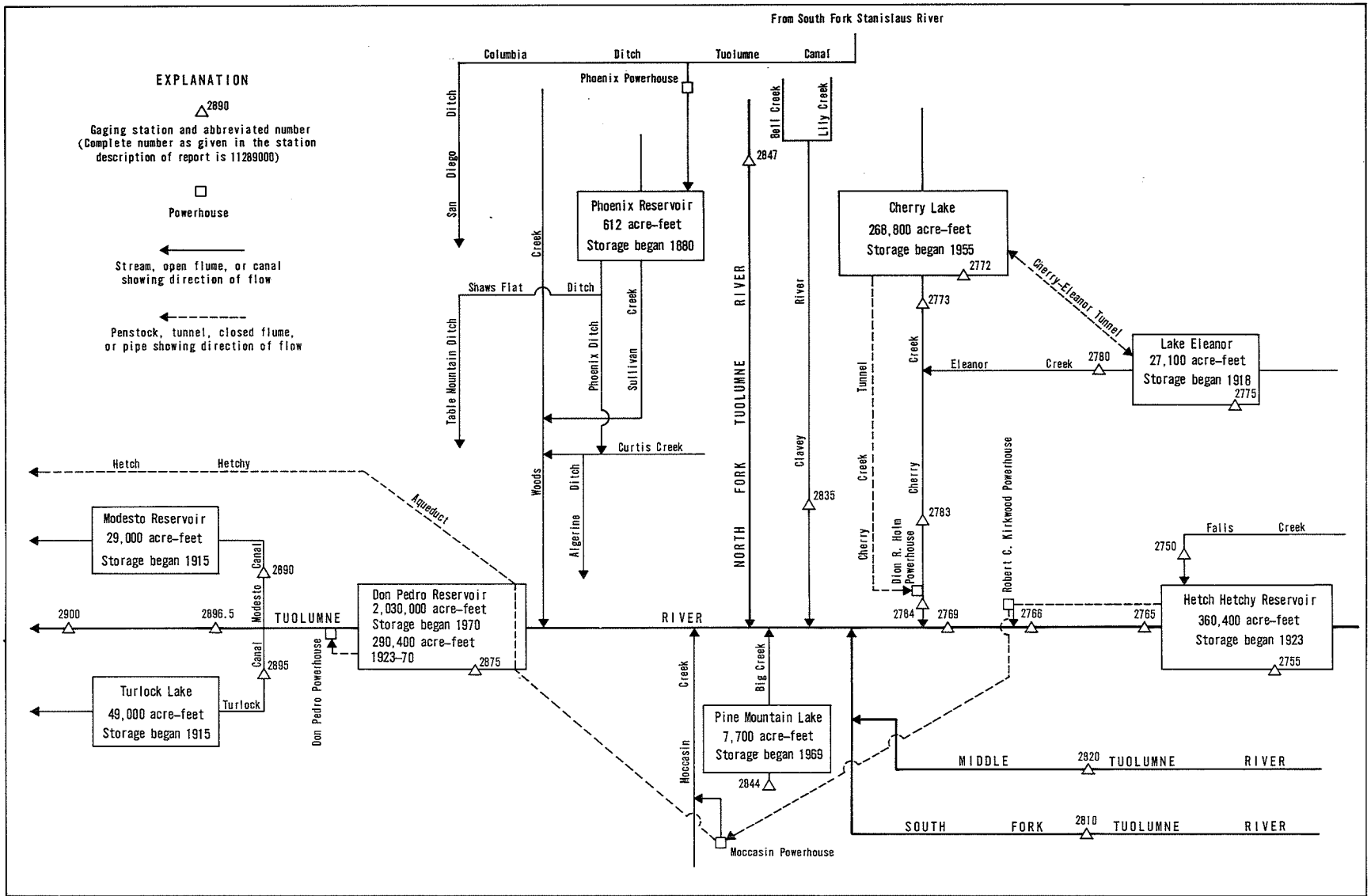


FIGURE 9. — Schematic diagram showing diversions and storage in Tuolumne River basin.

11275000 FALLS CREEK NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'15", long 119°45'48", in NW¼SE¼ 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 except those for period of no gage-height record, which are poor. No regulation or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--65 years, 142 ft³/s (4,021 m³/s), 102,900 acre-ft/yr (127 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.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2315	*4,340 123	8.26 2.518
Feb. 18	0145	983 27.8	5.76 1.756
May 21	0800	989 28.0	5.77 1.759

Minimum, no flow on many days during October.

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	20	52	284	73	117	111	550	374	225	47	14
2	0	17	48	155	72	108	104	580	385	260	46	13
3	0	18	45	109	70	108	92	665	395	225	44	13
4	0	35	40	84	71	105	93	669	360	200	42	12
5	0	42	37	70	76	100	118	655	340	180	40	12
6	0	40	36	64	79	95	109	620	360	170	38	11
7	0	37	40	61	74	89	93	590	390	157	37	11
8	0	37	43	59	72	86	94	538	440	146	36	11
9	0	37	43	85	69	84	119	542	480	139	34	13
10	0	33	44	92	67	83	153	530	500	130	33	13
11	0	32	40	245	66	77	173	440	460	123	32	20
12	0	31	34	1760	64	72	185	395	430	118	30	23
13	0	29	31	3240	62	73	224	415	405	113	29	25
14	0	27	29	2090	75	78	268	430	380	108	28	20
15	0	25	25	671	105	78	302	420	400	102	27	16
16	0	24	22	453	136	75	348	410	440	98	26	15
17	0	51	20	311	319	82	382	465	435	95	25	12
18	0	55	19	232	636	85	432	510	420	91	24	11
19	48	44	19	182	383	77	479	638	400	86	23	11
20	287	35	19	162	300	86	536	825	380	82	22	10
21	92	28	21	147	230	77	492	940	360	79	22	10
22	62	27	23	136	193	73	355	935	330	75	21	10
23	51	41	26	120	188	78	241	752	295	71	20	9.3
24	45	47	34	111	173	89	205	467	275	68	20	8.6
25	46	82	38	110	142	74	232	385	270	65	19	7.9
26	88	234	57	109	133	66	347	352	265	63	19	6.9
27	65	103	54	99	132	68	438	330	245	59	18	6.2
28	50	73	50	95	142	80	489	318	225	56	18	5.7
29	41	64	49	91	121	100	494	325	225	54	17	5.2
30	30	58	124	82	---	123	526	360	220	52	17	4.7
31	23	---	408	78	---	119	---	370	---	49	15	---
TOTAL	928	1426	1570	11587	4323	2705	8234	16421	10884	3539	869	360.5
MEAN	29.9	47.5	50.6	374	149	87.3	274	530	363	114	28.0	12.0
MAX	287	234	408	3240	636	123	536	940	500	260	47	25
MIN	0	17	19	59	62	66	92	318	220	49	15	4.7
AC-FT	1840	2830	3110	22980	8570	5370	16330	32570	21590	7020	1720	715
CAL YR 1979 TOTAL	52464.44			MEAN 144	MAX 1130	MIN 0	AC-FT 104100					
WTR YR 1980 TOTAL	62846.50			MEAN 172	MAX 3240	MIN 0	AC-FT 124700					

NOTE.--No gage-height record May 25 to Aug. 28.

SAN JOAQUIN RIVER BASIN

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, 361,900 acre-ft (446 hm³) July 22, gage height, 3,806.8 ft (1,160.31 m); minimum, 141,100 acre-ft (174 hm³) Jan. 11, gage height, 3,676.2 ft (1,120.51 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248100	210200	177100	145300	202200	207300	192400	220200	230800	355800	360400	332700
2	246400	208900	176100	145300	201400	207000	191900	223400	231800	360200	360800	331200
3	245000	207600	175000	145900	200600	207000	191500	228000	232300	360000	360800	329700
4	243300	206300	174000	145400	199700	206800	190700	232700	233200	360200	361000	328300
5	241800	205100	172900	144600	198900	206600	190200	237900	234300	359800	360600	326600
6	240600	203900	171900	143800	198100	206600	189900	243000	235400	360000	360200	325300
7	239100	202800	170900	143000	197500	206600	189300	248000	236900	360200	359800	324000
8	237500	201600	169800	142000	196800	206300	188800	251900	240400	361200	359400	322600
9	236000	200300	168800	141200	195900	205700	188400	253700	247100	360800	359000	321100
10	234500	199000	167900	141200	194900	205500	188400	254400	254700	360600	358600	319600
11	233000	197900	166900	141100	194000	205100	188400	253000	262000	360600	358000	318300
12	231500	196700	165700	144000	193000	204400	188700	250200	268700	361000	356600	316800
13	230000	195400	164600	163500	192100	203900	189300	247100	273700	361200	356400	315300
14	228500	194300	163500	191100	191100	203500	190700	244200	277100	361200	355600	313900
15	227000	192900	162100	198900	190700	202800	192300	241100	280900	361200	354500	312400
16	225300	191500	160900	202000	190200	202200	194000	238200	286700	361200	353500	310900
17	223800	190400	159600	204400	191100	201600	196200	236700	294200	361200	352100	309400
18	222400	189300	158500	205700	196500	201100	198700	236700	301800	361200	351100	308100
19	220900	188200	157300	206500	201700	200500	201400	239800	308900	361000	350000	306600
20	221200	187000	156000	206600	204400	199800	204900	245000	314100	360600	348800	305000
21	211500	185800	154700	206800	206000	199400	208200	251600	318800	361400	347600	303700
22	220200	184400	153600	206800	207100	198700	208200	259100	323000	361900	346300	302000
23	219400	183200	152200	206500	207600	197900	210500	264100	325700	361200	345100	300700
24	218300	182000	151200	206300	207800	197300	210000	263400	326600	361800	343900	299200
25	217300	181100	150400	205800	207800	196700	209500	259200	328700	360200	342600	297700
26	216600	181100	149400	205500	207400	195900	209500	253000	332600	360200	341200	296300
27	216000	180600	148400	205200	207400	195100	210800	246900	335600	360600	339900	295000
28	215000	179900	147300	204700	207400	194200	213100	241100	337700	361400	338500	293100
29	213900	179000	146200	204400	207600	193500	215300	235000	341600	361400	337000	291800
30	212700	178000	145100	203600	---	193000	217300	231300	348400	361000	335600	290000
31	211500	---	145300	202800	---	192900	---	230500	---	360400	334100	---
MAX	248100	210200	177100	206800	207800	207300	217300	264100	348400	361900	361000	332700
MIN	211500	178000	145100	141100	190200	192900	188400	220200	230800	355800	334100	290000
†	3723.4	3702.0	3679.3	3718.0	3721.0	3711.7	3727.0	3735.0	3799.9	3806.0	3792.5	3769.0
‡	-38000	-33500	-32700	+57500	+4800	-14700	+24400	+13200	+117900	+12000	-26300	-44100

CAL YR 1979 † -42000

WTR YR 1980 † +40500

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

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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.

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.

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 1923. 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); 15 years (water years 1968-80), 354 ft³/s (10.03 m³/s), 256,500 acre-ft/yr (316 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, 7,970 ft³/s (226 m³/s) July 2, gage height, 12.01 ft (3.661 m); minimum daily, 33 ft³/s (0.93 m³/s) Nov. 13.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	36	34	39	35	41	41	1430	1940	5340	562	76
2	36	36	34	35	35	42	41	1450	1950	6950	468	75
3	36	36	34	35	34	47	41	1490	1710	6410	359	75
4	36	36	34	35	34	47	40	1520	996	4910	244	78
5	36	35	35	36	34	50	41	1550	1000	4320	205	77
6	36	34	35	35	34	53	41	1590	1010	3520	114	77
7	36	34	36	35	35	48	40	1820	1010	3010	77	77
8	37	34	35	34	35	45	40	2440	1050	2790	77	77
9	37	34	35	38	35	42	40	2630	1240	2870	77	77
10	37	34	34	52	35	40	41	2630	1440	2620	78	77
11	37	34	34	65	35	40	40	2610	1610	2630	77	77
12	37	34	35	102	35	39	41	2580	1700	2670	76	77
13	36	33	35	119	35	38	41	2550	1760	2650	74	77
14	36	35	35	96	37	37	41	2530	1810	2570	80	77
15	36	35	35	66	38	37	78	2500	1860	2580	85	77
16	36	35	34	59	41	36	201	2470	1930	2560	84	54
17	36	37	34	56	52	36	374	2450	2000	2580	83	35
18	36	36	34	54	86	35	674	2460	2470	2620	83	35
19	37	35	34	50	95	40	825	2490	3750	2290	82	35
20	38	35	34	48	63	43	845	2540	4090	1660	81	35
21	37	35	34	46	81	43	861	2600	4180	1540	80	35
22	36	35	34	46	57	43	870	3020	4260	2100	78	34
23	36	35	34	45	51	43	872	4230	4300	2220	78	34
24	36	35	37	42	46	43	1080	4580	4150	2120	79	34
25	36	35	38	41	44	42	1330	4510	3450	1610	78	37
26	36	37	36	39	42	48	1340	4430	3500	1200	76	37
27	36	36	36	38	41	42	1350	4340	3540	1180	77	38
28	35	35	35	36	47	41	1370	4240	3570	1320	77	38
29	35	35	35	36	43	41	1390	3470	3640	1310	78	38
30	36	34	35	36	---	41	1410	2440	4020	1200	78	37
31	36	---	41	35	---	41	---	1940	---	1010	77	---
TOTAL	1123	1050	1085	1529	1315	1298	15439	83530	74936	84360	3922	1707
MEAN	36.2	35.0	35.0	49.3	45.3	41.9	515	2695	2498	2721	127	56.9
MAX	38	37	41	119	95	53	1410	4580	4300	6950	562	78
MIN	35	33	34	34	34	35	40	1430	996	1010	74	34
AC-FT	2230	2080	2150	3030	2610	2570	30620	165700	148600	167300	7780	3390

CAL YR 1979	TOTAL	113744	MEAN 312	MAX 3730	MIN 33	AC-FT	225600
WTR YR 1980	TOTAL	271294	MEAN 741	MAX 6950	MIN 33	AC-FT	538100

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA

LOCATION.--Lat 37°52'46", long 119°56'46", in SE¼SW¼ 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.

DRAINAGE AREA.--484 mi² (1,254 km²).

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.

GAGE.--Water-stage recorder. Altitude of gage is 2,420 ft (738 m), from topographic map.

REMARKS.--Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 12 mi (19 km) upstream.

AVERAGE DISCHARGE.--10 years, 350 ft³/s (9.912 m³/s), 253,600 acre-ft/yr (313 hm³/yr).

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, 8,100 ft³/s (229 m³/s) July 3, gage height, 20.38 ft (6.212 m); minimum daily, 36 ft³/s (1.02 m³/s) Oct. 4-6.

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	37	39	47	143	90	182	84	1440	1920	5110	602	80
2	37	39	46	81	88	174	81	1470	1930	6720	398	80
3	37	42	46	68	86	262	79	1500	1830	6830	377	80
4	36	48	46	63	84	287	78	1540	952	4910	233	80
5	36	42	45	59	82	316	97	1580	951	4500	202	83
6	36	40	45	58	80	350	109	1610	953	3530	170	82
7	38	40	45	55	78	276	90	1660	959	3170	88	82
8	39	40	46	55	78	234	84	2280	986	2700	88	82
9	39	40	45	69	78	210	80	2730	1140	2960	86	82
10	38	40	45	469	76	192	77	2790	1360	2640	85	82
11	38	40	45	397	76	188	78	2740	1540	2640	84	82
12	38	40	45	830	75	180	77	2710	1650	2690	83	82
13	38	40	45	905	74	161	76	2680	1730	2690	82	82
14	38	40	44	926	83	151	75	2660	1780	2590	81	82
15	38	41	46	510	179	145	74	2610	1830	2600	88	82
16	38	41	45	338	185	138	183	2570	1900	2570	89	81
17	38	57	45	301	358	130	341	2550	1980	2580	88	49
18	38	54	44	281	797	126	594	2580	2300	2640	87	40
19	42	46	44	202	1020	116	811	2570	3670	2370	86	40
20	60	45	44	166	585	118	837	2630	4110	1740	85	39
21	44	45	50	145	738	116	864	2700	4190	1450	84	39
22	40	46	51	132	444	111	879	3020	4280	2150	83	39
23	40	49	46	124	314	106	879	4150	4310	2300	81	39
24	38	47	76	117	254	103	1000	4600	4180	2100	83	39
25	38	47	100	111	220	100	1350	4520	3400	1700	83	38
26	40	73	70	105	196	98	1350	4430	3470	1140	81	40
27	39	58	59	99	181	94	1360	4350	3500	1090	80	41
28	39	51	53	96	261	92	1390	4240	3520	1210	81	41
29	38	48	50	102	223	90	1410	3630	3650	1230	81	41
30	38	48	57	99	---	87	1420	2570	4450	1130	80	40
31	38	---	118	93	---	86	---	1920	---	989	80	---
TOTAL	1211	1366	1633	7199	7083	5019	15907	85000	74421	84669	4079	1869
MEAN	39.1	45.5	52.7	232	244	162	530	2742	2481	2731	132	62.3
MAX	60	73	118	926	1020	350	1420	4600	4450	6830	602	83
MIN	36	39	44	55	74	86	74	1440	951	989	80	38
AC-FT	2400	2710	3240	14280	14050	9960	31550	168600	147600	167900	8090	3710
CAL YR 1979 TOTAL	128532			352	3800	36	AC-FT	254900				
WTR YR 1980 TOTAL	289456			791	6830	36	AC-FT	574100				

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.

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.

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, 8,300 ft³/s (235 m³/s) July 2, gage height, 9.33 ft (2.844 m); minimum daily, 59 ft³/s (1.67 m³/s) Sept. 21.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	138	72	185	256	376	267	1660	1930	5390	871	106
2	99	134	72	146	239	372	270	1660	1970	6980	595	172
3	95	81	120	125	243	454	258	1650	1900	6800	581	192
4	92	84	116	117	256	472	251	1670	1120	5000	465	172
5	89	150	103	73	253	490	266	1710	1100	4520	430	189
6	63	151	100	78	247	525	243	1730	1110	3500	371	106
7	64	147	95	128	244	470	285	1890	1110	3210	233	99
8	106	141	68	121	243	430	268	2230	1140	2710	216	189
9	109	144	76	128	231	353	268	2740	1300	2980	181	195
10	109	85	108	372	238	408	272	2830	1500	2720	135	189
11	105	85	105	424	249	404	260	2810	1660	2730	247	184
12	104	90	104	761	247	394	240	2680	1740	2780	250	181
13	72	152	104	819	247	375	251	2650	1800	2750	240	113
14	77	150	106	986	260	354	264	2530	1830	2660	226	114
15	110	148	83	641	375	327	257	2470	1830	2670	216	184
16	112	143	72	494	373	329	375	2430	1940	2640	204	186
17	107	97	115	459	480	332	494	2400	2010	2670	207	142
18	105	85	115	444	901	323	694	2350	2260	2730	240	137
19	111	166	118	379	1130	309	908	2440	3570	2430	236	140
20	90	162	115	350	724	306	906	2520	4300	1880	233	77
21	84	157	115	344	856	303	1000	2590	4320	1620	226	59
22	109	97	87	313	588	281	1020	2890	4420	2090	226	142
23	111	158	90	296	477	237	1030	4040	4460	2370	213	162
24	108	91	151	281	393	329	1170	4510	4460	2250	204	147
25	106	96	154	267	429	317	1550	4460	3630	1720	233	164
26	108	188	143	248	414	316	1530	4420	3690	1320	230	142
27	77	178	131	193	396	307	1520	4360	3730	1220	230	84
28	81	168	126	272	443	293	1590	4280	3750	1360	230	77
29	114	158	96	279	415	269	1610	3660	3750	1320	223	142
30	117	155	101	267	---	277	1620	2610	4080	1290	204	149
31	115	---	200	263	---	291	---	1950	---	1190	210	---
TOTAL	3046	3979	3361	10253	11847	11023	20937	84820	77410	87500	8806	4335
MEAN	98.3	133	108	331	409	356	698	2736	2580	2823	284	145
MAX	117	188	200	986	1130	525	1620	4510	4460	6980	871	195
MIN	63	81	68	73	231	237	240	1650	1100	1190	135	59
AC-FT	6040	7890	6670	20340	23500	21860	41530	168200	153500	173600	17470	8600
CAL YR 1979	TOTAL	163414	MEAN	448	MAX	3820	MIN	58				

11277200 CHERRY LAKE NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'33", long 119°54'47", in SE&NW¼ 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, 273,500 acre-ft (337 hm³) July 9, 11-15, gage height, 4,702.6 ft (1,433.35 m); minimum, 119,600 acre-ft (147 hm³) Dec. 29, gage height, 4,605.6 ft (1,403.79 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-FOOT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167600	152100	139500	125000	179000	189600	174300	194300	222400	271900	262000	216700
2	166800	151200	139600	126000	179100	189500	173900	196000	223200	272300	260500	215400
3	166100	150800	138900	126500	179900	189200	173400	198200	223600	272300	259500	214300
4	165300	151100	138100	126800	179800	188900	172900	200600	223600	273000	257900	213000
5	164400	150500	137200	127100	179600	188200	172900	203000	223000	272800	256300	211500
6	164000	149900	136500	127400	179600	187700	172600	205700	222700	272800	254700	210700
7	164000	149300	135800	127500	179300	187100	172200	207600	223200	272800	253000	210400
8	163000	148700	135100	127500	179000	186600	171900	209200	225100	273300	251400	209200
9	162600	148000	134900	127500	179000	186000	171700	210400	227200	273500	249900	208100
10	161700	147300	134100	127500	179600	185500	171600	210900	229600	273300	248100	207000
11	160900	147300	133200	129200	179300	184900	171600	210700	231700	273500	246600	205800
12	160200	147400	132200	139400	178800	184300	171700	210200	233400	273500	244900	204700
13	159400	146800	131400	160500	178400	183600	172300	209600	235100	273500	243000	203700
14	159300	145900	130400	170600	178700	183000	173100	208900	236100	273500	241300	203400
15	158700	145100	129400	174000	179000	182400	174000	208600	237900	273500	239700	202200
16	157800	144200	129200	176200	180400	182200	175000	208700	239900	273200	238200	201100
17	156900	143700	128200	177400	183800	181600	176400	209600	242500	273200	237300	200000
18	156100	143900	127200	178200	188700	181000	177900	211000	244900	273000	235800	198900
19	156900	143300	126100	178700	191200	180500	179600	213500	247600	272600	234400	197800
20	157500	142400	124800	179500	191900	179900	181600	216200	250000	272300	232700	196800
21	157600	141700	124000	179800	192700	178700	182700	219200	251900	271900	231200	196500
22	157300	141700	123000	179800	192700	178700	183300	222000	254000	271400	229700	195400
23	156700	140900	123000	179800	192500	178200	183300	223400	255600	270600	228200	194300
24	156100	140700	122400	179800	192200	177600	183500	223400	257000	270100	227400	193300
25	155800	141200	122500	179800	191900	177100	184100	222900	259000	269400	225900	192500
26	155500	141500	121800	179800	191200	176400	185500	222000	261300	268100	224400	191600
27	154900	141200	121000	179900	190900	175700	187300	221200	262700	267200	222900	190900
28	155000	140900	120300	179800	190600	175300	189000	220500	264200	266700	221400	190900
29	154100	140500	119600	179800	190100	174800	190800	220200	266400	265600	219700	190000
30	153600	140100	120500	179300	---	174800	192700	220400	269500	264600	218200	189200
31	152800	---	122800	179000	---	174500	---	221200	---	263200	217200	---
MAX	167600	152100	139600	179900	192700	189600	192700	223400	269500	273500	262000	216700
MIN	152800	140100	119600	125000	178400	174500	171600	194300	222400	263200	217200	189200
†	4628.8	4620.1	4607.9	4646.0	4653.1	4643.1	4654.7	4672.3	4700.4	4696.8	4669.9	4652.5
‡	-15000	-12700	-17300	+56200	+11100	-15600	+18200	+28500	+48300	-6300	-46000	-28000

CAL YR 1979 ‡ -3600

WTR YR 1980 ‡ +20700

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

11277300 CHERRY CREEK BELOW CHERRY VALLEY DAM, NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'04", long 119°54'59", in SE¼SW¼ sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 0.7 mi (1.1 km) downstream from Cherry Valley Dam, 3.5 mi (5.6 km) upstream from Eleanor Creek, 6.7 mi (10.8 km) north of Early Intake, and 7.2 mi (11.6 km) west of Hetch Hetchy.

DRAINAGE AREA.--118 mi² (306 km²).

PERIOD OF RECORD.--November 1956 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,337.08 ft (1,321.942 m) National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--Records excellent. Flow regulated by Cherry Lake (station 11277200) 0.7 mi (1.1 km) upstream. Diversion between Lake Eleanor (station 11277500) and Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake to Dion R. Holm powerplant began Aug. 1, 1960. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (since diversion to Dion R. Holm powerplant).--20 years (water years 1961-80), 28.0 ft³/s (0.793 m³/s), 20,290 acre-ft/yr (25.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,210 ft³/s (119 m³/s) July 10, 1974, gage height, 10.53 ft (3.210 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Apr. 10, 1957, Oct. 12, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) July 2, gage height, 8.11 ft (2.472 m); minimum daily, 5.2 ft³/s (0.15 m³/s) on many days October to December.

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	9.0	5.4	5.2	7.9	8.6	12	8.7	7.5	8.1	331	17	16
2	5.2	5.4	5.2	6.6	8.3	13	8.6	7.5	7.7	1510	17	16
3	5.2	5.9	5.3	6.3	8.3	14	8.6	7.4	7.7	915	17	16
4	5.2	5.7	5.2	6.1	8.3	14	9.4	7.2	7.7	389	17	16
5	5.2	5.6	5.2	6.0	8.0	15	11	7.3	7.7	537	17	16
6	5.2	5.6	5.2	5.9	8.0	14	9.5	7.6	7.7	501	17	16
7	5.2	7.1	5.2	5.9	7.8	13	9.3	7.5	7.7	287	17	16
8	5.2	5.5	5.2	5.9	7.8	13	9.0	7.5	7.5	20	17	16
9	5.2	5.2	5.2	7.6	7.7	12	8.8	8.4	7.5	224	17	16
10	5.2	5.2	5.2	10	7.7	12	8.6	9.1	7.5	211	17	16
11	5.2	5.2	5.2	19	7.5	13	8.5	8.6	7.5	52	17	16
12	5.2	5.2	5.2	48	7.5	12	8.3	8.3	7.5	83	17	16
13	5.2	5.2	5.2	54	7.5	12	8.3	8.5	7.5	97	17	16
14	5.2	5.2	5.2	37	9.8	11	8.3	8.6	7.5	75	17	16
15	5.2	5.2	5.2	26	11	11	8.1	8.3	7.5	53	16	16
16	5.2	5.2	5.2	22	11	11	7.7	8.3	7.5	33	16	16
17	5.2	5.7	5.2	22	18	11	7.7	7.9	7.5	19	16	16
18	5.2	5.2	5.2	18	25	10	7.7	7.7	7.5	17	16	16
19	6.3	5.2	5.2	15	33	10	7.7	7.7	7.5	17	16	16
20	6.1	5.2	5.2	14	24	10	7.9	7.7	7.5	17	16	16
21	5.5	5.2	5.3	13	37	9.9	7.8	7.7	7.5	17	16	16
22	5.4	5.3	5.2	12	24	9.6	7.7	7.7	7.5	17	16	16
23	5.4	5.2	5.3	11	19	9.8	7.7	7.7	7.5	17	16	16
24	5.4	5.2	6.2	10	17	9.6	7.7	7.7	7.5	17	16	16
25	5.5	5.4	5.8	10	16	9.6	7.6	8.1	7.5	17	16	16
26	5.4	5.8	5.4	9.7	14	9.3	7.5	8.3	7.5	17	16	16
27	5.4	5.4	5.4	9.4	14	9.3	7.5	7.9	7.5	17	16	16
28	5.4	5.4	5.3	9.3	15	9.0	7.6	7.8	7.5	17	16	16
29	5.4	5.2	5.2	9.3	13	8.9	7.5	7.7	7.5	17	16	16
30	5.4	5.2	6.3	9.0	---	8.9	7.5	7.7	11	17	16	16
31	5.4	---	9.1	8.6	---	8.9	---	8.0	---	17	16	---
TOTAL	169.4	162.4	168.6	454.5	403.8	345.8	247.8	244.9	230.3	5575	510	480
MEAN	5.46	5.41	5.44	14.7	13.9	11.2	8.26	7.90	7.68	180	16.5	16.0
MAX	9.0	7.1	9.1	54	37	15	11	9.1	11	1510	17	16
MIN	5.2	5.2	5.2	5.9	7.5	8.9	7.5	7.2	7.5	17	16	16
AC-FT	336	322	334	902	801	686	492	486	457	11060	1010	952
CAL YR 1979 TOTAL	3309.0			MEAN 9.07	MAX 21	MIN 5.2	AC-FT 6560					
WTR YR 1980 TOTAL	8992.5			MEAN 24.6	MAX 1510	MIN 5.2	AC-FT 17840					

SAN JOAQUIN RIVER BASIN

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, 27,600 acre-ft (34.0 hm³) Jan. 13, gage height, 4,661.5 ft (1,420.83 m); minimum 1,240 acre-ft (1.53 hm³) Dec. 19-23, gage height, 4,627.5 ft (1,410.46 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8710	2300	2110	3800	20100	24600	19100	24800	24700	24800	26700	24100
2	8430	2110	2010	4420	19800	24300	18800	25000	24700	24800	26700	24100
3	8160	1960	1920	3970	19400	24200	18600	25200	24600	24700	26600	24000
4	7880	1960	1870	3520	19300	24200	18300	25200	24500	24500	26600	23900
5	7540	1920	1770	3070	19100	24200	18300	25100	24300	24400	26500	23800
6	7130	1870	1720	2790	18600	24100	18200	25100	24300	24300	26500	23700
7	6850	1870	1670	2560	17900	23800	18100	25100	24400	24500	26400	23600
8	6580	1820	1670	2450	17700	23600	17900	25000	24600	25000	26300	23500
9	6510	1770	1620	2680	17400	23400	17700	24900	24800	25600	26200	23500
10	5960	1770	1580	3010	17300	23200	17800	24800	24800	26200	26100	23400
11	5540	1720	1580	3350	17000	23000	17900	24500	24800	26600	26100	23400
12	5210	1670	1530	3690	16700	22800	18000	24400	24800	27000	26000	23400
13	4930	1620	1480	27600	16600	22600	18400	24400	24700	27300	25900	23300
14	4650	1580	1430	26800	16500	22400	19000	24400	24600	27300	25700	23300
15	4420	1530	1380	26000	16500	22100	19600	24400	24700	27400	25600	23300
16	4140	1480	1380	2560	16600	22000	20200	24600	24800	27300	25600	23300
17	3860	1580	1330	25500	18800	21800	21100	24800	24800	27300	25500	23300
18	3580	1670	1290	25100	23100	21700	22200	24900	24800	27300	25300	23200
19	3580	1670	1240	24900	25000	21500	23400	25100	24800	27200	25200	23200
20	4200	1670	1240	24400	25100	21300	24200	25200	24800	27200	25200	23100
21	4200	1620	1240	23800	25200	21100	24300	25300	24800	27200	25100	23100
22	4080	1580	1240	23500	25200	21000	24000	25200	24700	27200	24900	23100
23	3920	1580	1240	23100	25200	20700	23700	24900	24600	27100	24800	22900
24	3690	1620	1380	22900	25200	20500	23600	24600	24500	27100	24800	22700
25	3520	1820	1430	22400	24700	20200	23700	24400	24600	27100	24700	22400
26	3520	2350	1480	22100	24900	20000	24100	24300	24600	26900	24600	22000
27	3410	2450	1430	21900	24800	19700	24400	24200	24600	26900	24500	21800
28	3240	2350	1430	21400	24800	19500	24600	24100	24500	27000	24400	21400
29	3010	2300	1430	21000	24600	19400	24700	24200	24600	27000	24300	21100
30	2790	2210	1430	20800	---	19300	24700	24400	24700	26900	24200	20900
31	2560	---	1420	20400	---	19200	---	24600	---	26800	24200	---
MAX	8710	2450	2110	27600	25200	24600	24700	25300	24800	27400	26700	24100
MIN	2560	1480	1240	2450	16500	19200	17700	24100	24300	24300	24200	20900
†	4630.2	4629.5	4628.9	4653.8	4658.3	4652.5	4658.4	4658.3	4658.4	4660.7	4657.9	4654.3
‡	-6460	-350	-290	+18480	+4200	-5400	+5500	-100	+100	+2100	-2600	-3300

CAL YR 1979 † +490
WTR YR 1980 ‡ +11880

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

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); 21 years (water years 1960-80), 67.6 ft³/s (1.914 m³/s), 48,980 acre-ft/yr (60.4 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, 6,790 ft³/s (192 m³/s) Jan. 14, gage height, 9.87 ft (3.008 m); minimum daily, 5.3 ft³/s (0.15 m³/s) Dec. 19, 20, 22.

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	8.0	5.6	6.4	7.2	7.2	86	6.7	770	693	708	161	38
2	6.5	5.6	6.5	6.6	7.1	79	6.7	890	666	901	160	37
3	6.5	5.8	6.5	6.3	7.0	78	6.7	1110	656	774	142	36
4	6.5	5.7	6.5	6.2	7.0	74	6.7	1170	571	635	116	35
5	6.4	5.6	6.2	6.1	6.8	71	7.9	1130	486	530	90	33
6	6.2	5.6	6.4	6.0	6.8	68	7.0	1190	437	463	87	31
7	6.2	5.6	6.5	6.0	6.6	60	6.7	1230	479	260	86	29
8	6.2	5.6	6.3	6.0	6.5	51	6.7	1100	603	61	85	27
9	6.2	5.6	6.2	8.0	6.5	44	6.6	1060	641	44	84	25
10	6.2	5.6	6.2	8.2	6.5	37	6.5	944	805	48	82	22
11	6.2	5.6	6.2	14	6.5	31	6.5	718	840	57	81	21
12	6.1	5.6	6.2	19	6.7	25	6.5	534	810	71	80	20
13	6.0	5.6	6.2	375	6.7	20	6.7	484	770	175	78	19
14	6.0	5.6	6.2	4060	7.4	15	6.7	503	654	303	76	17
15	6.0	5.6	6.2	1310	8.0	12	6.7	493	642	272	65	16
16	6.0	5.7	6.0	649	8.6	9.1	6.7	550	670	324	64	16
17	6.0	5.8	6.0	398	11	7.5	6.7	677	720	302	61	16
18	6.0	5.9	5.7	190	20	7.0	7.0	800	800	283	58	16
19	6.3	5.8	5.3	101	224	7.0	21	1030	795	293	57	15
20	6.2	5.8	5.3	76	509	7.0	167	1220	780	244	56	14
21	6.0	6.1	5.5	56	485	7.0	442	1320	755	236	55	14
22	6.0	6.2	5.3	42	330	7.0	353	1330	721	235	54	13
23	6.0	6.0	5.5	31	222	7.0	207	1130	653	234	53	13
24	6.0	6.1	6.4	17	167	7.0	118	958	596	234	52	11
25	6.0	6.2	6.1	11	127	7.0	112	567	587	233	51	12
26	6.0	6.6	6.0	8.4	107	7.0	217	430	621	232	49	11
27	6.0	6.2	5.7	7.3	100	6.8	410	358	602	230	47	11
28	6.0	6.3	5.6	7.2	99	6.7	610	330	549	190	45	11
29	5.7	6.4	5.8	7.4	94	6.7	665	335	581	153	43	11
30	5.6	6.2	7.4	7.2	---	6.7	715	385	654	164	41	11
31	5.6	---	9.5	7.2	---	6.7	---	556	---	162	40	---
TOTAL	190.6	175.6	191.8	7460.3	2606.9	864.2	4158.7	25302	19837	9051	2299	601
MEAN	6.15	5.85	6.19	241	89.9	27.9	139	816	661	292	74.2	20.0
MAX	8.0	6.6	9.5	4060	509	86	715	1330	840	901	161	38
MIN	5.6	5.6	5.3	6.0	6.5	6.7	6.5	330	437	44	40	11
AC-FT	378	348	380	14800	5170	1710	8250	50190	39350	17950	4560	1190
CAL YR 1979 TOTAL	19323.0			MEAN 52.9	MAX 1040	MIN 5.3	AC-FT 38330					
WTR YR 1980 TOTAL	72738.1			MEAN 199	MAX 4060	MIN 5.3	AC-FT 144300					

SAN JOAQUIN RIVER BASIN

11278300 CHERRY CREEK NEAR EARLY INTAKE, CA

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.

DRAINAGE AREA.--226 mi² (585 km²).

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).--20 years (water years 1961-80), 110 ft³/s (3.115 m³/s), 79,700 acre-ft/yr (98.3 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, 8,450 ft³/s (239 m³/s) Jan. 14, gage height, 12.01 ft (3.661 m); minimum daily, 13 ft³/s (0.37 m³/s) Oct. 18.

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	27	14	16	114	81	286	85	816	707	899	186	61
2	16	14	16	54	80	277	82	1000	679	2250	167	60
3	14	16	16	39	78	329	79	1150	672	1740	130	58
4	14	22	16	34	74	323	78	1220	597	1020	109	57
5	14	17	16	31	71	333	132	1150	524	1090	109	57
6	14	15	16	30	68	318	139	1160	473	993	108	56
7	14	15	16	29	64	278	107	1210	499	699	107	54
8	14	16	15	29	62	257	94	1090	608	113	106	52
9	14	15	15	43	60	240	87	1070	753	248	105	49
10	14	14	15	199	59	227	82	988	838	363	104	46
11	14	14	15	328	57	223	78	760	870	122	102	43
12	14	14	15	996	56	202	73	592	839	172	101	42
13	14	14	15	1110	54	184	71	548	770	268	100	41
14	14	14	15	4980	72	174	69	572	671	398	96	39
15	14	14	15	1750	205	169	67	554	644	350	89	39
16	14	14	15	974	184	159	64	584	697	373	87	38
17	14	23	15	711	368	147	62	694	761	353	85	37
18	13	19	15	458	574	142	60	856	823	328	85	37
19	19	16	15	303	859	133	68	1020	822	332	83	37
20	37	15	15	248	892	127	207	1190	812	302	82	36
21	18	15	17	207	1040	124	500	1290	773	277	81	35
22	16	15	19	173	717	118	433	1310	721	275	80	34
23	15	18	16	149	529	112	301	1130	657	273	79	34
24	15	16	33	129	430	110	199	822	604	272	78	32
25	15	17	40	108	371	106	171	608	589	270	76	29
26	16	30	25	99	338	102	281	481	618	267	75	33
27	15	21	21	91	320	99	460	409	606	212	72	30
28	15	18	20	91	376	95	636	382	560	172	68	31
29	14	17	19	97	323	92	718	380	577	173	66	31
30	14	17	24	89	---	90	772	423	645	187	64	31
31	14	---	79	83	---	87	---	562	---	187	63	---
TOTAL	489	499	620	13776	8462	5663	6255	26021	20409	14978	2943	1259
MEAN	15.8	16.6	20.0	444	292	183	209	839	680	483	94.9	42.0
MAX	37	30	79	4980	1040	333	772	1310	870	2250	186	61
MIN	13	14	15	29	54	87	60	380	473	113	63	29
AC-FT	970	990	1230	27320	16780	11230	12410	51610	40480	29710	5840	2500
CAL YR 1979	TOTAL	34162	MEAN	93.6	MAX	1030	MIN	13	AC-FT	67760		
WTR YR 1980	TOTAL	101374	MEAN	277	MAX	4980	MIN	13	AC-FT	201100		

11278400 CHERRY CREEK BELOW DION R. HOLM POWERHOUSE, NEAR MATHER, CA

LOCATION.--Lat 37°53'24", long 119°58'08", in NE¼ 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 except those for period Dec. 26 to Jan. 22, which are fair. 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.--17 years, 647 ft³/s (18.32 m³/s), 468,800 acre-ft/yr (578 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, 9,210 ft³/s (261 m³/s) Jan. 14, gage height, 13.86 ft (4.225 m); minimum daily, 157 ft³/s (4.45 m³/s) Oct. 7, 14.

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	644	632	650	410	715	1180	992	1800	1620	1870	1140	290
2	631	635	225	750	548	1020	992	1970	1690	3340	1120	738
3	629	596	700	720	302	1230	992	2120	1670	2870	919	738
4	639	172	704	740	711	1210	992	2190	1590	2010	1060	737
5	638	629	698	731	705	1240	1060	2170	1520	2050	1060	735
6	477	643	695	310	719	1230	1090	2130	1470	1840	1050	530
7	157	636	704	730	732	1180	1050	2160	1500	1680	1050	195
8	626	638	656	738	723	1160	1020	2080	1450	1040	1050	676
9	633	645	229	784	557	1140	1020	2040	1760	1190	1040	671
10	636	590	702	965	233	1130	1010	1980	1830	1340	1060	671
11	622	158	706	1100	721	1120	999	1610	1850	1060	1060	666
12	626	161	702	1900	720	1100	999	1590	1830	1110	1060	674
13	476	642	706	1600	720	1080	970	1540	1760	1220	1050	522
14	157	643	713	5660	732	1070	999	1560	1670	1380	1030	173
15	632	650	661	3000	891	1050	997	1540	1650	1320	917	661
16	630	645	224	2000	686	993	987	1570	1700	1350	915	661
17	633	616	702	1700	621	1040	971	1680	1760	1330	559	662
18	627	163	708	1400	915	1040	980	1840	1820	1300	903	656
19	639	639	711	1150	1560	1040	987	1980	1820	1300	909	660
20	506	636	714	960	1830	1040	1120	2140	1810	1110	901	522
21	166	641	723	1300	1900	1030	1470	2240	1760	1230	905	163
22	628	161	678	1100	1640	1020	1420	2250	1560	1230	901	662
23	627	653	228	1000	1450	1020	1360	2100	1650	1230	902	658
24	657	604	746	908	1350	1020	1360	1820	1600	1230	571	658
25	636	166	274	884	1280	1020	1240	1600	1580	1230	909	656
26	629	669	710	805	1250	1020	1210	1480	1610	1230	898	661
27	481	652	711	671	1220	1020	1400	1390	1600	1170	893	501
28	161	649	714	871	1280	1020	1610	1360	1560	1130	901	172
29	631	652	698	871	1220	999	1680	1350	1580	1120	893	659
30	629	649	221	868	---	943	1730	1400	1640	1140	889	657
31	625	---	780	860	---	992	---	1540	---	1140	539	---
TOTAL	17128	16265	18993	37486	27931	33397	34707	56220	49910	44790	29054	17285
MEAN	553	542	613	1209	963	1077	1157	1814	1664	1445	937	576
MAX	657	669	780	5660	1900	1240	1730	2250	1850	3340	1140	738
MIN	157	158	221	310	233	943	970	1350	1450	1040	539	163
AC-FT	33970	32260	37670	74350	55400	66240	68840	111500	99000	88840	57630	34280
CAL YR 1979 TOTAL	255808	MEAN	701	MAX	1750	MIN 157	AC-FT	507400				
WTR YR 1980 TOTAL	383166	MEAN	1047	MAX	5660	MIN 157	AC-FT	760000				

NOTE.--No gage-height record Dec. 26 to Jan. 22.

SAN JOAQUIN RIVER BASIN

11281000 SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'18", long 120°00'43", in SE4SE4 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.--57 years, 94.0 ft³/s (2.665 m³/s), 68,200 acre-ft/yr (84.1 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.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 14	0115	*5,520 156	10.12 3.085
Feb. 19	Unknown	3,690 105	9.05 2.758
Feb. 21	Unknown	2,470 70.0	8.10 2.469

Minimum daily, 8.2 ft³/s (0.23 m³/s) Oct. 5-7.

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	8.8	13	19	171	113	350	204	382	240	139	29	16
2	8.7	13	18	75	110	380	196	385	245	149	28	16
3	8.4	17	18	57	107	475	188	436	254	125	27	15
4	8.4	27	17	46	105	458	188	451	239	111	26	15
5	8.2	18	17	40	107	548	282	439	216	98	25	14
6	8.2	16	17	38	111	500	251	429	232	88	25	14
7	8.2	15	17	36	107	422	216	410	251	85	24	14
8	8.5	15	17	36	101	383	204	384	290	80	23	14
9	9.3	15	17	104	96	357	206	393	314	75	22	14
10	9.3	15	17	344	93	342	218	387	318	71	22	14
11	8.7	15	17	577	91	338	227	309	306	67	21	14
12	8.5	14	15	1530	88	313	237	285	288	64	20	14
13	8.6	14	16	2610	87	296	263	292	269	61	20	15
14	8.8	14	16	2740	159	288	283	309	241	60	19	14
15	9.1	14	16	1050	352	284	285	302	259	57	19	14
16	9.4	14	15	617	396	272	298	293	277	54	20	14
17	9.2	34	15	494	1050	263	326	313	280	52	20	14
18	9.3	27	15	413	1700	263	354	362	273	50	19	13
19	12	19	15	311	2020	247	364	412	261	47	19	14
20	39	16	15	259	1040	244	389	444	247	45	19	16
21	22	15	18	228	1130	240	358	444	230	43	18	14
22	16	17	18	205	700	229	306	452	212	41	17	14
23	14	19	16	182	540	221	271	369	190	40	17	13
24	16	19	70	167	475	222	262	301	179	38	17	13
25	14	19	73	158	420	216	271	265	175	37	19	13
26	17	30	33	147	385	209	310	244	172	35	19	12
27	16	31	25	137	370	203	347	226	155	33	18	11
28	15	23	23	138	445	201	384	214	145	33	17	11
29	14	20	22	142	385	204	376	207	146	32	16	11
30	13	19	50	124	---	214	379	220	142	31	16	11
31	13	---	188	119	---	212	---	237	---	30	16	---
TOTAL	378.6	557	865	13295	12883	9394	8443	10596	7046	1971	637	411
MEAN	12.2	18.6	27.9	429	444	303	281	342	235	63.6	20.5	13.7
MAX	39	34	188	2740	2020	548	389	452	318	149	29	16
MTN	8.2	13	15	36	87	201	188	207	142	30	16	11
AC-FT	751	1100	1720	26370	25550	18630	16750	21020	13980	3910	1260	815
CAL YR 1979 TOTAL	40455.6		MEAN 111	MAX 980	MIN 8.2	AC-FT 80240						
WTR YR 1980 TOTAL	66476.6		MEAN 182	MAX 2740	MIN 8.2	AC-FT 131900						

SAN JOAQUIN RIVER BASIN

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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.--64 years, 75.6 ft³/s (2.141 m³/s), 54,770 acre-ft/yr (67.5 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.--Peak discharges above base of 380 ft³/s (10.8 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. 14	0030	*2,280 64.6	8.54 2.603	May 4	0415	565 16.0	4.77 1.454
Feb. 19	1600	1,430 40.5	7.06 2.152	May 22	0330	699 19.8	5.22 1.591
Mar. 5	0645	402 11.4	4.14 1.262	June 18	0045	577 16.3	4.81 1.466

Minimum daily, 2.2 ft³/s (0.062 m³/s) Oct. 4-8.

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	2.9	5.0	11	73	90	190	130	405	320	228	24	11
2	2.7	5.1	10	42	87	207	125	429	331	257	22	10
3	2.3	6.8	9.8	31	85	251	120	468	330	203	21	9.8
4	2.2	11	9.3	26	83	234	121	497	301	189	20	9.2
5	2.2	7.2	8.9	24	83	293	152	462	287	167	19	8.7
6	2.2	6.4	8.9	21	86	260	146	479	311	138	18	8.4
7	2.2	5.8	8.9	20	86	225	137	484	343	129	17	8.3
8	2.2	5.8	8.9	20	83	203	132	459	394	120	16	8.1
9	2.3	5.8	8.9	51	79	192	131	460	438	112	15	8.1
10	2.4	5.8	9.0	167	77	185	144	408	455	104	16	8.2
11	2.5	5.8	9.1	219	76	187	153	335	445	93	17	8.1
12	2.5	5.6	6.9	547	74	174	159	305	420	86	18	7.9
13	2.5	5.5	8.2	1040	71	166	184	310	390	81	18	7.8
14	2.6	5.5	8.8	1360	113	162	210	313	359	79	17	8.0
15	2.5	5.5	8.5	560	167	158	217	306	393	78	17	7.2
16	2.7	5.4	8.2	365	197	154	233	321	428	67	17	7.3
17	2.7	12	7.3	312	395	146	267	365	441	62	17	7.1
18	2.7	12	7.2	250	940	146	297	424	438	59	17	6.9
19	3.1	8.9	7.9	193	1120	140	308	496	421	54	17	6.8
20	16	6.0	8.0	165	566	141	338	549	404	51	17	6.8
21	10	5.7	9.5	155	723	138	319	570	380	47	17	6.8
22	6.6	7.1	9.8	141	392	134	269	597	349	43	16	6.4
23	5.5	8.9	8.1	127	295	130	232	517	303	39	14	6.1
24	6.2	9.1	46	120	265	133	225	391	286	36	14	5.9
25	5.6	9.0	38	116	231	129	240	333	283	34	14	5.6
26	6.7	22	15	109	211	125	288	304	273	32	14	5.2
27	6.3	24	12	104	200	122	321	281	247	30	13	4.9
28	6.0	16	11	105	246	123	371	267	245	29	12	4.9
29	5.6	13	12	107	210	126	393	263	264	28	11	4.7
30	5.2	12	21	92	---	134	399	276	245	26	11	4.5
31	5.0	---	59	94	---	134	---	306	---	25	12	---
TOTAL	132.1	263.7	415.1	6756	7331	5242	6761	12380	10524	2726	508	218.7
MEAN	4.26	8.79	13.4	218	253	169	225	399	351	87.9	16.4	7.29
MAX	16	24	59	1360	1120	293	399	597	455	257	24	11
MIN	2.2	5.0	6.9	20	71	122	120	263	245	25	11	4.5
AC-FT	262	523	823	13400	14540	10400	13410	24560	20870	5410	1010	434
CAL YR 1979	TOTAL	32838.9	MEAN	90.0	MAX	699	MIN	2.2	AC-FT	65140		
WTR YR 1980	TOTAL	53257.6	MEAN	146	MAX	1360	MIN	2.2	AC-FT	105600		

SAN JOAQUIN RIVER BASIN

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.--21 years, 256 ft³/s (7.250 m³/s), 185,500 acre-ft/yr (229 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.--Peak discharges above base of 1,400 ft³/s (39.6 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. 13	2000	*19,400 549	21.47 6.544	May 4	0200	1,710 48.4	9.90 3.018
Feb. 18	0145	5,430 154	14.31 4.362	May 21	0045	1,750 49.6	9.98 3.042
Apr. 20	0200	1,620 45.9	9.72 2.963				

Minimum daily, 16 ft³/s (0.45 m³/s) on several days during October.

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	16	25	67	594	412	645	499	1240	617	446	62	27
2	16	25	61	321	393	685	471	1300	592	497	59	27
3	16	34	56	214	377	780	451	1350	580	407	55	26
4	16	52	52	169	366	790	452	1440	506	360	52	25
5	16	35	49	145	360	861	569	1370	470	318	51	25
6	16	30	48	132	369	821	582	1330	472	306	49	24
7	16	29	51	127	372	725	517	1280	522	278	47	24
8	16	29	55	126	362	661	500	1140	626	276	45	24
9	17	29	53	269	347	617	514	1110	707	257	42	25
10	17	29	53	667	333	599	566	824	726	238	40	25
11	17	28	50	856	323	596	606	643	688	227	39	25
12	17	27	42	5100	312	566	623	582	645	217	37	24
13	17	27	44	9870	301	546	739	592	590	209	35	23
14	17	27	41	6740	395	537	897	673	511	198	34	23
15	17	28	40	2620	834	541	892	702	562	190	34	24
16	17	34	38	2070	1350	525	957	720	611	177	35	24
17	17	67	36	1770	2890	517	1110	870	626	169	35	23
18	18	67	36	1370	4520	524	1240	1050	647	164	34	23
19	21	58	36	1010	4670	508	1270	1200	602	145	33	24
20	76	46	36	857	2650	516	1320	1330	599	131	34	24
21	52	42	42	767	2830	509	1110	1360	557	125	32	23
22	33	44	40	697	1980	486	809	1300	513	117	31	23
23	28	53	38	643	1450	475	650	1010	467	109	31	22
24	31	49	107	600	1230	490	624	672	444	102	31	22
25	28	98	138	571	1010	479	669	569	455	96	32	21
26	33	172	78	548	870	458	923	515	466	88	31	21
27	31	121	69	523	745	446	1090	478	422	81	30	20
28	29	88	67	501	770	451	1280	462	375	76	29	20
29	28	77	63	484	710	468	1370	462	421	75	28	20
30	26	72	163	457	---	498	1330	550	450	70	27	19
31	25	---	453	432	---	517	---	589	---	66	27	---
TOTAL	740	1542	2202	41250	33531	17837	24630	28713	16469	6215	1181	700
MEAN	23.9	51.4	71.0	1331	1156	575	821	926	549	200	38.1	23.3
MAX	76	172	453	9870	4670	861	1370	1440	726	497	62	27
MIN	16	25	36	126	301	446	451	462	375	66	27	19
AC-FT	1470	3060	4370	81820	66510	35380	48850	56950	32670	12330	2340	1390
CAL YR 1979	TOTAL	103112	MEAN	282	MAX	1650	MIN	13	AC-FT	204500		
WTR YR 1980	TOTAL	175010	MEAN	478	MAX	9870	MIN	16	AC-FT	347100		

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.--11 years, 7.61 ft³/s (0.216 m³/s), 5,510 acre-ft/yr (6.79 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.--Peak discharges above base of 150 ft³/s (4.25 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. 13	1600	*1,450 41.1	6.51 1.984	Feb. 21	1300	634 18.0	4.92 1.500
Feb. 17	0300	355 10.1	4.23 1.289	Mar. 5	2215	177 5.01	3.63 1.106
Feb. 19	1930	1,050 29.7	5.76 1.756				

Minimum, no flow for many days.

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	.08	2.6	5.6	20	6.4	5.2	2.5	1.0	.01	
2		0	.07	1.4	5.2	21	6.4	4.9	2.4	1.0	.01	
3		.23	.06	.94	4.8	32	6.4	4.6	2.2	1.0	.01	
4		.69	.06	.76	4.7	33	6.4	4.3	2.3	.93	.01	
5		.12	.05	.63	4.5	79	33	4.2	2.3	.80	.01	
6		.07	.05	.54	4.3	114	17	4.2	2.2	.72	0	
7		.05	.05	.49	4.1	62	11	4.1	2.0	.68	0	
8		.04	.04	.46	3.8	41	8.7	3.9	1.9	.63	0	
9		.04	.04	.29	3.4	31	7.9	5.7	1.8	.60	0	
10		.03	.04	175	3.3	25	7.2	19	1.7	.56	0	
11		.03	.04	289	3.2	23	6.7	7.5	1.6	.51	0	
12		.03	.04	513	3.1	21	6.4	6.4	1.6	.45	0	
13		.03	.04	593	3.0	18	6.3	6.1	1.6	.40	0	
14		.03	.04	443	21	16	6.1	5.7	1.6	.39	0	
15		.03	.04	154	67	16	6.1	5.1	1.5	.43	0	
16		.07	.03	89	115	14	6.0	4.6	1.5	.37	0	
17		1.7	.03	83	225	13	5.8	4.2	1.4	.32	0	
18		.69	.03	80	159	12	5.6	3.8	1.3	.27	0	
19		.31	.03	39	585	11	5.5	3.4	1.2	.22	0	
20		.19	.03	25	309	10	5.5	3.1	1.2	.19	0	
21		.15	.03	19	469	9.9	6.5	2.9	1.1	.16	0	
22		.16	.03	14	158	9.4	6.3	2.7	1.1	.12	0	
23		.27	.03	12	74	8.6	6.2	2.7	1.1	.10	0	
24		.24	1.5	9.9	47	8.3	6.1	3.0	1.0	.08	0	
25		.24	.85	8.8	34	8.4	6.0	3.4	1.0	.06	0	
26		.80	.52	7.3	28	8.2	5.6	3.4	.97	.05	0	
27		.36	.40	6.4	24	7.6	5.3	3.0	.91	.04	0	
28		.22	.32	8.2	38	7.1	5.3	2.9	.86	.03	0	
29		.13	.29	11	24	6.8	6.1	2.8	.80	.02	0	
30		.09	.28	7.6	---	6.7	5.8	2.6	.89	.02	0	
31		---	3.9	6.2	---	6.5	---	2.6	---	.02	0	---
TOTAL	0	7.04	9.04	2630.22	2430.0	699.5	229.6	142.0	45.53	12.17	.05	0
MEAN	0	.23	.29	84.8	83.8	22.6	7.65	4.58	1.52	.39	.002	0
MAX	0	1.7	3.9	593	585	114	33	19	2.5	1.0	.01	0
MIN	0	0	.03	.46	3.0	6.5	5.3	2.6	.80	.02	0	0
AC-FT	0	14	18	5220	4820	1390	455	282	90	24	.10	0
CAL YR 1979	TOTAL	2895.11	MEAN	7.93	MAX	368	MIN	0	AC-FT	5740		
WTR YR 1980	TOTAL	6205.15	MEAN	17.0	MAX	593	MIN	0	AC-FT	12310		

SAN JOAQUIN RIVER BASIN

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 except those for period of no gage-height record, which are poor. No storage or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--18 years, 28.1 ft³/s (0.796 m³/s), 20,360 acre-ft/yr (25.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,560 ft³/s (72.5 m³/s) 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 9.8 ft (2.99 m) from floodmarks, discharge, 2,560 ft³/s (72.5 m³/s) by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 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. 13	2030	*2,560 72.5	8.80 2.682	Feb. 28	0230	167 4.73	4.18 1.274
Feb. 19	0630	1,010 28.6	6.39 1.948	May 14	1700	161 4.56	4.15 1.265

Minimum daily, 0.37 ft³/s (0.010 m³/s) Oct. 2, 3, 6.

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	.40	3.2	4.0	63	47	120	56	97	45	21	3.9	1.9
2	.37	2.2	3.7	29	46	123	54	94	44	21	3.8	1.8
3	.37	6.5	3.5	21	45	134	54	98	43	21	3.6	1.7
4	.38	7.6	3.3	17	45	127	54	101	45	20	3.5	1.7
5	.38	5.2	3.2	15	46	130	72	100	43	20	3.2	1.7
6	.37	4.1	3.0	14	47	116	67	96	40	19	2.2	1.6
7	.39	3.5	2.9	15	45	105	59	90	37	18	2.3	1.6
8	.49	3.3	2.7	16	43	99	53	84	37	18	2.7	1.7
9	.61	3.1	2.7	69	41	94	53	35	37	17	2.8	1.7
10	.55	2.5	2.7	85	40	90	56	82	37	17	2.7	1.7
11	.54	2.4	2.4	156	39	87	59	71	36	16	2.7	1.7
12	.56	2.2	2.1	554	37	83	62	70	35	15	2.6	1.7
13	.79	2.1	2.1	960	37	79	68	74	34	15	2.5	1.7
14	.65	2.0	2.2	757	58	77	73	95	32	14	2.6	1.7
15	.71	2.0	2.3	349	139	75	78	92	30	13	2.6	1.7
16	.67	2.0	2.5	267	237	72	82	83	29	13	2.6	1.7
17	.63	15	2.0	224	462	69	88	81	28	12	2.7	1.7
18	.76	8.1	2.0	173	553	68	95	83	28	12	2.6	1.8
19	4.0	5.4	2.0	131	793	65	100	85	28	11	2.6	1.8
20	17	4.2	2.0	110	388	64	106	87	27	11	3.2	1.8
21	6.6	4.2	2.4	95	365	63	103	85	27	10	2.8	1.8
22	4.5	4.2	4.3	83	257	61	92	82	26	9.6	2.6	1.8
23	3.6	4.5	4.6	76	205	59	83	75	26	7.7	1.5	1.7
24	3.0	5.0	18	70	173	58	79	69	25	5.7	1.8	1.7
25	4.0	6.0	27	65	151	57	77	63	24	5.2	2.0	1.7
26	4.4	12	17	61	138	56	79	57	24	4.5	2.0	1.5
27	3.5	7.7	9.4	57	134	56	84	53	23	4.4	2.0	1.4
28	2.9	5.9	8.2	56	156	55	97	50	22	4.6	1.9	1.4
29	2.4	5.1	7.2	55	133	56	104	47	22	4.6	1.9	1.4
30	2.0	4.4	39	51	---	56	100	44	21	4.1	1.9	1.4
31	2.0	---	75	49	---	58	---	45	---	4.1	1.9	---
TOTAL	69.52	145.6	265.4	4743	4900	2512	2287	2418	955	388.5	79.7	50.2
MEAN	2.24	4.85	8.56	153	169	81.0	76.2	78.0	31.8	12.5	2.57	1.67
MAX	17	15	75	960	793	134	106	101	45	21	3.9	1.9
MIN	.37	2.0	2.0	14	37	55	53	44	21	4.1	1.5	1.4
AC-FT	138	289	526	9410	9720	4980	4540	4800	1890	771	158	100
CAL YR 1979	TOTAL	10848.03	MEAN	29.7	MAX	236	MIN	.30	AC-FT	21520		
WTR YR 1980	TOTAL	18813.92	MEAN	51.4	MAX	960	MIN	.37	AC-FT	37320		

NOTE.--No gage-height record Mar. 9 to Apr. 15.

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, 1,938,000 acre-ft (2.39 km³) July 25, elevation, 822.8 ft (250.79 m); minimum, 1,563,000 acre-ft (1.93 km³) Nov. 2, elevation, 790.3 ft (240.88 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1602000	1565000	1570000	1602000	1695000	1750000	1623000	1592000	1728000	1822000	1933000	1861000
2	1598000	1563000	1571000	1602000	1690000	1744000	1619000	1596000	1730000	1840000	1931000	1855000
3	1597000	1565000	1571000	1601000	1685000	1740000	1616000	1599000	1732000	1857000	1927000	1850000
4	1594000	1566000	1571000	1599000	1679000	1737000	1613000	1603000	1732000	1871000	1925000	1845000
5	1590000	1567000	1571000	1599000	1676000	1736000	1614000	1606000	1732000	1880000	1922000	1840000
6	1588000	1567000	1571000	1599000	1671000	1735000	1612000	1611000	1732000	1890000	1920000	1834000
7	1587000	1566000	1571000	1598000	1666000	1732000	1610000	1614000	1732000	1899000	1916000	1831000
8	1584000	1566000	1572000	1596000	1661000	1728000	1606000	1618000	1732000	1904000	1913000	1825000
9	1583000	1566000	1573000	1596000	1656000	1723000	1604000	1625000	1732000	1910000	1911000	1820000
10	1582000	1566000	1573000	1602000	1650000	1717000	1601000	1630000	1735000	1915000	1907000	1814000
11	1579000	1567000	1572000	1615000	1645000	1712000	1598000	1634000	1736000	1918000	1905000	1809000
12	1578000	1567000	1572000	1652000	1640000	1706000	1596000	1637000	1738000	1912000	1904000	1805000
13	1576000	1566000	1571000	1693000	1636000	1699000	1592000	1640000	1740000	1928000	1904000	1799000
14	1575000	1566000	1571000	1742000	1634000	1693000	1590000	1643000	1742000	1931000	1901000	1794000
15	1573000	1566000	1573000	1760000	1636000	1687000	1588000	1644000	1743000	1932000	1901000	1789000
16	1571000	1566000	1574000	1780000	1642000	1679000	1586000	1649000	1746000	1933000	1897000	1785000
17	1570000	1566000	1574000	1773000	1657000	1672000	1584000	1653000	1748000	1935000	1895000	1780000
18	1569000	1568000	1574000	1775000	1677000	1662000	1584000	1657000	1751000	1936000	1893000	1774000
19	1568000	1568000	1574000	1772000	1712000	1693000	1584000	1662000	1757000	1937000	1889000	1769000
20	1569000	1568000	1574000	1766000	1732000	1656000	1584000	1668000	1762000	1937000	1886000	1764000
21	1569000	1568000	1575000	1760000	1761000	1653000	1584000	1674000	1769000	1937000	1884000	1760000
22	1569000	1568000	1576000	1754000	1770000	1650000	1585000	1680000	1774000	1936000	1880000	1755000
23	1568000	1568000	1577000	1747000	1772000	1648000	1584000	1688000	1780000	1936000	1878000	1753000
24	1568000	1568000	1581000	1739000	1772000	1646000	1583000	1696000	1786000	1936000	1874000	1752000
25	1568000	1569000	1585000	1731000	1769000	1642000	1583000	1702000	1790000	1938000	1872000	1750000
26	1568000	1569000	1586000	1723000	1766000	1640000	1583000	1707000	1795000	1937000	1871000	1748000
27	1568000	1569000	1587000	1715000	1761000	1638000	1583000	1713000	1800000	1937000	1869000	1747000
28	1568000	1569000	1588000	1708000	1759000	1635000	1585000	1717000	1803000	1937000	1868000	1747000
29	1567000	1569000	1589000	1705000	1754000	1631000	1587000	1722000	1807000	1936000	1867000	1745000
30	1566000	1569000	1592000	1702000	---	1628000	1590000	1724000	1812000	1936000	1866000	1744000
31	1566000	---	1597000	1698000	---	1625000	---	1727000	---	1935000	1864000	---
MAX	1602000	1569000	1597000	1780000	1772000	1750000	1623000	1727000	1812000	1938000	1933000	1861000
MIN	1566000	1563000	1570000	1596000	1634000	1625000	1583000	1592000	1728000	1822000	1864000	1744000
†	790.5	790.8	793.4	802.6	807.5	796.0	792.8	805.1	812.4	822.5	816.8	806.6
‡	-39000	+3000	+28000	+101000	+56000	-129000	-35000	+137000	+85000	+123000	-71000	-120000

CAL YR 1979 ‡ +89000

WTR YR 1980 ‡ +139000

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

‡ Change in contents, in acre-feet.

SAN JOAQUIN RIVER BASIN

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.--77 years, 409 ft³/s (11.58 m³/s), 296,300 acre-ft/yr (365 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	852	38	201	43	0	.08	458	887	891	626	1240	1550
2	781	62	29	46	0	.07	456	886	890	550	1010	1380
3	657	39	795	46	0	.05	755	884	891	550	936	995
4	880	38	771	46	0	.05	930	881	894	329	938	1070
5	616	843	724	45	0	.05	931	977	896	546	939	1200
6	1100	735	826	43	0	.03	931	882	895	329	935	1210
7	305	690	684	46	0	.03	802	880	890	544	1010	1210
8	442	755	179	46	0	.02	641	879	890	547	1070	1200
9	430	702	42	46	0	0	600	878	889	548	1070	1200
10	557	199	952	46	0	0	599	878	893	643	1070	1200
11	484	27	921	46	0	0	726	880	894	918	1100	1200
12	344	27	950	45	0	0	860	893	932	1110	1120	943
13	304	805	953	48	0	0	857	901	954	182	1040	797
14	302	773	851	54	0	0	857	898	953	740	997	792
15	90	806	370	47	0	0	856	898	953	897	997	858
16	648	733	55	46	0	0	851	898	946	1060	998	892
17	901	180	1020	48	0	0	949	896	947	1160	998	890
18	183	29	1040	47	0	0	1370	893	950	1040	1000	887
19	39	868	1000	46	.04	0	1550	891	951	1020	965	829
20	38	852	46	46	.15	0	1510	889	952	1020	936	784
21	37	849	46	46	.17	15	1010	894	952	1120	940	782
22	39	28	45	46	.14	265	698	894	951	1190	942	781
23	39	369	44	46	.13	448	698	895	952	1210	940	634
24	39	261	45	23	.13	445	695	896	950	1230	940	521
25	39	27	44	.12	.12	451	690	896	950	1150	798	626
26	39	853	45	.04	.11	451	815	895	1020	1080	642	485
27	39	862	45	.03	.10	453	891	896	1090	883	637	485
28	37	805	45	.03	.09	459	888	894	1100	1070	691	480
29	38	806	44	.01	.08	458	889	891	1100	1170	754	512
30	38	729	43	.01	---	457	890	889	1260	1200	727	652
31	38	---	43	0	---	457	---	891	---	1260	729	---
TOTAL	10375	14790	12898	1087.24	1.26	4359.38	25653	27680	28676	26922	29109	27045
MEAN	335	493	416	35.1	.043	141	855	893	956	868	939	902
MAX	1100	868	1040	54	.17	459	1550	977	1260	1260	1240	1550
MIN	37	27	29	0	0	0	456	878	889	182	637	480
AC-FT	20580	29340	25580	2160	2.5	8650	50880	54900	56880	53400	57740	53640
CAL YR 1979 TOTAL	198050.25			MEAN 543	MAX 1380	MIN 0	AC-FT 392800					
WTR YR 1980 TOTAL	208595.88			MEAN 570	MAX 1550	MIN 0	AC-FT 413700					

SAN JOAQUIN RIVER BASIN

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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.--82 years, 625 ft³/s (17.70 m³/s), 452,800 acre-ft/yr (558 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200					0 1990		1540	1180	1700	2170	1440
2	769					0 1560		1550	1200	1650	2370	1350
3	945					0 1020		1560	1210	1630	2380	1310
4	1390					0 3.0		1570	1550	821	2420	1300
5	2150					0 780		1380	1820	1620	2400	1330
6	589					0 1010		1380	1810	800	2410	1330
7	731					0 1780		1180	1810	1620	2360	908
8	1290					0 2720		1370	1810	1630	2150	1340
9	671					0 2720		1490	1630	1620	2170	1330
10	734					0 2720		1370	1490	1760	2210	1340
11	729					0 2700		1210	1500	2060	1900	1340
12	663					0 2090		1220	1490	2030	1430	1320
13	1550					0 1530		1240	1490	784	1160	1320
14	559					0 411		1260	1490	2900	946	900
15	26					0 .46		1220	1490	3110	1280	1320
16	12					0 0		1240	1490	2850	1930	1310
17	11					0 0		1240	1690	2680	1890	1310
18	.81					0 0		1220	1810	2750	1900	1310
19	.76					0 324		1190	1810	2910	1920	1310
20	.70					0 1550		1170	1820	2910	2150	1320
21	.60					1200 2240		1520	1820	2760	2130	901
22	.31					2250 2710		1800	1820	2690	2120	1280
23	0					83 2710		1800	1820	2720	2120	1640
24	0					678 2710		1800	1820	2600	2120	1660
25	0					1830 2490		1800	1820	2020	1750	1620
26	0					1450 1570		1790	1820	2080	1670	1580
27	0					1560 1500		1790	1820	2220	1610	1110
28	0					1560 1500		1790	1660	2070	1560	565
29	0					1550 1510		1790	1600	2030	1520	1590
30	0				---	1550 1520		1450	1600	2010	1520	1520
31	0	---			---	2010	---	1190	---	2010	1510	---
TOTAL	14022.18	0	0	0	0	15721	45368.46	45120	49190	65045	59176	39204
MEAN	452	0	0	0	0	507	1512	1455	1640	2098	1909	1307
MAX	2150	0	0	0	0	2250	2720	1800	1820	3110	2420	1660
MIN	0	0	0	0	0	0	0	1170	1180	784	946	565
AC-FT	27810	0	0	0	0	31180	89990	89500	97570	129000	117400	77760
CAL YR 1979	TOTAL	289516.18	MEAN	793	MAX	2320	MIN	0	AC-FT	574300		
WTR YR 1980	TOTAL	332846.64	MEAN	909	MAX	3110	MIN	0	AC-FT	660200		

SAN JOAQUIN RIVER BASIN

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 255 ft³/s (7.22 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).--10 years, 621 ft³/s (17.59 m³/s), 449,900 acre-ft/yr (555 hm³/yr).
(Combined river and canals).--10 years, 1,901 ft³/s (53.84 m³/s), 1,377,000 acre-ft/yr (1.70 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, 7,330 ft³/s (208 m³/s) Mar. 18, gage height, 12.98 ft (3.956 m); minimum daily, 0.7 ft³/s (0.19 m³/s) July 13.
Combined flow, maximum daily discharge, 7,280 ft³/s (206 m³/s) Mar. 18; minimum daily, 344 ft³/s (9.74 m³/s) Oct. 21.

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	861	1450	490	463	4610	7130	2020	2220	2460	214	141	14
2	825	1310	435	2500	4610	7160	2520	2220	2440	17	15	1230
3	594	736	522	2490	4610	7170	2770	2230	2430	15	14	1680
4	394	404	540	2600	4620	7170	3670	2240	2050	14	13	1610
5	273	470	530	2030	4650	7200	2850	2310	1730	14	13	1460
6	478	508	531	455	4650	7200	2540	2400	1730	14	13	1460
7	203	569	526	2550	4670	7190	1950	2620	1730	13	13	959
8	617	497	484	2590	4670	7190	1160	2460	1630	13	13	1450
9	779	494	437	2650	4670	7190	1180	2330	1940	13	13	1490
10	795	486	562	2640	4690	7190	1200	2430	2130	13	13	1470
11	772	439	570	2570	4690	7190	1100	2570	2120	78	13	1470
12	771	428	582	2430	4290	7190	1530	2550	2090	18	14	1770
13	207	519	568	4820	4260	7200	2170	2540	2070	6.7	13	1920
14	221	548	561	4900	4270	7220	3290	2540	2070	21	13	1270
15	2260	512	503	4730	4300	7240	3800	2580	2070	125	13	1490
16	1460	532	432	5190	4330	7240	3810	2580	2080	169	13	1700
17	916	513	586	6640	3440	7270	3710	2590	1820	184	13	1690
18	1440	432	593	7080	3960	7280	3260	2600	1650	134	14	1750
19	1520	563	548	7030	4730	6090	2740	2600	1620	16	98	1890
20	1180	550	1350	7010	4780	4640	1460	2590	1620	15	14	1920
21	306	549	1300	7000	5450	3380	1300	2190	1620	117	14	1380
22	1520	442	705	7000	7180	1900	1130	1850	1620	156	13	1430
23	1520	490	450	6980	7180	4020	1130	1850	1620	151	13	347
24	1530	497	737	6980	7170	3460	1130	1840	1540	141	13	73
25	1510	455	458	7030	7160	2220	1330	1810	1550	168	13	115
26	1410	527	992	7030	7180	2590	2170	1820	1480	78	14	15
27	1180	550	1150	7030	7180	2480	2200	1810	1420	18	14	13
28	311	537	1120	6210	7180	2490	2210	1820	1580	145	13	12
29	1550	519	596	4610	7170	2500	2210	1830	1610	149	13	37
30	1490	524	459	4610	---	2510	2210	2180	1480	143	13	164
31	1460	---	608	4610	---	2050	---	2460	---	133	13	---
TOTAL	30353	17050	19925	142458	152350	169950	65750	70660	55000	2505.7	625	33279
MEAN	979	568	643	4595	5253	5482	2192	2279	1833	80.8	20.2	1109
MAX	2260	1450	1350	7080	7180	7280	3810	2620	2460	214	141	1920
MIN	203	404	432	455	3440	1900	1100	1810	1420	6.7	13	12
AC-FT	60210	33820	39520	282600	302200	337100	130400	140200	109100	4970	1240	66010
CAL YR 1979	TOTAL	333437.1	MEAN	914	MAX	3480	MIN	1.2	AC-FT	661400		
WTR YR 1980	TOTAL	759905.7	MEAN	2076	MAX	7280	MIN	6.7	AC-FT	1507000		

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 1979 TO SEPTEMBER 1980

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2910	1490	691	506	4610	7130	4470	4650	4530	2540	3550	3000
2	2380	1370	464	2550	4610	7160	4540	4660	4530	2220	3400	3960
3	2190	775	1320	2540	4610	7170	4550	4670	4530	2200	3330	3990
4	2660	442	1310	2650	4620	7170	4600	4690	4490	1160	3370	3980
5	3040	1310	1250	2080	4650	7200	4560	4670	4450	2180	3350	3990
6	2170	1240	1360	498	4650	7200	4480	4660	4440	1140	3360	4000
7	1240	1260	1210	2600	4670	7190	4530	4680	4430	2170	3380	3080
8	2350	1250	663	2640	4670	7190	4520	4710	4330	2190	3230	3990
9	1880	1200	479	2700	4670	7190	4500	4700	4460	2180	3250	4020
10	2090	685	1510	2690	4690	7190	4520	4680	4510	2410	3290	4010
11	1980	466	1490	2620	4690	7190	4530	4660	4510	3060	3010	4010
12	1780	455	1530	2480	4290	7190	4480	4660	4510	3160	2560	4030
13	2060	1320	1520	4870	4260	7200	4560	4680	4510	973	2210	4040
14	1080	1320	1410	4950	4270	7220	4560	4700	4510	3660	1950	2960
15	2380	1320	873	4780	4300	7240	4660	4700	4510	4140	2290	3670
16	2120	1270	487	5240	4330	7240	4660	4720	4520	4080	2940	3900
17	1830	693	1610	6690	3440	7270	4660	4730	4460	4020	2900	3890
18	1620	461	1630	7130	3960	7280	4630	4710	4410	3920	2910	3950
19	1560	1430	1550	7080	4730	6090	4610	4680	4380	3950	2990	4030
20	1220	1400	1400	7060	4780	4640	4520	4650	4390	3950	3100	4020
21	344	1400	1350	7050	5450	4600	4550	4600	4390	4000	3080	3060
22	1560	470	750	7050	7180	4420	4540	4540	4390	4040	3070	3490
23	1560	859	494	7030	7180	4550	4540	4550	4390	4080	3070	2620
24	1570	758	782	7000	7170	4580	4540	4540	4310	3970	3070	2250
25	1550	482	502	7030	7160	4500	4510	4510	4320	3340	2560	2370
26	1450	1380	1040	7030	7180	4490	4560	4510	4320	3240	2320	2090
27	1220	1410	1200	7030	7180	4490	4590	4500	4330	3120	2260	1610
28	348	1340	1170	6210	7180	4510	4600	4500	4340	3290	2260	1060
29	1590	1330	640	4610	7170	4510	4610	4510	4310	3350	2280	2140
30	1530	1250	502	4610	---	4520	4620	4520	4340	3350	2260	2330
31	1500	---	651	4610	---	4520	---	4540	---	3400	2250	---
TOTAL	54762	31836	32838	143614	152350	190040	136800	143480	132850	94483	88850	99540
MEAN	1767	1061	1059	4633	5253	6130	4560	4628	4428	3048	2866	3318
MAX	3040	1490	1630	7130	7180	7280	4660	4730	4530	4140	3550	4040
MIN	344	442	464	498	3440	4420	4470	4500	4310	973	1950	1060
AC-FT	108600	63150	65130	284900	302200	376900	271300	284600	263500	187400	176200	197400
CAL YR 1979	TOTAL	821110	MEAN	2250	MAX	3790	MIN	232	AC-FT	1629000		
WTR YR 1980	TOTAL	1301443	MEAN	3556	MAX	7280	MIN	344	AC-FT	2581000		

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, 17.0°C Aug. 11, 12; minimum recorded, 9.0°C Mar. 20, 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.0	11.5	11.0	11.5	11.0	11.5	11.0	---	---	---	---
2	12.0	11.0	11.0	10.5	11.5	11.0	11.5	11.0	---	---	---	---
3	11.5	11.0	11.0	11.0	11.5	11.0	11.5	11.0	---	---	---	---
4	12.0	11.0	11.5	11.0	11.5	11.0	11.5	11.0	---	---	---	---
5	12.5	11.0	11.0	11.0	11.0	11.0	11.5	11.0	---	---	---	---
6	12.0	10.5	11.5	10.5	11.5	11.0	11.5	11.0	---	---	---	---
7	12.0	11.0	11.0	11.0	11.5	11.0	11.5	11.0	---	---	---	---
8	12.0	11.0	11.5	10.5	11.5	11.0	11.5	11.0	---	---	---	---
9	11.5	11.0	11.5	11.0	11.5	11.0	11.5	11.0	---	---	---	---
10	11.5	11.0	11.5	10.5	11.5	11.0	11.0	11.0	---	---	---	---
11	11.5	10.5	11.5	10.5	11.5	11.0	11.5	11.0	---	---	---	---
12	11.5	11.0	11.0	10.5	11.5	11.0	11.5	11.0	---	---	---	---
13	11.5	11.0	11.0	10.5	11.5	11.0	11.5	11.0	---	---	---	---
14	12.0	10.5	11.0	10.5	11.5	11.0	11.0	11.0	---	---	---	---
15	11.5	11.0	11.0	10.5	11.5	11.0	11.0	11.0	---	---	9.5	9.5
16	12.0	11.0	11.0	11.0	11.5	11.0	11.0	11.0	---	---	9.5	9.5
17	11.5	11.0	11.5	10.5	11.5	10.5	11.0	10.0	---	---	9.5	9.5
18	11.5	11.0	11.0	10.5	11.5	11.0	10.0	10.0	---	---	9.5	9.5
19	11.5	11.0	11.0	10.5	11.5	11.0	10.5	10.0	---	---	9.5	9.5
20	11.5	10.5	11.0	10.5	11.5	11.0	10.5	10.0	---	---	9.5	9.0
21	11.5	10.5	11.0	10.5	11.5	11.0	10.0	10.0	---	---	9.5	9.0
22	11.5	11.0	11.0	10.5	11.5	11.0	10.0	10.0	---	---	---	---
23	11.0	11.0	11.0	10.5	11.0	11.0	10.0	10.0	---	---	---	---
24	11.5	10.5	11.0	10.5	11.0	11.0	10.0	10.0	---	---	---	---
25	11.5	10.5	11.0	10.5	11.5	11.0	10.0	10.0	---	---	---	---
26	11.5	10.0	11.0	10.5	11.0	10.5	10.0	10.0	---	---	---	---
27	11.5	10.5	11.0	10.5	11.5	11.0	10.0	10.0	---	---	---	---
28	11.5	11.0	11.5	11.0	11.5	11.0	10.0	9.5	---	---	---	---
29	11.5	10.5	11.5	11.0	11.5	11.0	10.0	9.5	---	---	---	---
30	11.5	10.5	11.5	11.0	11.5	11.0	10.0	9.5	---	---	---	---
31	11.5	11.0	---	---	11.5	11.5	9.5	9.5	---	---	---	---
MONTH	12.5	10.0	11.5	10.5	11.5	10.5	11.5	9.5	---	---	---	---
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	---	---	14.0	11.5	16.5	12.0
2	---	---	---	---	---	---	---	---	14.5	11.5	13.5	11.5
3	---	---	---	---	---	---	---	---	16.5	12.0	12.0	11.5
4	9.5	9.5	---	---	---	---	---	---	14.5	12.0	12.0	11.5
5	9.5	9.5	---	---	---	---	---	---	14.5	12.0	12.0	11.5
6	10.0	9.5	---	---	---	---	---	---	14.5	12.0	12.0	11.5
7	10.0	9.5	---	---	---	---	---	---	15.0	12.0	12.0	11.5
8	10.0	9.5	---	---	---	---	---	---	15.5	12.0	12.0	11.5
9	---	---	---	---	---	---	---	---	15.5	12.0	12.5	11.5
10	---	---	---	---	---	---	---	---	16.5	12.0	12.0	11.5
11	---	---	---	---	---	---	---	---	17.0	12.0	12.5	11.5
12	---	---	---	---	---	---	---	---	17.0	12.0	12.5	12.0
13	---	---	---	---	---	---	---	---	15.0	12.0	12.5	11.5
14	---	---	---	---	---	---	---	---	14.5	12.0	12.0	11.5
15	---	---	---	---	---	---	---	---	14.5	12.0	12.0	11.5
16	---	---	---	---	---	---	---	---	15.5	12.0	12.5	11.5
17	---	---	---	---	---	---	---	---	14.5	12.0	12.0	12.0
18	---	---	---	---	---	---	---	---	14.5	12.0	12.5	12.0
19	---	---	---	---	---	---	---	---	13.0	11.5	12.5	12.0
20	---	---	---	---	---	---	---	---	14.5	12.0	12.5	12.0
21	---	---	---	---	---	---	---	---	15.5	12.0	12.5	12.0
22	---	---	---	---	---	---	---	---	14.0	12.0	12.5	12.0
23	---	---	---	---	---	---	---	---	15.5	12.0	14.0	12.0
24	---	---	---	---	---	---	---	---	14.0	12.0	15.0	12.0
25	---	---	---	---	---	---	---	---	14.5	12.0	13.5	12.0
26	---	---	---	---	---	---	---	---	14.5	12.0	14.5	12.0
27	---	---	---	---	---	---	---	---	14.5	12.0	15.5	12.5
28	---	---	---	---	---	---	---	---	13.5	12.0	15.0	12.5
29	---	---	---	---	---	---	---	---	14.5	12.0	14.0	12.0
30	---	---	---	---	---	---	---	---	15.0	12.0	14.0	12.0
31	---	---	---	---	---	---	13.0	11.5	16.5	12.0	---	---
MONTH	---	---	---	---	---	---	---	---	17.0	11.5	16.5	11.5

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)
OCT 10...	1030	41	7.0	10.0	9.7	2	.5	18	4.0	2.0	2.0
JAN 09...	1040	41	7.2	11.0	11.3	--	--	18	4.0	2.0	2.0
FEB 13...	1445	--	7.3	8.0	11.1	--	--	--	--	--	--
APR 09...	1030	44	7.2	10.5	11.7	2	.6	18	4.0	2.0	2.0
MAY 07...	0815	--	7.2	10.0	12.7	4	1.3	--	--	--	--
JUN 11...	1215	--	7.1	11.0	11.2	5	1.0	--	--	--	--
JUL 22...	0830	37	7.2	12.0	8.9	14	.2	12	3.0	1.0	2.0
SEP 10...	0945	--	7.0	14.0	10.0	2	.8	--	--	--	--

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
OCT 10...	--	15	1.0	.0	29	0	.10	.00	.90	.03	.00
JAN 09...	--	15	2.0	.0	38	--	.10	.02	.20	.01	.00
FEB 13...	--	--	--	--	--	--	.10	.00	.20	.02	.01
APR 09...	.6	17	1.0	.0	37	1	--	--	--	--	--
MAY 07...	--	--	--	--	--	1	.10	.00	.10	.01	.00
JUN 11...	--	--	--	--	--	2	.05	.00	.10	.01	.00
JUL 22...	.5	13	1.0	1.0	28	--	.10	.00	.10	.01	.00
SEP 10...	--	--	--	--	--	1	.10	.00	.00	.01	.00

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 10...	10	0	0	.0	0	1.0	.00
JAN 09...	10	10	0	.0	0	--	--
APR 09...	--	--	--	--	--	1.6	.00
MAY 07...	--	--	--	--	--	.9	.00
JUN 11...	--	--	--	--	--	2.7	.00
JUL 22...	10	0	0	.0	0	1.6	.00
SEP 10...	--	--	--	--	--	1.8	.00

SAN JOAQUIN RIVER BASIN

11289660 TUOLUMNE RIVER AT LA GRANGE BRIDGE, AT LA GRANGE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 10...	1030	0	0	0	0	0	0
JAN 09...	1040	0	0	0	10	0	0
APR 09...	1030	--	--	100	--	--	--
MAY 07...	0815	--	--	--	--	--	--
JUN 11...	1215	--	--	--	--	--	--
JUL 22...	0830	0	0	0	0	0	0
SEP 10...	0945	--	--	--	--	--	--

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 excellent. 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.--41 years (water years 1896, 1941-80), 1,343 ft³/s (38.03 m³/s), 973,000 acre-ft/yr (1.20 km³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1895-96, 1941-80).--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, 8,730 ft³/s (247 m³/s) Jan. 18, elevation, 54.40 ft (16.581 m); minimum daily, 211 ft³/s (5.98 m³/s) Aug. 14.

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	477	1510	1200	788	4740	7110	2510	2550	2720	1660	351	319
2	660	1560	1200	753	4720	7070	2510	2540	2730	806	368	301
3	1090	1470	1120	2060	4710	7090	2900	2550	2690	578	325	910
4	983	1070	1090	2500	4690	7120	3150	2560	2670	501	284	1700
5	736	709	1200	2640	4690	7210	3970	2550	2390	473	266	1910
6	675	658	1200	2290	4700	7720	3450	2590	2090	424	242	1860
7	745	842	1180	1090	4700	7970	3140	2680	2050	396	256	1890
8	631	1050	1170	2200	4680	7510	2490	2860	2030	341	285	1570
9	797	884	1140	2620	4680	7310	1700	2770	1970	333	267	1870
10	1240	924	1110	2770	4670	7220	1720	2820	2210	334	281	1920
11	1240	974	1160	3580	4650	7180	1660	3000	2370	345	292	1930
12	1090	916	1210	4960	4600	7150	1510	3210	2400	326	255	1910
13	1060	893	1210	5300	4630	7120	1950	3120	2410	344	220	2160
14	736	1000	1220	6620	4650	7130	2490	3050	2370	307	211	2420
15	634	1100	1220	7470	4680	7110	3380	2920	2410	294	239	1970
16	2080	1110	1190	6330	4710	7070	3890	2910	2410	284	243	1970
17	2580	1120	1150	5790	4740	7080	3930	2900	2350	373	249	2280
18	1490	1110	1200	7650	4760	7110	3880	2890	2130	426	260	2230
19	1490	1110	1240	7850	4880	7150	3510	2860	1910	406	250	2280
20	1670	1130	1220	7240	7070	6220	3070	2840	1930	386	273	2380
21	1420	1150	1730	7010	7170	5030	2120	2830	1970	321	318	2440
22	779	1150	1850	6930	7560	3910	1700	2500	2030	290	273	2140
23	1280	1090	1350	6900	7620	2860	1570	2170	2020	365	251	1970
24	1530	1080	1260	6860	7520	4130	1500	2230	1900	383	292	997
25	1600	1110	1410	6860	7380	3880	1520	2190	1870	373	287	511
26	1590	1080	1100	6890	7280	2930	1800	2170	1830	376	263	474
27	1490	1120	1150	6900	7210	3030	2540	2160	1760	359	270	499
28	1290	1040	1280	6900	7170	2980	2610	2150	1670	331	281	517
29	720	1200	1280	6290	7160	2940	2590	2130	1890	305	296	513
30	1300	1210	983	5020	---	2930	2610	2140	1930	377	316	480
31	1510	---	736	4760	---	2910	---	2450	---	371	317	---
TOTAL	36613	32370	37759	153821	162420	181180	77370	81290	65110	13188	8581	46321
MEAN	1181	1079	1218	4962	5601	5845	2579	2622	2170	425	277	1544
MAX	2580	1560	1850	7850	7620	7970	3970	3210	2730	1660	368	2440
MIN	477	658	736	753	4600	2860	1500	2130	1670	284	211	301
AC-FT	72620	64210	74890	305100	322200	359400	153500	161200	129100	26160	17020	91880
CAL YR 1979 TOTAL	494015			1353	7310	176	AC-FT	979900				
WTR YR 1980 TOTAL	896023			2448	7970	211	AC-FT	1777000				

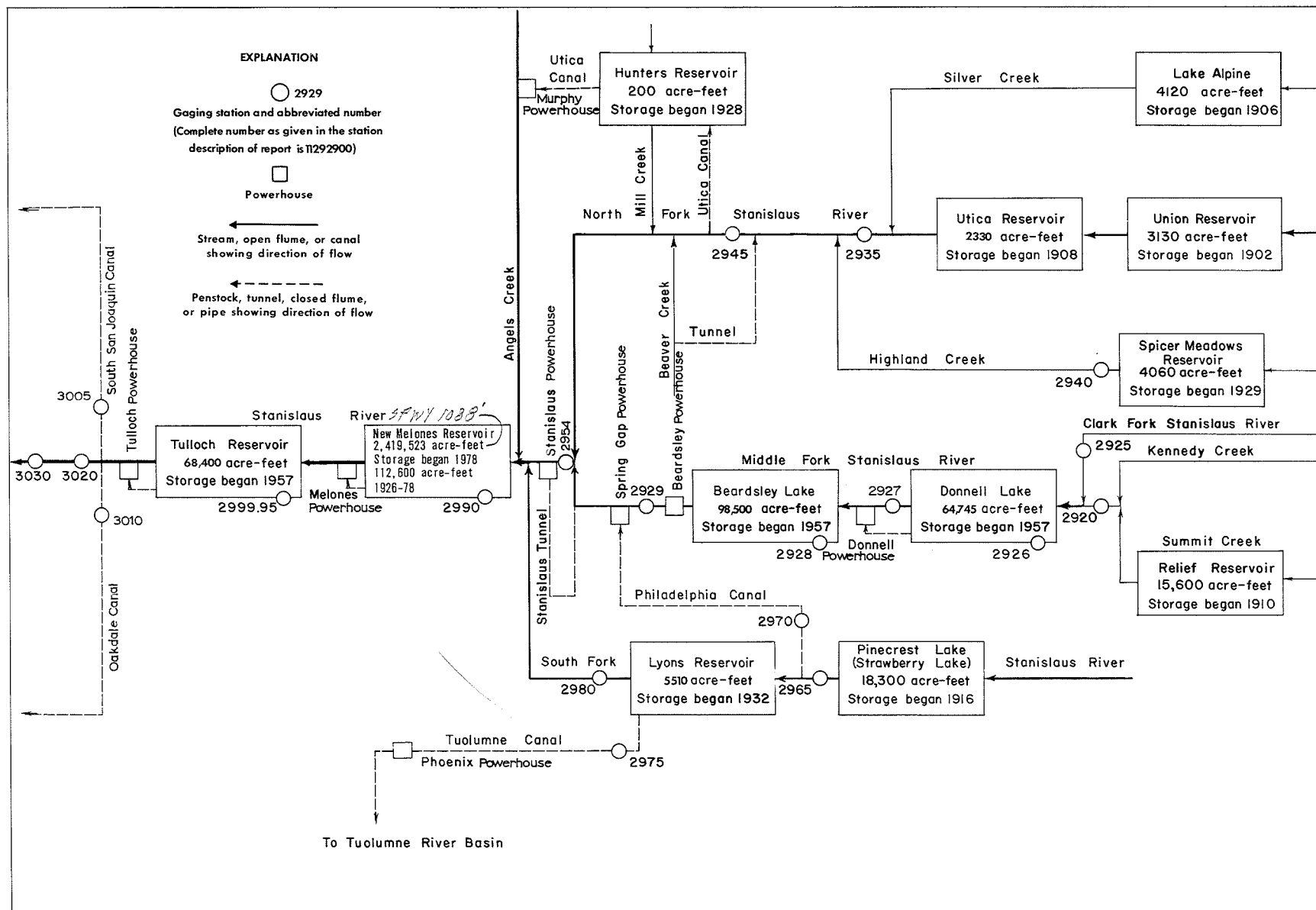


FIGURE 10.—Schematic diagram showing diversions and storage in Stanislaus River basin.

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)
OCT 09...	1100	158	7.3	15.0	8.3	4	.8	48	11	5.0	12
JAN 09...	1315	55	7.0	11.0	9.8	--	--	20	5.0	2.0	3.0
FEB 13...	1515	--	7.3	10.0	10.5	--	--	--	--	--	--
APR 08...	1200	72	7.3	12.0	10.3	5	1.0	23	6.0	2.0	4.0
MAY 06...	1300	--	7.3	14.5	10.5	11	1.4	--	--	--	--
JUN 11...	1015	--	7.2	15.0	9.8	8	.7	--	--	--	--
JUL 23...	0630	354	7.2	23.5	9.1	3	1.1	98	23	10	30
AUG 12...	1230	--	7.4	25.0	7.4	11	.4	--	--	--	--
SEP 11...	0715	--	7.2	17.0	8.9	6	--	--	--	--	--

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITROGEN, NO2+N03 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
OCT 09...	--	48	2.0	14	98	5	.60	.02	.30	.09	.05
JAN 09...	--	20	2.0	2.0	44	--	.60	.01	.20	.04	.02
FEB 13...	--	--	--	--	--	--	.10	.00	.20	.04	.01
APR 08...	.9	26	2.0	3.0	51	14	--	--	--	--	--
MAY 06...	--	--	--	--	--	8	.10	.00	.30	.05	.02
JUN 11...	--	--	--	--	--	16	.20	.01	.20	.06	.02
JUL 23...	2.8	95	14	39	213	18	1.4	.02	.50	.16	.09
AUG 12...	--	--	--	--	--	13	1.2	.03	.40	.16	.11
SEP 11...	--	--	--	--	--	12	.10	.00	.10	.06	.03

DATE	TIME	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT 09...	1100	0	0	0	0	0	0
JAN 09...	1315	--	--	0	--	--	--
FEB 13...	1515	0	0	--	0	0	0
APR 08...	1200	--	--	100	--	--	--
MAY 06...	1300	--	--	--	--	--	--
JUN 11...	1015	--	--	--	--	--	--
JUL 23...	0630	--	--	0	--	--	--
AUG 12...	1230	--	--	--	--	--	--

SAN JOAQUIN RIVER BASIN

11290200 TUOLUMNE RIVER AT TUOLUMNE CITY, NEAR GRAYSON, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT							
09...	50	0	20	.0	0	2.2	.00
JAN							
09...	--	--	--	--	--	--	--
FEB							
13...	20	0	10	.0	0	--	--
APR							
08...	--	--	--	--	--	1.8	.00
MAY							
06...	--	--	--	--	--	2.2	.00
JUN							
11...	--	--	--	--	--	2.6	.00
JUL							
23...	--	--	--	--	--	3.5	.00
AUG							
12...	--	--	--	--	--	3.6	.00

11292000 MIDDLE FORK STANISLAUS RIVER AT KENNEDY MEADOWS, NEAR DARDANELLE, CA

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 Dardanelle.

DRAINAGE AREA.--47.5 mi² (123.0 km²).

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."

REVISED RECORDS.--WSP 1315-A: 1939(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,326.3 ft (1,928.26 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Relief Reservoir 1.6 mi (2.6 km) upstream, capacity, 15,600 acre-ft (19.2 hm³). Contents of Relief Reservoir, 594 acre-ft (732,000 m³) Sept. 30, 1979, and 5,520 acre-ft (6.81 hm³) Sept. 30, 1980. 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 (unadjusted).--42 years, 133 ft³/s (3.767 m³/s), 96,360 acre-ft/yr (119 hm³/yr).

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, 1,220 ft³/s (34.6 m³/s) July 2, gage height, 6.06 ft (1.847 m); minimum daily, 14 ft³/s (0.40 m³/s) Dec. 27.

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	28	19	19	25	30	32	38	217	388	1070	302	138
2	28	19	19	20	29	31	37	240	392	1000	263	138
3	28	20	19	19	28	31	37	281	370	818	224	138
4	28	21	18	19	28	30	37	313	311	727	187	154
5	28	19	18	18	29	31	39	318	258	604	161	188
6	27	19	19	18	30	31	36	306	232	576	157	188
7	27	19	19	18	29	28	36	298	278	545	143	202
8	27	19	18	42	29	28	37	270	417	545	195	193
9	27	19	18	51	28	28	42	244	567	523	215	185
10	27	18	18	50	27	29	47	201	637	505	145	184
11	26	18	16	57	27	28	51	166	652	496	178	183
12	21	18	19	204	26	103	56	145	626	500	196	186
13	15	18	17	367	26	194	72	135	558	503	189	182
14	15	18	16	311	27	295	85	130	494	494	178	179
15	15	17	16	163	30	389	95	138	536	496	171	175
16	15	18	16	124	31	379	111	158	632	496	166	172
17	15	20	15	105	44	368	132	195	713	524	168	171
18	15	18	15	94	68	355	151	372	799	526	170	173
19	26	17	15	69	45	307	169	621	789	447	168	173
20	36	19	15	48	51	260	177	777	643	420	161	170
21	25	19	16	43	43	252	152	854	699	399	159	167
22	23	18	15	40	29	245	123	832	702	402	160	165
23	23	18	21	38	35	238	103	705	622	472	159	163
24	22	20	21	37	43	230	102	485	612	482	155	161
25	25	21	22	37	38	221	118	352	683	418	149	160
26	26	24	22	36	34	211	139	276	765	376	149	158
27	24	20	14	35	33	200	158	237	547	398	149	157
28	22	20	24	34	34	129	176	233	572	433	146	155
29	21	20	24	33	32	35	195	246	804	417	143	153
30	19	19	27	32	---	39	210	309	1000	401	141	152
31	20	---	30	33	---	40	---	360	---	370	140	---
TOTAL	724	572	581	2220	983	4817	2961	10414	17298	16383	5387	5063
MEAN	23.4	19.1	18.7	71.6	33.9	155	98.7	336	577	528	174	169
MAX	36	24	30	367	68	389	210	854	1000	1070	302	202
MIN	15	17	14	18	26	28	36	130	232	370	140	138
AC-FT	1440	1130	1150	4400	1950	9550	5870	20660	34310	32500	10690	10040
CAL YR 1979	TOTAL	46220	MEAN 127	MAX 908	MIN 14	AC-FT 91680						
WTR YR 1980	TOTAL	67403	MEAN 184	MAX 1070	MIN 14	AC-FT 133700						

SAN JOAQUIN RIVER BASIN

11292450 MIDDLE FORK STANISLAUS RIVER AT DARDANELLE, CA

LOCATION.--Lat 38°20'27", long 119°49'32", in SW¼NW¼ sec.30, T.6 N., R.20 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, at bridge on Highway 108, 0.4 mi (0.6 km) east of Dardanelle.

DRAINAGE AREA.--92.8 mi² (240.4 km²).

PERIOD OF RECORD.--

CHEMICAL ANALYSES: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARDNESS (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 13...	1300	84	7.4	1.5	11.0	--	--	33	10	2.0	4.0
MAY 06...	1145	44	7.3	5.0	10.6	--	--	18	4.0	2.0	2.0
JUN 11...	0830	44	7.2	4.5	10.5	5	.7	18	4.0	2.0	2.0
JUL 22...	1245	38	7.8	11.0	9.6	--	--	18	4.0	2.0	1.0
SEP 10...	1315	36	7.0	11.0	9.7	0	.4	14	4.0	1.0	1.0

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)
NOV 13...	.7	35	4.0	1.0	36	--	.00	.00	.10	.00	.00
MAY 06...	1.0	19	.0	.0	34	--	.00	.00	.20	.07	.01
JUN 11...	1.0	20	.0	.0	34	12	.01	.03	.10	.04	.03
JUL 22...	.7	16	1.0	.0	28	--	.00	.00	.00	.02	.00
SEP 10...	.4	14	.0	.0	24	1	.00	.00	.00	.01	.00

DATE	TIME	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)
NOV 13...	1300	0	0	0	0	0	0
MAY 06...	1145	0	0	0	0	0	0
JUN 11...	0830	0	0	0	0	0	0
JUL 22...	1245	--	--	0	--	--	--
SEP 10...	1315	--	--	0	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, DIS-SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 13...	20	0	0	.0	0	--	--
MAY 06...	10	0	0	.0	0	--	--
JUN 11...	20	0	0	.0	20	1.9	.00
JUL 22...	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	.8	.00

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 excellent. No storage or diversion above station. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--30 years, 150 ft³/s (4.248 m³/s), 108,700 acre-ft/yr (134 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.--Peak discharges above base of 600 ft³/s (17.0 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. 13	2215	*1,900 53.8	8.24 2.512	June 10	2100	869 24.6	5.93 1.807
May 6	2100	890 25.2	5.99 1.826	June 19	2100	1,140 32.3	6.64 2.024
May 20	2200	1,100 31.2	6.53 1.990	July 1	2015	1,370 38.8	7.15 2.179

Minimum daily, 21 ft³/s (0.59 m³/s) on several days.

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	22	32	42	80	102	127	117	569	484	997	214	67
2	21	33	41	51	100	126	114	623	492	921	198	65
3	21	35	40	47	98	123	112	695	455	823	181	64
4	21	35	39	45	97	119	114	764	423	739	167	62
5	21	35	38	44	99	122	120	765	391	672	157	61
6	21	34	39	43	102	117	112	786	387	623	148	60
7	21	35	38	44	99	110	109	747	442	591	139	66
8	21	35	37	43	96	108	112	694	549	570	135	74
9	25	34	35	45	93	107	128	634	652	544	129	67
10	22	34	33	46	92	108	144	530	724	531	123	71
11	21	34	30	55	90	108	153	461	734	518	120	68
12	21	33	24	521	88	104	166	419	698	508	115	69
13	21	33	25	1230	88	103	218	396	636	489	110	61
14	21	33	26	878	91	105	262	386	606	481	105	59
15	22	33	27	455	92	105	280	397	686	468	101	58
16	22	33	27	361	95	103	321	433	773	465	98	56
17	22	38	28	302	121	105	378	492	859	467	95	54
18	22	36	29	250	268	106	427	584	905	440	94	55
19	80	28	30	214	206	104	454	714	926	401	92	55
20	81	24	31	192	174	106	465	852	936	391	87	54
21	46	26	32	175	159	104	403	920	904	384	85	53
22	43	29	32	163	146	102	345	954	845	375	84	51
23	41	35	46	150	139	102	305	813	779	365	85	50
24	41	41	59	144	134	103	301	621	768	346	85	48
25	45	58	52	141	129	100	348	528	808	309	81	47
26	48	58	50	134	127	99	404	472	815	289	77	46
27	40	44	45	127	129	99	446	436	747	287	75	45
28	38	43	46	123	133	101	489	417	778	271	73	45
29	35	43	60	119	127	107	527	415	888	264	71	44
30	34	42	77	110	---	123	556	446	956	250	69	43
31	34	---	111	105	---	123	---	470	---	228	69	---
TOTAL	994	1086	1269	6437	3514	3379	8430	18433	21046	15007	3462	1718
MEAN	32.1	36.2	40.9	208	121	109	281	595	702	484	112	57.3
MAX	81	58	111	1230	268	127	556	954	956	997	214	74
MIN	21	24	24	43	88	99	109	386	387	228	69	43
AC-FT	1970	2150	2520	12770	6970	6700	16720	36560	41740	29770	6870	3410
CAL YR 1979	TOTAL	51825	MEAN 142	MAX 965	MIN 21	AC-FT 102800						
WTR YR 1980	TOTAL	84775	MEAN 232	MAX 1230	MIN 21	AC-FT 168200						

SAN JOAQUIN RIVER BASIN

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, 64,300 acre-ft (79.3 hm³) July 17, 23, gage height, 4,915.9 ft (1,498.37 m); minimum, 6,480 acre-ft (7.99 hm³) Apr. 4, gage height, 4,742.8 ft (1,445.61 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24800	19700	18300	13900	37900	22000	6810	31800	58400	64200	63900	50900
2	24200	19800	18500	14100	37100	21300	6730	34700	58500	63900	63900	50000
3	23600	20000	18600	14400	36200	21000	6570	38100	58300	63900	63600	49100
4	23100	20100	18700	14100	35400	20000	6480	41900	58200	64000	63400	48200
5	22600	20300	18800	14100	34500	19300	6500	45600	58000	64200	63100	47400
6	22600	20400	18500	14000	33700	18600	7140	49200	57900	64100	62600	46500
7	22700	20600	18700	13800	32800	17800	7020	52700	58200	64200	62200	45700
8	22200	20700	18800	13600	32000	17100	6880	55600	58700	64200	62000	45000
9	21700	20600	19000	13200	31100	16200	6900	58100	59100	64200	62400	44100
10	21400	20600	19100	12900	30200	15400	7070	58400	59300	64200	62700	43300
11	21000	20500	19000	12800	29300	14700	7340	58200	59400	64200	62600	42500
12	20700	20200	18600	20000	28400	13900	7680	58000	59500	64200	62100	42200
13	20600	20400	18100	35000	27400	13400	8340	57900	59700	64200	61500	42700
14	20600	20500	17300	42100	26500	13100	8770	57900	60000	64200	60800	43100
15	20400	20600	17500	43900	25700	13000	9330	57900	60500	64200	60000	42600
16	20100	20800	17200	45000	24900	12900	10200	58200	61600	64200	60400	41700
17	19700	21000	16000	45600	25000	12700	11400	58600	62900	64300	61000	40800
18	19200	21200	14700	45700	26800	12600	12900	59000	63900	64200	60300	39900
19	19500	20600	13400	45600	27300	12400	14700	59700	63800	64200	59500	39000
20	19500	19800	12100	45300	27200	12100	16400	60100	63900	64200	58700	38100
21	19500	19500	11900	45000	27000	11800	17800	60200	64100	64200	57900	37100
22	19600	19700	11800	44500	26600	11400	18600	60200	64100	64200	57100	36600
23	19600	19800	11500	44000	26000	11000	19000	59800	64100	64300	57500	35600
24	19400	20100	11700	43400	25500	10500	19300	58900	64200	64200	58000	34600
25	19200	20500	11900	42900	25100	9870	20000	58500	64200	64200	57100	33700
26	19100	20300	11900	42300	24400	9690	21400	58300	64200	64200	56300	32800
27	19200	19800	11700	41600	23800	9230	22900	58100	64100	64200	55400	31800
28	19400	19100	11300	41000	23300	8720	24800	58000	64200	64200	54500	30800
29	19000	18400	11500	40300	22700	8000	27000	58000	64200	64200	53600	30800
30	19400	18100	11900	39500	---	7410	29400	58200	64200	64200	52700	31100
31	19500	---	13000	38800	---	6880	---	58400	---	64000	51800	---
MAX	24800	21200	19100	45700	37900	22000	29400	60200	64200	64300	63900	50900
MIN	19000	18100	11300	12800	22700	6880	6480	31800	57900	63900	51800	30800
†	4791.6	4786.5	4768.3	4850.2	4801.9	4744.5	4822.9	4901.7	4915.7	4915.2	4885.2	4828.2
‡	-6000	-1400	-5100	+25800	-16100	-15820	+22520	+29000	+5800	-200	-12200	-20700

CAL YR 1979 † +1200
WTR YR 1980 ‡ +5600

† Gage height, in feet, at end of month.
‡ Change in contents, in acre-feet.

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA

LOCATION (REVISED).--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) north-west of Pinecrest.

DRAINAGE AREA.--287 mi² (743 km²).

PERIOD OF RECORD.--February 1956 to current year. Prior to October 1965, published as Middle Fork Stanislaus River at Hells Half Acre bridge.

GAGE.--Water-stage recorder. Datum of gage is 3,418.31 ft (1,041.901 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Aug. 9, 1961, at site 1,600 ft (488 m) upstream at different datum.

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.

AVERAGE DISCHARGE.--24 years, 250 ft³/s (7.080 m³/s), 181,100 acre-ft/yr (223 hm³/yr).

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 OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1905, 23 ft (7.0 m) Dec. 23, 1955, from floodmarks, at present site, discharge, 26,600 ft³/s (753 m³/s) by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,680 ft³/s (246 m³/s) Jan. 13, gage height, 12.87 ft (3.923 m); minimum daily, 16 ft³/s (0.45 m³/s) Nov. 2, 16.

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	36	30	33	297	202	338	207	502	974	1860	217	47
2	35	16	31	155	196	326	200	517	1080	1540	63	47
3	35	19	29	114	191	333	196	565	1140	1210	51	46
4	35	25	28	96	190	324	201	597	1080	1220	44	46
5	35	22	27	86	197	327	229	569	800	954	41	46
6	34	20	26	82	206	305	222	553	672	967	87	45
7	34	19	27	82	197	279	202	521	650	920	87	45
8	35	18	26	81	186	268	197	474	700	797	78	46
9	35	18	26	117	178	260	209	447	1470	805	68	45
10	34	18	26	195	174	258	226	1040	1870	764	68	45
11	34	18	25	312	166	253	233	1080	1290	745	64	44
12	34	18	23	2830	158	235	237	890	1330	685	58	44
13	33	17	23	5250	155	231	276	824	1370	687	58	44
14	33	17	22	2510	181	231	316	799	1410	643	57	44
15	33	17	22	1100	265	232	335	798	1630	689	57	44
16	33	16	22	1020	333	227	368	903	2370	653	56	46
17	33	31	21	805	817	227	426	1130	2230	609	57	45
18	34	30	20	594	1860	230	463	1510	2010	356	57	45
19	50	24	20	469	1340	224	498	2110	1970	505	54	45
20	74	22	20	402	771	229	521	2760	1820	599	52	45
21	49	21	25	358	680	226	468	3230	1520	444	52	44
22	42	21	22	326	555	205	372	3260	1630	343	52	44
23	34	26	22	299	487	195	327	2910	1820	435	52	44
24	32	26	43	281	446	203	330	2000	1800	465	54	43
25	33	45	42	270	394	201	346	1380	1340	350	55	43
26	40	89	32	255	369	195	400	1010	1630	245	49	43
27	35	54	28	240	364	195	454	858	2050	216	47	42
28	33	41	27	234	413	198	511	743	2390	248	48	42
29	31	38	27	229	367	205	530	695	2600	211	48	41
30	31	35	65	216	---	220	517	729	2440	209	48	41
31	31	---	279	210	---	216	---	814	---	286	47	---
TOTAL	1130	811	1109	19515	12038	7596	10017	36218	47086	20660	1926	1331
MEAN	36.5	27.0	35.8	630	415	245	334	1168	1570	666	62.1	44.4
MAX	74	89	279	5250	1860	338	530	3260	2600	1860	217	47
MIN	31	16	20	81	155	195	196	447	650	209	41	41
AC-FT	2240	1610	2200	38710	23880	15070	19870	71840	93400	40980	3820	2640
CAL YR 1979 TOTAL	79739		MEAN 218	MAX 3050	MIN 16	AC-FT 158200						
WTR YR 1980 TOTAL	159437		MEAN 436	MAX 5250	MIN 16	AC-FT 316200						

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.

COOPERATION.--Once-daily gage-height readings furnished by Oakdale-South San Joaquin Irrigation District.

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, 97,800 acre-ft (121 hm³) July 26, 27, 30, Aug. 2, 3, gage height, 3,397.0 ft (1,035.41 m); minimum, 39,800 acre-ft (49.1 hm³) Jan. 8, gage height, 3,303.3 ft (1,006.85 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89000	70600	58900	42600	78400	78600	78200	91600	90700	97700	97700	94900
2	88800	69700	58000	42100	78300	78600	78200	91500	91400	97600	97800	95000
3	88600	68900	57300	41500	78300	78600	78200	91400	91700	97700	97800	95200
4	88300	68000	56400	41300	78300	78600	78200	91300	91800	97700	97700	95400
5	88000	67100	55500	40800	78400	78600	78500	91300	91600	97700	97700	95600
6	87100	66200	55000	40400	78400	78500	77900	91100	91600	97700	97700	95800
7	86200	65400	54100	40100	78300	78500	78000	90900	91600	97700	97700	95900
8	85900	64500	53300	39800	78300	78500	78100	90600	92200	97700	97600	96200
9	85600	63900	52400	40000	78300	78400	78200	90200	93700	97600	96800	96400
10	85000	63200	51700	40400	78300	78400	78300	89900	95900	97700	96100	96600
11	84600	62600	50900	41200	78300	78400	78400	89700	97700	97700	95700	96800
12	84000	62000	50500	47000	78300	78400	78600	89000	97700	97700	95900	96400
13	83300	62000	50100	58500	78300	78400	78900	89000	97600	97700	96100	95300
14	82400	62100	50200	63900	78400	78400	79900	89100	97700	97700	96300	94200
15	81800	62200	49200	66700	78500	78400	80900	89200	97700	97700	96500	94100
16	81300	62200	48600	69200	78600	78400	81900	89200	97700	97700	95600	94300
17	80800	62300	49100	71300	79000	78400	83000	89500	97700	97700	94400	94400
18	80500	62300	49500	73000	78800	78400	84200	89900	97700	97700	94600	94700
19	80000	63000	49900	74300	78400	78400	85500	90300	97700	97600	94800	94900
20	79200	63900	50300	75400	78900	78400	87000	90200	97700	97700	94900	95100
21	78400	63900	49900	76400	78900	78400	88300	90300	97700	97700	95200	95300
22	77900	63100	49100	77300	78800	78400	89400	90400	97700	97700	95400	95400
23	77300	62200	48600	78100	78700	78400	90400	89900	97700	97700	94600	96700
24	76900	61300	47800	78400	78600	78400	91300	89100	97700	97700	93500	95900
25	76300	60500	46900	78400	78600	78400	91800	88900	97700	97700	93700	96200
26	75800	60200	46100	78400	78600	78400	92000	88900	97700	97800	93800	96300
27	75000	60100	45500	78400	78600	78300	92200	88800	97600	97800	94000	96600
28	74100	60100	45100	78400	78600	78300	92000	88800	97700	97700	94200	96800
29	73300	60100	44100	78400	78600	78300	92000	88900	97700	97700	94400	96100
30	72400	59800	43200	78400	---	78400	91800	89300	97700	97800	94500	94900
31	71500	---	42900	78400	---	78200	---	89900	---	97700	94700	---
MAX	89000	70600	58900	78400	79000	78600	92200	91600	97700	97800	97800	96800
MIN	71500	59800	42900	39800	78300	78200	77900	88800	90700	97600	93500	94100
†	3358.2	3339.2	3309.1	3368.8	3369.2	3368.6	3388.5	3385.9	3396.9	3396.8	3392.7	3393.0
‡	-17700	-11700	-16900	+35500	+200	-400	+13600	-1900	+7800	0	-3000	+200

CAL YR 1979 † -14800

WTR YR 1980 † +5700

† 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.--23 years (water years 1958-80), 620 ft³/s (17.56 m³/s), 449,200 acre-ft/yr (554 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, 4,620 ft³/s (131 m³/s) July 2, gage height, 9.89 ft (3.014 m); minimum daily, 26 ft³/s (0.74 m³/s) Nov. 16.

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	457	467	458	513	987	1280	737	1480	1400	3150	759	623
2	456	467	458	512	978	1250	676	1470	1480	3470	667	624
3	456	467	482	504	972	1290	676	1470	1630	2600	714	619
4	456	466	509	503	977	1280	676	1470	1620	2260	633	617
5	456	467	507	501	981	1290	688	1460	1580	1880	612	617
6	457	463	492	499	1000	1260	685	1470	1440	1870	611	617
7	455	453	481	482	1010	1210	682	1460	1360	1600	607	615
8	476	453	482	467	969	1180	679	1450	1400	1700	603	616
9	498	454	475	468	963	1150	678	1520	1420	1590	600	616
10	481	456	476	468	957	1150	678	1970	1450	1450	608	617
11	472	453	504	471	951	1150	677	2000	1610	1490	619	617
12	466	429	501	474	944	1130	676	1970	2520	1450	559	617
13	465	44	503	483	948	1110	673	1710	2180	1450	618	616
14	466	28	503	569	975	1100	680	1550	1920	1360	613	615
15	462	27	503	719	1120	1100	682	1550	2010	1370	613	611
16	465	26	502	709	1230	1090	685	1640	2040	1330	613	625
17	465	27	510	710	1600	1080	687	1810	2130	1430	613	624
18	465	27	520	701	2850	1090	689	2130	2390	1400	622	624
19	466	27	520	688	2780	1060	675	2690	3110	1270	616	625
20	466	28	519	684	2030	1070	678	3600	2870	998	606	618
21	465	112	518	680	1830	1060	683	3930	2650	1180	600	618
22	466	451	520	680	1680	1050	683	3950	2670	1030	576	500
23	464	454	519	683	1530	1040	676	3940	2390	1160	598	576
24	461	478	521	925	1470	1050	670	3230	2150	1160	603	619
25	460	495	519	1070	1280	1040	926	2260	2430	1060	616	617
26	459	495	518	1060	1320	1020	1160	1800	2600	924	618	553
27	469	486	518	1040	1300	1010	1300	1670	2330	917	618	626
28	475	486	516	1030	1360	1010	1470	1500	1870	972	622	628
29	475	488	513	1050	1340	1010	1490	1370	2630	901	625	623
30	471	481	512	1010	---	1030	1490	1360	3080	886	625	618
31	466	---	512	1000	---	1020	---	1380	---	919	620	---
TOTAL	14437	10155	15591	21353	38332	34660	24205	62260	62360	46227	19227	18351
MEAN	466	339	503	689	1322	1118	807	2008	2079	1491	620	612
MAX	498	495	521	1070	2850	1290	1490	3950	3110	3470	759	628
MIN	455	26	458	467	944	1010	670	1360	1360	886	559	500
AC-FT	28640	20140	30920	42350	76030	68750	48010	123500	123700	91690	38140	36400
CAL YR 1979 TOTAL	228015			625	MAX 3490	MIN 26	AC-FT 452300					
WTR YR 1980 TOTAL	367158			1003	MAX 3950	MIN 26	AC-FT 728300					

SAN JOAQUIN RIVER BASIN

11293500 NORTH FORK STANISLAUS RIVER BELOW SILVER CREEK, CA

LOCATION.--Lat 38°26'22", long 120°00'53", in SE¼ 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.

DRAINAGE AREA.--27.8 mi² (72.0 km²).

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1930: 1954(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,677.3 ft (2,035.24 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Flow regulated by Lake Alpine, Union, and Utica Reservoirs, combined capacity, 9,580 acre-ft (11.8 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.--28 years, 78.1 ft³/s (2.212 m³/s), 56,580 acre-ft/yr (69.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,780 ft³/s (78.7 m³/s) Dec. 24, 1964, gage height, 11.16 ft (3.402 m), from floodmarks, from rating curve extended above 500 ft³/s (14.2 m³/s); minimum daily, 0.3 ft³/s (0.008 m³/s) Oct. 10, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1950, reached a stage of 11.17 ft (3.405 m), from Pacific Gas and Electric Co. recorder chart, discharge, 2,790 ft³/s (79.0 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 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. 13	2030	*1,450 41.1	7.91 2.411	May 3	2130	900 25.5	7.23 2.204
Feb. 18	1300	387 11.0	6.23 1.899	May 20	1730	1,000 28.3	7.36 2.243
Apr. 19	2245	546 15.5	6.62 2.018	June 10	0100	600 17.0	6.73 2.051
Apr. 29	2030	750 21.2	7.00 2.134	June 18	0030	565 16.0	6.66 2.030

Minimum daily, 5.0 ft³/s (0.14 m³/s) Aug. 31, Sept. 1.

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	29	47	38	80	52	68	84	510	305	249	12	5.0
2	32	47	36	54	51	66	76	565	317	246	11	5.8
3	32	48	35	43	49	67	72	630	279	189	11	15
4	32	50	34	38	50	63	72	680	239	167	10	28
5	32	51	34	35	56	70	88	595	205	136	10	28
6	32	52	36	33	64	71	72	620	185	121	10	28
7	32	52	37	30	62	59	62	530	215	105	10	28
8	32	52	36	25	58	53	60	485	355	96	10	33
9	31	50	36	26	54	51	77	450	445	81	10	38
10	29	47	35	26	53	52	106	300	452	73	10	38
11	29	46	33	31	50	57	123	265	412	68	10	38
12	29	44	32	641	47	57	142	250	362	62	10	38
13	29	38	31	1040	47	54	209	265	294	58	9.8	38
14	29	36	30	465	52	54	251	295	257	52	9.8	38
15	29	36	27	396	66	54	254	335	336	48	9.8	40
16	29	37	27	218	70	52	288	395	379	44	9.8	43
17	29	44	27	173	98	52	339	460	401	41	9.8	33
18	29	47	27	128	339	54	383	545	408	38	9.8	7.0
19	37	44	27	94	230	54	416	620	383	33	9.8	6.6
20	44	41	27	88	140	57	405	675	365	30	9.8	6.6
21	34	40	28	93	128	58	291	700	326	27	9.8	6.6
22	31	41	28	86	86	53	198	650	283	25	9.8	6.6
23	30	42	28	79	74	53	165	415	242	23	9.8	6.6
24	29	69	28	78	71	59	201	330	232	22	9.8	6.6
25	36	76	29	81	68	57	250	275	246	20	12	6.6
26	33	57	29	77	65	52	345	245	249	18	15	6.6
27	29	43	29	71	66	52	415	225	213	16	16	6.5
28	29	41	29	70	75	56	500	230	198	15	16	13
29	35	41	29	73	70	67	570	235	230	14	12	32
30	48	40	32	64	---	96	540	244	277	13	5.3	20
31	47	---	71	55	---	101	---	308	---	12	5.0	---
TOTAL	1007	1399	1005	4491	2391	1869	7054	13327	9090	2142	322.9	646.1
MEAN	32.5	46.6	32.4	145	82.4	60.3	235	430	303	69.1	10.4	21.5
MAX	48	76	71	1040	339	101	570	700	452	249	16	43
MIN	29	36	27	25	47	51	60	225	185	12	5.0	5.0
AC-FT	2000	2770	1990	8910	4740	3710	13990	26430	18030	4250	640	1280
CAL YR 1979	TOTAL	29454.7	MEAN	80.7	MAX	779	MIN	5.6	AC-FT	58420		
WTR YR 1980	TOTAL	44744.0	MEAN	122	MAX	1040	MIN	5.0	AC-FT	88750		

11294000 HIGHLAND CREEK BELOW SPICER MEADOWS RESERVOIR, CA

LOCATION.--Lat 38°23'34", long 119°59'50", in SW¼ sec.3, 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.

DRAINAGE AREA.--42.4 mi² (109.8 km²).

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1930: 1953.

GAGE.--Water-stage recorder. Datum of gage is 6,382.2 ft (1,945.29 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Spicer Meadows Reservoir 500 ft (152 m) upstream, capacity, 4,060 acre-ft (5.01 hm³). 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.--28 years, 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft³/s (279 m³/s) Jan. 31, 1963, gage height, 11.88 ft (3.621 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s); no flow some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1950, reached a stage of 11.50 ft (3.505 m), from Pacific Gas and Electric Co. recorder chart, discharge, 8,800 ft³/s (249 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 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. 13	2145	*5,230 148	9.71 2.960	May 3	2030	1,260 35.7	6.29 1.917
Feb. 18	0215	1,240 35.1	6.25 1.905	May 20	2145	1,260 35.7	6.29 1.917
Apr. 19	2130	817 23.1	5.54 1.689	June 10	2230	833 23.6	5.57 1.698
Apr. 29	2115	1,000 28.3	5.88 1.792	June 17	2300	902 25.5	5.70 1.737

Minimum daily, 3.9 ft³/s (0.11 m³/s) Oct. 2, 3.

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	9.4	5.1	17	24	87	103	113	666	405	519	45	26
2	3.9	5.2	17	24	83	98	101	735	427	519	41	26
3	3.9	5.3	17	24	81	91	97	875	384	426	36	18
4	4.0	5.4	17	24	82	82	103	904	361	371	49	6.5
5	4.3	5.4	17	25	93	90	113	825	311	333	62	5.7
6	4.3	5.4	17	25	105	81	96	839	282	305	61	6.1
7	4.4	5.4	17	25	97	73	84	742	344	277	61	6.1
8	4.4	5.4	17	25	87	69	97	667	486	257	60	6.1
9	4.5	10	17	25	80	70	132	591	582	235	60	6.0
10	4.5	16	17	26	80	76	180	428	621	220	60	6.0
11	4.6	16	17	27	76	80	195	335	610	211	59	6.0
12	4.6	16	17	1470	72	70	224	302	561	201	53	6.0
13	4.6	16	17	3110	72	70	322	302	493	191	43	6.0
14	4.5	16	17	1720	85	76	377	311	454	175	43	6.0
15	4.5	16	17	533	94	74	379	346	526	168	37	6.3
16	4.5	16	17	378	104	69	425	426	589	157	29	6.3
17	4.5	16	20	323	320	76	494	527	640	154	28	21
18	4.4	16	22	246	827	81	542	637	645	142	28	46
19	4.8	16	22	199	359	77	590	789	623	118	28	45
20	5.3	16	22	175	235	86	578	892	611	105	28	45
21	5.4	16	22	162	171	78	448	930	564	105	28	44
22	5.5	16	22	150	154	73	319	895	513	97	27	43
23	5.6	16	22	139	135	77	258	666	461	91	27	42
24	5.6	16	22	135	135	84	282	429	454	85	27	41
25	5.9	16	22	140	120	78	389	336	478	74	27	40
26	5.6	16	22	131	111	70	495	285	484	65	27	39
27	5.4	17	22	119	114	74	567	259	430	61	27	37
28	5.4	17	22	119	115	83	602	260	425	60	27	28
29	5.3	17	22	111	103	107	697	284	483	55	27	6.4
30	5.2	17	22	91	---	145	685	350	534	51	27	5.8
31	5.1	---	22	94	---	137	---	390	---	47	27	---
TOTAL	153.9	392.6	600	9819	4277	2598	9984	17223	14781	5875	1209	632.3
MEAN	4.96	13.1	19.4	317	147	83.8	333	556	493	190	39.0	21.1
MAX	9.4	17	22	3110	827	145	697	930	645	519	62	46
MIN	3.9	5.1	17	24	72	69	84	259	282	47	27	5.7
AC-FT	305	779	1190	19480	8480	5150	19800	34160	29320	11650	2400	1250

CAL YR 1979	TOTAL	43144.41	MEAN 118	MAX 1030	MIN .81	AC-FT 85580
WTR YR 1980	TOTAL	67544.80	MEAN 185	MAX 3110	MIN 3.9	AC-FT 134000

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.--63 years, 418 ft³/s (11.84 m³/s), 302,800 acre-ft/yr (373 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 (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)
Jan. 13	2030	*25,100 711	13.43 4.093	May 4	0100	3,660 104	7.33 2.234
Apr. 19	2400	2,540 71.9	6.51 1.984	June 10	0430	2,040 57.8	6.05 1.844
Apr. 30	0030	3,250 92.0	7.06 2.152				

Minimum daily, 38 ft³/s (1.08 m³/s) Oct. 1, 2.

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	38	70	114	911	434	768	570	2190	1300	1100	100	44
2	38	69	110	428	424	725	513	2300	1340	1150	97	43
3	40	76	106	314	409	763	474	2630	1290	930	94	42
4	39	80	102	258	410	711	495	2810	1180	818	91	43
5	39	84	99	229	438	711	578	2610	1120	688	87	45
6	39	88	99	219	484	679	578	2530	982	619	98	44
7	39	90	103	220	471	610	517	2430	1010	547	96	45
8	40	89	104	216	430	566	485	2130	1390	499	95	45
9	42	89	103	363	388	547	521	1980	1660	461	93	45
10	41	87	102	540	381	558	674	1470	1730	416	93	54
11	40	91	98	807	364	578	773	1180	1700	385	91	57
12	40	89	88	7710	347	535	802	1000	1570	360	89	57
13	40	85	93	15100	337	510	1020	1070	1430	340	79	56
14	41	78	88	9110	388	513	1380	1220	1240	314	68	56
15	42	76	84	2580	647	517	1380	1270	1390	294	68	57
16	41	75	80	1980	803	485	1470	1440	1510	273	64	59
17	41	127	78	1650	1550	488	1660	1700	1550	260	54	61
18	41	130	79	1240	3000	517	1850	2000	1620	249	54	62
19	71	107	82	994	2700	481	1950	2340	1540	226	53	66
20	84	95	78	865	2300	510	2040	2610	1510	200	53	64
21	78	88	85	807	1900	485	1750	2710	1400	186	52	62
22	70	93	80	758	1600	454	1270	2630	1280	174	51	61
23	61	104	79	683	1300	444	1040	2120	1140	163	51	59
24	59	114	123	644	1200	474	1000	1390	1040	153	56	58
25	60	247	120	639	1100	468	1510	1100	1070	140	53	57
26	78	315	99	605	1000	428	1720	930	1100	129	51	55
27	70	181	95	562	980	422	1970	849	988	124	55	54
28	59	136	93	545	950	438	2130	828	881	119	54	53
29	53	125	94	535	818	471	2340	865	965	113	54	51
30	58	120	186	459	---	590	2400	1050	1020	109	52	52
31	70	---	823	463	---	631	---	1280	---	104	45	---
TOTAL	1592	3298	3767	52434	27553	17077	36860	54662	38946	11643	2191	1607
MEAN	51.4	110	122	1691	950	551	1229	1763	1298	376	70.7	53.6
MAX	84	315	823	15100	3000	768	2400	2810	1730	1150	100	66
MIN	38	69	78	216	337	422	474	828	881	104	45	42
AC-FT	3160	6540	7470	104000	54650	33870	73110	108400	77250	23090	4350	3190
CAL YR 1979 TOTAL	148758			MEAN 408	MAX 2920	MIN 27	AC-FT 295100					
WTR YR 1980 TOTAL	251630			MEAN 688	MAX 15100	MIN 38	AC-FT 499100					

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.

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: 13 years, 819 ft³/s (23.19 m³/s), 593,400 acre-ft/yr (732 hm³/yr).
Combined river and powerplant: 13 years, 1,283 ft³/s (36.33 m³/s), 929,500 acre-ft/yr (1.15 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, 34,400 ft³/s (974 m³/s) Jan. 13, 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, 35 ft³/s (0.99 m³/s) on several days during October.
Combined flow, maximum discharge, 35,100 ft³/s (994 m³/s) Jan. 13; minimum daily, 87 ft³/s (2.46 m³/s) Nov. 16.

REVISIONS.--Revised figures of discharge for the water year 1979, superseding those published in the report for 1979 are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	118	91	38	135	697	947	2690	2790	294	44	58
2	223	94	107	40	130	578	953	2120	2660	280	42	42
3	223	68	67	40	118	536	959	2760	2700	256	41	41
4	226	44	62	39	123	544	1020	3290	2750	198	42	42
5	221	50	63	41	123	583	1240	3520	2900	198	39	42
6	221	56	63	42	121	711	1530	3310	2940	186	42	45
7	221	77	56	42	125	941	1320	2590	2970	155	42	41
8	221	49	55	76	125	1130	1440	2060	2240	148	42	69
9	223	45	56	118	144	1170	1670	1700	1440	142	42	84
10	221	95	65	78	161	1250	1440	1610	1290	140	41	84
11	212	188	61	3310	138	1410	1330	1730	1750	148	41	86
12	172	178	61	1650	138	1380	1260	2180	1840	139	39	88
13	186	183	64	657	230	1370	1650	2780	2190	138	39	88
14	203	179	63	492	1180	1260	1930	3230	1890	138	42	88
15	213	182	48	454	716	1460	2060	3390	1370	139	41	68
16	196	176	32	341	570	1380	2200	3510	1010	136	42	48
17	203	133	43	289	422	1060	1930	3370	805	77	44	44
18	230	125	89	258	394	982	1480	4110	776	58	42	39
19	264	125	74	226	467	884	1260	4140	556	80	41	39
20	145	125	58	273	452	829	1220	4150	532	67	41	52
21	147	165	82	318	706	787	1250	4150	486	82	42	45
22	171	160	49	298	771	777	1470	4250	481	90	38	45
23	173	101	45	212	731	731	1480	4540	700	66	38	42
24	177	111	45	179	631	761	1290	4320	711	58	39	42
25	176	107	45	190	574	845	1280	4230	704	56	39	42
26	175	72	47	142	600	988	1580	4600	683	55	42	39
27	171	38	48	135	536	1460	3280	5210	616	53	45	39
28	173	34	50	125	511	1590	2830	5390	557	46	42	38
29	168	35	47	109	---	1220	2600	4280	367	46	41	38
30	121	35	41	123	---	1080	2720	3310	308	45	39	41
31	60	---	40	131	---	976	---	2820	---	44	39	---
TOTAL	5952	3148	1817	10466	11072	31370	48619	105340	43012	3758	1273	1599
MEAN	192	105	58.6	338	395	1012	1621	3398	1434	121	41.1	53.3
MAX	264	188	107	3310	1180	1590	3280	5390	2970	294	45	88
MIN	60	34	32	38	118	536	947	1610	308	44	38	38
AC-FT	11810	6240	3600	20760	21960	62220	96440	208900	85310	7450	2520	3170
CAL YR 1978	TOTAL	433321	MEAN	1187	MAX	6070	MIN	32	AC-FT	859500		
WTR YR 1979	TOTAL	267426	MEAN	733	MAX	5390	MIN	32	AC-FT	530400		

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 1978 TO SEPTEMBER 1979

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	750	118	630	308	665	1230	1480	3240	3330	837	586	599
2	712	94	645	310	663	1110	1490	2670	3200	824	584	583
3	757	68	603	307	648	1070	1500	3310	3240	800	583	582
4	761	44	597	297	652	1080	1560	3840	3290	742	584	583
5	756	50	598	282	654	1120	1780	4070	3440	742	581	582
6	757	56	597	307	651	1240	2070	3860	3480	730	583	586
7	756	77	589	304	657	1470	1860	3140	3510	699	584	582
8	756	159	587	345	657	1660	1980	2610	2780	692	584	610
9	759	205	587	393	677	1700	2210	2250	1980	686	584	625
10	756	635	597	354	695	1780	1980	2160	1830	684	583	625
11	747	729	593	3750	673	1940	1870	2280	2290	692	583	627
12	709	717	592	2190	673	1910	1800	2730	2380	683	581	629
13	731	721	595	1200	764	1900	2190	3330	2730	682	581	629
14	746	716	572	1010	1710	1790	2470	3780	2430	682	583	629
15	753	718	282	986	1250	1990	2600	3940	1910	683	583	608
16	734	711	263	883	1100	1910	2740	4060	1550	680	583	588
17	742	667	291	828	955	1590	2470	3920	1350	621	586	584
18	739	659	380	796	927	1520	2020	4660	1320	601	584	579
19	659	658	365	762	1000	1420	1800	4690	1100	624	582	580
20	555	658	331	809	985	1360	1760	4700	1070	611	582	593
21	692	698	352	853	1240	1320	1790	4700	1030	626	583	585
22	713	692	296	833	1300	1310	2010	4800	1020	633	580	585
23	713	633	306	746	1260	1270	2020	5090	1240	609	579	582
24	716	643	322	713	1160	1300	1830	4860	1250	601	580	582
25	715	639	325	723	1110	1380	1820	4770	1250	599	580	582
26	712	601	314	674	1130	1520	2120	5140	1230	597	583	579
27	707	567	313	665	1070	2000	3820	5750	1160	595	586	578
28	709	559	313	656	1040	2130	3370	5930	1100	588	584	578
29	704	567	312	639	---	1760	3150	4820	910	588	582	578
30	385	576	308	654	---	1620	3270	3850	851	587	580	581
31	60	---	310	660	---	1510	---	3360	---	586	580	---
TOTAL	21461	14635	13765	24237	25966	47910	64830	122310	59251	20604	18061	17813
MEAN	692	488	444	782	927	1545	2161	3945	1975	665	583	594
MAX	761	729	645	3750	1710	2130	3820	5930	3510	837	586	629
MIN	60	44	263	282	648	1070	1480	2160	851	586	579	578
AC-FT	42570	29030	27300	48070	51500	95030	128600	242600	117500	40870	35820	35330
CAL YR 1978 TOTAL	598182	MEAN	1639	MAX	6610	MIN 44	AC-FT	1186000				
WTR YR 1979 TOTAL	450843	MEAN	1235	MAX	5930	MIN 44	AC-FT	894200				

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

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	36	47	95	1560	1150	2210	1170	3100	2360	3740	350	164
2	36	48	75	684	1100	2100	994	3200	2430	4080	227	170
3	35	65	68	474	1080	2240	956	3300	2570	3110	244	169
4	35	148	87	363	1080	2200	977	3500	2400	2500	232	166
5	35	108	98	305	1120	2370	1370	3300	2330	1900	174	166
6	35	90	97	276	1180	2300	1290	3200	2010	1900	170	166
7	35	73	79	268	1160	2040	1110	3100	1980	1600	172	165
8	35	61	82	270	1060	1880	1060	3000	2320	1700	174	160
9	55	53	78	475	990	1780	1100	3000	2680	1570	162	163
10	67	50	71	1210	982	1750	1270	3200	2840	1390	166	166
11	57	48	62	1640	967	1740	1350	3100	2840	1400	174	166
12	48	48	54	11800	912	1640	1330	2720	3660	1330	166	166
13	43	61	47	20100	909	1560	1650	2590	3200	1300	128	165
14	42	94	49	13500	1050	1540	1970	2630	2650	1200	170	160
15	42	88	45	5510	1870	1530	1950	2690	2890	1170	170	152
16	41	87	44	4300	2340	1460	2040	2860	3110	1130	170	167
17	41	146	42	3760	4660	1450	2330	3290	3230	1130	172	171
18	43	170	42	2900	9390	1470	2720	3940	3460	1190	168	172
19	66	130	46	2170	8700	1390	2910	4840	4160	1030	115	172
20	219	109	48	1800	5670	1400	3180	6110	3810	748	110	170
21	130	96	70	1590	5910	1370	2200	6640	3510	861	106	166
22	73	55	76	1440	4450	1300	1500	6590	3380	714	62	149
23	60	59	65	1290	3510	1260	1300	6030	2800	811	80	37
24	52	63	181	1370	3080	1320	1200	4460	2700	835	90	147
25	54	201	284	1530	2630	1270	1800	3130	3000	690	92	150
26	83	422	157	1460	2460	1220	2400	2410	3300	594	114	141
27	76	259	113	1370	2350	1170	3000	2160	2600	494	110	105
28	61	157	99	1370	2740	1190	3200	2000	2300	602	108	162
29	59	132	89	1400	2400	1210	3300	1860	3300	479	115	162
30	54	149	220	1240	---	1370	3200	2070	3600	479	166	156
31	54	---	1290	1210	---	1450	---	2320	---	498	167	---
TOTAL	1802	3317	3953	88635	76900	50180	55827	106340	87370	42175	4824	4691
MEAN	58.1	111	128	2859	2652	1619	1861	3430	2912	1360	156	156
MAX	219	422	1290	20100	9390	2370	3300	6640	4160	4080	350	172
MIN	35	47	42	268	909	1170	956	1860	1980	479	62	37
AC-FT	3570	6580	7840	175800	152500	99530	110700	210900	173300	83650	9570	9300
CAL YR 1979	TOTAL	265581	MEAN	728	MAX	5390	MIN 35	AC-FT	526800			
WTR YR 1980	TOTAL	526014	MEAN	1437	MAX	20100	MIN 35	AC-FT	1043000			

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 1979 TO SEPTEMBER 1980

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	576	587	631	2090	1680	2750	1710	3640	2910	4290	885	724
2	576	587	610	1220	1630	2640	1530	3740	2980	4630	782	730
3	575	605	603	1010	1610	2780	1490	3840	3120	3660	800	728
4	575	687	623	896	1610	2740	1520	4050	2950	3050	788	725
5	575	647	634	838	1650	2910	1910	3850	2880	2450	731	724
6	575	629	632	809	1710	2840	1830	3750	2560	2450	727	724
7	575	612	614	800	1690	2580	1650	3650	2530	2150	728	724
8	575	599	616	802	1590	2420	1600	3550	2870	2250	732	717
9	596	592	612	1010	1820	2320	1640	3550	3230	2120	719	720
10	607	589	604	1750	1520	2290	1810	3750	3390	1940	723	724
11	597	586	595	2180	1500	2280	1890	3650	3390	1950	733	723
12	588	585	587	12300	1450	2180	1870	3270	4210	1880	725	723
13	584	187	580	20600	1450	2100	2190	3130	3750	1850	686	722
14	582	94	582	14000	1590	2080	2510	3180	3200	1750	730	715
15	582	88	578	6050	2410	2070	2490	3240	3440	1720	729	707
16	581	87	577	4830	2880	2000	2580	3410	3660	1680	730	722
17	582	146	575	4300	5200	1990	2870	3830	3780	1680	732	727
18	584	170	576	3440	9930	2010	3260	4490	4010	1740	728	727
19	606	130	579	2700	9240	1930	3450	5390	4710	1580	675	727
20	760	109	581	2330	6210	1940	3720	6660	4360	1300	670	724
21	670	116	604	2120	6450	1910	2740	7180	4060	1410	666	719
22	613	519	609	1970	4990	1840	2040	7130	3880	1270	622	696
23	600	565	598	1820	4050	1800	1840	6570	3350	1360	641	595
24	592	598	715	1900	3620	1860	1740	5000	3250	1390	650	709
25	594	745	818	2060	3170	1810	2340	3680	3550	1250	653	711
26	623	964	690	1990	3000	1760	2950	2960	3850	1140	675	699
27	615	799	646	1910	2890	1710	3550	2710	3150	1050	671	662
28	601	696	632	1910	3280	1730	3750	2550	2850	1160	669	718
29	598	670	622	1930	2940	1750	3850	2410	3850	1030	675	716
30	594	687	754	1770	---	1910	3750	2620	4150	1030	726	710
31	594	---	1820	1740	---	1990	---	2870	---	1050	727	---
TOTAL	18545	14675	20497	105075	92460	66920	72070	123300	103870	59260	22128	21392
MEAN	598	489	661	3390	3188	2159	2402	3977	3462	1912	714	713
MAX	760	964	1820	20600	9930	2910	3850	7180	4710	4630	885	730
MIN	575	87	575	800	1450	1710	1490	2410	2530	1030	622	595
AC-FT	36780	29110	40660	208400	183400	132700	143000	244600	206000	117500	43890	42430
CAL YR 1979	TOTAL	454699	MEAN	1246	MAX	5930	MIN 87	AC-FT	901900			
WTR YR 1980	TOTAL	720192	MEAN	1968	MAX	20600	MIN 87	AC-FT	1429000			

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, 19.5°C Aug. 21; minimum recorded, 4.0°C Jan. 19.

TEMPERATURE (DEG C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	13.5	13.5	12.5	10.5	8.5	6.0	5.0	---	---	7.0	6.0
2	14.5	13.5	13.5	13.0	10.5	9.5	6.5	5.5	---	---	7.0	6.5
3	15.0	13.5	13.5	12.5	10.5	9.5	6.5	5.5	---	---	7.0	6.0
4	14.5	13.5	13.0	12.0	10.5	10.0	7.5	6.0	---	---	7.5	5.5
5	15.0	13.5	13.0	12.0	10.0	9.0	7.5	6.5	---	---	7.5	5.5
6	14.5	13.5	13.0	12.0	10.5	10.0	8.0	7.0	---	---	6.5	5.0
7	15.0	13.5	13.0	12.5	10.5	9.5	8.0	7.5	---	---	7.0	5.5
8	15.0	13.5	13.5	12.0	10.5	9.5	7.5	7.5	---	---	7.0	5.5
9	18.0	13.5	13.0	12.5	10.5	10.0	7.5	7.5	---	---	7.5	6.0
10	15.0	13.5	13.0	12.5	10.5	9.5	7.5	6.0	---	---	8.0	6.0
11	14.5	13.5	13.0	12.5	10.5	9.0	7.0	6.0	---	---	7.5	6.5
12	14.5	13.5	13.0	12.0	10.0	9.0	6.5	5.5	---	---	7.0	5.5
13	14.5	13.5	13.0	8.5	10.0	8.5	6.5	5.5	---	---	7.5	6.0
14	14.5	13.5	9.5	8.0	10.0	9.0	6.5	5.5	---	---	7.5	6.0
15	14.5	14.0	9.5	8.0	9.5	9.5	6.5	6.0	---	---	7.5	7.0
16	14.5	14.0	9.5	8.5	9.5	9.0	7.0	6.5	---	---	7.5	6.0
17	15.0	14.0	10.0	9.5	9.5	8.5	7.0	6.0	---	---	8.0	6.5
18	14.5	14.0	10.0	9.0	9.5	9.0	6.0	5.0	---	---	8.5	7.0
19	14.5	13.5	9.0	6.5	9.5	8.5	5.5	4.0	---	---	8.5	6.5
20	14.0	13.5	6.5	5.5	9.5	9.0	5.5	4.5	---	---	9.0	7.0
21	13.0	12.5	6.0	4.5	9.5	8.5	5.5	4.5	---	---	7.5	7.0
22	13.5	13.0	11.0	5.0	8.5	8.0	5.5	5.0	---	---	8.5	6.5
23	13.5	13.0	11.5	10.5	8.5	7.5	5.5	4.5	---	---	9.0	7.0
24	13.5	13.0	12.0	10.0	8.5	7.0	5.5	5.0	---	---	9.0	7.0
25	13.5	13.0	12.0	9.5	8.0	7.0	6.0	5.5	---	---	8.0	6.5
26	13.5	13.0	11.0	8.5	8.0	7.0	6.0	5.0	7.5	6.0	8.0	6.0
27	13.5	13.0	10.5	9.5	8.0	7.0	5.5	5.0	7.5	6.0	8.5	6.5
28	13.5	13.0	10.5	8.5	8.0	6.5	5.5	5.5	7.5	6.5	9.0	7.0
29	13.0	12.5	10.5	9.5	8.5	7.0	5.5	4.5	7.0	5.0	9.0	7.0
30	13.0	12.0	10.5	9.5	8.0	7.0	---	---	---	---	9.5	7.5
31	13.5	12.5	---	---	7.0	5.5	---	---	---	---	9.0	6.5
MONTH	18.0	12.0	13.5	4.5	10.5	5.5	8.0	4.0	---	---	9.5	5.0

SAN JOAQUIN RIVER BASIN

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

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.--47 years (water years 1912-16, 1939-80), 127 ft³/s (3.597 m³/s), 92,010 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, 1,390 ft³/s (39.4 m³/s) Jan. 13, gage height, 5.83 ft (1.777 m); minimum daily, 16 ft³/s (0.45 m³/s) Dec. 28, 29.

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	99	62	74	43	68	79	75	638	470	797	51	63
2	99	61	73	31	66	79	73	659	466	818	56	63
3	99	62	73	26	65	79	71	721	425	687	61	64
4	99	62	71	24	65	76	71	763	349	567	62	65
5	98	61	71	23	65	76	74	733	282	457	64	65
6	98	61	75	23	67	75	72	721	254	433	64	64
7	98	61	84	28	65	72	69	725	337	349	64	63
8	98	60	85	32	64	71	70	655	546	348	63	63
9	99	59	85	35	63	70	72	587	683	341	63	63
10	101	59	70	36	63	71	78	439	725	329	63	64
11	99	59	53	41	62	71	83	331	708	302	62	63
12	99	43	49	226	61	69	88	273	663	287	63	63
13	98	30	49	738	60	68	112	257	575	270	63	63
14	99	30	48	655	63	69	131	247	516	252	63	63
15	87	30	47	252	68	69	139	254	634	241	63	64
16	80	30	47	185	77	68	155	319	725	233	63	64
17	81	33	36	151	100	68	179	429	797	228	63	63
18	80	31	27	124	158	69	201	591	832	211	33	63
19	82	30	28	109	144	67	261	712	821	180	18	63
20	88	30	27	98	110	69	470	803	811	159	29	63
21	83	30	26	94	99	68	292	839	764	160	36	63
22	82	30	26	90	91	67	147	798	693	155	36	63
23	72	41	26	85	88	67	120	650	617	136	36	63
24	64	56	27	83	86	69	135	446	613	127	37	63
25	67	65	27	82	82	68	241	340	674	112	37	63
26	73	71	27	79	81	67	346	268	713	82	36	63
27	67	64	22	76	82	66	456	223	614	67	36	63
28	66	68	16	75	84	68	553	210	567	70	36	63
29	65	76	16	73	80	71	591	226	704	63	50	63
30	64	75	19	68	---	78	634	343	799	64	65	63
31	63	---	28	70	---	78	---	429	---	58	64	---
TOTAL	2647	1530	1432	3755	2327	2202	6059	15629	18377	8583	1600	1899
MEAN	85.4	51.0	46.2	121	80.2	71.0	202	504	613	277	51.6	63.3
MAX	101	76	85	738	158	79	634	839	832	818	65	65
MIN	63	30	16	23	60	66	69	210	254	58	18	63
AC-FT	5250	3030	2840	7450	4620	4370	12020	31000	36450	17020	3170	3770

CAL YR 1979 TOTAL 46734 MEAN 128 MAX 1050 MIN 16 AC-FT 92700
WTR YR 1980 TOTAL 66040 MEAN 180 MAX 839 MIN 16 AC-FT 131000

SAN JOAQUIN RIVER BASIN

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.--41 years, 42.3 ft³/s (1.198 m³/s), 30,650 acre-ft/yr (37.8 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	59	59	11	58	50	59	61	60	60	53	59
2	60	59	59	10	58	51	59	60	59	59	52	59
3	60	60	59	10	58	54	59	59	59	59	60	59
4	60	60	59	10	59	56	59	59	57	59	60	60
5	60	59	59	10	60	56	60	60	58	59	60	60
6	60	59	59	10	60	56	59	61	60	61	60	60
7	59	59	60	21	60	59	59	60	61	59	60	60
8	59	59	60	32	59	61	59	60	63	59	60	60
9	59	59	59	33	59	61	59	60	62	59	60	60
10	59	59	44	36	60	59	60	59	61	59	60	60
11	59	59	20	45	60	56	60	59	61	59	60	60
12	59	46	21	57	60	56	60	60	60	60	60	60
13	59	29	21	56	60	56	61	60	60	59	60	60
14	59	29	19	43	57	57	61	60	60	60	60	60
15	59	29	20	47	53	56	61	60	62	60	60	60
16	59	29	20	49	55	57	61	60	61	60	60	60
17	59	30	16	50	56	57	60	60	60	59	60	60
18	59	29	10	54	57	56	61	60	60	59	22	60
19	59	29	10	54	52	56	57	60	61	59	0	60
20	59	29	10	54	48	55	58	61	61	59	0	60
21	59	29	10	55	49	55	57	60	61	60	0	60
22	59	29	10	55	49	55	55	52	60	60	0	48
23	59	38	10	54	50	55	54	59	60	59	0	60
24	59	56	10	54	50	57	58	59	60	60	0	60
25	60	56	10	56	50	59	63	59	60	60	0	60
26	60	57	10	57	50	59	62	60	60	59	0	51
27	59	56	11	58	50	58	61	60	59	60	0	60
28	59	57	10	58	51	58	60	59	60	60	1.1	60
29	59	59	10	57	50	59	61	60	61	59	30	60
30	59	59	10	57	---	59	60	61	61	59	60	60
31	59	---	10	57	---	59	---	61	---	55	59	---
TOTAL	1836	1426	855	1310	1598	1758	1783	1850	1808	1838	1177.1	1776
MEAN	59.2	47.5	27.6	42.3	55.1	56.7	59.4	59.7	60.3	59.3	38.0	59.2
MAX	60	60	60	58	60	61	63	61	63	61	60	60
MIN	59	29	10	10	48	50	54	52	57	55	0	48
AC-FT	3640	2830	1700	2600	3170	3490	3540	3670	3590	3650	2330	3520
CAL YR 1979	TOTAL	17875.10	MEAN	49.0	MAX	62	MIN	0	AC-FT	35460		
WTR YR 1980	TOTAL	19015.10	MEAN	52.0	MAX	63	MIN	0	AC-FT	37720		

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.--43 years, 27.8 ft³/s (0.787 m³/s), 20,140 acre-ft/yr (24.8 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	20	20	22	33	39	41	43	44	47	51	40
2	37	20	20	22	33	39	40	43	45	48	51	40
3	37	20	20	20	33	39	40	43	45	47	51	39
4	37	20	20	20	34	39	41	43	44	47	44	38
5	37	8.3	20	20	35	39	42	42	44	49	40	38
6	37	0	20	20	36	39	42	42	44	49	41	37
7	37	0	19	23	35	39	42	42	44	48	41	37
8	37	12	21	30	31	39	41	42	46	48	41	37
9	37	20	21	25	29	39	41	42	46	48	40	37
10	37	19	21	45	29	39	41	42	46	49	42	37
11	37	19	21	46	33	39	41	41	46	50	45	37
12	37	19	18	40	40	38	41	41	44	49	45	37
13	37	19	16	38	40	38	42	40	44	49	45	37
14	37	22	16	43	39	38	42	41	44	49	44	37
15	28	24	15	29	40	38	42	43	44	50	42	37
16	23	24	16	28	35	38	43	41	44	49	40	37
17	23	24	16	29	32	38	43	41	45	49	39	37
18	23	24	16	30	33	38	43	41	46	49	39	36
19	23	24	16	30	33	38	43	43	46	49	39	36
20	24	28	16	30	33	38	45	45	46	49	39	36
21	24	34	15	30	29	38	45	45	47	49	40	36
22	22	33	14	29	22	39	42	44	47	49	40	36
23	21	32	21	31	21	39	41	44	48	48	40	35
24	20	34	24	34	21	39	41	43	48	47	40	35
25	20	34	22	34	30	39	41	42	49	46	40	35
26	20	31	21	33	39	39	44	41	51	46	40	35
27	20	27	20	33	39	40	43	41	49	46	41	35
28	20	25	20	33	39	40	43	43	47	49	40	35
29	20	21	20	34	39	40	43	37	47	48	40	35
30	20	21	21	34	---	41	43	44	47	44	40	36
31	20	---	22	33	---	40	---	44	---	47	40	---
TOTAL	889	658.3	588	948	965	1205	1262	1309	1377	1491	1300	1100
MEAN	28.7	21.9	19.0	30.6	33.3	38.9	42.1	42.2	45.9	48.1	41.9	36.7
MAX	37	34	24	46	40	41	45	45	51	50	51	40
MIN	20	0	14	20	21	38	40	37	44	44	39	35
AC-FT	1760	1310	1170	1880	1910	2390	2500	2600	2730	2960	2580	2180
CAL YR 1979	TOTAL	12818.3	MEAN	35.1	MAX	55	MIN	0	AC-FT	25430		
WTR YR 1980	TOTAL	13092.3	MEAN	35.8	MAX	51	MIN	0	AC-FT	25970		

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.

REVISÉD 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.--43 years, 83.4 ft³/s (2.362 m³/s), 60,420 acre-ft/yr (74.5 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, 2,290 ft³/s (64.9 m³/s) Jan. 14, gage height, 7.05 ft (2.149 m); minimum daily, 0.17 ft³/s (0.005 m³/s) Jan. 1.

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	2.0	2.0	2.3	.17	15	105	15	540	332	782	5.5	2.2
2	2.2	1.6	2.4	.77	11	98	11	550	337	892	3.6	2.2
3	2.2	1.7	2.4	1.1	9.0	119	8.4	631	313	861	3.2	2.2
4	2.2	2.0	2.4	1.3	6.9	120	6.2	727	252	638	2.4	2.2
5	2.2	1.8	2.4	1.3	3.9	134	44	719	192	390	2.0	2.2
6	2.2	2.7	2.4	1.3	3.5	126	51	655	150	316	2.0	2.2
7	2.2	2.4	2.4	1.3	3.9	104	31	697	173	224	2.0	2.1
8	2.2	2.4	2.5	1.3	3.5	91	25	596	336	115	2.1	2.0
9	2.2	1.8	2.0	1.1	3.5	82	22	522	556	50	2.2	2.0
10	2.1	1.6	2.0	1.4	3.5	75	22	376	652	210	2.2	2.0
11	2.0	1.6	2.0	1.4	2.8	76	23	308	648	163	2.2	2.0
12	2.1	1.6	2.0	2.2	1.4	69	23	190	589	139	2.2	2.0
13	2.2	1.6	2.0	6.1	1.8	62	31	175	498	138	2.2	2.0
14	2.0	1.7	2.0	1450	2.4	57	49	171	384	135	2.2	2.0
15	2.0	2.0	2.0	615	36	56	58	185	487	94	2.2	2.0
16	1.6	2.0	2.0	337	144	50	67	194	599	70	2.2	2.0
17	1.6	2.0	2.0	305	332	45	84	260	666	88	2.2	2.0
18	1.6	2.0	2.0	242	605	44	110	402	799	79	2.2	2.0
19	1.8	2.0	2.0	169	844	38	137	573	721	31	2.2	2.0
20	2.0	2.0	1.8	124	539	35	344	763	744	22	2.1	2.0
21	1.6	2.0	2.1	98	608	33	243	877	694	23	1.9	2.0
22	1.6	2.0	2.2	80	417	30	109	867	622	28	1.8	2.0
23	1.7	2.0	2.2	63	298	26	77	659	481	26	1.8	2.0
24	1.7	2.0	1.7	50	232	25	50	396	453	17	1.8	2.0
25	2.0	1.9	1.7	44	181	20	56	268	460	9.3	2.3	2.0
26	2.0	2.0	1.4	35	140	18	192	214	474	2.6	2.4	2.0
27	2.0	1.9	1.2	29	121	15	276	146	487	2.2	1.9	2.0
28	2.0	1.7	1.1	29	154	10	423	120	429	2.2	1.8	2.0
29	2.0	1.6	.63	31	123	11	494	122	405	2.2	2.0	1.9
30	2.0	1.7	1.1	20	---	13	599	188	486	2.3	2.2	1.6
31	2.0	---	1.1	17	---	16	---	280	---	5.0	2.2	---
TOTAL	61.2	57.3	59.43	3758.74	4846.1	1803	3680.6	13371	14419	5556.8	71.2	60.8
MEAN	1.97	1.91	1.92	121	167	58.2	123	431	481	179	2.30	2.03
MAX	2.2	2.7	2.5	1450	844	134	599	877	799	892	5.5	2.2
MIN	1.6	1.6	.63	.17	1.4	10	6.2	120	150	2.2	1.8	1.6
AC-FT	121	114	118	7460	9610	3580	7300	26520	28600	11020	141	121
CAL YR 1979	TOTAL	26676.53	MEAN	73.1	MAX	1090	MIN	.63	AC-FT	52910		
WTR YR 1980	TOTAL	47745.17	MEAN	130	MAX	1450	MIN	.17	AC-FT	94700		

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: October 1979 to September 1980. 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 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT												
10...	0800	48	7.2	13.5	9.7	--	--	19	6.0	1.0	2.0	--
DEC												
12...	1215	53	7.4	9.0	11.6	--	--	23	6.0	2.0	2.0	--
JAN												
09...	1215	55	7.3	10.0	11.0	--	--	23	6.0	2.0	2.0	--
FEB												
13...	1300	--	7.3	7.0	11.4	--	--	--	--	--	--	--
MAY												
06...	1400	--	7.2	11.0	11.7	6	1.3	--	--	--	--	--
JUN												
11...	1045	30	7.2	12.0	11.1	5	.7	12	3.0	1.0	1.0	.6
JUL												
22...	1030	46	7.3	16.0	9.4	3	.6	16	5.0	1.0	2.0	.7
SEP												
10...	1120	--	7.1	14.0	9.9	1	.4	--	--	--	--	--

DATE	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+N03 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC 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, ORTHOPH OSPATE DISSOL. (MG/L AS P)
OCT											
10...	22	2.0	.0	37	--	.01	.00	.00	.10	.01	.00
DEC											
12...	22	1.0	1.0	46	--	--	--	--	--	--	--
JAN											
09...	24	1.0	1.0	49	--	.01	.00	--	.20	.03	.00
FEB											
13...	--	--	--	--	--	.02	.01	--	.20	.01	.00
MAY											
06...	--	--	--	--	5	.00	.00	--	.10	.02	.00
JUN											
11...	13	1.0	.0	22	8	.00	.00	--	.20	.02	.00
JUL											
22...	19	1.0	.0	34	4	.00	.00	--	.20	.02	.00
SEP											
10...	--	--	--	--	3	.00	.00	--	.00	.01	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT							
10...	0800	--	--	0	--	--	--
DEC							
12...	1215	0	0	0	0	0	0
JAN							
09...	1215	--	--	0	--	--	--
MAY							
06...	1400	--	--	--	--	--	--
JUN							
11...	1045	--	--	0	--	--	--
JUL							
22...	1030	--	--	0	--	--	--
SEP							
10...	1120	0	0	--	0	0	0

SAN JOAQUIN RIVER BASIN

11298600 STANISLAUS RIVER AT PARROTTS FERRY BRIDGE, NEAR COLUMBIA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 10...	--	--	--	--	--	--	--
DEC 12...	20	0	0	.0	10	--	--
JAN 09...	--	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	1.2	.00
JUN 11...	--	--	--	--	--	2.6	.00
JUL 22...	--	--	--	--	--	1.7	.00
SEP 10...	50	0	0	.0	10	1.4	.00

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, 446,700 acre-ft (551 hm³) Mar. 16, elevation, 845.82 ft (257.806 m); minimum, 110,300 acre-ft (136 hm³) Oct. 15-18, elevation 736.40 ft (224.455 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116400	128900	158200	183800	279600	406300	376200	256400	236200	356700	328100	276600
2	115400	130600	159400	183800	276600	411300	370700	257100	235600	361000	325500	276400
3	115000	131400	160800	183300	273300	415900	363900	258000	235500	364100	327000	276100
4	114200	132700	162100	182000	269700	421200	358400	259000	235500	365900	324000	275700
5	113500	134000	162500	180700	266500	429300	354700	260000	235000	366800	321000	275200
6	112500	135100	163600	179700	263300	434000	348700	260200	238500	368000	317700	274700
7	111800	136100	165300	178700	260000	435900	344000	260100	241600	368000	315400	276200
8	111000	137000	166600	177700	256600	436100	338600	258700	245500	367500	313600	276300
9	111000	137600	167800	178700	253100	435000	332500	258000	249900	366900	311400	276000
10	110400	139600	169200	180700	249600	433800	326300	256900	254200	366500	312800	275500
11	110400	140700	170500	192100	246200	432900	320100	256100	259000	365700	309900	275400
12	110400	141800	171800	221400	242700	431300	314500	253100	264500	364200	306500	275400
13	110400	142400	172300	282300	239400	435800	309700	248700	268900	363100	303900	275400
14	110400	142400	172900	309600	236900	440700	303600	246200	271200	361500	301600	276800
15	110300	142700	173400	316000	237800	443700	300300	243800	276900	359500	299600	276700
16	110300	143100	173900	319900	242900	446700	296400	241900	282600	357800	297300	276400
17	110300	143300	173900	326000	255700	443300	292600	241000	288600	356000	298500	276300
18	110300	144200	173900	327000	277400	441500	289400	242100	295200	354400	295400	276200
19	111600	144800	173700	326600	303000	439000	287000	244800	302400	352400	292500	275900
20	113300	144900	174200	321800	317200	436300	284200	250200	309300	349600	290200	276000
21	114900	145100	174200	316600	334800	432100	280200	255900	316300	347700	287400	277700
22	115800	146000	174200	311500	346300	427800	275300	260800	322300	345100	285100	277400
23	117200	147600	174400	307500	358800	423500	269900	264000	326700	339100	283400	276800
24	118400	148900	176200	302700	367000	419000	264100	264000	331000	339100	284600	276400
25	119600	150800	177200	297500	373800	412400	260300	261300	335800	337300	282100	275900
26	121200	153100	177400	294400	378600	407500	258000	257900	341000	336000	280300	275700
27	123200	153700	177200	292000	386000	402900	256500	255200	342500	337900	278800	275600
28	124000	154500	176400	290000	393900	398100	256200	250400	345000	337000	277300	277200
29	125200	155200	176200	287900	400000	393300	257500	245800	347200	334100	277300	277100
30	126400	157000	177500	285200	---	389000	257000	240500	351500	331700	276700	276900
31	127700	---	181700	282500	---	384600	---	237800	---	329900	276900	---
MAX	127700	157000	181700	327000	400000	446700	376200	264000	351500	368000	328100	277700
MIN	110300	128900	158200	177700	236900	384600	256200	237800	235000	329900	276700	274700
†	745.20	758.50	768.60	802.97	834.76	830.93	795.07	788.81	822.41	816.58	801.26	801.26
‡	+11800	+29300	+24700	+100800	+117500	-15400	-127600	-19200	+113700	-21600	-53000	0
††	620	300	160	130	320	800	1050	1430	2340	2980	2630	1850

CAL YR 1979 † +129364

WTR YR 1980 ‡ +160980

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

SAN JOAQUIN RIVER BASIN

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, 66,800 acre-ft (82.4 hm³) July 2, 26, elevation, 509.9 ft (155.42 m); minimum, 48,000 acre-ft (59.2 hm³) Sept. 28, elevation, 492.8 ft (150.21 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63600	56900	57600	59200	58200	57500	59100	59400	57900	66700	65600	56800
2	62200	57400	57400	58800	58300	58400	58700	58600	57600	66800	66300	55800
3	62100	57200	57200	58500	58400	59600	57900	58500	57800	66600	62700	55300
4	62000	57000	57000	58000	58500	59700	58400	58500	58800	66500	63400	55300
5	61800	57000	57400	57600	58600	59600	57600	58500	59800	66500	64500	55300
6	61800	57300	57900	57200	58700	59600	59100	58700	58800	66300	65800	55300
7	61700	57000	58000	57000	58900	59400	57700	59300	57400	66000	65800	53500
8	62200	57300	57900	57000	59100	59100	57500	59600	57500	65800	65700	53000
9	62400	57600	57700	57400	59200	59100	57800	59800	57700	66000	66000	52900
10	62300	57400	57500	57200	59200	58300	57900	59500	58600	66000	62300	52900
11	62000	57300	57400	58800	59200	57800	58400	57700	59400	65400	62900	52800
12	61700	56900	57200	62800	59100	58400	58200	58200	62200	65400	64400	52700
13	61400	56900	57400	64000	59100	58900	57800	58700	63200	65400	65000	52500
14	61100	56700	57500	57900	58900	58900	57700	59300	65500	65400	65400	50800
15	60800	56800	57600	57800	59300	58900	59100	59300	65600	65600	65500	50700
16	60600	57200	57800	58200	59300	59300	57700	59400	65500	65800	66200	50600
17	60300	57400	58200	58800	58400	59500	57800	59500	65100	65600	62800	50600
18	60100	57200	58200	58600	58800	59700	57700	59500	65200	65600	63900	50600
19	59600	56900	58200	57300	58800	59300	57500	59200	65600	66000	64900	50600
20	59300	56700	58000	57700	57400	58800	57600	59100	65600	66200	65100	50500
21	59300	56900	58000	58800	58300	59100	58200	58700	65500	66200	65700	49000
22	59000	56800	58200	59100	58200	57900	58400	58600	65000	66300	65800	48900
23	58700	56600	58200	58500	57700	58300	59300	58600	64200	66500	65700	49100
24	58500	56500	58600	57500	57900	57600	59100	58700	64600	65600	62300	49200
25	58400	56300	58800	57400	58400	59500	59100	58800	64200	66600	62100	49300
26	58200	56200	59000	58000	58900	59300	59400	58900	64200	66800	62000	49400
27	57900	56500	59100	58000	59400	59200	59600	57500	66700	63300	61400	49500
28	57800	57200	59000	58200	58600	58700	59100	57900	66000	62300	61000	48000
29	57600	57700	58800	58200	58400	58400	59400	57800	66600	64200	60200	48100
30	57400	57700	59000	58200	---	58200	59200	58200	66700	65200	59000	48200
31	57200	---	59100	58200	---	57700	---	57900	---	65800	57900	---
MAX	63600	57700	59100	64000	59400	59700	59600	59800	66700	66800	66300	56800
MIN	57200	56200	57000	57000	57400	57500	57500	57500	57400	62300	57900	48000
†	501.7	502.2	503.4	502.6	502.8	502.2	503.5	502.4	509.8	509.1	502.4	493.0
‡	-7700	+500	+1400	-900	+200	-700	+1500	-1300	+8800	-900	-7900	-9700
CAL YR 1979	†	-4700										
WTR YR 1980	†	-16700										

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

‡ Change in contents, in acre-feet.

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, 19.0°C on many days during September; minimum recorded, 8.5°C on many days during February to March.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	18.0	---	---	14.0	13.5	11.0	11.0	9.0	9.0	9.0	8.5
2	18.0	18.0	---	---	14.0	13.5	11.0	11.0	9.0	9.0	9.0	9.0
3	18.0	18.0	---	---	14.0	13.0	11.0	11.0	9.0	9.0	9.0	9.0
4	18.0	18.0	---	---	14.0	13.0	11.0	11.0	9.0	9.0	9.0	9.0
5	18.0	18.0	---	---	13.5	13.0	11.0	11.0	9.0	9.0	9.0	9.0
6	18.0	18.0	---	---	13.5	13.0	11.0	11.0	9.0	9.0	9.0	9.0
7	18.0	18.0	---	---	13.5	13.0	11.0	10.5	9.0	9.0	9.5	9.0
8	18.0	18.0	17.0	16.0	14.0	13.0	10.5	10.5	9.0	9.0	9.5	9.0
9	18.0	18.0	16.5	16.0	13.5	13.0	10.5	10.5	9.0	9.0	9.5	9.0
10	18.0	18.0	16.5	16.0	13.0	13.0	11.0	10.5	9.0	9.0	9.0	9.0
11	18.0	18.0	16.0	15.5	13.0	13.0	11.0	10.5	9.0	8.5	9.0	9.0
12	18.0	18.0	16.0	15.5	13.0	12.5	11.0	10.5	8.5	8.5	9.0	9.0
13	18.0	18.0	16.0	15.0	13.0	12.5	11.0	10.5	8.5	8.5	9.0	9.0
14	18.0	17.5	16.0	15.0	13.0	12.5	11.0	11.0	8.5	8.5	9.0	9.0
15	17.5	17.5	16.0	15.5	13.0	13.0	11.0	11.0	8.5	8.5	9.0	8.5
16	17.5	17.5	15.5	15.5	13.5	12.5	11.0	10.5	8.5	8.5	9.0	8.5
17	17.5	17.5	15.5	15.0	13.0	12.5	10.5	10.0	8.5	8.5	9.0	8.5
18	17.5	17.5	15.5	15.0	12.5	12.5	10.0	10.0	8.5	8.5	9.0	9.0
19	17.5	17.5	15.0	14.5	12.5	12.0	10.0	9.5	8.5	8.5	9.0	9.0
20	---	---	15.0	14.5	12.0	12.0	9.5	9.5	8.5	8.5	9.0	9.0
21	---	---	15.0	14.5	12.0	12.0	9.5	9.5	8.5	8.5	9.0	9.0
22	---	---	15.0	14.5	12.0	12.0	9.5	9.0	8.5	8.5	9.0	8.5
23	---	---	15.0	14.5	12.0	12.0	9.0	9.0	8.5	8.5	9.0	8.5
24	---	---	14.5	14.5	12.0	12.0	9.0	9.0	8.5	8.5	9.0	8.5
25	---	---	14.5	14.5	12.0	12.0	9.0	9.0	9.0	8.5	9.0	8.5
26	---	---	14.5	14.5	12.0	11.5	9.0	9.0	9.0	8.5	9.0	8.5
27	---	---	14.5	14.0	11.5	11.0	9.0	9.0	9.0	8.5	9.0	9.0
28	---	---	15.0	14.0	11.5	11.0	9.0	9.0	9.0	8.5	9.0	9.0
29	---	---	14.5	14.0	11.0	11.0	9.0	9.0	9.0	8.5	9.0	9.0
30	---	---	14.5	13.5	11.0	11.0	9.0	9.0	---	---	9.0	9.0
31	---	---	---	---	11.0	11.0	9.0	9.0	---	---	9.0	9.0
MONTH	---	---	---	---	14.0	11.0	11.0	9.0	9.0	8.5	9.5	8.5

SAN JOAQUIN RIVER BASIN

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	9.0	10.5	10.5					---	---	19.0	18.5
2	9.0	9.0	10.5	10.5					---	---	19.0	18.5
3	9.0	9.0	11.0	10.5					---	---	19.0	19.0
4	9.0	9.0	11.0	10.5					---	---	19.0	18.5
5	9.5	9.0	11.0	11.0					---	---	19.0	19.0
6	9.5	9.0	11.0	11.0					16.5	16.5	19.0	19.0
7	9.5	9.0	11.0	11.0					16.5	16.5	19.0	19.0
8	9.5	9.0	11.5	11.0					17.0	16.5	19.0	19.0
9	9.5	9.0	11.5	11.0					17.0	17.0	19.0	19.0
10	9.5	9.0	11.0	11.0					17.0	17.0	19.0	18.5
11	9.5	9.5	11.0	11.0					17.0	17.0	19.0	19.0
12	9.5	9.5	11.0	11.0					17.0	17.0	19.0	19.0
13	9.5	9.5	11.0	11.0					17.5	17.0	19.0	19.0
14	10.0	9.5	11.0	11.0					17.5	17.5	19.0	19.0
15	10.0	9.5	11.0	11.0					17.5	17.5	19.0	19.0
16	10.0	10.0	11.0	11.0					17.5	17.5	19.0	19.0
17	10.0	10.0	11.0	11.0					17.5	17.5	19.0	19.0
18	10.5	10.0	11.5	11.0					18.0	17.5	19.0	19.0
19	10.5	10.0	11.5	11.0					18.0	18.0	19.0	19.0
20	10.5	10.5	11.5	11.5					18.0	18.0	19.0	19.0
21	10.5	10.5	11.5	11.5					18.0	18.0	19.0	19.0
22	10.5	10.5	---	---					18.0	18.0	19.0	19.0
23	10.5	10.5	---	---					18.0	18.0	19.0	18.5
24	10.5	10.5	---	---					18.5	18.0	19.0	18.5
25	10.5	10.5	---	---					18.5	18.5	19.0	18.5
26	10.5	10.5	---	---					18.5	18.5	19.0	18.5
27	10.5	10.5	---	---					18.5	18.5	19.0	18.5
28	10.5	10.5	---	---					18.5	18.5	18.5	18.5
29	10.5	10.5	---	---					18.5	18.5	18.5	18.5
30	10.5	10.5	---	---					18.5	18.5	18.5	18.5
31	---	---	---	---					18.5	18.5	---	---
MONTH	10.5	9.0	---	---					18.5	16.5	19.0	18.5

SAN JOAQUIN RIVER BASIN

343

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, 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.--66 years, 430 ft³/s (12.18 m³/s), 311,500 acre-ft/yr (384 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 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	667	1.2	3.6	.03	.30	0	933	1070	1270	1280	1290	915
2	668	1.1	3.6	.02	.30	0	1100	1070	1220	1220	1280	915
3	667	1.2	2.7	.08	.26	.01	1110	1070	1000	1020	1290	633
4	666	.97	.56	12	.20	104	1120	1070	880	972	1290	478
5	667	.88	.42	18	.24	121	1020	1070	880	971	1290	475
6	667	.85	.98	1.0	.29	101	980	1070	896	971	1290	474
7	666	.85	.99	.73	6.3	102	982	1070	985	971	1290	474
8	432	.85	3.4	.40	23	104	983	1070	1040	970	1290	474
9	298	.82	4.9	.62	.31	105	983	1070	1110	970	1290	473
10	290	.80	2.6	.43	.24	104	1010	1080	1120	1180	1290	456
11	284	.80	.40	.83	.21	105	1080	1080	1080	1300	1290	442
12	285	.79	.40	.98	.24	187	1080	1080	1080	1300	1290	440
13	285	.77	.29	.70	.26	223	1080	1040	1050	1300	1240	439
14	285	.75	0	.67	.25	221	1090	813	976	1300	1210	439
15	286	.77	6.6	.53	.25	222	965	815	974	1300	1210	438
16	293	.79	11	.38	.39	223	944	816	1110	1300	1210	437
17	285	.89	0	.71	.38	229	1030	818	1200	1300	1210	428
18	285	.71	.03	.44	.26	199	1120	859	1210	1220	1210	420
19	210	.72	.05	.30	1.4	270	1150	1110	1220	1180	1210	420
20	108	.73	.02	.30	.54	344	1160	1150	1290	1180	1210	420
21	1.6	.72	3.9	.25	1.1	486	1100	1250	1290	1180	1210	419
22	1.4	.70	12	.21	.66	513	916	1250	1290	1260	1210	419
23	1.4	.70	.11	.20	.51	628	866	1210	1290	1300	1210	418
24	1.4	.70	.37	.20	.40	783	849	1120	1290	1290	1210	417
25	1.4	.71	.25	.20	.33	794	853	1080	1290	1280	1210	416
26	1.4	.71	.14	.20	.26	693	869	1080	1290	1290	1200	416
27	1.3	.70	0	.20	.14	779	870	1080	1280	1290	1200	415
28	1.2	.70	0	.21	.10	852	984	1090	1290	1290	1080	415
29	1.2	.70	0	.22	.02	813	1060	1130	1290	1290	956	413
30	1.2	2.5	.07	.24	---	753	1060	1250	1290	1290	917	411
31	1.2	---	.10	.30	---	755	---	1270	---	1290	916	---
TOTAL	8308.7	26.08	59.48	41.58	39.14	10813.01	30347	33101	34481	37255	37499	14249
MEAN	268	.87	1.92	1.34	1.35	349	1012	1068	1149	1202	1210	475
MAX	668	2.5	12	18	23	852	1160	1270	1290	1300	1290	915
MIN	1.2	.70	0	.02	.02	0	849	813	880	970	916	411
AC-FT	16480	52	118	82	78	21450	60190	65660	68390	73900	74380	28260
CAL YR 1979 TOTAL	205133.76			MEAN 562	MAX 1270	MIN 0	AC-FT 406900					
WTR YR 1980 TOTAL	206219.99			MEAN 563	MAX 1300	MIN 0	AC-FT 409000					

SAN JOAQUIN RIVER BASIN

11301000 OAKDALE CANAL NEAR KNIGHTS FERRY, CA

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) downstream from headgate at Goodwin Dam, and 3.4 mi (5.5 km) northeast of Knights Ferry.

PERIOD OF RECORD.--May 1914 to current year. Records for water years 1933-36 incomplete, monthly and yearly estimates published in WSP 1315-A.

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.

REMARKS.--Records good. Canal diverts water from left bank of Stanislaus River at Goodwin Dam 0.3 mi (0.5 km) upstream for irrigation in Oakdale Irrigation District. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--66 years, 166 ft³/s (4.701 m³/s), 120,300 acre-ft/yr (148 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.

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	427	0	0	0	0	0	362	472	495	518	528	524
2	427	0	0	0	0	0	388	472	497	525	528	524
3	427	0	0	0	0	0	389	471	499	526	529	523
4	426	0	0	0	0	0	404	472	499	526	528	521
5	427	0	0	0	0	.12	228	473	499	525	529	511
6	426	0	0	0	0	.12	150	473	503	525	529	508
7	426	0	0	0	0	0	163	474	506	525	529	508
8	426	0	0	0	0	0	377	474	508	525	529	505
9	426	0	0	.07	0	0	398	474	507	525	529	483
10	426	0	0	0	0	0	410	474	507	526	530	483
11	426	0	0	.43	0	0	410	473	508	526	530	483
12	414	0	0	.61	0	0	411	472	508	526	531	482
13	403	0	0	.27	0	0	416	472	515	526	530	482
14	403	0	0	.24	0	0	432	471	516	527	530	480
15	403	0	0	.08	.01	0	433	470	516	527	530	464
16	403	0	0	0	.24	0	433	473	515	527	531	455
17	397	.13	0	.38	.54	0	432	474	515	528	530	450
18	371	0	0	.05	.20	20	433	477	518	528	530	450
19	206	0	0	0	4.4	61	434	498	516	528	531	418
20	38	0	0	0	1.1	228	434	497	515	529	532	397
21	0	0	0	0	1.6	228	435	496	516	529	532	397
22	0	0	0	0	.42	229	443	499	515	530	533	397
23	0	0	0	0	.02	234	443	519	516	526	533	397
24	0	0	.15	0	0	296	433	519	516	526	532	397
25	0	0	0	0	0	236	417	519	516	521	533	400
26	0	0	0	0	0	167	421	512	517	526	533	414
27	0	0	0	0	0	167	450	493	514	527	532	414
28	0	0	0	0	0	174	450	495	514	527	533	414
29	0	0	0	0	0	254	450	496	510	527	529	414
30	0	0	0	0	---	263	452	496	511	527	524	414
31	0	---	0	0	---	359	---	494	---	528	524	---
TOTAL	7728	.13	.15	2.13	8.53	2916.24	11931	15044	15307	16312	16431	13709
MEAN	249	.004	.005	.069	.29	94.1	398	485	510	526	530	457
MAX	427	.13	.15	.61	4.4	359	452	519	518	530	533	524
MIN	0	0	0	0	0	0	150	470	495	518	524	397
AC-FT	15330	.3	.3	4.2	17	5780	23670	29840	30360	32350	32590	27190
CAL YR 1979	TOTAL	95721.75	MEAN	262	MAX	530	MIN	0	AC-FT	189900		
WTR YR 1980	TOTAL	99389.18	MEAN	272	MAX	533	MIN	0	AC-FT	197100		

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.--23 years, 749 ft³/s (21.21 m³/s), 542,700 acre-ft/yr (669 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, 5,080 ft³/s (144 m³/s) Jan. 16, gage height, 13.90 ft (4.237 m); minimum daily, 4.0 ft³/s (0.11 m³/s) Oct. 4, 5.

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	4.4	104	91	1020	3270	514	3370	3400	2420	1010	38	31
2	4.4	103	91	1310	3270	514	3300	3380	2340	1050	38	31
3	4.1	104	93	1750	3280	518	3200	3340	1640	1110	38	28
4	4.0	104	97	1720	3280	506	3200	3340	1440	1150	38	27
5	4.0	104	95	1720	3280	1280	3240	3330	1460	1050	38	28
6	4.3	103	92	1730	3290	1900	3260	3340	1220	998	38	28
7	4.3	105	92	1600	3280	1910	3330	3370	174	1000	38	28
8	4.2	105	87	1530	3280	3110	3250	3410	14	997	38	28
9	4.5	103	83	1600	3300	3290	3260	3440	14	997	37	27
10	4.5	99	89	1730	3310	3270	3320	3430	14	1010	38	26
11	4.7	99	93	1750	3310	3260	3340	3360	13	1000	37	26
12	4.5	99	92	2150	3300	3110	3340	3280	12	997	38	26
13	4.2	99	122	2790	3300	1160	3320	3320	12	998	37	26
14	4.3	97	259	3570	3300	524	3380	3290	12	997	36	25
15	4.3	103	321	4180	3310	524	3370	3310	12	998	36	25
16	47	103	316	4800	3340	550	3350	3310	12	961	36	24
17	108	105	333	4800	3320	2300	3360	3320	12	990	35	24
18	108	100	681	4800	3270	3310	3370	3330	13	995	35	23
19	101	101	697	4800	3290	3330	3370	3360	12	999	35	23
20	96	100	695	4800	3270	3270	3360	3370	13	1000	35	23
21	100	100	685	4800	3290	3280	3380	3390	14	1010	35	22
22	100	100	681	4800	2220	3350	3330	3370	13	1020	35	21
23	100	101	700	4800	517	3370	3390	3310	14	990	35	21
24	103	99	715	4800	514	3340	3410	3360	14	265	35	22
25	104	99	706	4790	514	3300	3360	3360	14	36	34	21
26	104	99	701	4060	514	3320	3350	3330	14	37	34	21
27	103	99	870	3270	517	3280	3350	3310	14	38	34	21
28	103	99	1030	3270	517	3270	3360	3250	833	38	33	21
29	104	98	1030	3270	515	3270	3390	3300	992	38	32	21
30	103	94	1030	3270	---	3230	3400	3380	1010	38	32	21
31	104	---	1030	3270	---	3350	---	3020	---	38	32	---
TOTAL	1652.7	3028	13697	98550	74968	74510	100010	103410	13791	23855	1110	739
MEAN	53.3	101	442	3179	2585	2404	3334	3336	460	770	35.8	24.6
MAX	108	105	1030	4800	3340	3370	3410	3440	2420	1150	38	31
MIN	4.0	94	83	1020	514	506	3200	3020	12	36	32	21
AC-FT	3280	6010	27170	195500	148700	147800	198400	205100	27350	47320	2200	1470
CAL YR 1979	TOTAL	223819.85	MEAN	613	MAX	4110	MIN	.12	AC-FT	443900		
WTR YR 1980	TOTAL	509320.70	MEAN	1392	MAX	4800	MIN	4.0	AC-FT	1010000		

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, 23.0°C Oct. 1, 2; minimum recorded, 8.0°C Mar. 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.0	19.0	17.0	16.0	14.5	14.0	11.0	10.5	---	---	---	---
2	23.0	19.5	16.5	16.0	14.5	14.0	11.0	10.0	---	---	---	---
3	22.0	19.5	16.5	16.0	14.0	13.0	11.5	11.0	---	---	---	---
4	22.5	19.5	16.5	16.0	13.5	12.0	11.5	11.0	10.0	8.0	---	---
5	22.5	19.5	16.5	16.0	13.5	12.0	11.5	11.0	10.0	9.0	---	---
6	22.5	19.5	16.5	16.0	13.0	12.0	11.5	11.0	10.0	9.0	---	---
7	22.0	19.5	16.5	16.0	13.0	11.5	11.5	11.0	10.0	9.0	---	---
8	21.0	18.5	16.5	16.0	13.0	12.0	12.0	11.0	11.0	9.5	---	---
9	21.5	18.5	16.5	16.0	13.0	12.0	12.0	11.5	11.0	9.5	---	---
10	21.5	18.5	16.5	15.5	12.5	12.0	12.0	11.5	10.5	9.5	---	---
11	21.5	18.5	16.5	15.5	12.5	12.0	12.0	11.5	10.5	10.0	---	---
12	21.0	18.0	16.5	15.5	12.0	11.5	12.0	11.5	10.5	9.5	---	---
13	20.5	18.5	16.0	15.5	12.5	11.0	12.5	11.5	10.5	9.5	---	---
14	21.0	18.5	15.5	15.0	12.5	11.0	12.5	11.5	10.5	9.5	---	---
15	21.5	19.0	15.5	13.5	12.5	11.5	12.5	12.0	10.5	10.0	---	---
16	20.5	18.0	15.5	15.0	12.5	11.5	13.0	12.0	10.5	9.5	---	---
17	18.0	17.5	16.0	15.5	12.5	11.5	12.5	12.5	11.0	9.5	---	---
18	18.0	16.5	16.0	15.0	12.5	11.5	12.5	11.5	11.5	11.0	---	---
19	18.0	17.0	15.5	14.5	12.0	11.5	12.0	11.5	11.5	11.0	---	---
20	18.0	17.0	15.0	14.0	12.0	11.5	12.0	11.5	11.5	10.0	---	---
21	18.0	17.0	14.5	14.0	12.0	11.5	12.0	11.0	11.5	11.0	---	---
22	17.5	16.5	14.0	14.0	12.0	11.0	11.5	11.0	12.0	11.0	---	---
23	17.5	16.5	14.5	14.0	11.5	11.0	11.5	10.5	11.5	11.0	---	---
24	18.0	17.0	14.5	14.0	11.5	11.0	11.0	10.5	12.0	11.0	---	---
25	17.5	17.0	15.0	14.5	12.0	11.0	11.5	10.5	11.5	11.0	---	---
26	17.5	16.5	15.0	14.5	11.5	11.0	---	---	11.5	11.0	---	---
27	17.5	16.5	14.5	14.0	11.5	11.0	---	---	11.5	11.0	---	---
28	17.5	16.5	14.5	14.0	11.5	10.5	---	---	11.5	10.0	---	---
29	17.5	16.5	14.5	14.0	11.5	10.5	---	---	11.5	10.0	---	---
30	17.0	16.0	14.5	14.0	11.5	10.5	---	---	12.0	10.0	---	---
31	17.0	16.0	---	---	12.5	11.0	---	---	12.0	10.5	---	---
MONTH	23.0	16.0	17.0	13.5	14.5	10.5	13.0	10.0	---	---	12.0	8.0

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	16.0	13.0	19.0	17.5	21.0	19.0
2	12.0	11.0	13.0	10.5	13.5	12.0	16.5	14.5	19.0	17.5	20.5	19.0
3	12.5	11.5	13.5	11.5	13.5	12.0	15.5	13.0	19.0	17.5	21.0	19.0
4	12.5	12.0	16.0	11.0	13.5	11.5	15.5	12.5	19.5	17.5	21.0	19.5
5	12.5	12.0	15.5	13.5	13.5	12.0	15.5	12.5	19.5	17.5	21.0	19.5
6	12.5	12.0	15.5	13.5	13.5	12.5	15.5	12.5	19.5	17.5	20.5	19.5
7	12.5	12.0	15.5	13.5	15.0	12.0	16.5	12.5	19.5	18.0	21.0	19.0
8	13.0	12.5	15.0	13.5	17.0	12.5	17.0	15.0	19.5	18.0	21.0	19.5
9	13.0	12.5	15.0	13.0	17.0	13.0	17.0	16.0	19.5	18.0	21.0	19.5
10	13.5	12.5	15.0	13.5	17.0	12.0	17.0	16.0	19.5	18.0	21.0	19.5
11	13.0	12.5	15.0	13.5	17.5	13.0	17.0	16.5	19.5	18.0	21.0	19.5
12	13.5	13.0	14.5	13.0	17.5	13.5	17.5	16.5	19.5	18.0	20.5	17.0
13	13.5	13.0	14.5	13.0	17.5	12.5	17.5	16.5	20.0	18.0	18.0	16.0
14	14.0	13.0	14.0	12.5	17.0	12.0	17.5	16.5	20.0	18.0	18.0	15.5
15	14.0	13.5	14.0	12.5	17.0	12.0	17.5	16.5	20.0	18.0	18.0	15.0
16	14.5	13.5	14.0	12.5	17.0	12.5	18.0	16.5	20.0	18.5	18.0	16.0
17	14.5	14.0	14.0	12.5	16.5	13.0	17.5	16.5	20.0	18.5	18.0	15.5
18	14.0	13.5	14.0	12.5	17.0	13.0	17.5	17.0	20.5	18.5	17.5	15.5
19	14.5	14.0	14.0	12.0	17.5	13.0	17.5	16.5	20.5	18.5	18.0	15.0
20	14.5	14.0	14.0	12.0	17.5	13.5	17.5	17.0	20.5	18.5	18.0	15.0
21	---	---	13.5	12.0	17.5	13.5	17.5	17.0	20.5	18.5	17.0	15.0
22	---	---	13.5	9.5	18.0	13.0	18.0	17.0	20.0	18.5	17.0	15.0
23	---	---	13.0	9.5	17.5	13.0	18.0	17.0	20.5	18.5	17.0	14.5
24	---	---	13.0	10.0	17.5	13.0	18.0	17.0	20.5	18.5	17.0	14.5
25	---	---	13.0	10.5	18.0	13.0	18.5	17.0	20.5	18.5	17.0	14.5
26	---	---	12.5	10.0	17.5	13.0	18.5	17.0	20.5	18.5	17.0	14.5
27	---	---	13.0	10.0	17.5	13.0	18.5	17.5	20.5	19.0	16.5	14.0
28	---	---	13.5	10.0	15.0	12.0	18.5	17.5	20.5	18.5	16.5	14.0
29	---	---	14.0	10.5	15.5	12.5	18.5	17.5	20.5	19.0	16.5	14.0
30	---	---	14.0	10.5	16.5	13.0	19.0	17.5	20.5	19.0	16.0	13.5
31	---	---	14.0	10.0	---	---	19.0	17.5	21.0	19.0	---	---
MONTH	---	---	16.0	9.5	18.0	11.0	19.0	12.5	21.0	17.5	21.0	13.5

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.--40 years, 1,015 ft³/s (28.74 m³/s), 735,400 acre-ft/yr (907 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, 4,860 ft³/s (138 m³/s) Jan. 18, gage height, 53.57 ft (16.328 m); minimum daily, 147 ft³/s (4.16 m³/s) Oct. 5.

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	176	267	246	948	3570	817	3660	3840	3580	1190	255	298
2	170	296	246	944	3560	794	3720	3850	3110	1260	311	239
3	159	301	243	1060	3550	779	3750	3810	2880	1360	355	274
4	174	312	228	1410	3550	775	3650	3770	2310	1490	392	250
5	147	309	195	1430	3540	802	3700	3740	2000	1520	332	314
6	160	305	182	1400	3540	1480	3790	3720	2000	1430	328	313
7	205	302	178	1380	3540	2140	3730	3740	1790	1350	355	333
8	204	302	173	1300	3530	2160	3740	3750	1040	1260	289	365
9	216	284	171	1230	3510	2890	3760	3800	775	1230	272	320
10	229	237	168	1330	3530	3340	3760	3910	631	1180	305	299
11	232	196	164	1620	3530	3420	3770	3970	568	1190	290	303
12	226	182	164	2070	3530	3430	3790	3980	526	1200	274	323
13	204	175	165	2510	3530	3340	3780	3870	505	1200	248	318
14	267	171	165	2890	3530	1880	3760	3840	461	1220	239	329
15	373	170	186	3950	3540	989	3730	3770	468	1210	275	405
16	312	169	269	4500	3600	874	3730	3740	479	1190	315	398
17	268	185	290	4710	3840	856	3720	3720	451	1150	318	369
18	249	237	306	4780	3970	1980	3720	3750	397	1170	289	366
19	256	221	414	4580	3790	3130	3740	3760	396	1160	270	487
20	354	192	530	4680	4030	3400	3790	3730	380	1200	302	459
21	355	181	565	4690	4010	3480	3790	3710	428	1180	244	478
22	255	178	578	4680	4040	3550	3780	3780	460	1140	279	487
23	220	178	572	4700	3200	3640	3810	3760	457	1150	273	461
24	192	177	615	4710	1400	3710	3850	3730	426	1140	298	460
25	181	175	724	4710	1110	3790	3890	3810	411	740	290	441
26	178	177	753	4700	997	3800	3860	3840	416	488	292	467
27	176	175	672	4520	935	3720	3860	3760	423	416	261	475
28	170	189	720	3920	889	3640	3880	3740	454	381	334	480
29	165	214	881	3660	851	3620	3870	3660	759	332	288	479
30	163	236	923	3610	---	3650	3810	3690	1150	285	249	468
31	169	---	929	3590	---	3640	---	3750	---	311	249	---
TOTAL	6805	6693	12615	96212	89742	79516	113190	117290	30131	32723	9071	11458
MEAN	220	223	407	3104	3095	2565	3773	3784	1004	1056	293	382
MAX	373	312	929	4780	4040	3800	3890	3980	3580	1520	392	487
MIN	147	169	164	944	851	775	3650	3660	380	285	239	239
AC-FT	13500	13280	25020	190800	178000	157700	224500	232600	59760	64910	17990	22730
CAL YR 1979	TOTAL	259204	MEAN	710	MAX	4120	MIN	139	AC-FT	514100		
WTR YR 1980	TOTAL	605446	MEAN	1654	MAX	4780	MIN	147	AC-FT	1201000		

SAN JOAQUIN RIVER BASIN

11303300 STANISLAUS RIVER AT KOETITZ RANCH, NEAR RIPON, CA

LOCATION.--Lat 37°41'58", long 121°10'07", in NE¼SW¼ 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: October 1979 to September 1980. Water years 1900-79 in files of California Department of Water Resources.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY AS (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 09...	1230	119	7.5	19.0	8.6	--	--	42	10	4.0	6.0
DEC 11...	1400	232	7.5	10.0	11.6	--	--	90	21	9.0	12
JAN 09...	0900	78	7.2	11.0	10.0	--	--	32	8.0	3.0	3.0
FEB 13...	1330	--	7.4	9.0	10.8	--	--	--	--	--	--
APR 08...	1330	--	7.5	12.0	11.4	6	1.5	--	--	--	--
MAY 07...	0800	64	7.3	15.5	10.8	9	1.3	23	6.0	2.0	2.0
JUN 11...	0830	152	7.3	17.0	7.9	7	.8	62	15	6.0	6.0
JUL 22...	1330	--	7.3	23.0	8.6	4	1.0	--	--	--	--
AUG 13...	0715	--	7.3	21.0	7.7	11	.6	--	--	--	--
SEP 10...	1345	--	7.3	22.0	7.8	10	.9	--	--	--	--

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	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, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
OCT 09...	--	46	6.0	3.0	82	--	.40	.01	.80	.23	.10
DEC 11...	--	90	7.0	8.0	152	--	1.1	.00	.20	.06	.03
JAN 09...	--	33	2.0	1.0	59	--	.20	.01	.20	.05	.02
FEB 13...	--	--	--	--	--	--	.10	.00	.20	.05	.01
APR 08...	--	--	--	--	--	14	--	--	--	--	--
MAY 07...	1.0	25	1.0	1.0	43	16	.04	.06	.30	.06	.02
JUN 11...	1.4	62	7.0	3.0	96	20	.60	.02	.20	.09	.03
JUL 22...	--	--	--	--	--	27	.10	.02	.40	.05	.02
AUG 13...	--	--	--	--	--	18	.50	.03	.30	.13	.08
SEP 10...	--	--	--	--	--	16	.60	.03	.30	.14	.08

SAN JOAQUIN RIVER BASIN

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11303300 STANISLAUS RIVER AT KOETITZ RANCH, NEAR RIPON, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 09...	1230	--	--	0	--	--	--
DEC 11...	1400	0	0	0	0	0	0
JAN 09...	0900	0	0	0	0	0	0
APR 08...	1330	--	--	--	--	--	--
MAY 07...	0800	--	--	0	--	--	--
JUN 11...	0830	--	--	0	--	--	--
JUL 22...	1330	--	--	--	--	--	--
AUG 13...	0715	--	--	--	--	--	--
SEP 10...	1345	0	0	--	0	0	0

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 09...	--	--	--	--	--	--	--
DEC 11...	90	10	60	.0	20	--	--
JAN 09...	30	0	10	.0	20	--	--
APR 08...	--	--	--	--	--	2.0	.00
MAY 07...	--	--	--	--	--	1.5	.00
JUN 11...	--	--	--	--	--	2.4	.00
JUL 22...	--	--	--	--	--	2.9	.00
AUG 13...	--	--	--	--	--	3.6	.00
SEP 10...	40	0	20	.0	10	3.3	.00

SAN JOAQUIN RIVER BASIN

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.--52 years (water years 1924, 1930-80), 4,388 ft³/s (124.3 m³/s), 3,179,000 acre-ft/yr (3.92 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, 33,900 ft³/s (960 m³/s) Feb. 27, elevation, 30.19 ft (9.202 m); minimum daily, 1,760 ft³/s (49.8 m³/s) Aug. 2.

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	2440	2560	2370	2960	21300	30000	14200	9690	8540	4450	1810	2400
2	2240	2700	2370	3000	21100	29600	13200	9630	8330	4330	1760	2410
3	2530	2770	2310	3100	20700	29300	12200	9570	7970	4110	1840	2220
4	2820	2650	2160	4200	19800	28500	11400	9460	7620	3940	1900	2820
5	2720	2350	2110	4790	18700	27600	11100	9430	7190	3990	1790	3450
6	2540	2140	2140	4950	17600	27500	11300	9330	6840	4080	1790	3630
7	2550	2130	2140	4640	16500	28300	10800	9280	6570	4190	1840	3810
8	2630	2270	2120	3960	15200	29100	10400	9350	6080	4200	1810	3960
9	2530	2390	2100	4610	14000	30000	9680	9490	5730	4410	1860	3860
10	2660	2230	2060	4910	12800	32000	9220	9760	5430	4620	1940	3930
11	2980	2210	1990	5490	11900	32500	9160	10100	5380	4710	2050	3980
12	3080	2190	2040	6700	11300	31700	9190	10600	5230	4620	1990	4070
13	2970	2120	2080	8330	10900	30600	9250	10800	5190	4210	1870	4150
14	3050	2090	2090	9600	10600	29000	9570	10700	5090	3750	1820	4320
15	3140	2160	2090	11600	10500	26600	9880	10700	4980	3420	1830	4510
16	3430	2240	2110	14000	10400	25400	10400	10800	4900	3260	1920	4290
17	4030	2300	2130	15200	11300	24800	10700	10900	4690	3170	2010	4330
18	3780	2280	2140	15900	13500	24800	10700	11200	4540	3170	2090	4390
19	3120	2340	2260	17100	14800	25700	10600	11300	4330	3120	1970	4480
20	3080	2320	2450	18100	15700	26200	10500	11200	4190	3160	1990	4620
21	3120	2330	2580	19000	18100	25600	10200	11000	4160	3090	2050	4710
22	2810	2340	3030	19800	20300	24100	9510	10800	4170	2900	1990	4740
23	2240	2320	3150	20900	22700	22000	9100	10300	4230	2740	2020	4560
24	2540	2240	2970	21900	25200	20400	8920	9930	4040	2720	2110	4200
25	2690	2280	3010	22500	29200	20300	8850	9620	3930	2540	2230	3680
26	2740	2310	3290	23000	33400	19600	8910	9390	3850	2210	2060	3380
27	2700	2250	3010	23500	33700	18400	9260	9030	3830	2070	2050	3290
28	2600	2270	3060	23500	32400	17400	9710	8700	3880	2090	2110	3300
29	2380	2220	3280	23300	30900	16500	9790	8470	3870	1980	2140	3340
30	1990	2340	3350	22800	---	15700	9780	8360	4380	1830	2130	3220
31	2370	---	3100	21800	---	15000	---	8390	---	1810	2270	---
TOTAL	86500	69340	77090	405140	544500	784200	307480	307280	159160	104890	61040	114050
MEAN	2790	2311	2487	13070	18780	25300	10250	9912	5305	3384	1969	3802
MAX	4030	2770	3350	23500	33700	32500	14200	11300	8540	4710	2270	4740
MIN	1990	2090	1990	2960	10400	15000	8850	8360	3830	1810	1760	2220
AC-FT	171600	137500	152900	803600	1080000	1555000	609900	609500	315700	208000	121100	226200
CAL YR 1979 TOTAL	1255810			3441	MAX 13700	MIN 1090	AC-FT 2491000					
WTR YR 1980 TOTAL	3020670			MEAN 8253	MAX 33700	MIN 1760	AC-FT 5991000					

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.

REMARKS.--Mean daily specific conductance records since January 1973, furnished by Water and Power Resources Service; 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, 822 micromhos July 30; minimum daily recorded, 133 micromhos May 16.

WATER TEMPERATURES: Maximum recorded, 28.0°C July 29 to Aug. 1; minimum recorded, 8.0°C Dec. 12-16.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 281 mg/L Jan. 16; minimum daily mean, 25 mg/L Dec. 18.

SEDIMENT DISCHARGE: Maximum daily, 11,200 tons (10,200 metric tons) Jan. 29; minimum daily, 144 tons (131 metric tons) Dec. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (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)
OCT										
09...	1310	406	7.6	20.0	--	8.1	--	--	--	--
15...	1500	240	7.5	19.0	14	6.6	4700	250	57	4
22...	1140	439	7.5	15.0	11	7.7	--	--	--	--
NOV										
08...	1300	529	7.5	14.0	11	8.2	300	K38	120	25
26...	1530	510	7.6	12.0	11	9.0	--	--	--	--
DEC										
04...	1410	558	7.4	10.0	6.6	9.3	K69	40	120	37
05...	1110	542	7.6	11.0	9.0	10.6	--	--	--	--
JAN										
08...	1430	368	7.2	11.0	13	9.3	140	160	83	23
FEB										
04...	1530	185	7.0	11.0	28	9.1	K53	130	51	15
06...	1335	257	--	11.0	19	8.9	--	--	--	--
MAR										
25...	1400	191	7.2	13.0	18	9.5	K50	K50	51	12
APR										
04...	1500	274	7.4	14.0	24	9.5	K110	37	--	--
07...	1315	306	7.5	13.0	17	9.5	--	--	--	--
21...	1420	275	7.8	15.0	13	9.4	--	--	--	--
MAY										
05...	1345	217	7.5	18.0	17	9.0	--	--	--	--
16...	1115	131	7.6	16.5	9.0	9.6	K160	39	35	6
19...	1345	237	7.8	21.0	17	8.9	--	--	--	--
JUN										
03...	1220	257	7.7	17.0	16	8.6	--	--	--	--
05...	1230	248	7.7	17.0	17	8.3	K1800	110	63	17
17...	1410	413	7.9	22.0	18	8.7	--	--	--	--
JUL										
01...	1145	--	7.6	21.0	19	8.2	--	--	--	--
07...	1300	344	7.6	21.5	22	7.8	3600	70	82	2
15...	1150	--	7.8	23.0	28	7.2	--	--	--	--
AUG										
01...	1200	806	8.1	26.0	38	6.8	3200	K260	190	60
04...	1800	--	8.1	26.0	35	7.6	--	--	--	--
18...	1610	--	8.0	24.0	30	7.5	--	--	--	--
SEP										
02...	1630	--	7.9	24.0	27	7.4	--	--	--	--
15...	1450	--	7.7	21.0	17	8.3	--	--	--	--
17...	1245	254	7.7	19.0	20	7.8	2000	200	63	15

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (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)
OCT										
09...	--	16	--	--	--	--	36	--	50	--
15...	13	5.9	25	49	1.4	.5	53	19	29	.1
22...	--	--	--	--	--	--	62	--	--	--
NOV										
08...	25	13	64	68	2.6	3.3	95	58	70	.1
26...	--	--	--	--	--	--	71	--	61	--
DEC										
04...	25	13	64	68	2.6	2.7	83	76	73	.1
05...	--	--	--	--	--	--	--	--	68	--
JAN										
08...	18	9.2	43	52	2.1	1.9	60	46	48	.1
FEB										
04...	12	5.1	18	42	1.1	1.7	36	28	20	.1
06...	--	--	--	--	--	--	--	--	27	.4
MAR										
25...	12	5.1	19	44	1.2	1.4	39	27	19	.0
APR										
04...	--	--	--	--	--	1.6	41	38	27	.1
07...	--	--	--	--	--	--	44	--	33	--
21...	--	--	--	--	--	--	--	--	--	--
MAY										
05...	--	--	--	--	--	--	36	--	22	--
16...	8.4	3.4	11	40	.8	1.2	29	12	11	.1
19...	--	--	--	--	--	--	36	--	--	--
JUN										
03...	--	--	--	--	--	--	37	--	29	--
05...	14	6.8	26	47	1.4	1.6	46	30	28	.1
17...	--	--	--	--	--	--	57	--	--	--
JUL										
01...	--	--	--	--	--	--	44	--	44	--
07...	19	8.5	38	49	1.8	2.1	80	36	37	.2
15...	--	--	--	--	--	--	80	--	--	--
AUG										
01...	41	22	96	51	3.0	4.4	130	100	110	.2
04...	--	--	--	--	--	--	98	--	100	--
18...	--	--	--	--	--	--	87	--	--	--
SEP										
02...	--	--	--	--	--	--	83	--	64	--
15...	--	--	--	--	--	--	45	--	--	--
17...	14	6.9	26	46	1.4	2.0	48	28	30	.1

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT									
09...	16	234	--	.32	--	.83	--	.10	--
15...	14	--	142	--	.68	.70	.10	.10	1.0
22...	14	--	--	--	--	.71	--	.10	--
NOV									
08...	18	318	310	.43	1.5	1.4	.35	.26	.75
26...	16	289	--	.39	--	.87	--	.22	--
DEC									
04...	16	--	323	--	.90	.73	.28	.30	.82
05...	15	297	--	--	--	.90	--	.28	--
JAN									
08...	14	228	219	.31	.63	.60	.14	.07	1.1
FEB									
04...	11	132	119	.18	.36	.36	.10	.10	.40
06...	11	145	--	.20	--	.36	--	.06	--
MAR									
25...	10	128	118	.17	.18	.18	.10	.01	.88
APR									
04...	6.6	166	--	--	.45	.39	.09	.09	.42
07...	12	163	--	.22	--	.46	--	.07	--
21...	11	--	--	--	--	.27	--	.02	--
MAY									
05...	13	130	--	.18	--	.30	--	.01	--
16...	12	79	78	.11	.30	.27	.06	.02	.44
19...	7.9	--	--	--	--	.16	--	.07	--
JUN									
03...	13	150	--	.20	--	.32	--	.02	--
05...	13	150	149	.20	.41	.39	.03	--	.78
17...	14	--	--	--	--	.71	--	.01	--
JUL									
01...	13	212	--	.29	--	.74	--	.10	--
07...	16	213	209	.29	.92	.89	.07	.03	1.3
15...	19	--	--	--	--	1.0	--	.10	--
AUG									
01...	23	477	477	.65	2.1	2.2	.10	.09	1.4
04...	19	422	--	.57	--	1.7	--	.21	--
18...	19	--	--	--	--	1.6	--	.03	--
SEP									
02...	16	310	--	.42	--	1.3	--	.07	--
15...	13	--	--	--	--	.62	--	.03	--
--	--	--	--	--	--	.61	--	.04	--

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPATE DISSOL. (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
09...	.30	.80	--	--	--	.24	--	.12	--
15...	.90	1.1	1.0	1.8	1.7	.25	.15	--	--
22...	.30	.60	--	--	--	--	--	--	--
NOV									
08...	.59	1.1	.85	2.6	2.3	.28	.16	--	13
26...	.40	.80	--	--	--	.23	--	.11	61
DEC									
04...	.45	1.1	.75	2.0	1.5	.21	.13	--	4.3
05...	.20	.70	--	--	--	.22	--	.14	--
JAN									
08...	1.0	1.2	1.1	1.8	1.7	.19	.10	--	--
FEB									
04...	.31	.50	.41	.86	.77	.25	.10	--	5.6
06...	.10	.40	--	--	--	.11	--	.06	--
MAR									
25...	.33	.98	.34	1.2	.52	.12	.06	--	4.3
APR									
04...	.44	.51	.53	.96	.92	.16	.08	--	--
07...	.20	.50	--	--	--	.14	--	.06	--
21...	.30	.40	--	--	--	--	--	--	--
MAY									
05...	.20	.40	--	--	--	.13	--	.05	--
16...	--	.50	--	.80	.86	.12	.07	--	6.4
19...	.20	.50	--	--	--	--	--	--	--
JUN									
03...	.20	.40	--	--	--	.14	--	.04	--
05...	--	.81	--	1.2	--	.17	.09	--	3.9
17...	.20	.50	--	--	--	--	--	--	--
JUL									
01...	.20	.60	--	--	--	.21	--	.10	--
07...	.37	1.4	.40	2.3	1.3	.27	.13	--	--
15...	.30	.70	--	--	--	--	--	--	--
AUG									
01...	.91	1.5	1.0	3.6	3.2	.39	.42	--	7.6
04...	.40	1.2	--	--	--	.34	--	.18	--
18...	.50	.90	--	--	--	--	--	--	--
SEP									
02...	.30	.80	--	--	--	.24	--	.12	--
15...	.20	.50	--	--	--	--	--	--	--
17...	.53	.70	.57	1.3	1.2	.21	.11	--	4.4

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 , 1979											
15...	1500	3	2	100	40	1	1	20	10	1	<3
JAN , 1980											
08...	1430	--	--	200	40	0	12	0	0	0	<3
APR											
04...	1500	2	1	100	20	1	<1	0	0	3	<3
JUL											
07...	1300	3	2	100	50	1	<1	0	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 , 1979										
15...	45	6	4900	80	7	0	340	20	.1	.2
JAN , 1980										
08...	0	0	60	30	5	0	10	20	.0	.0
APR										
04...	8	2	1900	40	5	0	100	20	.1	.0
JUL										
07...	21	5	2700	50	19	0	160	10	.1	.0

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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 (MG/L AS C)
OCT , 1979										
15...	7	3	0	0	0	0	50	10	4.1	1.2
JAN , 1980										
08...	3	0	0	0	0	0	--	<3	3.5	.5
APR										
04...	10	0	1	1	0	0	30	9	5.3	.6
JUL										
07...	17	3	0	0	0	0	40	7	4.4	1.3

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.

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF
BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE TIME	NOV 8,79 1300	JAN 8,80 1430	APR 4,80 1500	JUL 7,80 1300	AUG 1,80 1200	SEP 17,80 1245
TOTAL CELLS/ML	6600	8200	11000	18000	17000	11000
DIVERSITY: DIVISION	1.4	1.6	1.4	1.6	1.6	1.5
..CLASS	1.4	1.6	1.4	1.6	1.6	1.5
..ORDER	2.0	2.0	1.6	2.1	2.1	2.0
...FAMILY	2.8	2.4	1.7	2.4	2.6	2.5
....GENUS	3.1	3.2	2.9	3.1	3.2	3.0

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
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
....CHLORACIACEAE												
....SCHROEDERIA	39	1	--	--	--	--	170	1	150	1	--	--
....COELASTRACEAE												
....COELASTRUM	--	--	--	--	--	--	--	--	200	1	--	--
....MICRACTINIACEAE												
....GOLENKINIA	--	--	* 0	--	--	--	--	--	* 0	--	--	--
....MICRACTINIUM	170	3	--	--	--	--	--	--	1600	10	240	2
....OOCYSTACEAE												
....ANKISTRODESUS	--	--	830	10	750	7	600	3	--	--	--	--
....CHLORELLA	--	--	460	6	960	8	--	--	--	--	--	--
....CHODATELLA	--	--	61	1	--	--	430	2	--	--	--	--
....DICTYOSPHAERIUM	--	--	--	--	--	--	1000	6	400	2	2300#	21
....KIRCHNERIELLA	--	--	180	2	68	1	260	1	--	--	--	--
....OOCYSTIS	--	--	--	--	68	1	170	1	100	1	--	--
....SELENASTRUM	* 0	--	--	--	--	--	--	--	100	1	120	1
....TETRAEDRON	--	--	--	--	--	--	--	--	* 0	--	--	--
....TREUBARIA	--	--	--	--	--	--	* 0	--	--	--	--	--
....WESTELLA	--	--	--	--	--	--	--	--	--	--	410	4
....SCENEDESMACEAE												
....SCENEDESMUS	460	7	370	4	--	--	1500	8	700	4	1300	12
....TETRASTRUM	52	1	--	--	--	--	--	--	1200	7	240	2
....ULOTRICHIALES												
....CHAETOPHORACEAE												
....PROTODERMA	90	1	--	--	--	--	--	--	--	--	--	--
....VOLVOCALES												
....CHLAMYDOMONADACEAE												
....CARTERIA	--	--	--	--	--	--	* 0	--	--	--	--	--
....CHLAMYDOMONAS	--	--	120	1	68	1	430	2	--	--	120	1
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
....COSCINODISCACEAE												
....CYCLOTELLA	310	5	890	11	2500#	22	2500	14	2700#	16	880	8
....MELOSIRA	90	1	120	1	140	1	4200#	24	1700	10	1100	10
....SKELETONEMA	--	--	120	1	2100#	18	--	--	--	--	--	--
....STEPHANODISCUS	39	1	--	--	--	--	--	--	--	--	--	--
....THALASSIOSIRA	--	--	--	--	1800#	16	--	--	--	--	--	--
...PENNIALES												
....ACHNANTHACEAE												

See footnotes at end of table.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PHYTOPLANKTON

DATE TIME	NOV 8,79 1330	JAN 8,80 1430	APR 4,80 1500	JUL 7,80 1300	AUG 1,80 1200	SEP 17,80 1245						
TOTAL CELLS/ML	6600	8200	11000	18000	17000	11000						
DIVERSITY: DIVISION	1.4	1.6	1.4	1.6	1.6	1.5						
..CLASS	1.4	1.6	1.4	1.6	1.6	1.5						
..ORDER	2.0	2.0	1.6	2.1	2.1	2.0						
...FAMILY	2.8	2.4	1.7	2.4	2.6	2.5						
....GENUS	3.1	3.2	2.9	3.1	3.2	3.0						
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT		
CHRYSTOPHYTA												
....ACHNANTHES	--	-	--	-	--	-	170	1	--	-		
....COCCONEIS	*	0	--	-	--	-	--	-	--	-		
....CYMBELLACEAE												
....CYMBELLA	--	-	61	1	--	-	--	-	--	-		
....FRAGILARIACEAE												
....ASTERIONELLA	*	0	*	0	--	-	--	-	--	-		
....FRAGILARIA	550	8	1600#	20	140	1	--	-	--	-		
....NAVICULACEAE												
....NAVICULA	52	1	*	0	--	-	--	-	--	-		
....NITZSCHACEAE												
....NITZSCHIA	210	3	120	1	210	2	260	1	350	2	59	1
....TABELLARIACEAE												
....TABELLARIA	--	-	--	-	140	1	--	-	--	-	--	-
..CHRYSTOPHYCEAE												
..CHRYSONOMADALES												
...OCHROMONADACEAE												
....OCHROMONAS	--	-	--	-	--	-	--	-	*	0	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	--	-	150	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....AGMENELLUM	150	2	--	-	--	-	--	-	1600	10	--	-
....ANACYSTIS	90	1	61	1	--	-	1800	10	700	4	2000#	18
....GOMPHOSPHAERIA	280	4	--	-	--	-	--	-	--	-	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	1300#	20	--	-	--	-	--	-	--	-	--	-
...OSCILLATORACEAE												
....OSCILLATORIA	2500#	37	2100#	25	2400#	21	4200#	24	5000#	30	2100#	19
....SCHIZOTHRIX	--	-	980	12	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
....EUGLENA	140	2	--	-	--	-	--	-	--	-	--	-
....PHACUS	*	0	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	*	0	--	-	68	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PERIPHYTON

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	SAMPLING METHOD
OCT 15...	34	.870	.710	11.3	1.59	14.2	Polyethylene strip
DEC 04...	26	41.4	39.4	1.94	1.00	1031	do

SAN JOAQUIN RIVER BASIN
11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C); WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	369	477	464	490	173	204	248	208	207	370	773	560
2	407	447	476	481	174	204	278	211	230	395	800	535
3	351	440	471	484	180	203	282	206	232	440	---	581
4	298	475	516	305	197	206	281	209	242	438	738	493
5	329	571	512	274	212	214	271	203	264	445	776	359
6	363	649	487	266	242	219	259	201	286	465	815	347
7	372	599	---	286	266	217	278	201	293	369	792	329
8	363	515	506	341	271	211	283	189	315	367	800	319
9	378	484	506	259	275	207	297	180	331	322	802	332
10	338	553	509	251	275	197	303	172	344	267	790	307
11	293	526	502	251	273	182	288	155	333	269	748	300
12	289	528	472	244	276	187	260	148	342	314	730	291
13	311	549	463	225	263	185	272	152	354	381	760	287
14	312	566	448	199	268	195	253	153	358	428	767	259
15	271	538	440	168	293	209	235	155	381	469	770	252
16	197	505	440	161	311	208	211	133	390	501	721	268
17	176	487	427	153	338	204	213	138	---	522	694	---
18	220	495	442	152	285	202	219	158	---	525	709	---
19	298	474	413	155	290	188	210	161	---	513	720	---
20	---	476	396	147	---	183	205	176	433	507	708	232
21	347	477	379	143	---	187	215	181	425	525	687	216
22	412	492	302	150	236	198	250	181	412	554	691	---
23	535	498	319	158	236	218	275	182	426	543	680	---
24	422	514	356	168	236	226	267	186	450	---	665	260
25	405	507	377	166	207	215	269	193	461	550	637	288
26	421	502	363	168	194	217	263	201	450	653	646	322
27	430	508	455	---	195	229	237	209	453	721	641	336
28	457	500	415	---	200	231	205	221	454	777	646	321
29	525	540	354	---	205	236	204	231	435	794	615	312
30	697	475	368	175	---	235	208	220	385	822	599	324
31	525	---	437	176	---	243	---	213	---	787	594	---
MONTH	370	512	434	236	243	208	251	185	359	501	717	337

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
DAY	MAX	MIN	MAX	MIN		MAX	MIN		MAX	MIN		MAX	MIN		MAX	MIN	
	DAILY		DAILY			DAILY			DAILY			DAILY			DAILY		
1	21.5	-- 20.0	14.0	-- 13.0		10.5	-- 10.0		-- 11.5	--		10.0	-- 9.5		13.5	-- 13.5	
2	22.0	-- 20.5	14.0	-- 13.0		10.5	-- 10.0		-- 12.0	--		10.5	-- 10.0		13.5	-- 13.0	
3	21.5	-- 20.5	14.0	-- 13.5		11.0	-- 10.0		-- 12.0	--		10.5	-- 10.5		13.0	-- 12.5	
4	21.0	-- 20.0	14.0	-- 13.5		11.0	-- 10.0		-- 11.5	--		11.0	-- 10.5		13.0	-- 12.5	
5	20.5	-- 19.5	14.5	-- 13.5		11.0	-- 10.0		-- 11.0	--		11.5	-- 11.0		13.0	-- 12.5	
6	20.5	-- 19.5	15.0	-- 13.5		11.0	-- 10.0		-- 11.5	--		11.5	-- 11.0		13.0	-- 12.5	
7	20.5	-- 19.5	14.5	-- 13.5		11.0	-- 10.0		-- 11.5	--		11.0	-- 10.5		13.5	-- 12.5	
8	20.0	-- 19.0	15.0	-- 14.0		10.5	-- 10.0		-- 11.0	--		11.0	-- 10.5		13.5	-- 13.0	
9	20.0	-- 19.0	14.5	-- 13.5		11.0	-- 10.0		11.5	-- 11.5		11.0	-- 10.5		14.0	-- 13.0	
10	20.0	-- 19.0	14.5	-- 13.5		10.5	-- 10.0		11.5	-- 11.5		11.0	-- 10.5		14.0	-- 13.5	
11	19.5	-- 18.5	14.0	-- 13.5		10.0	-- 9.0		11.5	-- 11.5		11.5	-- 11.0		14.0	-- 13.5	
12	19.0	-- 18.0	13.5	-- 13.0		8.5	-- 8.0		12.0	-- 11.5		11.5	-- 11.0		13.5	-- 13.0	
13	19.0	-- 18.5	13.5	-- 12.5		8.5	-- 8.0		13.0	-- 12.0		11.0	-- 11.0		13.5	-- 13.0	
14	19.0	-- 18.5	13.5	-- 12.5		8.5	-- 8.0		13.5	-- 13.0		11.0	-- 11.0		13.5	-- 13.0	
15	19.5	-- 19.0	13.0	-- 12.5		9.0	-- 8.0		13.5	-- 13.0		11.5	-- 11.0		13.5	-- 13.5	
16	19.5	-- 19.0	13.5	-- 12.5		9.0	-- 8.0		13.0	-- 13.0		11.5	-- 11.5		13.5	-- 12.5	
17	19.5	-- 17.5	14.0	-- 13.0		9.0	-- 8.5		13.0	-- 13.0		12.0	-- 11.5		13.5	-- 12.5	
18	17.5	-- 17.0	13.5	-- 13.0		-- 9.0	--		13.0	-- 12.0		12.5	-- 12.0		13.5	-- 13.0	
19	17.5	-- 17.0	12.5	-- 12.0		-- 10.0	--		12.0	-- 11.0		13.0	-- 12.5		13.5	-- 12.5	
20	17.5	-- 16.5	11.5	-- 10.5		-- 11.0	--		11.0	-- 10.5		12.5	-- 12.5		13.5	-- 13.0	
21	16.0	-- 15.5	10.5	-- 10.0		-- 10.0	--		11.0	-- 10.5		12.5	-- 12.5		13.5	-- 13.0	
22	16.5	-- 15.0	10.5	-- 10.0		-- 11.0	--		10.5	-- 10.0		12.5	-- 12.5		13.5	-- 13.0	
23	16.5	-- 15.5	10.5	-- 10.0		-- 10.0	--		10.0	-- 10.0		12.5	-- 12.0		14.0	-- 13.0	
24	16.0	-- 15.0	11.0	-- 10.5		-- 10.5	--		10.0	-- 10.0		13.0	-- 12.5		14.0	-- 13.5	
25	15.5	-- 15.0	11.5	-- 11.0		-- 10.0	--		10.0	-- 9.5		13.5	-- 13.0		13.5	-- 13.0	
26	15.5	-- 14.0	12.0	-- 11.0		-- 10.5	--		10.0	-- 9.5		13.5	-- 13.0		13.5	-- 12.5	
27	15.0	-- 14.0	11.0	-- 10.0		-- 9.0	--		9.5	-- 9.5		13.5	-- 13.5		14.0	-- 13.0	
28	15.5	-- 14.0	10.5	-- 10.0		-- 9.0	--		9.5	-- 9.5		14.0	-- 13.0		14.0	-- 13.0	
29	14.5	-- 13.5	11.0	-- 10.0		-- 9.0	--		9.5	-- 9.0		14.0	-- 13.5		15.0	-- 13.5	
30	14.5	-- 13.0	11.0	-- 9.5		-- 10.0	--		9.5	-- 9.0		--	--		15.0	-- 14.0	
31	14.5	-- 13.5	--	--		-- 11.0	--		10.0	-- 9.5		--	--		14.5	-- 13.5	
MONTH	18.2	-- 17.2	12.9	-- 12.0		--	--		--	--		11.9	-- 11.6		13.7	-- 13.0	

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	14.0	--	13.5	16.5	--	15.5	18.5	--	17.5	--	21.5	--	28.0	--	26.0	24.0	--	22.0
2	14.5	--	13.5	17.0	--	16.0	18.5	--	18.0	--	21.0	--	27.5	--	25.5	24.0	--	22.5
3	14.5	--	13.5	17.0	--	16.5	18.0	--	17.5	--	21.0	--	27.0	--	25.0	24.5	--	22.5
4	14.0	--	13.5	17.5	--	16.5	18.0	--	17.0	--	23.0	--	26.5	--	24.5	24.5	--	23.0
5	14.0	--	13.5	17.5	--	16.5	--	17.0	--	--	23.0	--	26.0	--	24.0	23.5	--	21.5
6	14.0	--	13.5	17.0	--	16.0	--	16.5	--	--	23.0	--	26.0	--	24.0	21.5	--	21.0
7	14.5	--	13.5	17.0	--	16.0	--	19.5	--	--	21.5	--	26.0	--	24.0	21.0	--	20.0
8	14.5	--	14.0	17.0	--	16.5	--	19.0	--	22.5	--	21.5	26.0	--	24.0	21.0	--	20.5
9	15.5	--	14.5	16.5	--	15.5	--	21.0	--	22.5	--	21.5	26.0	--	24.0	21.5	--	20.5
10	15.5	--	15.0	15.5	--	14.5	--	19.0	--	23.0	--	21.5	26.0	--	24.0	21.5	--	20.5
11	15.5	--	15.0	15.0	--	14.5	--	18.5	--	23.5	--	22.0	26.0	--	24.0	21.0	--	20.0
12	16.0	--	15.0	15.5	--	14.5	--	18.0	--	24.0	--	22.5	25.5	--	24.0	21.0	--	20.0
13	16.5	--	15.5	16.0	--	15.0	--	18.0	--	24.0	--	22.5	25.5	--	24.0	21.0	--	20.0
14	16.5	--	16.0	17.0	--	15.5	--	20.0	--	24.0	--	22.5	25.0	--	23.5	20.0	--	19.0
15	16.5	--	15.5	17.0	--	16.0	--	19.0	--	24.5	--	22.5	25.0	--	23.0	19.0	--	18.5
16	16.0	--	15.5	17.5	--	16.5	--	19.0	--	25.0	--	23.0	25.0	--	23.5	19.5	--	18.5
17	16.5	--	16.0	18.0	--	17.0	--	22.0	--	25.5	--	23.5	25.5	--	23.5	19.5	--	19.0
18	16.0	--	15.5	19.0	--	17.5	--	22.0	--	25.0	--	23.5	25.0	--	23.5	19.5	--	19.0
19	16.5	--	15.5	19.5	--	18.5	--	21.5	--	25.0	--	23.0	25.0	--	23.0	19.5	--	18.5
20	16.5	--	15.5	20.0	--	19.0	--	19.5	--	25.0	--	23.0	25.0	--	23.0	19.0	--	18.5
21	15.5	--	15.0	20.0	--	19.5	--	22.0	--	25.0	--	23.5	25.0	--	23.0	19.0	--	18.5
22	15.0	--	14.0	19.5	--	18.5	--	19.0	--	25.0	--	23.5	24.5	--	23.5	19.0	--	18.0
23	14.0	--	13.0	18.5	--	17.0	--	19.0	--	25.5	--	23.5	23.5	--	22.5	19.0	--	18.0
24	14.0	--	13.0	17.0	--	16.0	--	20.5	--	25.5	--	24.0	24.0	--	22.0	19.5	--	18.5
25	15.0	--	13.5	17.0	--	16.0	--	19.5	--	26.5	--	24.0	24.5	--	22.5	20.5	--	19.5
26	15.5	--	14.5	17.0	--	16.0	--	21.0	--	27.0	--	25.0	24.5	--	23.0	21.0	--	20.0
27	16.0	--	15.5	17.5	--	16.5	--	20.0	--	27.5	--	25.5	24.5	--	23.0	21.0	--	20.0
28	16.5	--	16.0	17.5	--	16.5	--	23.0	--	27.5	--	26.0	23.5	--	22.5	20.5	--	19.5
29	16.5	--	16.0	18.0	--	17.0	--	22.0	--	28.0	--	26.0	23.5	--	22.0	20.5	--	19.5
30	16.5	--	15.5	18.0	--	17.0	--	22.0	--	28.0	--	26.0	23.5	--	21.5	21.0	--	20.0
31	--	--	--	18.5	--	17.5	--	--	--	28.0	--	26.0	23.5	--	22.0	--	--	--
MONTH	15.4	--	14.6	17.5	--	16.5	--	19.9	--	--	--	--	25.2	--	23.5	20.9	--	19.9

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	2440	77	507	2560	50	346	2370	41	262
2	2240	76	460	2700	54	394	2370	44	282
3	2530	82	560	2770	42	314	2310	44	274
4	2820	78	594	2650	40	286	2160	32	187
5	2720	76	558	2350	37	235	2110	37	211
6	2540	80	549	2140	40	231	2140	37	214
7	2550	75	516	2130	45	259	2140	40	231
8	2630	77	547	2270	53	325	2120	38	218
9	2530	73	499	2390	47	303	2100	39	221
10	2660	84	603	2230	37	223	2060	42	234
11	2980	77	620	2210	43	257	1990	32	172
12	3080	68	565	2190	44	260	2040	34	187
13	2970	66	529	2120	37	212	2080	31	174
14	3050	78	642	2090	45	254	2090	31	175
15	3140	81	687	2160	46	268	2090	41	231
16	3430	85	787	2240	40	242	2110	37	211
17	4030	80	870	2300	54	335	2130	38	219
18	3780	69	704	2280	54	332	2140	25	144
19	3120	63	531	2340	47	297	2260	38	232
20	3080	68	565	2320	45	282	2450	46	304
21	3120	58	489	2330	41	258	2580	54	376
22	2810	49	372	2340	43	272	3030	59	483
23	2240	47	284	2320	41	257	3150	59	502
24	2540	54	370	2240	43	260	2970	58	465
25	2690	53	385	2280	40	246	3010	76	618
26	2740	46	340	2310	32	200	3290	121	1070
27	2700	45	328	2250	59	358	3010	78	634
28	2600	44	309	2270	43	264	3060	65	537
29	2380	43	276	2220	44	264	3280	62	549
30	1990	34	183	2340	42	265	3350	67	606
31	2370	50	320	---	---	---	3100	58	485
TOTAL	86500	---	15549	69340	---	8299	77090	---	10708

SAN JOAQUIN RIVER BASIN
11030500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	2960	53	424	21300	66	3800	30000	41	3320
2	3000	54	437	21100	64	3650	29600	39	3120
3	3100	52	435	20700	63	3520	29300	38	3010
4	4200	73	828	19800	67	3580	28500	37	2850
5	4790	69	892	18700	69	3480	27600	36	2680
6	4950	66	882	17600	65	3090	27500	37	2750
7	4640	59	739	16500	65	2900	28300	34	2600
8	3960	48	513	15200	66	2710	29100	38	2990
9	4610	60	747	14000	68	2570	30000	37	3000
10	4910	83	1100	12800	63	2180	32000	37	3200
11	5490	149	2210	11900	56	1800	32500	36	3160
12	6700	179	3240	11300	61	1860	31700	40	3420
13	8330	227	5110	10900	54	1590	30600	32	2640
14	9600	251	6510	10600	49	1400	29000	39	3050
15	11600	249	7800	10500	52	1470	26600	34	2440
16	14000	281	10600	10400	57	1600	25400	43	2950
17	15200	235	9640	11300	109	3330	24800	46	3080
18	15900	176	7560	13500	171	6230	24800	36	2410
19	17100	150	6930	14800	180	7190	25700	40	2780
20	18100	120	5860	15700	158	6700	26200	36	2550
21	19000	119	6100	18100	146	7140	25600	41	2830
22	19800	165	8820	20300	91	4990	24100	38	2470
23	20900	125	7050	22700	71	4350	22000	59	3500
24	21900	90	5320	25200	70	4760	20400	40	2200
25	22500	123	7470	29200	73	5760	20300	41	2250
26	23000	133	8260	33400	72	6490	19600	43	2280
27	23500	146	9260	33700	64	5820	18400	42	2090
28	23500	168	10700	32400	52	4550	17400	44	2070
29	23300	178	11200	30900	42	3500	16500	44	1960
30	22800	90	5540	---	---	---	15700	42	1780
31	21800	66	3880	---	---	---	15000	46	1860
TOTAL	405140	---	156057	544500	---	112010	784200	---	83290

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	14200	51	1960	9690	76	1990	8540	59	1360
2	13200	55	1960	9630	53	1380	8330	59	1330
3	12200	61	2010	9570	60	1550	7970	60	1290
4	11400	62	1910	9460	50	1280	7620	64	1320
5	11100	57	1710	9430	50	1270	7190	68	1320
6	11300	57	1740	9330	52	1310	6840	76	1400
7	10800	55	1600	9280	50	1250	6570	71	1260
8	10400	55	1540	9350	50	1260	6080	79	1300
9	9680	52	1360	9490	51	1310	5730	75	1160
10	9220	58	1440	9760	52	1370	5430	78	1140
11	9160	58	1430	10100	54	1470	5380	87	1260
12	9190	60	1490	10600	48	1370	5230	79	1120
13	9250	58	1450	10800	50	1460	5190	74	1040
14	9570	63	1630	10700	45	1300	5090	72	989
15	9880	60	1600	10700	50	1440	4980	71	955
16	10400	56	1570	10800	49	1430	4900	69	913
17	10700	46	1330	10900	49	1440	4690	72	912
18	10700	58	1680	11200	50	1510	4540	70	858
19	10600	43	1230	11300	46	1400	4330	74	865
20	10500	48	1360	11200	46	1390	4190	79	894
21	10200	75	2070	11000	52	1540	4160	78	876
22	9510	52	1340	10800	57	1660	4170	80	901
23	9100	51	1250	10300	54	1500	4230	72	822
24	8920	55	1320	9930	63	1690	4040	82	894
25	8850	88	2100	9620	58	1510	3930	90	955
26	8910	64	1540	9390	56	1420	3850	83	863
27	9260	60	1500	9030	58	1410	3830	89	920
28	9710	52	1360	8700	58	1360	3880	89	932
29	9790	56	1480	8470	59	1350	3870	79	825
30	9780	66	1740	8360	57	1290	4380	74	875
31	---	---	---	8390	61	1380	---	---	---
TOTAL	307480	---	47700	307280	---	44290	159160	---	31549

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	4450	75	901	1810	113	552	2400	83	538
2	4330	90	1050	1760	117	556	2410	84	547
3	4110	80	888	1840	118	586	2220	76	456
4	3940	80	851	1900	117	600	2820	78	594
5	3990	78	840	1790	108	522	3450	85	792
6	4080	81	892	1790	100	483	3630	85	833
7	4190	96	1090	1840	97	482	3810	85	874
8	4200	107	1210	1810	94	459	3960	76	813
9	4410	104	1240	1860	92	462	3860	76	792
10	4620	101	1260	1940	108	566	3930	76	806
11	4710	102	1300	2050	104	576	3980	73	784
12	4620	106	1320	1990	112	602	4070	73	802
13	4210	99	1130	1870	111	560	4150	79	885
14	3750	98	992	1820	106	521	4320	80	933
15	3420	105	970	1830	113	558	4510	70	852
16	3260	98	863	1920	122	632	4290	68	788
17	3170	96	822	2010	125	678	4330	71	830
18	3170	97	830	2090	107	604	4390	70	830
19	3120	86	724	1970	104	553	4480	65	786
20	3160	94	802	1990	104	559	4620	62	773
21	3090	95	793	2050	102	565	4710	61	776
22	2900	92	720	1990	106	570	4740	64	819
23	2740	90	666	2020	96	524	4560	75	923
24	2720	80	588	2110	98	558	4200	69	782
25	2540	75	514	2230	105	632	3680	86	854
26	2210	80	477	2060	92	512	3380	83	757
27	2070	77	430	2050	97	537	3290	90	799
28	2090	92	519	2110	91	518	3300	82	731
29	1980	94	503	2140	91	526	3340	77	694
30	1830	106	524	2130	96	552	3220	73	635
31	1810	108	528	2270	86	527	---	---	---
TOTAL	104890	---	26237	61040	---	17132	114050	---	23078
YEAR	3020670	---	575899						

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (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								
15...	1550	3190	19.0	74	637	--	--	--
NOV								
08...	1120	2280	14.0	52	320	--	--	--
08...	1300	2260	14.0	55	336	--	--	--
DEC								
04...	1215	2140	10.0	29	168	--	--	--
04...	1410	2120	10.0	29	166	--	--	--
JAN								
08...	1310	3780	11.0	53	541	--	--	--
08...	1430	3810	11.0	52	535	--	--	--
25...	1350	22500	10.0	67	4070	--	--	--
MAR								
25...	1400	20200	13.0	46	2510	--	--	--
APR								
04...	1440	11400	14.0	63	1940	--	--	--
04...	1500	11800	14.0	66	2100	--	--	--
MAY								
16...	1115	10800	16.5	64	1870	28	35	42
JUN								
05...	1000	7200	17.0	70	1360	--	--	--
JUL								
07...	1300	4200	21.5	94	1070	41	51	61
AUG								
01...	1200	1840	26.0	110	546	--	--	--
SEP								
17...	1200	4350	19.0	76	893	--	--	--

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 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. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT 15...	--	--	--	81	93	97	100	--
NOV 08...	--	--	--	78	87	90	95	100
08...	--	--	--	78	--	--	--	--
DEC 04...	--	--	--	78	90	95	100	--
04...	--	--	--	75	--	--	--	--
JAN 08...	--	--	--	68	79	88	96	100
08...	--	--	--	68	--	--	--	--
25...	--	--	--	50	56	70	94	100
MAR 25...	--	--	--	72	--	--	--	--
APR 04...	--	--	--	79	86	98	100	--
04...	--	--	--	75	--	--	--	--
MAY 16...	51	59	65	65	70	84	96	100
JUN 05...	--	--	--	83	89	95	99	100
JUL 07...	72	83	92	92	98	100	--	--
AUG 01...	--	--	--	98	100	--	--	--
SEP 17...	--	--	--	84	92	99	100	--

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	TUR-BID-ITY (NTU)
OCT 02...	1740	2000	22.0	76	410	21
03...	0730	2450	21.0	84	556	22
04...	1710	2840	21.0	76	583	20
05...	0715	2760	20.0	76	566	18
06...	0820	2520	20.0	82	558	18
07...	0955	2540	20.0	73	501	18
08...	1715	2630	20.0	77	547	18
09...	1650	2500	20.0	71	479	17
10...	0730	2710	19.0	86	629	18
11...	0930	2990	19.0	79	638	18
12...	1835	3040	19.0	65	534	17
13...	1410	2980	19.0	67	539	16
14...	1120	3060	19.0	81	669	18
15...	1500	3180	19.0	--	--	14
15...	1700	3210	19.5	80	693	22
16...	1650	3440	19.5	91	845	18
17...	1655	3880	19.5	76	796	14
18...	0720	3940	17.0	70	745	16
19...	0710	3190	17.0	63	543	17
20...	0820	3090	16.0	71	592	17
21...	0910	3180	15.0	58	498	15
22...	1140	2860	15.0	--	--	11
22...	1730	2670	16.5	47	339	13
23...	1745	2140	16.0	50	289	13
24...	0730	2520	15.0	55	374	13
25...	1710	2730	15.5	53	391	12
26...	0725	2740	14.0	47	348	12
27...	0750	2740	14.0	45	333	10
28...	1315	2590	15.5	43	301	12
29...	0705	2490	13.5	46	309	12
30...	0710	1960	13.0	34	180	10
31...	0720	2340	13.5	50	316	13
NOV 01...	0940	2560	13.0	50	346	12
02...	0950	2700	13.5	57	416	12
03...	0915	2760	14.0	41	306	10
04...	1235	2760	14.0	40	298	11
05...	0720	2760	13.5	37	276	11
06...	0650	2150	13.5	38	221	7.6
07...	0700	2100	14.0	43	244	10

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
NOV						
08...	1300	2260	14.0	55	336	11
08...	1715	2310	15.0	53	331	15
09...	0715	2390	14.0	49	316	13
10...	0805	2320	13.5	36	226	12
11...	0925	2220	14.0	43	258	12
12...	0825	2200	13.0	45	267	10
13...	0715	2140	12.5	36	208	11
14...	0715	2090	12.5	45	254	11
15...	0905	2160	12.5	47	274	12
16...	0710	2240	13.0	40	242	12
17...	0850	2300	14.0	55	342	13
18...	0845	2290	13.5	56	346	13
19...	0655	2330	12.0	47	296	13
20...	0655	2320	11.0	46	288	13
21...	0710	2320	10.0	41	257	11
22...	0915	2340	10.5	43	272	11
23...	1710	2320	10.5	44	276	12
24...	1335	2240	11.0	44	266	13
25...	0925	2280	11.5	41	252	11
26...	0700	2320	12.0	25	157	12
26...	1530	2310	12.0	--	--	11
27...	0710	2260	11.0	65	397	10
28...	0735	2260	10.5	41	250	10
29...	0645	2190	11.0	45	266	12
30...	0650	2330	10.5	41	258	12
DEC						
01...	0825	2360	10.5	41	261	10
02...	1055	2380	10.5	45	289	10
03...	0710	2330	11.0	47	296	9.4
04...	0715	2240	10.5	31	187	8.5
04...	1410	2120	10.0	29	166	6.6
05...	0710	2110	11.0	37	211	10
05...	1110	2120	11.0	--	--	9.0
06...	0830	2150	11.0	37	215	7.4
07...	0730	2140	10.5	41	237	8.5
08...	1135	2140	10.5	37	214	9.7
09...	1600	2110	11.0	39	222	10
10...	0730	2080	10.5	44	247	10
11...	0725	2010	10.0	32	174	11
12...	0750	2040	8.0	34	187	10
14...	0745	2090	8.0	29	164	7.5
15...	1550	2100	9.0	42	238	9.0
16...	1530	2110	9.0	34	194	9.3
17...	0740	2130	8.5	39	224	9.4
18...	1140	2140	9.0	22	127	8.3
19...	1645	2300	10.0	41	255	8.8
20...	1710	2480	11.0	46	308	9.5
21...	0720	2510	10.0	54	366	8.9
22...	1415	3080	11.0	60	499	13
23...	1530	3140	10.0	58	492	13
24...	1650	2970	10.5	58	465	20
25...	1025	2980	10.0	76	611	20
26...	1500	3340	10.5	131	1180	80
27...	1430	2950	9.0	68	542	28
28...	1050	3090	9.0	64	534	23
29...	1025	3300	9.0	61	544	18
30...	1305	3380	10.0	68	621	18
31...	0945	3130	11.0	58	490	17
JAN						
01...	1130	2940	11.5	53	421	17
02...	1100	3000	12.0	54	437	15
03...	1450	3030	12.0	50	409	16
04...	1640	4370	11.5	76	897	15
05...	1020	4810	11.0	69	896	14
06...	1235	4980	11.5	67	901	13
07...	0710	4950	11.5	61	815	13
08...	0715	3900	11.0	48	505	13
08...	1430	3810	11.0	52	535	13
09...	0725	4560	11.5	60	739	11
10...	1015	4900	11.5	77	1020	13
11...	0725	5290	11.5	147	2100	70
12...	1120	6570	12.0	176	3120	75
13...	1100	8240	13.5	228	5070	65
14...	0730	9310	13.5	255	6410	60
15...	1730	12100	13.5	242	7910	70
16...	0715	13600	13.0	287	10500	70
18...	0730	15700	13.0	181	7670	45
19...	0830	16900	11.0	152	6940	40
20...	1405	18200	10.5	115	5650	29
21...	1745	19200	10.5	125	6480	28

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	TUR- BID- ITY (NTU)
JAN						
22...	1725	20100	10.0	179	9710	29
23...	1450	21100	10.0	115	6550	28
24...	1140	21800	10.0	87	5120	26
25...	1140	22500	9.5	125	7590	26
26...	1225	23000	9.5	133	8260	25
27...	1550	23600	9.5	147	9370	23
28...	1720	23500	9.5	174	11000	23
29...	0745	23300	9.0	189	11900	22
30...	1325	22800	9.0	79	4860	21
31...	1515	21700	9.5	66	3870	21
FEB						
01...	0730	21400	9.5	66	3810	22
02...	1030	21200	10.0	64	3660	22
03...	1550	20600	10.5	63	3500	20
04...	1530	19800	11.0	--	--	28
04...	1710	19600	11.0	69	3650	19
05...	0750	18900	11.0	69	3520	20
06...	1335	17600	11.0	--	--	19
06...	1615	17500	11.5	65	3070	22
08...	0950	15300	10.5	66	2730	24
09...	0930	14100	10.5	70	2670	22
10...	1015	12800	10.5	64	2210	22
11...	1510	11800	11.5	53	1690	19
12...	1020	11400	11.0	63	1940	18
13...	0750	11000	11.0	55	1630	17
14...	1730	10500	11.0	50	1420	17
15...	1725	10400	11.5	52	1460	17
16...	1420	10400	11.5	55	1540	17
17...	0835	11300	12.0	99	3020	29
18...	1800	14400	12.5	176	6840	110
19...	1705	14800	13.0	180	7190	120
20...	1740	16700	12.5	151	6810	95
21...	1650	19100	12.5	149	7680	100
22...	1645	21500	12.5	76	4410	65
23...	1510	23900	12.5	72	4650	60
24...	1540	26500	13.0	--	--	55
25...	1735	32300	13.5	--	--	60
26...	1755	34000	13.5	71	6520	60
27...	1800	33200	13.5	62	5560	55
29...	0655	30300	13.5	41	3350	33
MAR						
01...	1750	29700	13.5	41	3290	30
02...	0830	29400	13.0	39	3100	32
03...	1650	29100	13.0	39	3060	27
04...	0730	28600	12.5	37	2860	26
05...	0745	27800	12.5	35	2630	24
06...	1705	26500	13.0	37	2650	18
07...	0700	27100	13.0	33	2420	20
08...	0810	29100	12.5	39	3060	22
09...	1430	30100	14.0	37	3010	21
10...	1705	32400	14.5	37	3240	18
11...	0700	32600	13.0	33	2910	20
12...	0735	31900	12.0	41	3530	20
13...	1735	30400	13.5	29	2380	17
14...	0745	29400	12.5	39	3100	16
15...	1240	26500	14.0	33	2360	14
16...	1345	25300	13.5	45	3070	14
17...	0740	24800	12.0	49	3280	15
18...	0700	24600	13.0	35	2330	14
19...	0705	25600	12.5	40	2770	15
20...	1750	26300	13.5	34	2410	13
21...	1600	25500	13.5	44	3030	13
22...	0925	24400	13.0	34	2240	12
23...	0800	22500	13.0	65	3950	13
24...	0720	20400	13.5	39	2150	15
25...	1330	20500	13.0	46	2550	13
25...	1400	20200	13.0	46	2510	18
25...	1710	20200	13.0	46	2510	14
26...	1330	19600	13.0	42	2220	14
27...	1815	18200	13.5	44	2160	15
28...	0710	17600	13.0	44	2090	18
29...	1120	16500	14.0	45	2010	15
30...	0915	15800	14.0	42	1790	16
31...	1840	14900	14.0	52	2090	16
APR						
01...	0725	14400	13.5	52	2020	17
02...	0820	13400	13.5	53	1920	17
03...	1610	12100	14.5	61	1990	18
04...	1430	11400	14.0	77	2370	13
04...	1500	11800	14.0	66	2100	24
04...	1525	11300	13.5	62	1890	15

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
APR						
05...	1830	11200	13.5	54	1630	12
06...	0920	11300	13.5	58	1770	16
07...	1315	10700	13.0	--	--	17
07...	1645	10600	14.5	54	1550	13
08...	0740	10400	14.0	55	1540	12
09...	0745	9820	14.5	53	1410	12
10...	1815	9220	15.5	64	1590	14
11...	0735	9150	15.0	59	1460	13
12...	0945	9180	15.0	61	1510	13
13...	1205	9230	16.5	56	1400	12
14...	0610	9460	16.0	62	1580	10
15...	0630	9760	15.5	62	1630	11
16...	0745	10300	15.5	57	1590	12
17...	1750	10700	16.5	42	1210	9.2
18...	0755	10700	15.5	60	1730	13
19...	0640	10700	15.5	44	1270	12
20...	0720	10600	16.0	41	1170	4.2
21...	0750	10400	15.0	80	2250	14
21...	1420	10200	15.0	--	--	13
22...	0645	9640	14.5	54	1410	13
23...	0745	9150	13.5	51	1260	12
24...	1755	8890	14.0	54	1300	10
25...	0645	8850	13.5	97	2320	16
26...	0845	8900	15.0	65	1560	13
27...	0925	9190	16.0	61	1510	12
28...	0730	9700	16.0	52	1360	12
29...	0630	9770	16.0	53	1400	13
30...	0735	9800	15.5	65	1720	15
MAY						
01...	0830	9680	16.0	81	2120	17
02...	0720	9620	16.0	54	1400	12
03...	1300	9570	17.0	65	1680	15
04...	0950	9480	17.0	50	1280	13
05...	0750	9450	17.0	48	1230	5.7
05...	1345	9460	18.0	--	--	17
06...	0700	9320	16.0	53	1330	14
07...	0730	9290	16.5	50	1250	9.0
08...	1810	9370	17.0	50	1270	10
09...	0645	9440	16.0	51	1300	10
10...	1730	9840	15.5	52	1380	10
11...	1150	10200	15.0	56	1540	7.6
12...	0725	10500	14.5	49	1390	6.4
13...	0745	10800	15.0	50	1460	5.7
14...	0620	10800	15.5	45	1310	8.2
15...	0600	10700	16.0	49	1420	13
16...	0635	10700	16.5	49	1420	10
16...	1115	10800	16.5	64	1870	9.0
17...	0620	10900	17.0	49	1440	13
18...	0820	11100	18.0	51	1530	12
19...	0700	11300	18.5	45	1370	10
19...	1345	11300	21.0	--	--	17
20...	0725	11200	19.0	45	1360	11
21...	0645	11000	19.5	50	1490	12
22...	1830	10700	19.5	57	1650	12
23...	0730	10400	17.0	52	1460	12
24...	0755	9980	16.5	64	1730	14
25...	0630	9680	16.0	58	1520	14
26...	0930	9420	16.0	55	1400	12
27...	0735	9110	16.5	58	1430	10
28...	1725	8640	17.5	57	1330	13
29...	1820	8390	18.0	62	1400	11
30...	0715	8330	17.0	57	1280	13
31...	1720	8400	18.5	65	1470	13
JUN						
01...	1030	8550	17.5	59	1360	13
02...	0710	8400	18.5	59	1340	13
03...	0715	8030	17.5	57	1240	14
03...	1220	7980	17.0	--	--	16
04...	0710	7730	17.0	62	1290	12
05...	1230	7470	17.0	--	--	17
05...	1730	7140	17.0	65	1250	13
06...	0705	6920	16.5	77	1440	17
07...	1540	6570	19.5	69	1220	11
08...	1205	6080	19.0	82	1350	17
09...	1715	5670	21.0	70	1070	19
10...	0755	5470	19.0	74	1090	14
11...	0730	5400	18.5	88	1280	16
12...	0845	5250	18.0	79	1120	22
13...	0855	5180	18.0	74	1040	17
14...	1505	5080	20.0	72	988	18

SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
JUN						
15...	0910	4980	19.0	71	955	17
16...	0840	4960	19.0	69	924	17
17...	1410	4680	22.0	--	--	18
17...	1515	4680	22.0	73	922	14
18...	1715	4500	22.0	68	826	18
19...	1700	4320	21.5	77	898	18
20...	0710	4240	19.5	79	904	20
21...	1600	4160	22.0	78	876	21
22...	0815	4170	19.0	81	912	21
23...	0800	4290	19.0	72	834	18
24...	1225	4070	20.5	82	901	22
25...	0830	3950	19.5	91	971	20
26...	1500	3840	21.0	81	840	11
27...	0920	3840	20.0	89	923	17
28...	1915	3810	23.0	87	895	18
29...	1330	3860	22.0	77	802	11
30...	2000	4400	22.0	74	879	14
JUL						
01...	1145	4480	21.0	--	--	19
01...	1845	4440	21.5	75	899	14
02...	1840	4270	21.0	96	1110	22
03...	1200	4120	21.0	78	868	18
04...	1615	3920	23.0	83	878	16
05...	1625	4000	23.0	75	810	18
06...	1735	4120	23.0	85	946	20
07...	1300	4200	21.5	94	1070	22
07...	1905	4180	21.5	100	1130	31
08...	0945	4210	21.5	108	1230	28
09...	1740	4480	22.5	103	1250	28
10...	0900	4640	21.5	101	1270	27
11...	1650	4720	23.5	104	1330	25
12...	1810	4520	24.0	106	1290	21
13...	1100	4270	23.0	98	1130	24
14...	1440	3700	24.0	99	989	27
15...	1150	3440	23.0	--	--	28
15...	1930	3350	24.5	107	968	31
16...	1825	3230	25.0	94	820	28
17...	0920	3180	23.5	96	824	28
18...	1145	3220	24.5	98	852	23
19...	2030	3120	25.0	80	674	24
20...	0815	3140	23.0	94	797	24
21...	1630	3080	25.0	93	773	31
22...	0915	2940	23.5	92	730	30
23...	0910	2760	23.5	91	678	27
24...	1945	2710	25.5	77	563	23
25...	0645	2630	24.0	75	533	17
26...	0925	2260	25.0	81	494	28
27...	0930	2060	26.0	76	423	22
28...	0945	2140	26.5	92	532	27
29...	0950	2060	26.0	92	512	24
30...	0745	1880	26.0	106	538	32
31...	1000	1850	26.5	108	539	34
AUG						
01...	0735	1810	26.0	112	547	37
01...	1200	1840	26.0	110	546	38
01...	1220	1850	26.0	114	569	26
02...	0930	1810	26.0	116	567	34
03...	0910	1830	25.0	118	583	40
04...	0815	1940	24.5	118	618	37
04...	1800	1860	26.0	--	--	35
05...	0930	1810	24.0	108	528	32
06...	0915	1780	24.0	100	481	31
09...	1915	1880	26.0	91	462	21
10...	0910	1930	24.0	110	573	31
11...	1350	2060	26.0	103	573	26
12...	1135	2020	24.5	114	622	31
13...	1720	1850	26.0	109	544	35
14...	1655	1780	26.0	106	509	45
15...	1015	1830	24.0	112	553	37
16...	0820	1930	23.5	122	636	29
17...	1300	1990	24.5	126	677	27
18...	1610	2090	24.0	--	--	30
18...	1630	2090	25.0	100	564	31
19...	1135	1990	23.0	105	564	40
20...	1000	1990	23.0	105	564	33
21...	1330	2080	24.5	101	567	28
22...	1530	2020	24.5	108	589	40
23...	1945	1980	23.5	88	470	28
24...	0915	2100	22.0	97	550	25
25...	0950	2300	22.5	106	658	23

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT
CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	TUR- BID- ITY (NTU)
AUG						
26...	1650	2060	24.5	87	484	24
27...	0745	2080	23.0	96	539	25
28...	1735	2120	23.5	88	504	24
29...	0800	2160	22.0	89	519	23
30...	0925	2180	21.5	97	571	28
31...	1715	2310	23.5	82	511	20
SEP						
01...	1330	2440	24.0	85	560	28
02...	1630	2380	24.0	--	--	27
02...	1820	2370	24.0	84	538	20
03...	1725	2180	24.5	74	436	22
05...	1750	3560	23.0	88	846	16
06...	0910	3640	21.5	84	826	14
07...	1030	3800	20.5	86	882	19
08...	1930	3910	21.0	74	781	15
09...	0740	3870	20.5	76	794	16
10...	0730	3970	20.5	76	815	16
11...	0730	3980	20.0	74	795	17
12...	1800	4070	21.0	73	802	17
13...	0920	4160	20.0	79	887	17
14...	1000	4340	19.0	81	949	18
15...	1450	4560	21.0	--	--	17
15...	1715	4530	19.0	68	832	13
16...	1700	4230	19.5	68	777	18
17...	0745	4320	19.0	68	793	13
17...	0905	4330	19.0	76	889	13
17...	1245	4630	19.0	--	--	20
18...	0735	4010	19.0	70	758	14
19...	0745	3970	18.5	64	686	17
20...	0845	4140	18.5	--	--	16
21...	1200	4460	19.0	61	735	12
22...	1710	4750	19.0	63	808	12
23...	1725	4530	19.0	82	1000	15
24...	0745	3950	18.5	67	715	13
25...	0800	3440	19.5	87	808	17
26...	1830	3210	21.0	76	659	18
27...	0855	2810	20.0	92	698	12
28...	1100	2910	20.0	80	629	17
29...	0740	2820	19.5	77	586	15
30...	1705	3220	21.0	72	626	11

SAN JOAQUIN RIVER BASIN

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.--Backwater from New Hogan Dam Jan. 13-20, Feb. 21-23, Mar. 13 to June 11.

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, 29.0°C July 31, Aug. 1; minimum recorded, 4.5°C Dec. 18.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	26.0	17.0	13.5	11.0	9.5	8.0	10.0	9.0	8.0	6.5		
2	25.5	17.0	12.5	11.0	10.0	8.0	9.5	8.5	8.0	7.5		
3	25.0	17.0	12.5	12.0	10.0	8.0	8.5	7.5	9.0	8.0		
4	25.5	17.5	13.0	12.0	10.0	7.5	8.0	7.5	9.5	9.0		
5	25.0	17.0	13.0	11.0	9.5	7.0	9.0	8.0	9.5	9.0		
6	23.5	17.0	13.0	11.0	9.0	7.0	9.5	9.0	10.5	9.0		
7	24.5	17.5	12.5	10.5	9.0	7.0	10.0	8.5	9.0	8.0		
8	21.5	16.0	13.5	11.5	9.5	7.0	10.0	9.0	8.5	7.0		
9	25.0	15.5	12.5	10.5	9.5	7.0	10.5	9.5	8.5	7.0		
10	24.5	16.5	12.5	10.0	9.0	7.5	10.0	9.5	8.5	7.0		
11	24.5	16.5	12.0	10.0	9.0	7.0	11.0	9.0	8.5	7.0		
12	23.5	15.5	12.0	9.5	8.0	6.0	12.0	11.0	9.0	7.0		
13	23.0	15.5	11.5	9.0	8.0	6.0	---	---	8.5	7.0		
14	22.0	17.0	11.0	8.5	7.5	5.5	---	---	9.0	8.0		
15	23.0	17.5	11.0	9.0	7.5	5.5	---	---	10.5	9.0		
16	23.5	16.5	11.0	9.5	7.5	5.0	---	---	10.5	9.5		
17	23.5	15.5	11.5	11.0	7.0	5.0	---	---	10.5	10.0		
18	18.5	15.5	12.0	10.0	7.0	4.5	---	---	11.5	10.5		
19	18.0	16.0	10.5	8.5	6.5	5.5	---	---	11.0	10.0		
20	19.0	16.0	9.0	7.5	7.0	6.0	---	---	10.5	9.5		
21	18.5	15.5	8.5	6.5	8.0	7.0	8.0	6.5	---	---		
22	18.0	14.5	8.5	7.5	8.0	6.5	8.0	7.0	---	---		
23	18.0	14.0	9.0	8.0	7.0	6.0	8.0	6.5	---	---		
24	17.0	14.0	10.5	9.0	7.5	6.5	7.5	6.5	11.0	9.0		
25	15.0	14.5	11.5	10.0	8.0	7.5	7.5	6.5	11.0	9.0		
26	16.0	13.5	11.5	10.0	7.5	6.5	7.5	7.0	12.0	9.5		
27	15.5	13.0	10.0	9.0	6.5	6.0	7.5	7.0	11.0	10.0		
28	15.5	12.5	10.0	8.5	6.0	5.5	8.0	7.5	---	---		
29	14.5	11.5	10.0	8.5	6.5	5.5	8.0	7.0	---	---		
30	13.5	11.0	10.0	8.0	8.0	6.0	7.0	5.5	---	---		
31	14.0	12.0	---	---	10.0	8.0	7.0	6.0	---	---		
MONTH	26.0	11.0	13.5	6.5	10.0	4.5	---	---	12.0	6.5		

11308600 CALAVERAS RIVER ABOVE NEW HOGAN LAKE, NEAR SAN ANDREAS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1					---	---	24.0	21.0	29.0	23.5	---	---
2					---	---	22.5	20.5	28.0	22.5	---	---
3					---	---	24.0	20.0	27.5	21.5	---	---
4					---	---	24.0	20.0	27.5	21.5	---	---
5					---	---	24.0	20.0	27.0	21.0	---	---
6					---	---	23.0	20.0	27.0	21.0	25.0	19.0
7					---	---	23.5	20.0	27.5	21.0	25.5	18.0
8					---	---	23.0	19.5	27.0	21.0	25.5	19.5
9					---	---	23.0	19.5	27.0	20.5	25.5	19.0
10					---	---	23.5	19.0	27.0	19.5	25.0	19.0
11					---	---	24.0	19.0	27.0	18.0	26.0	18.5
12					21.0	18.0	23.5	19.5	---	---	26.0	18.5
13					21.0	17.5	24.0	19.5	---	---	23.5	18.0
14					21.5	18.0	24.5	20.0	---	---	22.0	16.5
15					22.0	18.0	25.0	20.0	---	---	22.0	17.0
16					22.5	18.5	26.0	20.5	---	---	22.5	16.5
17					23.5	19.5	26.5	21.0	---	---	22.0	17.5
18					23.5	20.0	26.0	21.5	---	---	22.0	18.0
19					23.5	20.0	26.0	20.5	---	---	23.5	18.0
20					23.5	20.0	26.5	21.5	---	---	23.0	17.0
21					23.0	19.0	27.0	21.5	---	---	22.5	16.5
22					22.5	19.0	27.0	22.0	---	---	23.0	16.0
23					22.5	19.0	28.0	22.0	---	---	23.5	16.0
24					22.5	19.0	28.0	22.5	---	---	24.0	16.0
25					22.5	19.0	28.0	22.5	---	---	24.5	16.0
26					22.5	19.0	28.0	23.0	---	---	24.0	16.5
27					22.5	19.0	28.5	23.5	---	---	23.5	16.0
28					24.0	19.5	27.5	24.5	---	---	23.5	15.5
29					23.0	21.0	28.5	23.0	---	---	25.5	15.0
30					22.0	21.5	28.0	23.0	---	---	25.0	15.5
31					---	---	29.0	23.5	---	---	---	---
MONTH					---	---	29.0	19.0	---	---	26.0	15.0

SAN JOAQUIN RIVER BASIN

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, 323,715 acre-ft (399 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, 227,119 acre-ft (280 hm³) Jan. 14, elevation, 689.90 ft (210.282 m); minimum, 148,801 acre-ft (183 hm³) Sept. 30, elevation, 664.98 ft (202.686 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		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176871	171894	171863	178189	166608	198535	209914	215395	206970	193488	178312	160918
2	176566	171833	171924	178773	166756	198437	210049	215191	206637	193392	177606	160337
3	176352	171984	171894	179173	166726	198827	210217	214986	206304	193102	176932	159787
4	176077	171984	171773	179389	166963	199056	210385	214748	206038	192814	176229	159237
5	175863	171894	171683	179605	167200	200888	211936	214477	205706	192461	175620	158689
6	175620	171863	171532	179728	167468	202728	212814	214204	205307	192078	175072	158084
7	175345	171803	171381	179790	167705	202827	213322	213933	204909	191726	174494	157538
8	175101	171743	171232	179944	167913	202662	213695	213628	204511	191343	173948	157021
9	174859	171652	171111	180284	168062	202432	214034	213526	204148	190864	173433	156535
10	174615	171592	171051	181771	168241	202366	214272	213322	203718	190514	172888	156020
11	174403	171532	171021	185863	168389	202662	214510	213153	203289	190068	172375	155506
12	174221	171442	170961	200920	168538	203289	214748	213017	202860	189623	171833	155022
13	174039	171381	170931	211733	168657	203784	214884	212915	202399	189178	171262	154453
14	173857	171291	170871	227119	168926	204161	215020	212713	201971	188766	170691	153942
15	173675	171202	170811	222201	169882	204611	215123	212476	201577	188354	170151	153545
16	173464	171351	170781	213254	172285	204909	215191	212239	201149	187943	169583	153149
17	173282	171713	170721	215191	176687	205274	215225	211969	200724	187375	169016	152754
18	173009	171743	170661	215702	182859	205739	215293	211699	200233	186838	168419	152386
19	173009	171743	170631	214238	194743	206104	215327	211429	199676	186271	167883	152161
20	172979	171683	170571	207036	201445	206437	215395	211059	199121	185769	167379	151823
21	172858	171622	170661	192301	212915	206804	215463	210654	198535	185203	166874	151542
22	172708	171592	170631	178066	211969	207170	215599	210251	197948	184639	166341	151233
23	172557	171622	170841	169583	205606	207504	215668	209881	197396	184045	165869	150952
24	172406	171652	171924	165603	201248	207804	215804	209578	196845	183421	165396	150644
25	172587	171773	173766	165160	199774	208172	215975	209311	196293	182797	164895	150335
26	172496	171743	174494	165308	199154	208540	215975	209042	195776	182206	164366	150000
27	172436	171773	174828	165396	199089	208807	216043	208707	195292	181554	163720	149664
28	172285	171803	175041	165543	199252	209076	215941	208373	194839	180903	163105	149386
29	172164	171803	175101	166016	198991	209311	215804	207971	194324	180253	162549	149107
30	172074	171833	175376	166341	---	209511	215633	207604	193905	179636	161994	148801
31	171984	---	176535	166519	---	209746	---	207270	---	178957	161441	---
MAX	176871	171984	176535	227119	212915	209746	216043	215395	206970	193488	178312	160918
MIN	171984	171202	170571	165160	166608	198437	209914	207270	193905	178957	161441	148801
†	672.98	672.93	674.48	671.15	681.59	684.84	686.58	684.10	680.02	675.27	669.42	664.98
‡	-5163	-151	+4702	-10016	+32472	+10755	+5887	-8363	-13365	-14948	-17516	-12640
††	1105	456	279	249	358	739	1020	1441	1867	2274	2101	1657

CAL YR 1979 † +24627
WTR YR 1980 † -28346

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

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).--19 years, 219 ft³/s (6.202 m³/s), 158,700 acre-ft/yr (196 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, 10,000 ft³/s (283 m³/s) Jan. 22, gage height, 10.52 ft (3.206 m); minimum daily, 9.2 ft³/s (0.261 m³/s) Jan. 3.

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	138	34	9.3	32	197	823	86	187	182	224	322	275
2	110	34	12	25	197	658	81	186	182	207	322	275
3	102	34	27	9.2	197	572	71	186	167	183	322	275
4	104	35	62	21	104	572	75	185	160	182	323	275
5	103	36	89	40	39	704	83	185	197	182	293	274
6	103	36	90	50	65	1240	59	185	220	182	275	272
7	103	38	89	44	67	1370	52	185	222	196	275	273
8	103	41	90	39	56	1080	57	189	222	223	268	267
9	103	42	89	40	56	920	50	197	198	214	254	250
10	103	42	52	138	56	726	49	201	221	198	255	250
11	89	42	35	218	56	446	56	180	234	213	255	250
12	74	42	39	221	56	206	61	149	239	226	254	250
13	76	42	39	230	56	197	62	148	249	226	255	250
14	76	42	27	888	56	196	69	162	249	224	267	250
15	76	41	38	5620	58	197	107	187	249	224	275	223
16	76	43	38	6480	57	197	112	200	249	224	275	198
17	76	44	37	2260	59	143	102	198	252	281	275	199
18	77	42	35	2430	147	96	102	199	262	298	275	185
19	61	43	36	2020	555	96	102	197	285	250	265	167
20	49	42	36	4280	1070	96	102	214	299	250	248	147
21	49	36	36	7860	1390	74	95	211	302	270	249	150
22	49	30	35	7450	3800	55	78	197	301	291	241	149
23	49	29	35	4360	4910	56	78	189	301	299	227	149
24	43	30	28	2320	3390	56	62	174	294	308	227	150
25	40	29	21	538	1740	56	53	173	280	315	240	150
26	39	31	20	197	1140	58	104	174	275	306	261	150
27	39	35	20	197	815	57	101	191	274	323	304	150
28	39	36	24	197	823	57	122	189	273	322	291	150
29	39	37	33	196	823	56	181	226	253	314	275	152
30	36	27	32	197	---	57	198	201	224	311	274	153
31	34	---	32	197	---	65	---	182	---	322	274	---
TOTAL	2258	1115	1285.3	48794.2	22035	11182	2610	5827	7315	7788	8416	6308
MEAN	72.8	37.2	41.5	1574	760	361	87.0	188	244	251	271	210
MAX	138	44	90	7860	4910	1370	198	226	302	323	323	275
MIN	34	27	9.3	9.2	39	55	49	148	160	182	227	147
AC-FT	4480	2210	2550	96780	43710	22180	5180	11560	14510	15450	16690	12510

CAL YR 1979 TOTAL 75628.5 MEAN 207 MAX 4440 MIN 9.2 AC-FT 150000 MEAN ‡ 263 AC-FT ‡ 190300
WTR YR 1980 TOTAL 124933.5 MEAN 341 MAX 7860 MIN 9.2 AC-FT 247800 MEAN ‡ 322 AC-FT ‡ 233000

‡ Adjusted for change in contents in and evaporation from New Hogan Lake.

SAN JOAQUIN RIVER BASIN

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, 14.5°C Apr. 25; minimum recorded, 9.5°C on several days during December to February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.5	12.0	11.0	11.5	9.5	11.0	10.5	10.5	10.0	11.0	11.0
2	12.0	11.5	11.5	11.0	12.0	10.5	11.0	10.0	10.5	10.0	11.0	11.0
3	12.0	11.5	11.5	11.0	11.5	10.5	11.5	9.5	10.5	10.0	11.0	11.0
4	12.0	11.5	12.0	11.0	11.5	11.0	11.0	10.0	10.5	9.5	11.0	11.0
5	12.0	11.0	11.5	11.0	11.5	11.0	11.0	10.5	10.0	9.5	11.0	11.0
6	12.0	11.0	12.0	11.0	11.5	10.5	10.5	10.5	10.0	9.5	11.0	11.0
7	12.0	11.0	12.0	11.0	11.5	11.0	11.0	10.5	10.5	9.5	11.5	11.0
8	11.5	11.0	11.5	11.0	11.5	10.5	11.0	10.5	10.5	9.5	11.5	11.5
9	12.0	11.0	12.0	11.0	11.5	11.0	10.5	10.5	10.5	9.5	11.5	11.5
10	12.0	11.0	12.0	11.0	12.0	10.5	10.5	10.5	10.5	9.5	11.5	11.5
11	12.0	11.0	12.0	11.0	11.5	10.5	11.0	10.5	10.5	9.5	11.5	11.0
12	12.0	11.0	12.0	11.0	11.5	10.5	11.0	11.0	10.5	9.5	11.5	11.0
13	12.0	11.0	12.0	11.0	11.5	10.5	12.0	11.0	10.5	9.5	11.5	11.0
14	12.0	11.5	12.0	11.0	11.5	10.0	11.5	11.0	10.5	9.5	11.5	11.0
15	12.0	11.5	12.0	11.0	11.5	10.5	11.0	11.0	10.5	10.0	11.5	11.0
16	12.0	11.0	11.5	11.0	11.5	10.5	11.5	11.5	10.5	10.0	11.5	11.0
17	12.0	11.0	11.5	11.0	11.5	10.5	11.5	11.5	10.5	10.5	12.0	11.0
18	11.5	11.0	11.5	10.5	11.5	10.5	11.5	11.5	11.0	10.5	12.0	11.0
19	11.5	11.0	11.5	10.5	11.5	10.5	11.5	11.5	11.0	10.5	12.0	11.0
20	12.0	11.0	11.5	10.5	11.5	11.0	11.5	11.0	10.5	10.5	12.0	11.0
21	12.0	11.0	11.5	10.5	11.5	11.0	11.0	11.0	10.5	10.5	12.5	11.0
22	12.0	11.0	11.5	10.5	11.5	10.5	11.0	11.0	10.5	10.5	12.5	11.0
23	12.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	10.5	10.5	12.5	11.0
24	12.0	11.0	11.5	11.0	11.0	10.5	11.0	11.0	11.0	10.5	12.5	11.0
25	11.5	11.0	12.0	11.0	11.5	10.5	11.0	10.5	11.0	11.0	11.5	11.0
26	12.0	11.0	11.5	10.5	11.0	10.0	10.5	10.5	11.0	11.0	12.0	11.0
27	12.0	11.0	11.5	10.5	11.0	10.0	10.5	10.5	11.0	11.0	12.5	11.0
28	12.0	11.0	12.0	10.5	11.0	10.0	10.5	10.5	11.0	11.0	12.5	11.0
29	12.0	11.0	12.0	10.5	10.5	10.0	10.5	10.5	11.0	11.0	12.5	11.0
30	12.0	10.5	11.5	10.0	10.5	10.0	10.5	10.5	---	---	12.5	11.0
31	12.0	11.0	---	---	11.0	10.5	10.5	10.0	---	---	12.5	11.0
MONTH	12.0	10.5	12.0	10.0	12.0	9.5	12.0	9.5	11.0	9.5	12.5	11.0

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	11.5	12.5	12.0	---	---	13.0	12.5	13.5	13.0	13.5	13.0
2	12.5	11.0	12.5	12.0	---	---	12.5	12.5	13.5	13.0	13.0	13.0
3	12.5	11.0	12.5	12.0	---	---	13.0	12.5	13.5	13.0	13.0	13.0
4	12.0	11.5	12.5	12.0	---	---	13.0	12.5	13.5	13.5	13.0	13.0
5	12.0	11.5	12.5	12.0	13.0	12.0	13.0	12.5	13.5	13.0	13.0	13.0
6	12.5	11.0	12.5	12.0	13.0	12.0	13.0	12.5	13.5	13.0	13.0	13.0
7	13.0	11.0	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
8	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	13.0
9	13.0	11.5	12.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
10	13.0	11.5	12.5	12.0	13.0	12.0	13.0	12.5	13.5	13.0	13.0	12.5
11	13.0	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
12	13.0	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
13	13.0	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
14	13.0	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
15	12.5	11.5	12.5	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
16	12.5	11.5	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
17	12.5	11.5	13.0	12.0	13.0	12.5	13.0	12.5	13.5	13.0	13.0	12.5
18	12.5	11.5	13.0	12.0	13.0	12.5	13.5	13.0	13.5	13.0	13.0	12.5
19	13.0	11.5	13.0	12.0	13.0	12.5	13.5	12.5	13.5	13.0	13.0	12.5
20	12.5	11.5	13.0	12.0	13.0	12.5	13.5	12.5	13.5	13.0	13.0	12.5
21	12.5	11.5	12.5	12.0	13.0	12.5	13.5	13.0	13.5	13.0	13.0	12.5
22	12.0	11.5	13.0	12.0	13.0	12.5	13.5	13.0	13.0	13.0	13.0	12.5
23	12.0	11.5	12.5	12.0	13.0	12.5	13.5	13.0	13.0	12.5	13.0	12.5
24	12.5	11.5	12.5	12.0	13.0	12.5	13.5	13.0	13.5	12.5	13.0	12.5
25	14.5	11.5	13.0	12.0	13.0	12.5	13.5	13.0	13.0	12.5	13.0	12.5
26	12.5	11.5	13.0	12.0	13.0	12.5	13.5	13.0	13.0	12.5	13.0	12.5
27	13.0	11.5	---	---	13.0	12.5	13.5	13.0	13.5	12.5	13.0	12.5
28	12.5	11.5	---	---	13.0	12.5	13.5	13.0	13.5	13.0	13.0	12.5
29	12.0	12.0	---	---	13.0	12.5	13.5	13.0	13.5	13.0	13.0	12.5
30	12.5	12.0	---	---	13.0	12.5	13.5	13.0	13.5	13.0	13.0	12.5
31	---	---	---	---	---	---	13.5	13.0	13.5	13.0	---	---
MONTH	14.5	11.0	13.0	12.0	13.0	12.0	13.5	12.5	13.5	12.5	13.5	12.5

SAN JOAQUIN RIVER BASIN

11312000 BEAR CREEK NEAR LOCKEFORD, CA

LOCATION.--Lat 38°09'10", long 121°08'17", in NW¼SE¼ 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 good. 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.--50 years, 11.7 ft³/s (0.331 m³/s), 8,480 acre-ft/yr (10.5 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 14	Unknown	720 20.4	9.03 2.752	Feb. 19	1700	*1,380 39.1	11.86 3.615
Jan. 17	2130	519 14.7	7.55 2.301	Feb. 21	1300	956 27.1	8.75 2.667

Minimum, no flow many days.

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	.07	0	.10	8.5	4.0	17	1.4	1.6	.16	.02	0	0
2	.32	0	.13	7.9	3.9	12	1.6	.37	.13	.72	0	0
3	.58	0	.19	4.0	3.9	22	2.2	.20	.13	.15	.34	0
4	.11	0	.26	2.4	3.7	46	1.3	.63	.14	.02	.64	.18
5	.35	0	.20	1.7	3.0	75	6.8	.94	.30	.02	.70	.45
6	.72	0	.22	1.3	2.7	225	16	.18	1.1	.01	.05	1.2
7	1.0	0	.17	1.0	2.7	143	6.6	.03	1.3	.01	.02	.06
8	.98	0	.11	.89	2.3	75	3.8	.13	.45	0	.01	.01
9	.74	0	.08	14	1.9	47	2.4	1.0	1.1	.01	.86	.17
10	.30	0	.06	130	1.7	32	1.9	.39	.12	.01	.28	.17
11	.11	0	.07	250	1.5	23	1.6	.19	.04	.02	.06	.01
12	.63	0	.09	400	1.4	17	1.2	.04	.08	.01	.06	0
13	.30	0	.06	300	1.3	13	.93	.01	.09	.01	.18	.01
14	.06	0	.06	580	1.9	11	.74	.01	.42	.01	.23	.03
15	.06	0	.04	152	19	8.9	.67	.02	.29	.01	.26	.06
16	.03	0	.04	87	43	7.6	.83	.51	.69	.01	.09	.03
17	.03	0	.02	194	87	6.5	.46	.13	.13	.02	.01	.02
18	.02	0	.03	315	146	5.7	.32	.25	.20	.10	.07	1.0
19	.06	0	.25	79	837	2.7	.46	.03	.50	.78	.28	.45
20	.21	0	.45	45	503	3.6	.36	.01	.20	.28	.15	.30
21	0	0	.34	30	748	3.4	.44	0	.33	.67	.02	.07
22	.14	.03	.17	21	260	3.2	.44	.02	.64	.11	.02	.02
23	.36	0	.84	16	83	2.8	1.0	0	.04	.01	.02	.01
24	0	0	21	13	53	2.2	.86	0	.04	.01	.47	.01
25	.29	.04	27	12	35	2.2	1.3	0	.02	.01	.81	.01
26	0	0	20	10	23	2.7	1.0	.02	.02	.01	.53	.02
27	.01	.03	6.9	7.9	16	3.8	.18	.01	.41	0	.11	.01
28	0	.10	3.7	7.5	27	3.2	.24	.01	.78	0	.01	0
29	0	.08	2.5	8.7	31	2.4	1.6	.04	.04	0	0	0
30	0	.09	2.3	7.3	---	1.9	2.1	.17	.01	0	0	0
31	0	---	3.6	5.4	---	1.3	---	.17	---	0	0	---
TOTAL	7.48	.37	90.98	2712.49	2946.9	822.1	60.73	7.11	9.90	3.04	6.28	4.30
MEAN	.24	.012	2.93	87.5	102	26.5	2.02	.23	.33	.098	.20	.14
MAX	1.0	.10	27	580	837	225	16	1.6	1.3	.78	.86	1.2
MIN	0	0	.02	.89	1.3	1.3	.18	0	.01	0	0	0
AC-FT	15	.7	180	5380	5850	1630	120	14	20	6.0	12	8.5
CAL YR 1979	TOTAL	5116.25	MEAN	14.0	MAX	635	MIN	0	AC-FT	10150		
WTR YR 1980	TOTAL	6671.68	MEAN	18.2	MAX	837	MIN	0	AC-FT	13230		

11313000 DELTA-MENDOTA CANAL AT TRACY PUMPING PLANT, NEAR TRACY, CA

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.

PERIOD OF RECORD.--June 1951 to current year. Prior to October 1959, published as "near 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 Water and Power Resources Service).

REMARKS.--Discharge computed from records of operation of pumps. Water is diverted from Sacramento-San Joaquin Delta by way of Old River and a dredged channel to the Tracy pumping plant where it is lifted 200 ft (61 m) into canal. Water, less intermediate diversions, flows into Mendota Pool on San Joaquin River to replace water diverted at Friant Dam. The canal is a part of the Central Valley Project.

COOPERATION.--Records furnished by Water and Power Resources Service, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--29 years, 2,180 ft³/s (61.74 m³/s), 1,579,000 acre-ft/yr (1.95 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.

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	4400	3740			1050	3260	3850	3490	3160	4580	4530	4510
2	4410	3830			1710	3270	3810	3280	2630	4590	4490	3550
3	4380	3820			905	3240	3810	3270	2460	4540	3950	3180
4	4370	3850			0	3260	3780	3300	2440	4430	4180	3470
5	4430	3830			495	3240	3800	3270	2430	4400	4660	3700
6	4390	3860			1150	3250	3790	2910	2420	4450	4650	3680
7	4410	3120			2520	3250	3790	2490	2410	4400	4680	3650
8	4380	2270			3120	3240	3410	2500	2410	4430	4620	3670
9	4390	2280			3110	3230	3020	2500	2410	4500	4630	3650
10	4420	311			3120	3210	3430	2500	1320	4580	4630	3690
11	4400	0			3110	3180	3810	2480	2200	4590	4620	3540
12	4380	0			3400	3190	3800	2490	3200	4600	4620	3490
13	4190	0			3780	3220	3800	2500	3180	4590	4590	3680
14	3890	0			3900	3220	3790	2480	3170	4620	4630	3660
15	4130	0			3880	3220	3810	2460	3180	4650	4600	3690
16	4270	0			3740	3210	3860	2470	3190	4650	4590	3680
17	3760	0			3230	3210	3950	2510	3170	4660	4580	3660
18	3770	0			3000	3230	4030	2500	3190	4650	4650	3720
19	3780	0			3000	3250	3980	2960	3240	4640	4630	3710
20	3480	0			3000	3250	4020	3180	3280	4630	4550	3730
21	3330	0			3110	3250	3990	3190	3260	4640	4630	4010
22	3300	0			3230	3250	4000	3200	3280	4640	4620	3680
23	3320	0			3140	3230	3980	3190	3240	4640	4620	3690
24	3310	0			3210	3210	3980	3190	3160	4650	4470	3690
25	3340	0			3110	3190	3980	3160	3060	4650	4480	3720
26	3310	0			3110	3190	3980	3180	2740	4670	4530	3160
27	3320	0			3260	3190	4000	3160	2330	4680	4520	873
28	3310	0			3240	3200	4000	3180	2690	4650	4520	879
29	3300	0			3230	3180	3990	3190	3160	4230	4500	2830
30	3290	0			---	3200	4000	3170	3880	4340	4490	3970
31	3900	---			---	3620	---	3180	---	4620	4390	---
TOTAL	121060	30911	0	0	79860	100340	115240	90530	85890	141590	140850	103812
MEAN	3905	1030	0	0	2754	3237	3841	2920	2863	4567	4544	3460
MAX	4430	3860	0	0	3900	3620	4030	3490	3880	4680	4680	4510
MIN	3290	0	0	0	0	3180	3020	2460	1320	4230	3950	873
AC-FT	240100	61310	0	0	158400	199000	228600	179600	170400	280800	279400	205900
CAL YR 1979	TOTAL	1023172	MEAN	2803	MAX	4660	MIN	0	AC-FT	2029000		
WTR YR 1980	TOTAL	1010083	MEAN	2760	MAX	4680	MIN	0	AC-FT	2003000		

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, 141,900 acre-ft (175 hm³) July 7-15, elevation, 3,958.0 ft (1,206.40 m); minimum, 26,400 acre-ft (32.6 hm³) Dec. 30, elevation, 3,796.4 ft (1,157.14 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 1500

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87080	65512	45700	28382	72394	73702	59880	88413	140992	140897	136985	124541
2	86534	64613	45077	28934	71815	73265	59023	91264	140992	141280	136606	124086
3	86067	63653	44347	28934	71310	72974	58563	94964	140897	141088	136322	123723
4	85523	62902	43624	28612	70807	72901	58109	99722	140416	141184	135944	123179
5	84980	62021	42852	28063	70305	72756	58239	104499	140129	141472	135567	122817
6	84054	61079	42141	27564	69877	72539	58044	109029	140225	141472	135189	122275
7	82979	60212	41490	27248	69449	72104	57525	113815	140321	141857	134719	121914
8	82137	59682	40897	26890	68951	71743	57074	116904	140897	141857	134342	121643
9	81224	59220	40254	26578	68313	71310	56625	120026	140321	141857	133873	121283
10	80315	58304	39616	27159	67749	70707	56434	121914	140608	141857	133498	120833
11	79560	57332	38825	27881	67116	70592	56306	123179	140512	141857	133029	120474
12	78809	56306	38093	33446	66556	70162	56497	123814	140416	141857	132562	120115
13	77836	55355	37316	46156	65859	69663	56753	124996	140225	141857	132188	119667
14	76794	54789	36546	64338	65304	69306	57396	125634	140416	141857	131722	119220
15	75979	54226	35683	69306	65166	68738	58304	126274	141088	141857	131257	118862
16	75168	53605	34980	71310	65166	68243	59023	127282	140704	141568	130792	118505
17	74287	53172	34234	72829	65166	67819	60411	129032	140416	141184	130328	118149
18	73084	52741	33495	73629	69663	67467	62427	131536	140416	141088	129864	117615
19	72684	52190	32716	74141	72249	66626	64475	134342	140321	140800	129401	117259
20	72539	51702	31992	74214	73484	66137	67256	136985	140225	140225	128940	116815
21	72176	51217	31133	74287	74360	65720	69449	138887	140225	139746	128478	116372
22	71382	50134	30660	74214	74727	65235	70377	139078	140321	139078	128110	115930
23	70735	49182	30142	73921	74727	64476	71095	138601	140416	138410	127742	115488
24	69877	48240	29768	73629	74654	63858	71526	138601	140321	137935	127374	114958
25	69520	47947	29396	73484	74434	63379	72539	138506	140704	137935	127007	114694
26	69877	47889	29072	73047	74214	62902	74068	138315	141184	137935	126640	114254
27	69449	47831	28612	72756	73995	62360	76201	138601	141184	137840	126274	113903
28	68880	47308	27881	72466	74068	61751	79109	138887	140897	137745	125908	113903
29	68031	46788	27114	72756	73921	61146	82061	139173	141280	137555	125543	113026
30	67116	46156	26401	72901	---	60678	85523	140033	141280	137365	125178	112589
31	66346	---	26801	72901	---	60411	---	141184	---	137175	124814	---
MAX	87080	65512	45700	74287	74727	73702	85523	141184	141280	141857	136985	124541
MIN	66346	46156	26401	26578	65166	60411	56306	88413	140129	137175	124814	112589
†	3867.3	3835.5	3797.3	3876.5	3877.9	3858.6	3893.3	3957.3	3957.4	3953.1	3939.8	3926.1
‡	-21400	-20200	-19400	+46100	+1020	-13500	+25100	+55700	+96	-4100	-12400	-12200

CAL YR 1979 † +8850

WTR YR 1980 ‡ +24800

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

‡ Change in contents, in acre-feet, rounded to Geological Survey standards.

SAN JOAQUIN RIVER BASIN

11314000 TIGER CREEK POWERHOUSE CONDUIT BELOW SALT SPRINGS DAM, CA

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.

PERIOD OF RECORD.--June 1931 to current year.

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.

REMARKS.--Conduit conveys water of North Fork Mokelumne River from tailrace of Salt Springs powerhouse to forebay of Tiger Creek powerhouse. Since December 1952, records include Bear River diversion to Salt Springs powerhouse. 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.--49 years, 355 ft³/s (10.05 m³/s), 257,200 acre-ft/yr (317 hm³/yr).

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.

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	541	546	550	399	503	533	552	551	559	559	554	541
2	547	545	549	495	509	533	551	550	559	560	554	541
3	548	488	552	531	512	538	547	550	558	560	554	530
4	549	541	551	510	511	548	547	432	558	560	553	542
5	548	545	551	522	512	541	527	2.1	559	560	553	541
6	548	542	551	528	512	542	538	1.1	559	560	553	541
7	549	547	551	525	512	547	548	1.0	559	560	553	543
8	550	548	551	506	513	547	552	1.0	559	560	553	543
9	549	544	552	414	513	547	551	1.0	559	560	553	542
10	548	548	551	226	513	548	551	.90	559	561	552	542
11	547	546	552	230	512	543	551	.70	559	560	551	543
12	548	547	552	214	519	544	169	.60	559	561	550	542
13	546	549	551	184	530	547	105	.60	559	561	552	541
14	548	550	551	299	524	547	549	.60	560	561	552	542
15	547	549	551	241	511	547	550	.40	560	560	551	542
16	547	549	551	507	526	547	552	209	512	560	551	542
17	544	548	552	357	543	547	552	549	561	560	548	542
18	546	550	552	2.0	453	546	552	549	559	561	545	537
19	527	548	551	1.3	434	547	151	549	559	561	542	543
20	395	549	552	1.1	432	547	108	550	560	561	543	544
21	502	546	551	.70	432	546	551	421	561	561	544	542
22	528	548	551	.60	432	546	550	354	561	560	544	543
23	537	547	551	.60	432	547	550	507	561	561	543	543
24	432	549	547	264	477	547	550	548	559	541	543	543
25	115	539	541	501	522	547	550	548	560	557	543	543
26	320	430	551	494	533	549	551	553	560	557	546	544
27	348	548	551	487	533	551	552	557	560	556	543	542
28	485	550	551	484	533	552	550	557	560	556	543	542
29	532	549	551	497	533	552	550	557	561	555	542	542
30	544	550	513	509	---	551	551	527	558	555	542	544
31	540	---	300	504	---	551	---	559	---	554	542	---
TOTAL	15655	16235	16782	10434.30	14521	16925	14808	10187.00	16737	17319	16992	16252
MEAN	505	541	541	337	501	546	494	329	558	559	548	542
MAX	550	550	552	531	543	552	552	559	561	561	554	544
MIN	115	430	300	.60	432	533	105	.40	512	541	542	530
AC-FT	31050	32200	33290	20700	28800	33570	29370	20210	33200	34350	33700	32240
CAL YR 1979 TOTAL	175290.00			MEAN 480	MAX 554	MIN 0	AC-FT 347700					
WTR YR 1980 TOTAL	182847.30			MEAN 500	MAX 561	MIN .40	AC-FT 362700					

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).--54 years, 468 ft³/s (13.25 m³/s), 339,100 acre-ft/yr (418 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 discharge, 4,510 ft³/s (128 m³/s) May 22, gage height, 10.26 ft (3.127 m); minimum daily, 5.2 ft³/s (0.15 m³/s) Nov. 14, 15.

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	9.5	7.9	39	11	302	279	229	300	1250	1070	12	9.8
2	9.5	5.9	104	7.7	296	280	229	307	1270	2070	12	9.8
3	9.5	6.2	133	22	291	276	232	315	1270	1860	12	9.8
4	9.7	6.1	131	39	121	266	230	447	1040	1190	12	9.8
5	9.8	5.9	131	34	130	274	254	773	711	1170	11	9.8
6	9.8	5.9	118	27	287	272	240	877	527	865	11	9.8
7	9.8	5.9	81	42	284	264	228	886	622	881	11	10
8	9.8	5.9	57	82	281	262	222	891	1340	639	11	11
9	9.5	5.7	76	58	280	261	222	897	2220	565	11	9.8
10	9.5	5.6	113	8.9	279	259	221	900	2140	711	11	9.8
11	9.2	5.4	136	11	278	262	221	902	2040	515	11	9.8
12	8.8	5.4	132	22	269	262	395	631	2080	423	11	9.5
13	8.8	5.4	134	54	256	256	647	611	1440	424	11	9.5
14	8.8	5.2	133	67	261	255	216	906	1190	427	11	9.5
15	8.8	5.2	119	291	277	254	217	906	1640	310	11	9.5
16	8.5	5.7	101	550	265	253	219	661	2460	269	11	9.5
17	8.7	6.7	99	313	247	252	223	374	2490	209	11	9.5
18	9.5	6.4	89	481	356	252	231	392	2520	178	10	9.5
19	9.8	5.9	88	800	391	251	635	870	2440	257	10	9.5
20	9.8	5.7	103	797	388	250	674	1780	2350	288	11	9.2
21	8.8	5.9	122	797	396	249	252	2660	2170	287	11	9.2
22	9.2	5.9	5.4	796	388	248	257	3370	1660	283	10	9.5
23	9.8	5.9	5.9	795	385	245	258	2510	1770	277	10	9.2
24	11	5.8	7.3	539	341	245	261	1250	1540	112	10	9.2
25	10	5.9	8.6	308	294	244	263	758	1450	13	10	9.2
26	11	6.1	8.3	316	282	240	267	511	1550	13	10	9.2
27	11	43	71	321	281	236	271	400	1790	13	10	9.2
28	11	118	161	116	282	234	280	378	1230	13	11	9.2
29	11	144	158	8.6	281	233	287	378	1680	12	11	9.2
30	11	91	138	8.1	---	233	294	487	2330	12	11	9.2
31	10	---	45	159	---	232	---	941	---	12	11	---
TOTAL	300.9	549.5	2847.5	7881.3	8469	7879	8675	28269	50410	16168	337	286.7
MEAN	9.71	18.3	91.9	254	292	254	289	912	1680	522	10.9	9.56
MAX	11	144	161	800	396	280	674	3370	2520	2070	12	11
MIN	8.5	5.2	5.4	7.7	121	232	216	300	527	12	10	9.2
AC-FT	597	1090	5650	15630	16800	15630	17210	56070	99990	32070	668	569
CAL YR 1979 TOTAL	51460.0			MEAN 141	MAX 2140	MIN 4.2	AC-FT 102100					
WTR YR 1980 TOTAL	132072.9			MEAN 361	MAX 3370	MIN 5.2	AC-FT 262000					

SAN JOAQUIN RIVER BASIN

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA

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.

DRAINAGE AREA.--21.0 mi² (54.4 km²).

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."

REVISED RECORDS.--WSP 1515: 1928, 1930-31, 1938(M), 1944, 1947. WSP 1930: Drainage area.

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.--52 years, 64.1 ft³/s (1.815 m³/s), 46,440 acre-ft/yr (57.3 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 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. 13	2145	*3,500 99.1	6.16 1.878	May 6	2015	683 19.3	3.55 1.082
Feb. 18	0230	510 14.4	3.27 0.997	May 21	2015	772 21.9	3.68 1.122
Apr. 19	2030	510 14.4	3.27 .997	June 17	2045	551 15.6	3.34 1.018
Apr. 29	2100	569 16.1	3.37 1.027				

Minimum daily, 0.08 ft³/s (0.002 m³/s) on several days during October.

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	.08	6.6	34	125	45	52	50	320	176	200	4.0	.38
2	.08	5.9	30	70	42	47	45	345	194	203	3.5	.38
3	.08	7.0	26	56	41	45	44	401	147	215	2.9	.36
4	.08	12	24	46	42	45	47	424	145	135	2.5	.34
5	.08	15	23	39	51	44	48	401	121	107	2.2	.33
6	.08	17	25	34	59	41	40	442	113	89	1.9	.31
7	.08	21	32	34	51	39	42	348	168	81	1.7	.31
8	.08	22	30	32	49	41	43	298	260	73	1.5	.55
9	.12	22	31	38	46	42	67	234	296	62	1.3	.65
10	.13	20	29	42	44	45	91	153	298	57	1.2	.45
11	.11	20	22	71	41	44	94	116	273	52	1.0	.36
12	.10	17	22	1480	39	43	97	115	233	49	.97	.33
13	.10	15	16	2620	40	37	160	135	186	44	.87	.30
14	.11	14	15	1090	40	39	181	142	198	40	.81	.28
15	.15	12	14	291	48	37	178	157	252	36	.76	.28
16	.14	11	14	205	52	36	213	203	290	32	.76	.28
17	.13	19	14	153	127	38	273	258	309	30	.71	.26
18	.17	26	14	111	372	41	287	319	295	27	.71	.26
19	111	21	11	98	163	38	315	412	289	22	.71	.27
20	127	19	11	78	98	44	312	432	267	19	.66	.28
21	31	14	10	73	76	39	214	469	239	18	.59	.27
22	28	13	12	69	63	36	130	399	210	16	.49	.26
23	23	15	13	64	58	36	113	255	186	13	.60	.25
24	22	95	11	64	60	43	165	144	185	12	.83	.23
25	39	126	18	69	53	39	216	109	187	9.8	.68	.21
26	43	108	22	66	52	36	278	93	180	8.0	.54	.21
27	24	54	19	59	59	36	321	88	154	7.0	.51	.21
28	15	44	16	54	60	42	347	85	168	7.2	.47	.19
29	10	44	16	55	53	52	369	110	183	6.3	.41	.19
30	7.6	41	47	67	---	72	343	175	190	5.2	.40	.19
31	6.9	---	193	52	---	65	---	179	---	4.5	.38	---
TOTAL	489.40	876.5	814	7405	2024	1334	5123	7761	6392	1680.0	36.56	9.17
MEAN	15.8	29.2	26.3	239	69.8	43.0	171	250	213	54.2	1.18	.31
MAX	127	126	193	2620	372	72	369	469	309	215	4.0	.65
MIN	.08	5.9	10	32	39	36	40	85	113	4.5	.38	.19
AC-FT	971	1740	1610	14690	4010	2650	10160	15390	12680	3330	73	18
CAL YR 1979	TOTAL	23285.01	MEAN 63.8	MAX 864	MIN .04	AC-FT 46190						
WTR YR 1980	TOTAL	33944.63	MEAN 92.7	MAX 2620	MIN .08	AC-FT 67330						

SAN JOAQUIN RIVER BASIN

379

11316000 BEAR RIVER NEAR SALT SPRINGS DAM, CA

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 Bear River 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.--29 years, 53.0 ft³/s (1,501 m³/s), 38,400 acre-ft/yr (47.3 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, 1,200 ft³/s (34.0 m³/s) Jan. 13, gage height, 3.83 ft (1.167 m); minimum daily, 3.6 ft³/s (0.10 m³/s) Nov. 15, 16.

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	4.6	5.8	8.0	66	35	77	35	43	21	399	5.8	5.4
2	4.6	5.5	7.3	37	34	75	33	41	173	439	6.0	5.3
3	4.5	8.8	6.9	27	33	77	32	40	335	300	5.9	5.3
4	4.5	8.6	6.6	23	33	77	32	214	266	117	5.9	5.2
5	4.5	6.1	6.5	22	34	76	56	649	230	15	5.9	5.2
6	4.5	5.1	6.3	21	34	68	47	715	194	14	6.1	5.2
7	4.6	4.6	6.3	22	31	63	41	741	166	14	5.8	5.1
8	4.6	4.3	6.2	22	29	60	41	368	189	13	5.8	5.9
9	4.7	4.2	6.0	47	28	58	43	174	527	13	5.7	5.6
10	4.6	4.3	5.9	69	27	57	45	139	725	12	5.7	5.2
11	4.5	4.2	6.0	137	26	57	45	88	648	11	5.7	5.1
12	4.5	4.0	5.9	594	25	53	46	91	470	11	5.6	5.1
13	4.5	3.9	5.9	786	24	51	52	96	263	10	5.5	5.0
14	4.6	3.8	5.8	445	38	49	55	111	97	9.9	5.5	5.1
15	4.7	3.6	5.7	231	64	49	55	148	159	9.4	5.5	5.1
16	4.6	3.6	5.5	228	78	45	56	233	402	9.3	5.7	5.0
17	4.6	11	5.4	190	148	46	60	334	509	8.6	5.7	5.0
18	4.9	6.7	5.3	150	255	46	60	520	514	8.7	5.6	5.1
19	30	5.6	5.3	117	250	43	60	570	509	12	5.6	5.1
20	27	5.1	5.3	98	169	44	69	619	499	7.3	5.6	5.0
21	9.2	4.8	6.7	252	154	43	70	602	465	7.2	5.5	5.0
22	6.7	5.2	6.4	512	127	39	61	568	357	6.9	5.5	4.9
23	6.2	9.0	6.0	421	111	39	55	474	237	6.6	5.7	5.0
24	5.9	14	10	193	100	39	52	355	118	6.5	5.7	4.9
25	11	21	8.4	56	91	37	50	209	15	5.9	5.5	4.9
26	7.9	43	6.6	51	87	35	51	121	36	5.8	5.5	4.9
27	6.3	15	6.4	47	86	35	51	89	240	5.8	5.4	4.8
28	6.0	11	6.2	46	96	35	53	22	241	5.8	5.4	4.8
29	5.9	9.6	6.4	43	84	36	53	20	192	6.0	5.3	4.8
30	5.9	8.6	32	39	---	38	48	19	206	5.9	5.4	4.7
31	5.8	---	97	37	---	36	---	20	---	5.9	5.4	---
TOTAL	216.4	250.0	314.2	5029	2331	1583	1507	8433	9003	1501.5	174.9	152.7
MEAN	6.98	8.33	10.1	162	80.4	51.1	50.2	272	300	48.4	5.64	5.09
MAX	30	43	97	786	255	77	70	741	725	439	6.1	5.9
MIN	4.5	3.6	5.3	21	24	35	32	19	15	5.8	5.3	4.7
AC-FT	429	496	623	9980	4620	3140	2990	16730	17860	2980	347	303
CAL YR 1979 TOTAL	14707.6			MEAN 40.3	MAX 543	MIN 3.6	AC-FT 29170					
WTR YR 1980 TOTAL	30495.7			MEAN 83.3	MAX 786	MIN 3.6	AC-FT 60490					

SAN JOAQUIN RIVER BASIN

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.--20 years, 23.0 ft³/s (0.651 m³/s), 16,660 acre-ft/yr (20.5 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.--Peak discharges above base of 120 ft³/s (3.40 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 13	2230	*1,470 41.6	7.21 2.198
Feb. 19	1630	655 18.5	5.22 1.591

Minimum daily, 2.4 ft³/s (0.068 m³/s) Aug. 26.

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	2.5	4.3	6.1	42	38	117	40	40	20	11	5.1	3.8
2	2.5	4.3	5.8	21	37	115	39	38	19	13	4.0	3.6
3	2.7	8.4	5.5	15	37	124	36	37	19	14	3.3	3.9
4	2.6	10	5.4	12	36	125	36	36	21	12	3.9	3.7
5	2.5	7.3	5.1	11	36	134	66	35	20	11	4.1	3.5
6	2.5	6.0	5.1	10	36	127	58	34	19	10	4.7	3.1
7	2.5	5.2	5.1	9.8	35	117	51	32	18	10	4.4	3.5
8	2.6	4.8	4.9	9.9	33	111	47	30	17	9.6	4.4	4.6
9	2.8	4.7	4.8	18	32	104	46	35	17	9.5	4.2	4.9
10	2.7	4.7	4.8	46	31	95	45	38	16	9.2	4.3	3.9
11	2.6	4.7	4.7	67	29	92	43	33	16	9.0	4.3	3.7
12	2.6	4.6	4.3	315	27	83	42	31	16	8.6	3.5	4.3
13	2.6	4.6	4.7	668	26	77	43	36	16	8.0	3.4	4.2
14	2.7	4.6	4.5	669	39	73	44	38	15	8.1	3.7	4.5
15	2.7	4.6	4.4	293	76	74	44	34	13	7.7	5.0	4.7
16	2.7	4.6	4.3	241	118	66	44	32	12	7.3	5.3	4.3
17	2.7	12	4.3	230	247	64	45	30	12	7.1	5.2	3.4
18	2.7	8.5	4.2	171	466	63	46	30	12	6.6	5.2	2.9
19	6.0	6.6	4.3	124	554	59	47	29	12	6.8	5.4	4.2
20	13	5.7	4.4	109	434	57	50	28	12	7.0	5.3	4.4
21	7.8	5.3	6.5	95	469	56	53	27	11	6.9	4.3	4.4
22	5.4	5.8	5.4	82	329	54	51	27	11	6.5	4.0	4.8
23	4.7	6.7	5.3	70	255	51	47	26	11	6.3	4.7	4.8
24	4.3	7.3	19	63	192	49	45	26	12	6.5	5.0	4.5
25	7.3	10	22	59	145	48	42	26	11	5.9	3.6	4.1
26	6.7	16	11	53	131	46	41	25	11	5.9	2.4	3.8
27	5.0	9.2	8.5	48	126	44	40	23	10	6.0	3.0	3.8
28	4.6	7.9	7.4	52	141	43	43	22	9.9	6.0	3.4	4.0
29	4.4	7.1	6.9	52	124	41	45	21	9.8	6.4	3.7	4.0
30	4.3	6.5	17	44	---	41	43	20	11	5.9	3.6	3.5
31	4.3	---	58	41	---	41	---	20	---	5.6	3.8	---
TOTAL	125.0	202.0	263.7	3740.7	4279	2391	1362	939	429.7	253.4	130.2	120.8
MEAN	4.03	6.73	8.51	121	148	77.1	45.4	30.3	14.3	8.17	4.20	4.03
MAX	13	16	58	669	554	134	66	40	21	14	5.4	4.9
MIN	2.5	4.3	4.2	9.8	26	41	36	20	9.8	5.6	2.4	2.9
AC-FT	248	401	523	7420	8490	4740	2700	1860	852	503	258	240
CAL YR 1979 TOTAL	7997.5			MEAN 21.9	MAX 168	MIN 1.8	AC-FT 15860					
WTR YR 1980 TOTAL	14236.5			MEAN 38.9	MAX 669	MIN 2.4	AC-FT 28240					

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA

LOCATION.--Lat 38°23'23", long 120°31'32", in SE¼NE¼ 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, nonrecording gage at present site and datum.

REMARKS.--Records good. 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.--69 years, 61.3 ft³/s (1.736 m³/s), 44,410 acre-ft/yr (54.8 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.--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)
Dec. 31	1930	584 16.5	3.94 1.201	Feb. 19	1530	1,770 50.1	6.18 1.884
Jan. 12	1030	1,570 44.5	5.90 1.798	Feb. 21	1300	1,580 44.7	5.92 1.804
Jan. 13	2200	*4,080 116	8.32 2.536	Feb. 28	0600	489 13.8	3.53 1.076
Feb. 18	1400	1,630 46.2	5.98 1.823	Mar. 5	0830	503 14.2	3.58 1.091

Minimum daily, 6.0 ft³/s (0.17 m³/s) Sept. 20, 21.

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	7.5	11	18	220	115	312	128	142	71	37	13	8.1
2	7.2	11	18	102	109	298	124	138	70	41	13	8.0
3	7.8	16	17	71	105	325	121	139	68	44	13	7.8
4	8.0	21	16	56	103	352	119	140	70	37	12	7.6
5	7.9	15	16	49	101	416	201	139	72	34	12	7.4
6	7.9	13	15	45	106	408	181	138	67	32	12	7.3
7	7.3	13	15	42	100	344	154	130	64	31	11	7.4
8	7.7	12	14	42	96	306	144	121	63	30	10	7.5
9	8.2	12	14	85	92	280	139	132	62	27	10	7.6
10	8.0	12	14	236	89	260	139	148	62	28	9.8	7.3
11	7.9	12	14	336	85	249	137	122	62	30	9.3	7.1
12	7.7	12	13	1190	82	230	133	112	60	26	9.2	7.0
13	7.7	12	14	1540	76	212	135	116	59	24	9.2	7.0
14	8.0	11	13	1950	96	203	137	130	57	22	9.2	7.0
15	8.2	11	13	840	212	204	137	119	54	20	9.1	7.1
16	8.2	12	13	674	324	191	137	112	52	19	9.1	7.0
17	8.1	25	13	683	648	183	140	109	51	18	9.2	6.7
18	8.0	19	13	542	1240	182	143	108	51	18	9.2	6.4
19	14	15	13	391	1500	171	145	106	49	16	9.2	6.1
20	23	14	13	311	1080	166	153	108	48	17	9.1	6.0
21	16	13	21	257	1260	164	165	110	46	18	9.0	6.0
22	12	14	23	219	858	156	154	112	44	17	8.8	6.2
23	11	16	18	188	643	151	144	107	43	17	8.6	6.2
24	11	16	100	168	526	149	140	100	42	19	8.4	6.2
25	15	22	126	143	447	146	136	94	41	16	8.3	6.2
26	15	42	54	140	393	142	135	89	40	15	8.0	6.2
27	12	33	34	134	358	138	136	82	40	14	7.8	6.4
28	11	25	27	147	427	135	143	78	37	15	7.6	7.0
29	11	22	25	157	349	133	152	75	35	15	7.6	7.3
30	11	19	56	132	---	133	149	72	36	14	7.9	6.7
31	11	---	225	117	---	130	---	71	---	14	8.1	---
TOTAL	314.3	501	998	11207	11620	6869	4301	3499	1616	725	297.7	207.8
MEAN	10.1	16.7	32.2	362	401	222	143	113	53.9	23.4	9.60	6.93
MAX	23	42	225	1950	1500	416	201	148	72	44	13	8.1
MIN	7.2	11	13	42	76	130	119	71	35	14	7.6	6.0
AC-FT	623	994	1980	22230	23050	13620	8530	6940	3210	1440	590	412
CAL YR 1979	TOTAL	24799.6	MEAN	67.9	MAX	589	MIN	5.9	AC-FT	49190		
WTR YR 1980	TOTAL	42155.8	MEAN	115	MAX	1950	MIN	6.0	AC-FT	83620		

SAN JOAQUIN RIVER BASIN

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA

LOCATION.--Lat 38°22'06", long 120°32'40", in SE¼SE¼ 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.--47 years, 82.6 ft³/s (2.339 m³/s), 59,840 acre-ft/yr (73.8 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 12	1230	2,010 56.9	7.49 2.283	Feb. 21	1200	2,200 62.3	7.74 2.359
Jan. 13	2200	*5,760 163	10.83 3.301	Feb. 28	0600	655 18.5	5.19 1.582
Feb. 19	1530	2,510 71.1	8.10 2.469	Mar. 5	0730	589 16.7	5.04 1.536

Minimum daily, 3.0 ft³/s (0.085 m³/s) Oct. 6.

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	3.5	9.5	17	228	129	399	142	128	57	36	17	11
2	3.3	9.4	16	101	122	386	138	120	55	40	17	10
3	3.8	24	14	69	117	409	133	118	55	41	16	11
4	3.6	46	14	56	113	410	132	111	60	34	16	10
5	3.6	28	13	50	112	497	260	105	63	31	15	10
6	3.0	22	13	46	111	524	218	101	58	29	15	9.7
7	3.4	19	12	43	105	463	183	96	55	28	14	9.6
8	4.5	18	12	43	99	405	169	94	51	29	12	10
9	6.9	15	12	95	93	362	164	108	51	28	13	11
10	4.9	12	11	240	89	336	163	135	50	28	12	9.5
11	4.2	11	11	444	86	321	158	106	49	27	12	9.4
12	3.5	11	11	1680	84	294	154	98	48	26	12	9.5
13	4.1	13	11	2290	83	274	155	99	48	25	12	9.7
14	4.4	13	11	2770	119	261	158	116	48	25	12	9.8
15	5.0	10	10	1020	283	257	156	107	47	24	12	10
16	4.3	10	10	823	449	239	155	96	45	23	12	9.0
17	4.3	56	10	833	914	228	156	90	43	23	12	8.5
18	4.5	38	10	689	1700	229	157	86	40	24	12	8.6
19	19	25	10	487	2030	216	156	83	39	22	13	9.2
20	47	17	14	370	1470	204	161	79	38	22	13	9.6
21	32	15	25	296	1750	197	173	75	36	22	12	9.6
22	18	15	26	246	1200	187	162	72	36	22	12	9.3
23	13	19	20	212	856	180	151	72	37	21	11	9.4
24	11	18	146	191	689	176	146	74	37	20	11	9.0
25	19	24	143	176	577	171	139	73	35	19	11	8.8
26	28	40	60	160	499	164	136	71	35	18	11	10
27	18	30	41	146	453	158	134	67	34	17	10	12
28	16	23	33	166	537	154	139	64	34	19	10	11
29	13	20	29	183	442	151	142	64	32	19	9.9	10
30	11	18	58	148	---	150	133	61	34	18	10	11
31	13	---	216	137	---	146	---	59	---	17	11	---
TOTAL	332.8	628.9	1039	14438	15311	8548	4723	2828	1350	777	387.9	295.2
MEAN	10.7	21.0	33.5	466	528	276	157	91.2	45.0	25.1	12.5	9.84
MAX	47	56	216	2770	2030	524	260	135	63	41	17	12
MIN	3.0	9.4	10	43	83	146	132	59	32	17	9.9	8.5
AC-FT	660	1250	2060	28640	30370	16950	9370	5610	2680	1540	769	586
CAL YR 1979 TOTAL	29227.3			MEAN 80.1	MAX 726	MIN 2.5	AC-FT 57970					
WTR YR 1980 TOTAL	50658.8			MEAN 138	MAX 2770	MIN 3.0	AC-FT 100500					

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.--54 years (water years 1904, 1928-80), 970 ft³/s (27.47 m³/s), 702,800 acre-ft/yr (867 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, 27,100 ft³/s (767 m³/s) Jan. 13, gage height, 21.55 ft (6.568 m); minimum daily, 376 ft³/s (10.6 m³/s) Sept. 10.

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	626	553	739	1570	1310	2390	1420	1640	2200	3230	552	581
2	438	628	738	952	1310	2200	1350	1540	2240	3280	734	515
3	550	593	738	872	1300	2280	1230	1550	2470	3200	671	563
4	598	710	737	829	1290	2420	1280	1590	2590	2490	476	513
5	571	683	737	812	1080	2600	1680	2420	1970	1790	542	642
6	521	635	733	800	1180	2670	1720	2460	1820	1770	573	747
7	591	652	733	796	1240	2460	1500	2560	1540	1490	582	535
8	620	560	733	794	1310	2250	1380	2090	2060	1570	573	614
9	534	553	732	834	1160	2050	1400	1680	3570	1240	656	482
10	600	604	742	1420	1210	2080	1400	1730	3750	1470	664	376
11	597	615	735	1480	1170	1990	1400	1590	3890	1070	607	642
12	565	587	732	8160	1170	1960	1220	1510	3560	1130	487	540
13	563	630	732	11900	1150	1790	1300	1160	2920	1070	571	588
14	490	547	732	13600	1200	1830	1410	1480	2220	1090	520	567
15	606	589	732	4670	1740	1780	1310	1670	2320	1030	590	586
16	581	565	732	4120	2150	1720	1380	1740	3590	917	620	527
17	563	710	732	4060	3210	1680	1470	1850	3920	922	587	619
18	544	747	732	3430	6410	1690	1540	2140	4000	888	495	545
19	518	633	728	2620	8010	1640	1450	2470	3840	873	655	513
20	844	630	731	2250	6110	1570	1570	3490	3880	882	598	593
21	624	604	748	2120	7310	1580	1660	4410	3580	843	545	530
22	500	577	770	2450	5010	1560	1530	5060	3110	872	546	526
23	641	629	751	2210	4000	1510	1510	4630	2730	855	526	593
24	552	663	878	1930	3320	1460	1470	3110	2660	866	557	582
25	390	693	1080	1590	2870	1520	1440	2250	2250	643	634	559
26	412	725	855	1510	2590	1440	1380	1750	2210	580	556	601
27	395	685	795	1430	2480	1440	1510	1560	2690	629	587	543
28	399	755	772	1530	2710	1350	1500	1380	2600	606	565	546
29	487	750	762	1280	2330	1490	1620	1440	2510	641	523	548
30	602	747	778	1100	---	1390	1600	1250	3030	612	603	580
31	568	---	1170	1070	---	1470	---	1540	---	645	573	---
TOTAL	17090	19252	24039	84189	77330	57260	43630	66740	85720	39194	17968	16896
MEAN	551	642	775	2716	2667	1847	1454	2153	2857	1264	580	563
MAX	844	755	1170	13600	8010	2670	1720	5060	4000	3280	734	747
MIN	390	547	728	794	1080	1350	1220	1160	1540	580	476	376
AC-FT	33900	38190	47680	167000	153400	113600	86540	132400	170000	77740	35640	33510
CAL YR 1979 TOTAL	351572			963	MAX	3520	MIN	73	AC-FT	697300		
WTR YR 1980 TOTAL	549308			1501	MAX	13600	MIN	376	AC-FT	1090000		

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

CHEMICAL ANALYSES: October 1979 to September 1980. 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.--Records furnished by California Department of Water Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 28...	1200	772	39	7.1	12.2	2	1.3	14	4.0	1.0	2.0	.6
APR 17...	1135	1680	37	7.2	10.8	4	1.0	12	3.0	1.0	2.0	.6
JUN 05...	0905	2490	28	7.1	10.9	--	--	12	3.0	1.0	2.0	.4
AUG 28...	1010	691	24	7.0	10.3	4	.2	9	2.0	1.0	1.0	.5

DATE	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC 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, ORTHOPH OSPATE DISSOL. (MG/L AS P)
DEC 28...	19	2.0	2.0	--	2	.02	.00	.00	.20	.02	.00
APR 17...	13	.0	2.0	28	4	.00	.00	--	.10	.01	.00
JUN 05...	11	1.0	1.0	26	--	.00	.00	--	.10	.01	.00
AUG 28...	8	.0	1.0	--	1	.00	.00	--	.10	.01	.00

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)
DEC 28...	1200	0	0	0	0	0	0
APR 17...	1135	0	0	0	0	0	0
JUN 05...	0905	0	0	0	0	0	0
AUG 28...	1010	0	0	0	0	0	10

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
DEC 28...	30	10	10	.0	0	2.2	.00
APR 17...	20	0	20	.0	20	1.2	.00
JUN 05...	20	0	0	.0	0	--	--
AUG 28...	30	0	0	.0	0	1.8	.00

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, 215,200 acre-ft (265 hm³) Jan. 13, elevation, 569.96 ft (173.724 m); minimum, 174,500 acre-ft (215 hm³) Oct. 5, elevation, 550.92 ft (167.920 m).

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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175900	175500	186800	198300	200200	205500	188500	180400	190600	211800	198100	186300
2	175400	175600	187200	198400	200300	203600	188100	180400	191400	211800	197900	185700
3	175000	176400	187300	198100	199700	201900	187500	180400	192600	211600	198500	185300
4	174800	177400	187300	197800	199500	200400	187100	180500	194100	211400	197700	184700
5	174500	177600	187200	197300	199200	199700	187500	182200	194400	211200	197100	184300
6	175000	177700	187200	196900	199500	199000	187900	183400	194400	211000	196400	184200
7	175700	177800	187200	196500	199200	198200	187900	184600	193800	210900	195800	184700
8	175600	177900	187700	196100	199100	198400	187800	184500	194300	210900	195100	184200
9	175300	177800	188200	196000	199000	198200	187700	183400	197800	210500	194600	183600
10	175100	178600	188200	196900	198700	198900	187600	182200	201400	210700	194300	182700
11	174800	179300	188200	198400	198500	198300	187600	180700	205300	210400	194700	182400
12	174800	179300	188200	204300	198800	198300	187100	179500	208600	210300	193900	181800
13	175400	179200	188200	215200	198300	198900	186800	178000	210500	210100	193200	181400
14	175900	179800	188200	212900	198700	198900	186700	177400	211000	210100	192500	181900
15	175700	180500	188700	210000	199700	198700	186400	177400	211300	209900	191800	181600
16	175400	180800	189200	207900	200900	198600	186200	177000	211800	209500	191300	180900
17	175100	182000	189200	206100	203800	198300	186200	176700	211900	209200	191800	181400
18	174900	183100	189100	205300	209100	198100	186200	177000	211800	208700	191100	181100
19	174600	182800	189100	205200	212600	197600	186000	178000	211700	208200	190700	180700
20	175800	182400	189200	205300	211100	196900	186100	181100	211800	207800	190200	180400
21	176600	182100	189300	205300	212300	196200	185900	185500	211700	207200	189600	180100
22	176200	182800	189800	205600	209900	195600	185100	189900	211600	206800	188900	179700
23	176200	182900	190300	205200	207300	194700	184200	192900	212000	206200	188100	179500
24	176100	183800	190900	205400	203400	193800	183400	194300	211700	205800	188700	179200
25	175800	184700	192700	205300	203800	193000	182500	194400	211500	204800	188100	178900
26	175300	185000	193200	205100	206900	192000	181500	193900	211600	203700	187700	178700
27	175700	185200	193300	205200	208400	191000	180800	193200	212000	202700	187300	178400
28	176000	185600	193300	205500	208300	190200	180000	192200	211700	201700	186600	178000
29	175700	185900	193800	204300	207100	189900	180000	191500	211900	200700	185900	177700
30	175500	186300	194400	202000	---	189300	180100	190400	211900	199800	185200	177300
31	175500	---	195600	199800	---	188800	---	189800	---	198800	185800	---
MAX	176600	186300	195600	215200	212600	205500	188500	194400	212000	211800	198500	186300
MIN	174500	175500	186800	196000	198300	188800	180000	176700	190600	198800	185200	177300
†	551.44	556.72	561.13	563.06	566.37	557.94	553.74	558.43	568.53	562.60	556.48	552.35
‡	-500	+10800	+9300	+4200	+7300	-18300	-8700	+9700	+22100	-13100	-13000	-8500
††	433	337	101	93	217	430	569	924	1241	1461	1193	765
†††	15222	12870	13420	13162	11761	14276	15096	18184	18056	18736	18417	17864

CAL YR 1979 ‡ +13200

WTR YR 1980 ‡ +1300

† 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.

SAN JOAQUIN RIVER BASIN

11322300 CAMANCHE RESERVOIR NEAR CLEMENTS, CA

LOCATION.--Lat 38°13'31", long 121°01'17", in NE&SE¼ sec.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 initial season of operation, 42,800 acre-ft (52.8 hm³) Jan. 2, 3, 1978, elevation, 152.44 ft (46.464 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 351,200 acre-ft (433 hm³) July 27-31, elevation, 224.51 ft (68.431 m); minimum, 266,700 acre-ft (329 hm³) Feb. 12, elevation, 211.34 ft (64.46 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 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342900	317200	295900	296300	286600	290900	271800	290300	306800	342500	351000	337800
2	342200	316400	295500	296400	282400	289200	272000	290700	306800	346700	351000	337400
3	341600	314800	295300	296800	279200	287300	272200	291300	306800	349300	349700	337100
4	340900	313100	295300	297200	276000	285600	272400	291700	306900	350100	348900	337000
5	340300	312100	295600	297700	273100	284400	273500	292100	307000	350100	348800	336800
6	339000	311100	295800	298000	270400	282800	273700	293000	307300	350400	348200	336300
7	337500	310000	295900	298600	269000	280800	274100	294300	307700	350400	348200	335300
8	336800	308800	295600	299200	268100	277800	274500	295600	308100	350700	348000	334700
9	336100	307900	295400	300300	267300	275300	274800	296900	308600	350800	347700	334400
10	335500	306500	295400	300800	267300	272700	275100	298000	309300	350900	347200	334100
11	334900	305200	295400	301800	267300	271500	275600	298900	309700	351000	346700	333900
12	334100	304400	295400	307000	266700	270400	276000	299200	310000	351000	346200	333300
13	332600	304100	295600	313500	267000	269200	276400	299200	310400	351000	346000	333100
14	331300	303400	296000	335300	267300	268900	276800	299400	311000	350900	345800	332000
15	330700	302300	295700	340000	267600	269100	277300	299400	312200	350900	345300	331300
16	330100	302300	295400	342700	267400	268900	277800	299900	315600	350900	345300	331100
17	329500	301800	295600	345800	267800	269100	278100	300300	320000	350700	344200	330400
18	328700	300600	295800	345500	270700	269300	278300	300900	324300	350700	343800	329900
19	328200	300600	296000	342800	277200	269400	278700	301300	328100	350700	343400	329300
20	326900	300800	296300	339000	285800	269600	279200	301900	331600	350700	343200	328700
21	325700	300800	296500	335100	297700	269900	279900	302500	334300	350700	342900	328500
22	324900	299900	296200	331500	306400	270100	281000	304300	336100	350700	342900	327900
23	324300	299600	297000	327900	309300	270300	282300	306100	336800	350700	342700	327500
24	323700	298800	297100	323200	311500	270400	283600	306800	337900	351000	341600	326900
25	323400	298000	296500	318100	308900	270600	284900	306800	338000	351000	341300	326700
26	323000	297500	296400	313100	302800	271200	286200	306800	337600	351100	341300	326100
27	321700	297100	296500	307800	298000	271400	287500	306600	337600	351200	340600	325500
28	320100	296900	296700	302500	295300	271600	288600	306600	338100	351200	340200	325100
29	319300	296600	296500	298100	292900	271600	289400	306700	337900	351200	339900	324500
30	318800	296300	296600	294600	---	271600	289900	306700	339000	351200	339000	323900
31	318100	---	297000	291400	---	271800	---	306800	---	351200	339000	---
MAX	342900	317200	297100	345800	311500	290900	289900	306800	339000	351200	351000	337800
MIN	318100	296300	295300	291400	266700	268900	271800	290300	306800	342500	339000	323900
†	219.57	216.18	216.29	215.40	215.63	212.19	215.15	217.82	222.71	224.51	222.72	220.46
‡	-25500	-21800	+700	+5600	+1500	-21100	+18100	+16900	+32200	+12200	-12200	-15100
††	2570	880	805	486	1117	1643	2137	3600	4771	5505	5092	3796

CAL YR 1979 ‡ +3500

WTR YR 1980 ‡ -19700

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

‡ Change in contents, in acre-feet.

†† Evaporation, in acre-feet.

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); 52 years (water years 1929-80), 797 ft³/s (22.57 m³/s), 577,400 acre-ft/yr (712 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, 4,550 ft³/s (129 m³/s) Feb. 19, gage height 9.77 ft (2.978 m); minimum daily, 414 ft³/s (11.7 m³/s) on several days during December.

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	708	722	503	418	3480	3970	1170	984	1430	1110	638	607		
2	708	819	503	477	3290	3970	1090	983	1430	1070	612	606		
3	709	934	503	572	3080	3970	1090	984	1430	1660	612	606		
4	708	933	470	573	2860	3970	1090	984	1430	1810	609	606		
5	709	933	430	573	2570	3990	1100	984	1430	1520	609	606		
6	718	933	432	573	2320	3970	1090	983	1280	1310	611	606		
7	714	933	435	573	2030	3810	1090	984	1210	1120	612	602		
8	711	933	435	573	1720	3530	1040	1130	1210	986	607	602		
9	709	807	435	606	1440	3210	984	1350	1210	984	606	599		
10	711	723	435	666	1210	2900	984	1540	1210	901	606	599		
11	715	719	435	930	1090	2660	984	1670	1350	776	606	599		
12	712	709	428	2440	1090	2380	984	1660	1430	783	610	601		
13	711	588	420	3340	1040	2080	984	1660	1430	783	612	599		
14	708	506	420	3940	991	1780	985	1430	1310	752	612	618		
15	709	505	420	3910	1180	1640	989	1240	1200	730	612	621		
16	708	506	420	3890	1550	1640	987	1430	1200	737	612	621		
17	712	510	420	3920	1740	1590	984	1430	1320	743	612	619		
18	711	508	420	3960	2320	1540	984	1430	1520	706	609	619		
19	720	508	420	3990	3930	1540	984	1430	1660	687	599	619		
20	723	508	414	4000	3080	1540	984	1430	1760	694	599	619		
21	718	507	414	3990	1560	1540	984	1570	1860	695	599	619		
22	716	508	414	4000	1820	1540	981	1650	1860	694	600	619		
23	715	508	416	4010	3690	1540	983	1780	1850	694	606	619		
24	716	508	425	4000	4020	1540	984	1860	1850	693	599	619		
25	720	508	420	3980	4020	1540	988	1860	1970	702	599	619		
26	721	503	415	3970	3990	1540	991	1740	2060	701	601	621		
27	722	503	414	3950	3970	1540	991	1640	2060	701	602	619		
28	720	503	414	3950	3970	1450	991	1520	2150	703	606	619		
29	721	503	414	3880	3970	1310	991	1430	2240	708	606	615		
30	723	503	414	3760	---	1300	987	1430	2200	711	612	622		
31	723	---	421	3660	---	1300	---	1430	---	709	612	---		
TOTAL	22149	19291	13379	83074	73021	71820	30448	43626	47550	27573	18847	18365		
MEAN	714	643	432	2680	2518	2317	1015	1407	1585	889	608	612		
MAX	723	934	503	4010	4020	3990	1170	1860	2240	1810	638	622		
MIN	708	503	414	418	991	1300	981	983	1200	687	599	599		
AC-FT	43930	38260	26540	164800	144800	142500	60390	86530	94320	54690	37380	36430		
MEAN ‡	342	291	456	2597	2563	2000	1355	1740	2207	1177	492	422		
AC-FT ‡	21000	17340	28040	159700	147400	123000	80630	107000	131300	72400	30270	25130		
CAL YR 1979	TOTAL	254096	MEAN	696	MAX	1920	MIN	196	AC-FT	504000	MEAN ‡	753	AC-FT ‡	545300
WTR YR 1980	TOTAL	469143	MEAN	1282	MAX	4020	MIN	414	AC-FT	930500	MEAN ‡	1299	AC-FT ‡	943200

‡ Adjusted for change in contents and evaporation from Camanche Reservoir.

SAN JOAQUIN RIVER BASIN

11325000 WOODBRIDGE CANAL AT WOODBRIDGE, CA

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.

PERIOD OF RECORD.--April 1926 to current year.

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.

AVERAGE DISCHARGE.--54 years, 134 ft³/s (3.795 m³/s), 97,080 acre-ft/yr (120 hm³/yr).

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.

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	122					0	80	168	140	252	315	190
2	123					0	97	189	151	140	297	193
3	123					0	100	203	168	129	276	198
4	123					0	96	206	181	134	272	210
5	126					0	48	202	194	132	274	204
6	126					0	37	203	192	107	270	200
7	122					0	30	206	185	137	271	177
8	107					0	35	202	160	208	271	180
9	94					0	40	192	169	281	277	197
10	75					0	40	168	180	281	259	204
11	73					0	60	152	192	281	255	175
12	75					0	83	136	192	267	269	170
13	73					0	89	126	203	240	274	172
14	75					0	88	129	202	240	250	152
15	75					0	102	117	200	268	236	151
16	76					0	124	123	201	277	231	150
17	75					0	149	121	236	265	218	150
18	73					0	163	126	252	253	216	154
19	70					0	158	141	253	252	244	151
20	53					0	143	159	258	231	256	146
21	15					15	152	165	241	231	262	138
22	25					35	158	171	225	247	263	134
23	30					30	144	171	225	259	245	145
24	25					35	139	165	241	282	218	148
25	5.0					37	162	158	236	307	222	149
26	5.0					17	170	151	251	303	232	154
27	2.1					14	170	153	250	282	246	157
28	0					34	170	160	237	296	222	140
29	0					44	173	152	240	300	219	133
30	0					41	173	144	224	309	190	138
31	0	---			---	56	---	135	---	309	178	---
TOTAL	1966.1	0	0	0	0	358	3373	4994	6279	7500	7728	4960
MEAN	63.4	0	0	0	0	11.5	112	161	209	242	249	165
MAX	126	0	0	0	0	56	173	206	258	309	315	210
MIN	0	0	0	0	0	0	30	117	140	107	178	133
AC-FT	3900	0	0	0	0	710	6690	9910	12450	14880	15330	9840
CAL YR 1979	TOTAL	38233.10	MEAN	105	MAX	305	MIN	0	AC-FT	75840		
WTR YR 1980	TOTAL	37158.10	MEAN	102	MAX	315	MIN	0	AC-FT	73700		

SAN JOAQUIN RIVER BASIN

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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).--51 years (water years 1929-80), 589 ft³/s (16.68 m³/s), 426,700 acre-ft/yr (526 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, 3,870 ft³/s (110 m³/s) Jan. 20, gage height, 21.44 ft (6.535 m); minimum daily, 186 ft³/s (5.268 m³/s) Aug. 7.

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	458	636	436	366	3550	3700	1020	765	1110	1380	273	351
2	481	630	436	350	3370	3710	960	729	1100	842	213	339
3	472	789	436	444	3170	3720	950	720	1080	1030	197	300
4	465	829	434	498	2950	3720	950	723	1050	1360	201	276
5	457	826	388	503	2710	3730	960	735	1040	1360	217	302
6	453	822	365	504	2410	3740	960	724	1030	1180	189	345
7	468	824	362	506	2140	3740	930	716	920	990	186	353
8	520	824	362	506	1870	3710	910	729	925	718	195	344
9	519	821	361	527	1620	3580	908	888	935	590	198	331
10	508	680	361	565	1410	3270	905	1100	916	566	214	323
11	512	652	360	682	1250	2980	926	1240	907	471	233	336
12	509	648	362	1040	1170	2690	905	1300	1010	429	220	346
13	515	638	352	2120	1140	2390	889	1280	1030	427	207	345
14	515	495	343	2800	1100	2090	886	1270	1040	435	219	353
15	518	459	341	3440	1080	1830	835	1030	920	368	226	366
16	514	453	340	3670	1230	1680	837	1040	863	356	236	362
17	514	470	340	3740	1430	1620	796	1110	840	355	250	375
18	516	452	340	3790	1590	1570	790	1120	959	370	260	357
19	569	447	341	3840	2270	1520	781	1110	1090	341	252	351
20	569	446	342	3850	3290	1490	785	1070	1160	342	223	359
21	574	444	346	3860	2950	1370	782	1090	1260	355	233	367
22	562	445	342	3860	1730	1350	788	1190	1330	336	285	370
23	544	446	351	3850	2130	1350	797	1240	1340	307	318	361
24	543	445	401	3810	3170	1340	802	1360	1320	285	323	355
25	576	445	391	3860	3580	1340	792	1390	1340	250	300	355
26	614	446	365	3860	3680	1340	774	1400	1450	258	244	354
27	595	441	384	3860	3700	1340	770	1290	1490	283	258	347
28	600	440	352	3860	3700	1340	770	1240	1510	295	278	358
29	947	438	349	3860	3690	1180	764	1120	1620	277	323	366
30	810	436	356	3800	---	1150	761	1110	1710	280	372	363
31	674	---	372	3660	---	1150	---	1110	---	279	356	---
TOTAL	17091	17267	11411	75881	69080	70730	25683	32939	34295	17115	7699	10410
MEAN	551	576	368	2448	2382	2282	856	1063	1143	552	248	347
MAX	947	829	436	3860	3700	3740	1020	1400	1710	1380	372	375
MIN	453	436	340	350	1080	1150	761	716	840	250	186	276
AC-FT	33900	34250	22630	150500	137000	140300	50940	65330	68020	33950	15270	20650
CAL YR 1979	TOTAL	175633	MEAN	481	MAX	1340	MIN	146	AC-FT	348400		
WTR YR 1980	TOTAL	389601	MEAN	1064	MAX	3860	MIN	186	AC-FT	772800		

SAN JOAQUIN RIVER BASIN

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, 21.5°C Sept. 4-11; minimum recorded, 9.5°C Dec. 23-24, 27-28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (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)
OCT										
16...	1130	514	41	7.7	15.0	.70	10.0	K1000	29	18
NOV										
26...	1100	446	39	7.1	13.5	3.5	10.0	K130	140	17
DEC										
19...	1015	340	40	6.9	10.5	1.6	10.9	57	75	14
JAN										
15...	1100	3440	37	6.9	12.0	--	10.2	--	560	--
24...	1030	3810	34	6.9	11.5	39	10.8	K15	230	13
FEB										
26...	0945	3680	41	7.7	10.5	15	11.1	72	156	15
MAR										
18...	1000	1580	45	7.9	10.5	8.8	10.8	K16	K16	17
APR										
30...	1045	762	47	7.3	13.0	3.1	10.7	25	32	16
MAY										
29...	1030	1090	45	7.6	12.5	3.4	10.5	11	14	16
JUN										
24...	1000	1330	44	7.6	13.5	2.3	10.1	50	31	16
JUL										
15...	1015	347	46	7.0	14.5	1.7	9.7	62	34	15
AUG										
21...	1000	218	45	7.4	19.5	2.4	9.2	96	28	14
SEP										
16...	1045	362	37	7.7	20.5	2.7	9.2	K300	220	13

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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT										
16...	2	4.7	1.5	2.6	23	.3	.8	16	1.1	2.1
NOV										
26...	1	4.4	1.5	2.5	31	.3	.8	16	2.5	1.7
DEC										
19...	0	3.9	1.1	2.2	31	.3	.9	17	2.7	1.9
JAN										
15...	--	--	--	--	--	--	--	15	--	--
24...	0	3.5	1.0	1.9	23	.2	1.0	13	2.9	1.4
FEB										
26...	3	4.0	1.2	2.7	27	.3	1.0	12	8.6	1.2
MAR										
18...	0	4.3	1.5	2.2	21	.2	.8	17	3.9	1.0
APR										
30...	0	4.2	1.3	2.2	22	.2	.8	17	1.6	1.3
MAY										
29...	0	4.1	1.4	2.1	21	.2	.8	16	2.4	2.2
JUN										
24...	0	4.1	1.4	2.2	22	.2	.7	17	3.6	2.0
JUL										
15...	0	4.1	1.2	2.1	22	.2	.8	17	3.4	1.4
AUG										
21...	0	3.8	1.2	1.8	20	.2	.7	23	1.0	1.4
SEP										
16...	0	3.7	1.0	2.1	24	.3	1.1	16	1.4	1.5

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

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11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	FLUORIDE, 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 CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT 16...	.1	11	39	34	.05	.07	.11	.01	.01
NOV 26...	.1	9.5	32	33	.04	.08	.08	.05	.02
DEC 19...	.0	7.9	26	31	.04	.05	.01	.01	.01
JAN 15...	--	--	--	--	--	--	--	--	--
24...	.1	9.3	34	29	.05	--	.08	--	.00
FEB 26...	.0	10	33	36	.04	.09	.09	.06	.03
MAR 18...	.0	12	42	36	.06	.05	.08	.00	.00
APR 30...	.1	11	34	33	.05	.03	.03	.06	.02
MAY 29...	.0	11	35	34	.05	.06	.06	.07	.03
JUN 24...	.1	11	36	36	.05	.00	.05	.04	.00
JUL 15...	.1	11	35	34	.05	.02	.01	.00	.00
AUG 21...	.1	10	35	34	.05	.00	.00	.00	.00
SEP 16...	.1	9.6	23	30	.03	.00	.00	.00	.00

DATE	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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, 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 16...	4.1	.47	4.1	.48	4.2	.59	.01	.02	--
NOV 26...	.65	.19	.70	.21	.78	.29	.02	.01	2.3
DEC 19...	.24	.29	.25	.30	.30	.31	.01	.01	1.4
JAN 15...	--	--	--	--	--	--	--	--	--
24...	--	--	.37	.39	--	--	.14	.01	--
FEB 26...	.00	.00	.05	.00	.14	.09	.06	.01	3.2
MAR 18...	.26	.16	.26	.16	.31	.24	.02	.01	2.2
APR 30...	.36	.38	.42	.40	.45	.43	.01	.01	--
MAY 29...	--	.25	--	.28	--	.34	.02	.01	2.5
JUN 24...	3.5	.45	3.5	.45	3.5	.50	.02	.02	4.0
JUL 15...	1.1	.31	1.1	.31	1.1	.32	.04	.01	--
AUG 21...	.39	.26	.39	.26	.39	.26	.02	.01	2.4
SEP 16...	.37	.26	.37	.26	.37	.26	.02	.03	1.8

SAN JOAQUIN RIVER BASIN

11325500 MOKEBUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 16...	1130	1	30	<1	10	3	40	0	4	.0	0	--
NOV 26...	1100	--	--	--	--	--	--	--	--	--	--	2.3
DEC 19...	1015	--	--	--	--	--	--	--	--	--	--	1.4
JAN 15...	1100	1	20	2	0	0	50	1	10	.0	0	--
FEB 26...	0945	--	--	--	--	--	--	--	--	--	--	3.2
MAR 18...	1000	--	--	--	--	--	--	--	--	--	--	2.2
APR 30...	1045	0	30	<1	0	2	40	1	4	.1	0	--
MAY 29...	1030	--	--	--	--	--	--	--	--	--	--	2.5
JUN 24...	1000	--	--	--	--	--	--	--	--	--	--	4.0
JUL 15...	1015	1	30	<1	0	4	30	0	6	.0	0	--
AUG 21...	1000	--	--	--	--	--	--	--	--	--	--	2.4
SEP 16...	1045	--	--	--	--	--	--	--	--	--	--	1.8

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.

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
PHYTOPLANKTON

DATE TIME	DEC 19,79 1015	MAR 18,80 1000	MAY 29,80 1030	JUN 24,80 1000				
TOTAL CELLS/ML	3000	65	1900	120				
DIVERSITY: DIVISION	0.8	0.0	0.3	0.5				
..CLASS	0.8	0.0	0.3	0.5				
...ORDER	0.9	0.7	0.5	1.0				
....FAMILY	1.2	0.7	0.5	2.1				
.....GENUS	1.2	0.7	0.5	2.3				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....HYDRODICTYACEAE								
....PEDIASTRUM	20	1	--	-	--	-	--	-
....MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	13	11
....MICRACTINIUM	--	-	--	-	--	-	13	11
...OOCYSTACEAE								
....CHLORELLA	--	-	--	-	--	-	13	11
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....OOCYSTIS	25	1	--	-	--	-	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	96	3	--	-	--	-	--	-
....SCENEDESMUS	20	1	--	-	26	1	--	-
....TETRASTRUM	--	-	--	-	--	-	51#	44
..TETRASPORALES								
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	13	1	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	13	1	--	-
....CHLAMYDOMONAS	*	0	--	-	--	-	13	11
..ZYGNEATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	71	2	--	-	--	-	--	-
....MELOSIRA	*	0	52#	80	--	-	--	-
...PENNALES								
....ACHNANTHACEAE								
....ACHNANTHES	*	0	--	-	--	-	--	-
....COCCONEIS	*	0	--	-	13	1	--	-
...CYMBELLACEAE								
....CYMBELLA	*	0	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	*	0	--	-	--	-	--	-

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
PHYTOPLANKTON

DATE TIME	DEC 19,79 1015		MAR 18,80 1000		MAY 29,80 1030		JUN 24,80 1000	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA								
...FRAGILARIACEAE								
....ASTERIONELLA	25	1	--	-	--	-	--	-
....FRAGILARIA	55	2	--	-	--	-	--	-
....SYNEDRA	20	1	--	-	--	-	--	-
...NAVICULACEAE								
...NAVICULA	50	2	13#	20	13	1	--	-
...NITZSCHIA								
....NITZSCHIA	71	2	--	-	--	-	13	11
CHRYSOPHYCEAE								
..CHRYDOMONADALES								
...OCHROMONADACEAE								
...OCHROMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	2500#	83	--	-	39	2	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
...OSCILLATORIA	--	-	--	-	1800#	94	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
...GLENODINIUM	*	0	--	-	--	-	--	-

DATE TIME	JUL 15,80 1015		AUG 21,80 1000		SEP 16,80 1045	
TOTAL CELLS/ML	490		52		90	
DIVERSITY: DIVISION	1.1		1.5		0.6	
..CLASS	1.3		1.5		0.6	
..ORDER	2.0		1.5		1.1	
...FAMILY	2.6		1.5		1.7	
....GENUS	3.1		1.5		2.2	

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....HYDRODICTYACEAE						
....PEDIASTRUM	--	-	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....CHLORELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	14	3	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	--	-	26#	50	--	-
....TETRASTRUM	--	-	--	-	--	-
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	--	-	13	14
..ZYGNEHATALES						
...DESMIDIACEAE						
....COSMARUM	14	3	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
....CYCLOTELLA	110#	22	--	-	13	14
....MELOSIRA	55	11	--	-	--	-
...PENNALES						
....ACHNANTHACEAE						
....ACHNANTHES	41	8	--	-	--	-
....COCONEIS	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...EUNOTIACEAE						
....EUNOTIA	14	3	--	-	--	-

See footnotes at end of table.

SAN JOAQUIN RIVER BASIN

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
PHYTOPLANKTON

DATE TIME	JUL 15,80 1015		AUG 21,80 1000		SEP 16,80 -1045	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA						
...FRAGILARIACEAE						
...ASTERIONELLA	--	-	--	-	26#	29
...FRAGILARIA	--	-	--	-	--	-
...SYNEDRA	--	-	--	-	26#	29
...NAVICULACEAE						
...NAVICULA	41	8	13#	25	13	14
...NITZSCHIACEAE						
...NITZSCHIA	55	11	--	-	--	-
...CHRYSTOPHYCEAE						
...CHRYSSOMONADALES						
...OCHROMONADACEAE						
...OCHROMONAS	14	3	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
...CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...ANACYSTIS	110#	22	13#	25	--	-
...COCCOCHLORIS	27	6	--	-	--	-
...HORMOGONALES						
...OSCILLATORIACEAE						
...OSCILLATORIA	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
...DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
...GLENODINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PERIPHYTON

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	SAMPLING METHOD
OCT 16...	34	39.8	37.6	14.3	1.74	154	Polyethylene strip
SEP 16...	26	10.6	9.06	1.75	1.14	880	do

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	18.5	14.0	13.0	12.5	12.0	12.0	11.0	10.5	10.5	10.0	10.0
2	19.5	18.5	13.5	13.5	13.0	12.5	11.5	10.5	10.5	10.5	10.0	10.0
3	19.0	16.0	14.0	13.5	12.5	12.5	11.0	11.0	10.5	10.5	---	---
4	16.0	15.0	14.0	13.5	12.5	12.0	11.0	10.5	10.5	10.5	---	---
5	16.0	15.0	14.0	13.5	12.5	12.0	11.0	10.5	10.5	10.5	---	---
6	15.5	15.0	14.0	13.5	12.5	11.5	11.0	11.0	10.5	10.5	---	---
7	15.5	15.0	14.0	13.5	12.5	11.5	11.0	11.0	10.5	10.5	---	---
8	15.5	14.5	14.5	13.5	12.5	12.0	11.0	11.0	10.5	10.5	---	---
9	15.0	14.0	14.0	13.5	12.5	12.0	11.5	11.0	10.5	10.5	---	---
10	15.5	14.5	13.5	13.0	12.5	12.0	11.5	11.0	10.5	10.5	---	---
11	15.5	14.5	13.5	13.0	12.0	10.5	11.5	11.0	10.5	10.5	---	---
12	15.0	14.5	13.5	13.0	10.5	10.0	12.0	11.5	10.5	10.5	---	---
13	15.0	14.5	13.5	13.0	11.0	10.5	12.0	12.0	10.0	10.0	---	---
14	15.5	14.5	13.5	12.5	11.0	10.5	12.0	12.0	10.5	10.0	---	---
15	15.5	14.5	13.5	12.5	11.0	10.5	12.0	12.0	10.5	10.5	---	---
16	15.5	15.0	14.0	13.0	11.0	10.5	12.0	12.0	10.0	10.0	---	---
17	15.5	14.5	14.5	14.0	11.0	10.5	12.0	12.0	10.0	10.0	---	---
18	15.0	14.5	14.0	12.5	11.0	10.5	12.0	12.0	10.0	10.0	---	---
19	14.5	14.0	12.5	12.0	11.0	10.5	12.0	12.0	10.0	10.0	---	---
20	14.5	14.0	12.0	11.5	11.0	11.0	12.0	11.5	10.5	10.0	---	---
21	14.0	13.0	12.0	11.5	11.5	11.0	11.5	11.5	10.5	10.0	---	---
22	14.0	13.5	12.5	12.0	11.5	10.5	11.5	11.5	10.5	10.5	---	---
23	14.5	13.5	12.5	12.5	10.5	9.5	11.5	11.5	10.5	10.5	---	---
24	14.5	13.5	13.0	12.5	10.0	9.5	11.5	11.5	10.5	10.5	---	---
25	14.5	14.0	14.0	13.0	11.0	10.0	11.5	11.0	10.5	10.5	11.5	11.5
26	14.5	13.5	14.0	13.0	10.5	10.0	11.0	11.0	10.5	10.5	11.5	11.5
27	14.5	13.5	13.0	12.5	10.0	9.5	11.0	11.0	10.5	10.5	11.5	11.5
28	14.5	13.5	12.5	12.0	10.0	9.5	11.0	11.0	10.5	10.0	11.5	11.5
29	14.0	13.0	13.0	12.5	10.0	10.0	11.0	11.0	10.0	10.0	11.5	11.5
30	14.0	12.5	13.0	12.5	10.5	10.0	11.0	11.0	---	---	11.5	11.5
31	14.5	13.5	---	---	12.5	10.5	11.0	10.5	---	---	11.5	11.5
MONTH	19.5	12.5	14.5	11.5	13.0	9.5	12.0	10.5	10.5	10.0	---	---
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	11.5	13.0	13.0	12.5	12.5	13.5	13.5	19.0	19.0	21.0	20.5
2	11.5	11.5	13.5	13.0	12.5	12.5	13.5	13.5	19.0	19.0	21.0	21.0
3	12.0	12.0	13.5	13.5	12.5	12.5	13.5	13.5	19.0	19.0	21.0	21.0
4	12.0	12.0	13.5	13.5	12.5	12.5	13.5	13.5	19.5	19.0	21.5	21.0
5	12.0	12.0	13.5	13.5	12.5	12.5	13.5	13.5	19.5	19.5	21.5	21.0
6	12.0	12.0	---	---	12.5	12.5	13.5	13.5	19.5	19.5	21.5	21.5
7	12.0	12.0	---	---	12.5	12.5	13.5	13.5	19.5	19.5	21.5	21.5
8	12.0	12.0	---	---	12.5	12.5	13.5	13.5	19.5	19.5	21.5	21.5
9	12.0	12.0	---	---	12.5	12.5	13.5	13.5	19.5	19.0	21.5	21.5
10	12.0	12.0	---	---	12.5	12.5	13.5	13.5	19.5	19.5	21.5	21.5
11	12.5	12.0	---	---	12.5	12.5	14.0	14.0	19.5	19.5	21.5	21.5
12	12.5	12.5	---	---	12.5	12.5	14.0	14.0	19.5	19.5	21.0	21.0
13	12.5	12.5	---	---	13.0	12.5	14.0	14.0	19.5	19.5	21.0	21.0
14	12.5	12.5	---	---	13.0	13.0	14.5	14.5	19.5	19.0	21.0	21.0
15	12.5	12.5	---	---	13.0	13.0	15.0	14.5	19.5	19.0	21.0	20.5
16	12.5	12.5	---	---	13.0	13.0	15.0	15.0	19.5	19.5	20.5	20.5
17	13.0	12.5	---	---	13.0	13.0	15.5	15.0	19.5	19.5	20.5	20.5
18	13.0	13.0	---	---	13.0	13.0	16.0	15.5	19.5	19.5	20.5	20.5
19	13.0	13.0	---	---	13.0	13.0	16.0	16.0	19.5	19.5	20.5	20.5
20	13.0	13.0	---	---	13.0	13.0	16.5	16.0	19.5	19.5	20.5	20.5
21	13.0	13.0	---	---	13.5	13.0	16.5	16.5	19.5	19.5	20.5	20.5
22	13.0	13.0	---	---	13.5	13.5	17.0	16.5	19.5	19.5	20.5	20.5
23	13.0	13.0	---	---	13.5	13.5	17.0	17.0	19.5	19.5	20.0	20.0
24	13.0	12.5	---	---	13.5	13.5	17.0	17.0	19.5	19.0	20.0	20.0
25	12.5	12.5	---	---	13.5	13.5	17.5	17.5	19.0	19.0	20.5	20.0
26	12.5	12.5	---	---	13.5	13.5	17.5	17.5	19.0	19.0	20.5	20.5
27	13.0	12.5	12.5	12.5	13.5	13.5	18.0	18.0	19.0	19.0	20.5	20.5
28	13.0	13.0	12.5	12.5	13.5	13.5	18.5	18.0	19.0	18.5	20.5	20.5
29	13.0	13.0	12.5	12.5	13.5	13.5	18.5	18.5	19.0	18.5	20.5	20.0
30	13.0	13.0	12.5	12.5	13.5	13.5	18.5	18.5	20.0	19.0	20.0	20.0
31	---	---	12.5	12.5	---	---	19.0	18.5	20.5	20.0	---	---
MONTH	13.0	11.5	---	---	13.5	12.5	19.0	13.5	20.5	18.5	21.5	20.0

SAN JOAQUIN RIVER BASIN

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (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 16...	1130	514	15.0	4	5.6	62
NOV 26...	1100	446	13.5	10	12	75
DEC 19...	1015	340	10.5	6	5.5	69
FEB 26...	0945	3680	10.5	77	765	53
MAR 18...	1000	1580	10.5	47	201	50
APR 30...	1045	762	13.0	13	27	36
MAY 29...	1030	1210	12.5	10	33	56
JUN 24...	1000	1330	13.5	15	54	48
AUG 21...	1000	243	19.5	5	3.3	85
SEP 16...	1045	362	20.5	5	4.9	81

11327000 SUTTER CREEK NEAR SUTTER CREEK, CA

LOCATION.--Lat 38°23'45", long 120°46'49", in SE¼SE¼ sec.5, T.6 N., R.11 E., Amador County, Hydrologic Unit 18040012, on left bank 1.3 mi (2.1 km) east of town of Sutter Creek.

DRAINAGE AREA.--48.1 mi² (124.6 km²).

PERIOD OF RECORD.--October 1935 to December 1941, March 1960 to current year. Monthly discharge only for some periods, published in WSP 1315-A. - *DISCONTINUED*

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,220 ft (372 m), from topographic map. Prior to Oct. 29, 1937, nonrecording gage 15 ft (5 m) downstream at datum 4.00 ft (1.219 m) lower. Oct. 29, 1937, to Dec. 7, 1938, nonrecording gage at present site at datum 4.00 ft (1.219 m) lower.

REMARKS.--Small diversion above station for irrigation.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by the Geological Survey. *Verrie*
Pegree said sta was vandalized & DWR had discontinued gaging

AVERAGE DISCHARGE.--26 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, 6,930 ft³/s (196 m³/s) Jan. 13, 1980, gage height, 6.53 ft (1.990 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-area measurement at gage height 4.77 ft (1.454 m); no flow at times in each year except 1938, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,930 ft³/s (196 m³/s) Jan. 13, gage height, 6.53 ft (1.990 m); no flow many days during October.

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	2.7	5.8	91	34	105	34	21	13	7.0	2.6	2.2
2	0	2.7	5.4	35	31	101	31	20	12	16	2.2	1.8
3	0	4.2	5.2	23	29	120	29	18	12	20	2.1	1.6
4	0	12	4.9	18	27	159	29	18	13	11	2.1	2.1
5	0	8.0	5.0	15	25	236	119	17	14	9.3	2.2	1.1
6	0	5.3	5.2	13	24	269	71	17	13	8.5	2.4	.60
7	0	4.4	5.2	12	23	203	53	17	12	8.0	2.3	.70
8	0	4.0	5.2	11	22	159	44	17	11	7.0	2.0	1.2
9	0	3.5	5.2	39	21	134	40	24	11	7.5	1.9	1.2
10	0	3.4	5.2	137	20	114	37	44	10	7.3	1.9	1.0
11	0	3.4	5.2	217	19	106	35	31	10	6.9	2.1	1.3
12	0	3.2	5.0	898	19	96	31	25	10	6.4	2.1	1.2
13	0	2.9	4.8	1120	17	87	30	22	10	6.4	1.9	1.0
14	0	3.0	4.8	1310	31	81	30	21	10	6.2	1.8	1.2
15	0	3.0	4.9	268	122	83	31	19	9.7	5.8	2.3	2.1
16	0	3.5	4.8	234	109	74	30	18	9.3	5.3	2.6	2.3
17	0	23	4.8	317	167	69	26	17	9.0	5.1	2.8	3.1
18	0	15	4.7	243	297	70	28	16	8.6	5.1	2.8	3.3
19	0	7.5	4.4	145	778	63	24	15	8.5	5.5	3.0	3.5
20	0	5.5	4.4	105	569	58	25	14	8.6	5.2	3.2	3.7
21	0	4.8	6.9	84	1430	60	33	13	8.4	4.9	3.4	3.8
22	0	4.6	15	71	527	55	29	14	8.3	4.8	3.3	3.6
23	0	5.3	9.9	61	295	51	28	14	8.5	4.7	3.5	3.1
24	0	5.6	53	51	213	47	26	14	8.5	4.5	3.8	2.5
25	3.7	8.0	88	45	168	46	25	15	8.6	3.9	3.6	2.1
26	9.7	22	41	40	141	44	24	14	8.4	3.6	3.3	1.6
27	4.6	14	22	36	126	42	23	14	8.1	3.4	2.9	1.3
28	3.4	9.1	16	55	158	38	23	14	7.6	3.6	2.5	1.3
29	3.1	7.3	13	64	118	36	23	13	7.4	4.1	2.2	1.3
30	2.6	6.3	23	45	---	35	22	13	7.5	3.5	1.9	.90
31	2.8	---	102	37	---	34	---	13	---	2.9	2.1	---
TOTAL	29.9	207.2	489.9	5840	5560	2875	1033	562	296.0	205.0	78.8	57.70
MEAN	.96	6.91	15.8	188	192	92.7	34.4	18.1	9.87	6.61	2.54	1.92
MAX	9.7	23	102	1310	1430	269	119	44	14	20	3.8	3.8
MIN	0	2.7	4.4	11	17	34	22	13	7.4	2.9	1.8	.60
AC-FT	59	411	972	11580	11030	5700	2050	1110	587	407	156	114

CAL YR 1979 TOTAL 9169.70 MEAN 25.1 MAX 455 MIN 0 AC-FT 18190
WTR YR 1980 TOTAL 17234.50 MEAN 47.1 MAX 1430 MIN 0 AC-FT 34180

SAN JOAQUIN RIVER BASIN

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.--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.--43 years, 115 ft³/s (3.257 m³/s), 83,320 acre-ft/yr (103 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 12	2030	5,400 153	24.04 7.327	Feb. 20	0230	7,120 202	24.51 7.471
Jan. 14	1600	7,060 200	24.18 7.370	Feb. 22	0230	*14,100 399	24.92 7.596
Jan. 18	0300	6,380 181	24.08 7.340				

Minimum, no flow for many days.

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	566	171	355	108	46	20	4.1	.40	0
2			0	253	153	328	95	45	19	7.8	.30	0
3			0	127	135	653	95	43	18	5.3	.20	1.4
4			0	85	121	787	100	44	16	14	.10	.48
5			0	65	111	1070	235	37	14	14	0	0
6			0	49	108	1640	327	28	16	5.0	.25	0
7			0	37	106	1040	195	29	14	5.8	0	0
8			0	27	95	689	153	28	13	6.0	.68	2.2
9			0	65	82	517	134	24	16	4.4	.10	.62
10			0	588	85	428	120	33	12	3.8	.22	2.7
11			0	1010	93	371	110	112	15	6.2	2.0	1.0
12			0	4130	74	329	103	76	19	4.1	2.5	1.6
13			0	2710	46	288	99	63	11	3.8	2.2	1.0
14			0	5640	54	267	84	50	4.2	2.9	1.5	.87
15			0	2220	300	255	79	51	5.0	1.6	1.5	.72
16			0	1360	485	243	79	32	2.5	4.3	.18	.87
17			0	1670	779	216	75	32	5.2	5.8	.06	1.2
18			0	3340	1110	206	64	29	2.8	2.9	.50	1.5
19			0	1060	4190	195	66	28	4.3	2.1	0	1.0
20			0	674	5920	182	62	26	4.6	2.5	.18	.68
21			0	489	8310	176	71	23	8.1	6.0	.25	.38
22			0	373	6680	171	84	27	7.0	2.4	.52	0
23			0	305	1480	157	76	26	6.0	2.9	.91	0
24			0	269	952	149	73	24	4.2	3.3	2.2	0
25			236	252	705	143	67	22	7.0	3.3	1.6	.16
26			365	224	572	154	64	21	6.0	1.3	1.1	.79
27			90	195	473	147	54	19	5.6	1.0	1.0	.87
28			45	199	575	151	51	15	4.2	.80	1.1	.68
29			16	211	444	125	50	16	6.2	.70	1.3	.58
30			15	207	---	121	43	20	4.2	.60	1.0	0
31		---	94	189	---	112	---	22	---	.50	.58	---
TOTAL	0	0	861	28589	34409	11665	3016	1091	290.1	129.20	24.43	21.30
MEAN	0	0	27.8	922	1187	376	101	35.2	9.67	4.17	.79	.71
MAX	0	0	365	5640	8310	1640	327	112	20	14	2.5	2.7
MIN	0	0	0	27	46	112	43	15	2.5	.50	0	0
AC-FT	0	0	1710	56710	68250	23140	5980	2160	575	256	48	42
CAL YR 1979	TOTAL	49859.89	MEAN	137	MAX	4660	MIN	0	AC-FT	98900		
WTR YR 1980	TOTAL	80096.03	MEAN	219	MAX	8310	MIN	0	AC-FT	158900		

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., El 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 good. 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).--26 years (water years 1955-80), 79.3 ft³/s (2.246 m³/s), 57,450 acre-ft/yr (70.8 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, 5,200 ft³/s (147 m³/s) Jan. 13, gage height, 11.76 ft (3.584 m); minimum daily, 3.4 ft³/s (0.096 m³/s) Oct. 4-6.

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	3.8	4.1	6.2	41	111	339	91	141	27	13	10	6.0
2	3.7	3.8	6.0	20	106	317	90	127	20	37	9.0	5.9
3	3.5	5.4	5.8	15	102	315	87	125	19	46	6.0	5.9
4	3.4	10	5.7	12	97	318	85	125	24	33	6.8	5.6
5	3.4	6.3	5.7	10	93	348	161	124	34	28	7.0	5.3
6	3.4	4.5	5.6	9.4	94	348	168	119	30	26	8.6	5.5
7	3.5	3.8	5.5	8.7	112	311	142	113	26	24	8.4	5.5
8	3.6	3.7	5.5	8.2	97	280	124	101	22	22	8.3	5.4
9	4.0	3.5	5.5	16	83	259	118	116	17	21	7.9	5.5
10	4.3	4.3	5.4	36	74	241	116	150	15	21	7.5	5.4
11	4.2	5.7	5.3	44	71	236	113	112	13	20	7.1	5.1
12	4.3	5.6	5.3	767	68	224	109	95	12	19	6.9	5.0
13	4.1	5.6	5.3	1800	66	201	108	100	12	18	7.4	5.1
14	4.3	5.6	5.3	1520	85	183	111	121	12	17	7.8	5.1
15	4.2	5.6	5.3	520	200	197	114	111	12	17	7.8	5.3
16	4.4	5.6	5.3	406	265	175	114	100	11	16	7.4	5.3
17	4.2	15	5.3	399	463	162	115	92	10	15	7.8	5.0
18	4.0	12	5.3	343	980	169	118	89	11	14	7.3	5.0
19	16	7.2	5.3	280	1720	153	124	89	11	15	7.1	5.2
20	46	6.2	5.3	247	1270	142	143	91	10	16	7.1	5.2
21	28	5.8	13	157	1250	137	166	88	10	15	7.0	5.6
22	13	5.8	11	34	1000	131	144	85	11	14	6.8	5.7
23	9.7	6.7	7.8	68	758	137	126	82	11	13	6.8	5.3
24	7.9	6.9	29	158	601	146	116	76	11	14	6.9	5.2
25	12	10	42	162	428	123	112	69	11	13	6.9	5.0
26	20	18	23	159	389	115	112	60	11	13	6.8	5.0
27	14	9.8	14	144	371	109	114	52	10	12	6.5	4.9
28	11	7.6	10	172	439	99	121	45	10	13	6.1	4.8
29	8.8	6.9	8.2	166	382	69	139	41	8.9	14	5.9	4.9
30	8.0	6.5	13	146	---	88	148	37	9.9	12	6.0	4.8
31	5.6	---	34	121	---	90	---	32	---	11	6.0	---
TOTAL	270.3	207.5	314.9	7989.3	11775	6162	3649	2908	451.8	582	224.9	158.5
MEAN	8.72	6.92	10.2	258	406	199	122	93.8	15.1	18.8	7.25	5.28
MAX	46	18	42	1800	1720	348	168	150	34	46	10	6.0
MIN	3.4	3.5	5.3	8.2	66	69	85	32	8.9	11	5.9	4.8
AC-FT	536	412	625	15850	23360	12220	7240	5770	896	1150	446	314
†	-1949	-176	+600	+15894	+156	-253	+97	-181	-1073	-3601	-4304	-3054
‡	2188	999	649	181	149	270	388	1154	3387	3840	4156	3122
††	81	20	18	24	45	61	109	167	221	260	250	153
CAL YR 1979 TOTAL	16180.1		MEAN 44.3	MAX 351	MIN 3.1	AC-FT 32090	MEAN †† 76.3	AC-FT †† 55270				
WTR YR 1980 TOTAL	34693.2		MEAN 94.8	MAX 1800	MIN 3.4	AC-FT 68810	MEAN †† 128	AC-FT †† 92860				

† Change in contents, in acre-feet, in Jenkinson Lake, furnished by Water and Power Resources Service.

‡ Diversion, in acre-feet, from Jenkinson Lake, furnished by Water and Power Resources Service.

†† Evaporation, in acre-feet, from Jenkinson Lake, furnished by Water and Power Resources Service.

††† Adjusted for change in contents, evaporation, and diversion from Jenkinson Lake.

SAN JOAQUIN RIVER BASIN

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 except those for summer months, which are fair. 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.--62 years, 199 ft³/s (5.636 m³/s), 144,200 acre-ft/yr (178 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.--Peak discharges above base of 1,800 ft³/s (51.0 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. 12	1600	5,180 147	10.37 3.161	Feb. 19	1500	6,160 174	11.05 3.368
Jan. 14	0100	*13,400 379	13.81 4.209	Feb. 21	1130	4,630 131	9.95 3.033

Minimum daily, 7.6 ft³/s (0.22 m³/s) Oct. 7.

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	14	21	46	400	336	858	308	375	130	84	26	15
2	11	20	44	120	320	800	310	356	123	96	22	16
3	11	24	41	90	307	824	306	340	114	110	17	17
4	12	56	40	76	298	907	300	329	114	91	19	16
5	9.2	54	37	68	291	1070	449	333	136	82	22	17
6	8.0	42	35	62	289	1170	478	326	126	72	24	15
7	7.6	34	34	60	293	978	398	321	117	68	24	15
8	8.4	30	33	62	285	825	362	294	118	66	23	15
9	9.6	28	32	200	256	726	350	305	127	64	22	16
10	12	28	32	600	240	659	350	395	140	61	22	16
11	12	28	32	662	235	614	345	318	140	58	21	16
12	12	29	31	3460	225	590	337	269	139	56	21	16
13	12	28	26	5550	217	540	328	257	133	52	20	15
14	16	25	27	5870	240	500	328	307	125	50	18	16
15	15	23	25	2420	628	514	335	289	120	48	18	16
16	15	25	25	1960	768	485	336	272	120	45	20	16
17	16	59	25	2020	1430	451	335	261	125	42	23	16
18	16	84	25	1660	2270	451	348	253	122	44	24	16
19	25	56	25	1230	4280	439	365	251	122	44	24	16
20	119	45	31	956	3020	411	377	258	119	44	23	17
21	105	41	45	760	3470	410	448	257	113	42	23	17
22	54	40	40	501	2410	405	415	261	107	40	22	16
23	36	43	38	440	1810	394	376	255	100	40	21	16
24	28	43	130	498	1460	399	343	227	97	38	22	15
25	35	59	150	475	1150	396	325	210	94	35	23	15
26	64	103	140	446	958	388	317	187	85	33	24	14
27	54	102	55	411	892	373	318	168	76	32	20	15
28	36	68	41	479	1170	360	323	151	71	34	18	15
29	31	57	45	458	973	310	343	140	68	37	17	15
30	27	50	100	397	---	281	375	135	75	32	16	16
31	25	---	560	362	---	295	---	132	---	28	15	---
TOTAL	855.8	1345	1990	32753	30521	17823	10628	8242	3396	1668	654	472
MEAN	27.6	44.8	64.2	1057	1052	575	354	266	113	53.8	21.1	15.7
MAX	119	103	560	5870	4280	1170	478	395	140	110	26	17
MIN	7.6	20	25	60	217	281	300	132	68	28	15	14
AC-FT	1700	2670	3950	64970	60540	35350	21080	16350	6740	3310	1300	936
CAL YR 1979 TOTAL	61799.6			MEAN 169	MAX 1220	MIN 7.6	AC-FT 122600					
WTR YR 1980 TOTAL	110347.8			MEAN 301	MAX 5870	MIN 7.6	AC-FT 218900					

11334300 SOUTH FORK COSUMNES RIVER NEAR RIVER PINES, CA

LOCATION.--Lat 38°33'25", long 120°47'32", in SE¼SW¼ sec.8, T.8 N., R.11 E., Amador County, Hydrologic Unit 18040013, on left bank 2.4 mi (3.9 km) upstream from mouth, and 2.7 mi (4.3 km) west of River Pines.

DRAINAGE AREA.--64.3 mi² (166.5 km²).

PERIOD OF RECORD.--October 1957 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,220 ft (372 m), from topographic map.

REMARKS.--No storage or known diversion above station.

COOPERATION.--Records furnished by Water and Power Resources Service and reviewed by Geological Survey.

AVERAGE DISCHARGE.--23 years, 44.9 ft³/s (1.272 m³/s), 32,530 acre-ft/yr (40.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft³/s (157 m³/s) Feb. 1, 1963, gage height, 10.90 ft (3.322 m), from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurement at gage height 9.90 ft (3.018 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,620 ft³/s (131 m³/s) Jan. 13, gage height, 9.80 ft (2.987 m); no flow on several days during October.

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	1.8	7.0	133	64	170	51	34	20	10	2.7	.71
2	0	1.8	6.5	62	60	159	49	31	19	16	2.3	.71
3	0	2.8	5.7	41	56	177	47	30	18	23	1.5	.71
4	0	11	5.7	33	52	194	47	29	19	15	1.7	.60
5	0	8.5	5.5	27	49	308	133	27	21	12	1.8	.55
6	0	6.2	5.3	23	47	347	103	27	20	11	1.8	.50
7	0	4.8	5.0	21	43	275	81	26	18	10	1.8	.45
8	0	4.0	4.8	20	41	228	71	26	18	9.8	1.6	.50
9	0	3.6	4.4	26	39	199	66	31	16	9.8	1.5	.55
10	0	3.5	4.4	172	37	179	62	50	16	9.5	1.4	.65
11	0	3.3	4.4	272	36	159	58	43	15	9.2	1.1	.71
12	0	3.1	4.4	1320	35	146	54	34	15	8.8	1.0	.55
13	0	2.8	4.4	1520	34	130	51	33	15	8.2	.97	.55
14	0	2.8	4.4	1510	48	120	50	31	15	7.9	.90	.55
15	0	2.8	4.4	540	214	122	47	30	15	7.9	.90	.71
16	0	2.8	4.4	432	239	109	46	28	14	7.3	.97	.83
17	0	18	4.4	542	387	101	43	27	13	6.8	1.0	.77
18	0	13	4.4	416	544	101	41	25	13	6.5	1.0	.77
19	0	8.2	4.4	274	1610	91	40	24	12	6.2	1.0	.83
20	4.9	6.2	4.4	201	970	84	43	23	12	6.0	1.0	.90
21	4.6	5.5	7.7	161	1590	79	47	22	12	6.0	1.0	.90
22	2.3	5.0	13	130	852	75	42	22	12	5.5	1.0	.83
23	1.3	5.3	9.8	108	508	70	40	21	11	5.3	.97	.77
24	.97	5.5	83	94	361	67	39	22	11	4.8	1.1	.71
25	2.1	7.0	175	82	278	66	38	22	11	4.2	1.2	.55
26	5.6	13	74	73	228	64	37	22	11	3.8	1.2	.45
27	4.2	12	38	69	204	61	34	21	11	3.8	1.0	.45
28	2.8	9.2	26	87	263	58	34	21	10	3.5	.83	.41
29	2.1	8.5	21	99	191	56	34	21	9.5	4.0	.77	.41
30	1.9	7.0	31	81	---	53	34	20	9.5	3.5	.71	.41
31	1.8	---	85	70	---	51	---	20	---	3.1	.77	---
TOTAL	34.57	189.0	661.8	8639	9080	4099	1562	843	432.0	248.4	38.49	18.99
MEAN	1.12	6.30	21.3	279	313	132	52.1	27.2	14.4	8.01	1.24	.63
MAX	5.6	18	175	1520	1610	347	133	50	21	23	2.7	.90
MIN	0	1.8	4.4	20	34	51	34	20	9.5	3.1	.71	.41
AC-FT	69	375	1310	17140	18010	8130	3100	1670	857	493	76	38
CAL YR 1979 TOTAL	14473.06			MEAN 39.7	MAX 574	MIN 0	AC-FT 28710					
WTR YR 1980 TOTAL	25846.25			MEAN 70.6	MAX 1610	MIN 0	AC-FT 51270					

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).

WATER-DISCHARGE RECORDS

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.--73 years, 480 ft³/s (13.59 m³/s), 347,800 acre-ft/yr (429 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 (4.447 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.--Peak discharges above base of 4,000 ft³/s (113 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. 12	1515	13,200 374	9.17 2.795	Feb. 21	1300	16,000 453	9.80 2.987
Jan. 13	2330	*34,200 969	13.17 4.014	Mar. 3	0245	4,120 117	6.47 1.972
Feb. 19	1530	24,000 680	11.36 3.463				

Minimum daily, 12 ft³/s (0.34 m³/s) Oct. 7-9.

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	16	43	101	1560	748	2080	621	774	311	149	52	31
2	19	40	94	704	705	1960	602	739	301	162	49	28
3	16	42	88	481	669	3050	579	721	309	270	48	28
4	14	67	82	378	641	2670	564	726	303	266	46	27
5	14	120	78	322	623	3410	1140	723	340	196	46	29
6	15	87	76	289	616	3590	1210	710	336	165	44	28
7	12	71	72	269	592	2700	922	703	307	151	44	27
8	12	61	71	257	587	2190	807	645	295	141	44	28
9	12	56	69	577	537	1910	763	770	297	132	42	27
10	14	52	68	1690	502	1720	752	760	302	123	36	28
11	15	53	67	1810	485	1590	729	615	307	117	36	26
12	16	54	66	9100	467	1520	699	560	308	107	36	28
13	18	53	63	12700	447	1360	692	570	300	105	36	25
14	19	50	60	19000	476	1270	716	624	287	102	35	24
15	21	46	60	7020	1450	1290	731	575	269	100	35	25
16	24	46	59	5190	1910	1200	722	550	262	96	34	26
17	21	80	58	6100	3640	1100	732	532	264	91	35	27
18	21	165	57	4630	5460	1080	759	528	263	86	36	27
19	24	124	56	3110	14700	1020	780	532	259	82	37	27
20	77	91	57	2380	9540	951	819	556	253	79	35	26
21	205	77	67	1940	12100	922	980	562	240	77	34	26
22	115	71	116	1470	7280	877	851	572	226	75	34	28
23	70	74	107	1230	4860	826	773	557	218	72	34	26
24	55	79	325	1180	3690	821	712	498	208	68	25	25
25	64	87	1160	1110	2970	801	677	460	197	65	32	24
26	86	153	632	1030	2450	790	668	420	185	62	37	23
27	113	238	314	943	2210	730	675	385	177	58	39	25
28	74	157	215	1070	3000	693	700	364	165	57	36	23
29	56	125	171	1080	2370	640	746	345	152	58	34	26
30	49	110	179	901	---	623	794	321	147	58	32	25
31	45	---	596	808	---	624	---	311	---	56	30	---
TOTAL	1332	2572	5284	90329	85725	46008	22915	17708	7788	3426	1173	793
MEAN	43.0	85.7	170	2914	2956	1484	764	571	260	111	37.8	26.4
MAX	205	238	1160	19000	14700	3590	1210	774	340	270	52	31
MIN	12	40	56	257	447	623	564	311	147	56	25	23
AC-FT	2640	5100	10480	179200	170000	91260	45450	35120	15450	6800	2330	1570
CAL YR 1979 TOTAL	161329			MEAN 442	MAX 3900	MIN 11	AC-FT 320000					
WTR YR 1980 TOTAL	285053			MEAN 779	MAX 19000	MIN 12	AC-FT 565400					

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953 to current year.

CHEMICAL ANALYSES: Water years 1953 to current year.

WATER TEMPERATURES: Water years 1963-79.

SEDIMENT RECORDS: Water years 1958-74.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 17...	1000	706	65	7.4	9.9	20	5.0
SEP 05...	0650	29	83	7.6	--	30	7.0

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 17...	2.0	3.0	.9	26	--	2.0	39
SEP 05...	3.0	4.0	1.4	33	1.0	2.0	59

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B)
SEP 05...	0650	0

SAN JOAQUIN RIVER BASIN

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 good except those above 5,000 ft³/s (142 m³/s), which are fair. Diversions for irrigation of about 2,100 acres (8.50 km²) between stations at Michigan Bar and at McConnell.

AVERAGE DISCHARGE.--39 years, 533 ft³/s (15.09 m³/s), 386,200 acre-ft/yr (476 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (water years 1944-80).--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)
Jan. 14	1500	*30,000 850	47.33 14.426
Feb. 20	0630	20,500 581	44.81 13.668
Mar. 6	1630	5,320 151	41.18 12.552

Minimum, no flow many days.

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	9.6	81	1640	721	2090	617	718	252	102		
2	0	6.9	71	1100	677	1880	601	688	246	122		
3	0	7.5	61	605	648	2760	578	664	245	164		
4	0	11	54	439	628	3640	558	662	244	228		
5	0	47	47	348	612	3520	740	671	255	166		
6	0	81	43	295	602	4980	1290	662	284	135		
7	0	53	39	258	589	3920	953	652	262	118		
8	0	31	35	235	581	2480	812	628	237	105		
9	0	22	34	244	551	1980	749	610	237	94		
10	0	17	32	1860	519	1710	721	715	232	88		
11	0	13	30	2500	499	1540	706	730	234	78		
12	0	15	30	5050	483	1460	685	609	230	73		
13	0	15	28	8200	466	1330	662	543	234	71		
14	0	14	25	19600	470	1220	669	551	217	66		
15	0	11	24	11300	972	1200	684	595	212	71		
16	0	9.0	23	6110	2060	1170	683	553	208	56		
17	0	16	25	5910	3500	1070	680	528	204	40		
18	0	63	26	7200	6100	1030	698	510	202	45		
19	0	123	26	5000	6940	1010	721	504	194	38		
20	0	82	25	2670	14500	927	734	512	191	56		
21	63	54	25	2050	8640	892	857	525	188	64		
22	133	40	34	1580	10500	860	857	534	179	67		
23	72	35	99	1290	6790	812	749	537	172	55		
24	35	35	124	1170	4690	791	691	505	154	39		
25	31	41	860	1100	3220	782	665	439	142	25		
26	61	66	1130	1010	2500	776	646	398	126	28		
27	71	162	500	918	2200	730	647	353	120	14		
28	76	168	280	919	2750	698	657	322	115	1.0		
29	38	113	197	1010	2710	661	675	299	121	1.0		
30	22	91	159	879	---	621	726	274	109	1.0		
31	15	---	225	778	---	626	---	257	---	1.0		---
TOTAL	617	1452.0	4392	93268	86118	49166	21711	16748	6046	2212.0	0	0
MEAN	19.9	46.4	142	3009	2970	1586	724	540	202	71.4	0	0
MAX	133	168	1130	19600	14500	4980	1290	730	284	228	0	0
MIN	0	6.9	23	235	466	621	558	257	109	1.0	0	0
AC-FT	1220	2880	8710	185000	170800	97520	43060	33220	11990	4390	0	0
CAL YR 1979	TOTAL	164030.57	MEAN 449	MAX 4810	MIN 0	AC-FT 325400						
WTR YR 1980	TOTAL	281730.00	MEAN 770	MAX 19600	MIN 0	AC-FT 558800						

11336580 MORRISON CREEK NEAR SACRAMENTO, CA

LOCATION.--Lat 38°29'55", long 121°27'06", in SW¼SE¼ sec.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.--21 years, 18.6 ft³/s (0.527 m³/s), 13,480 acre-ft/yr (16.6 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.--Peak discharges above base of 400 ft³/s (11.3 m³/s), revised, 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. 11	0415	642 18.2	4.83 1.472	Feb. 17	1900	710 20.1	5.07 1.545
Jan. 12	0430	621 17.6	4.75 1.448	Feb. 19	0800	*1,440 40.8	7.12 2.170
Jan. 13	1730	693 19.6	5.01 1.527	Feb. 21	0645	919 26.0	5.66 1.725
Jan. 17	1315	558 15.8	4.51 1.375	May 6	0200	708 20.1	4.90 1.494

Minimum daily, 1.4 ft³/s (0.040 m³/s) Dec. 16, June 29.

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	3.9	5.9	7.0	21	7.6	19	5.9	4.9	2.8	5.6	6.6	3.5
2	4.7	4.9	6.0	13	5.0	39	4.8	4.3	4.3	39	3.3	4.6
3	4.4	77	5.5	9.1	4.8	102	4.3	2.6	4.5	12	2.8	5.3
4	5.1	20	5.3	7.3	6.4	70	8.9	1.9	4.8	8.1	2.8	5.3
5	5.6	11	5.3	4.0	7.0	161	79	4.4	5.0	6.3	2.3	6.6
6	2.3	6.2	5.4	3.0	7.3	407	14	4.4	4.7	3.9	2.5	3.6
7	1.8	6.3	5.4	5.1	6.9	118	7.8	5.2	2.5	6.5	2.4	2.7
8	4.9	5.4	3.6	5.7	6.4	47	6.8	4.9	1.9	6.9	3.3	4.3
9	5.4	4.7	2.3	92	3.9	28	6.4	28	4.1	5.7	3.4	5.4
10	5.1	2.9	4.1	121	3.1	23	6.3	4.5	5.3	5.6	3.2	5.4
11	5.8	2.2	4.6	323	5.7	19	6.1	3.8	5.2	5.1	3.7	4.8
12	6.8	2.6	5.2	377	7.3	16	6.0	4.6	4.9	2.4	4.4	5.5
13	4.6	4.1	5.5	399	5.7	14	5.6	5.3	3.6	1.9	3.2	3.0
14	3.6	4.2	5.4	475	52	13	5.3	5.1	2.6	3.7	3.0	2.3
15	6.4	3.9	2.6	146	147	12	5.1	5.2	1.9	4.8	3.1	4.4
16	6.1	15	1.4	218	232	12	4.9	6.9	3.0	5.3	3.2	5.5
17	5.5	13	3.0	364	445	12	4.8	3.3	5.7	4.8	2.5	5.8
18	5.3	9.0	4.3	336	284	11	4.7	2.7	6.0	5.6	4.4	5.5
19	13	7.1	36	105	824	10	4.5	4.6	5.4	2.5	4.6	5.7
20	14	5.1	15	59	425	9.8	6.9	5.5	5.7	1.7	4.3	3.4
21	4.3	4.8	10	35	614	9.5	4.4	5.0	2.5	3.8	4.7	4.2
22	6.1	11	8.0	21	334	7.0	12	6.0	1.7	5.2	5.6	4.7
23	6.3	5.2	220	18	223	6.7	6.4	6.1	4.0	5.7	3.2	5.3
24	6.1	4.0	100	16	159	8.4	5.5	3.0	5.6	5.5	2.2	5.1
25	103	7.0	45	15	105	61	4.4	1.9	4.6	5.8	5.4	5.3
26	36	9.0	25	11	60	21	2.4	2.7	4.8	3.7	6.2	5.4
27	8.2	7.0	13	9.4	39	8.7	2.3	5.7	5.7	3.4	5.7	2.9
28	4.1	5.5	7.7	11	92	6.4	5.6	5.2	2.2	5.6	6.6	1.9
29	5.4	5.0	5.2	11	33	4.1	6.5	5.2	1.4	5.8	6.4	4.4
30	6.1	6.0	21	10	---	3.0	4.8	5.3	3.6	6.2	3.6	5.5
31	8.2	---	38	8.4	---	8.1	---	3.2	---	6.5	3.3	---
TOTAL	308.1	275.0	625.8	3249.0	4145.1	1286.7	252.4	161.4	120.0	194.6	121.9	137.3
MEAN	9.94	9.17	20.2	105	143	41.5	8.41	5.21	4.00	6.28	3.93	4.58
MAX	103	77	220	475	824	407	79	28	6.0	39	6.6	6.6
MIN	1.8	2.2	1.4	3.0	3.1	3.0	2.3	1.9	1.4	1.7	2.2	1.9
AC-FT	611	545	1240	6440	8220	2550	501	320	238	386	242	272
CAL YR 1979	TOTAL	7053.9	MEAN	19.3	MAX	630	MIN	1.1	AC-FT	13990		
WTR YR 1980	TOTAL	10877.3	MEAN	29.7	MAX	824	MIN	1.4	AC-FT	21580		

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 Water and Power Resources Service).

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 Water and Power Resources Service and reviewed by Geological Survey.

AVERAGE DISCHARGE.--30 years, 99.5 ft³/s (2.818 m³/s), 72,090 acre-ft/yr (88.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 255 ft³/s (7.22 m³/s) June 23, 1972; minimum daily, 4.0 ft³/s (0.11 m³/s) Jan. 20, 1970.

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	163	135	93	66	59	54	64	128	130	182	212	195
2	164	131	82	75	52	47	64	129	137	175	202	195
3	164	128	93	71	51	57	64	134	137	168	200	193
4	169	124	87	71	57	54	61	139	135	154	203	189
5	164	125	84	64	58	55	57	134	137	157	202	192
6	163	121	82	65	60	53	54	139	156	145	200	189
7	162	121	78	72	59	53	59	130	153	143	201	184
8	163	119	73	61	58	51	56	139	161	139	201	187
9	164	124	71	62	56	42	59	129	167	141	200	189
10	168	105	75	59	56	51	59	125	169	143	199	185
11	159	105	74	54	55	54	62	123	170	150	207	188
12	163	110	77	53	62	53	61	128	177	155	211	193
13	146	111	77	52	60	55	55	131	179	155	213	184
14	132	111	81	57	56	56	72	131	175	160	208	185
15	136	109	89	60	53	54	67	144	175	158	207	181
16	145	112	77	61	47	50	77	143	177	172	201	180
17	165	98	89	57	42	57	80	140	180	182	200	181
18	174	102	89	55	55	57	76	137	173	191	194	187
19	166	105	88	52	46	59	69	119	174	185	182	173
20	153	103	80	45	55	60	74	107	173	188	172	175
21	149	109	84	57	50	58	75	140	173	195	159	169
22	154	103	82	58	51	57	89	156	168	193	180	174
23	152	106	79	61	54	55	89	154	164	198	185	176
24	145	106	66	58	54	61	88	151	167	191	184	174
25	134	111	65	57	51	58	85	144	168	180	197	174
26	134	114	77	56	54	58	88	138	176	179	192	172
27	123	108	79	56	54	53	86	134	181	176	189	169
28	123	102	71	58	52	53	106	143	176	193	195	163
29	136	103	72	39	54	54	115	150	176	202	196	172
30	136	98	71	57	---	50	122	148	180	204	199	165
31	135	---	70	56	---	62	---	137	---	207	198	---
TOTAL	4704	3359	2455	1825	1571	1691	2233	4224	4964	5361	6089	5433
MEAN	152	112	79.2	58.9	54.2	54.5	74.4	136	165	173	196	181
MAX	174	135	93	75	62	62	122	156	181	207	213	195
MIN	123	98	65	39	42	42	54	107	130	139	159	163
AC-FT	9330	6660	4870	3620	3120	3350	4430	8380	9850	10630	12080	10780
CAL YR 1979 TOTAL	44152		MEAN 132	MAX 244	MIN 33	AC-FT 95510						
WTR YR 1980 TOTAL	43909		MEAN 120	MAX 213	MIN 39	AC-FT 87090						

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.--27 years, 8.66 ft³/s (0.245 m³/s), 6,270 acre-ft/yr (7.73 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.--Peak discharges above base of 140 ft³/s (4.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 13	1945	*2080	58.9	9.44	2.877	Feb. 19	0815	1590	45.0	8.47	2.582
Jan. 17	1345	303	8.58	5.08	1.548	Feb. 27	2130	205	5.81	4.74	1.445
Feb. 16	2345	938	26.6	7.11	2.167	Mar. 2	2000	249	7.05	4.94	1.506

Minimum daily discharge, no flow many days.

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	11	15	49	13	6.8	3.0	.34		
2			0	8.5	14	87	13	6.5	3.1	.81		
3			0	7.1	14	83	12	6.4	2.9	1.2		
4			0	5.8	13	59	14	6.2	2.8	.89		
5			0	4.7	12	102	38	6.3	2.9	.63		
6			0	4.0	11	91	21	7.0	2.7	.59		
7			0	3.6	11	72	16	6.7	2.5	.44		
8			0	3.3	10	62	15	6.5	2.3	.39		
9			0	4.3	10	55	14	8.2	1.8	.28		
10			0	6.5	10	50	13	11	1.6	.19		
11			0	54	10	45	12	8.0	1.6	.22		
12			0	349	10	40	12	7.7	1.7	.19		
13			0	571	10	37	12	7.5	1.8	.15		
14			0	399	21	35	11	7.3	1.7	.17		
15			0	152	74	33	11	7.1	1.4	.24		
16			0	114	312	29	11	6.2	1.3	.12		
17			0	166	419	27	11	5.3	1.2	.27		
18			0	126	346	26	9.4	4.7	1.0	.37		
19			0	80	892	23	9.6	4.5	1.0	.33		
20			0	56	385	22	9.3	4.0	.98	.36		
21			0	43	478	22	10	3.3	.80	.31		
22			0	35	219	21	12	3.4	.67	.16		
23			0	30	139	19	12	3.4	.68	.10		
24			11	28	103	18	10	3.8	.56	.08		
25			43	24	81	25	9.2	3.9	.50	.04		
26			16	23	67	21	8.5	4.2	.25	0		
27			9.1	21	82	18	8.2	3.6	.16	0		
28			6.1	20	83	16	7.8	3.7	.14	0		
29			4.1	19	55	15	7.9	3.4	.23	0		
30			4.8	17	---	15	7.5	3.2	.27	0		
31		---	5.6	16	---	14	---	3.1	---	0		---
TOTAL	0	0	99.7	2401.8	3906	1231	370.4	172.9	43.54	8.89	0	0
MEAN	0	0	3.22	77.5	135	39.7	12.3	5.58	1.45	.29	0	0
MAX	0	0	43	571	892	102	38	11	3.1	1.2	0	0
MIN	0	0	0	3.3	10	14	7.5	3.1	.14	0	0	0
AC-FT	0	0	198	4760	7750	2440	735	343	86	18	0	0
CAL YR 1979	TOTAL	2084.71	MEAN	5.71	MAX	284	MIN	0	AC-FT	4140		
WTR YR 1980	TOTAL	8234.23	MEAN	22.5	MAX	892	MIN	0	AC-FT	16330		

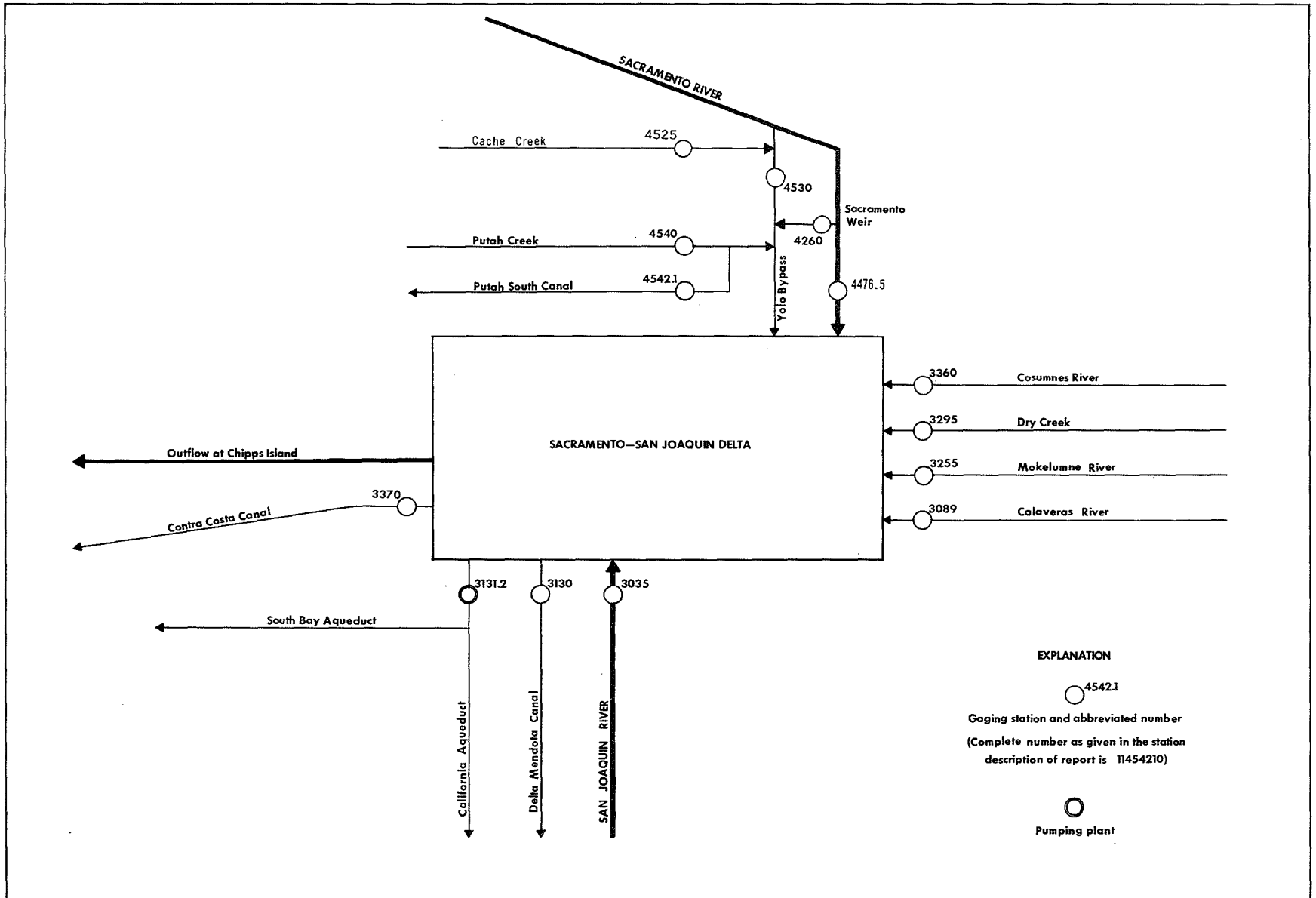


FIGURE 12.--Schematic diagram showing principal inflows and diversions, Sacramento-San Joaquin Delta.

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 Water and Power Resources Service, California Aqueduct by California Department of Water Resources.

SUMMARY OF PRINCIPAL INFLOWS AND DIVERSIONS IN THE
SACRAMENTO-SAN JOAQUIN DELTA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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													
171.6	137.5	152.9	803.6	1080	1555	609.9	609.5	315.7	208.0	121.1	226.2	5991	
11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM													
4.48	2.21	2.55	96.78	43.71	22.18	5.18	11.56	14.51	15.45	16.69	12.51	247.8	
11325500 MOKELUMNE RIVER AT WOODBRIDGE													
33.90	34.25	22.63	150.5	137.0	140.3	50.94	65.33	68.02	33.95	15.27	20.65	772.7	
11329500 DRY CREEK NEAR GALT													
0	0	1.71	56.71	68.25	23.14	5.98	2.16	0.58	0.26	0.05	0.04	158.9	
11336000 COSUMNES RIVER AT MCCONNELL													
1.22	2.88	8.71	185.0	170.8	97.52	43.06	33.22	11.99	4.39	0	0	558.8	
11426000 SACRAMENTO WEIR SPILL													
0	0	0	369.6	173.2	4.06	0	0	0	0	0	0	546.9	
11447650 SACRAMENTO RIVER AT FREEPORT													
773.4	904.5	1249	3605	3024	3403	1344	977.3	1060	1090	917.2	945.3	19290	
114530000 YOLO BYPASS NEAR WOODLAND ^{1/}													
--	--	54.57	2120	2472	1083	--	--	--	--	--	--	5730	
11454000 PUTAH CREEK NEAR WINTERS													
12.29	3.87	4.48	4.12	7.61	3.84	19.43	34.95	37.63	43.47	39.53	27.56	238.8	
Total	996.9	1085	1497	7391	7177	6332	2078	1734	1508	1396	1110	1232	33535

Diversions, in thousands of acre-feet													Water year
Month													
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
11313000 DELTA-MENDOTA CANAL													
240.1	61.31	0	0	158.4	199.0	228.6	179.6	170.4	280.8	279.4	205.9	2004	
11313120 CALIFORNIA AQUEDUCT (DELTA PUMPING PLANT)													
223.9	281.8	360.3	387.0	188.3	70.72	87.08	95.31	178.2	130.3	275.6	237.8	2516	
11337000 CONTRA COSTA CANAL													
9.33	6.66	4.87	3.62	3.12	3.35	4.43	8.38	9.85	10.63	12.08	10.78	87.10	
11454210 PUTAH SOUTH CANAL													
10.49	2.03	2.35	1.76	1.81	3.01	17.66	32.20	34.53	38.98	34.66	25.00	204.5	
Total	483.8	351.8	367.5	392.4	351.6	276.1	337.8	315.5	393.0	460.7	601.7	479.5	4812

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 1980

					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	1974-80	2-20-80	8.54	148
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, 1974-80	1-12-80	23.49	608
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, 1974-80	2-20-80	--	200
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	1972-80	1-15-79 2-19-80	b39.98 39.40	390 370
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	1972-80	1-15-79 2-19-80	b39.15 39.12	b285 230
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	1972-80	1-15-79 1-14-80	38.97 39.20	b63 44
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	1972-80	1-14-80	21.92	--

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS

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Annual maximum discharge at crest-stage partial-record stations during water year 1979--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.	117	1972-80	2-19-80	39.30	7000
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	1972-80	3-1-79 2-19-80	b38.92 38.78	b145 130
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	1972-80	1-14-80	20.58	--
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	1972-80	2-19-80	24.64	240

a Published as miscellaneous measurement.

b Revised.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 28...	1500	217	7.2	14.0	9.2	--	--	76	19	7.0	13
JAN 23...	0945	48	7.0	9.0	11.0	--	--	14	4.0	1.0	2.0
MAY 20...	1200	--	7.0	17.5	11.1	--	--	--	--	--	--
JUN 25...	1415	--	7.0	22.5	9.3	--	--	--	--	--	--
JUL 22...	0845	--	6.8	18.5	9.2	--	--	--	--	--	--
SEP 24...	1230	42	7.2	16.0	9.6	7	.7	14	4.0	1.0	2.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	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, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
NOV 28...	--	78	13	9.0	126	--	.80	.06	.30	.06	.02
JAN 23...	--	15	.0	1.0	43	--	.20	.00	.40	.10	.01
MAY 20...	--	--	--	--	--	--	.10	.00	.40	.04	.00
JUN 25...	--	--	--	--	--	--	.02	.01	.20	.04	.00
JUL 22...	--	--	--	--	--	--	.04	.00	.20	.03	.00
SEP 24...	.8	14	1.0	1.0	30	3	.10	.00	.20	.03	.00

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 28...	1500	100	--	--
JAN 23...	0945	0	--	--
SEP 24...	1230	0	2.6	.00

GROUND-WATER LEVELS

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San Joaquin County

Victor area

SITE NUMBER 38071712114501 LOCAL NUMBER 003N007E10L04M

0.8 MI SOUTHEAST OF VICTOR. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 12 IN 0-121 FT, 10 IN 121-190 FT, DEPTH 190 FT, CASED TO 190 FT. ALTITUDE OF LSD 73 FT. MEASUREMENTS FURNISHED BY DWR. 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 11, 1979	90.2	JAN 22, 1980	83.7	MAY 08, 1980	87.80	AUG 05, 1980	96.50
NOV 23	86.3	MAR 11	82.0	JUN 03	89.30	SEP 08	89.90
DEC 13	85.3	APR 03	82.4	JUL 07	89.40		

Turner area

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 DWR. RECORDS AVAILABLE FROM 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
OCT 03, 1979	31.8	MAR 19, 1980	32.9

Tracy area

SITE NUMBER 374J35121253301 LOCAL NUMBER 002S005E28P01M

.3 MI WEST OF TRACY. HYDRAULIC ROTARY DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM 6.5 IN, DEPTH 119 FT, CASED TO 119 FT, PERFORATED 109-119 FT. ALTITUDE OF LSD 72 FT. MEASUREMENTS FURNISHED BY DWR. 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 05, 1979	23.0	MAR 19, 1980	25.0

Carbona area

SITE NUMBER 374223121250601 LOCAL NUMBER 003S005E04H01M

2 MILES NORTHWEST OF CARBONA. HYDRAULIC ROTARY DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAMETER 6 IN, DEPTH 140 FT, CASED TO 140 FT, SCREENED 120-140 FT. ALTITUDE OF LSD 118 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1972 TO PRESENT.

HIGHEST WATER LEVEL 45.5 FEET BELOW LAND SURFACE DATUM OCT 03, 1974.

LOWEST WATER LEVEL 54.5 FEET BELOW LAND SURFACE DATUM MAR 19, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1979	53.5	MAR 19, 1980	54.5

GROUND-WATER LEVELS

Stanislaus County

Ripon area

SITE NUMBER 374040121083701 LOCAL NUMBER 003S007E13A01M

4.4 MI SOUTHWEST OF RIPON. DOMESTIC WATER-TABLE IN ALLUVIUM. DIAMETER 16 IN, DEPTH 198 FT, CASED TO 198 FT. ALTITUDE OF LSD 41 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1937 TO CURRENT YEAR.

HIGHEST WATER LEVEL 1.2 FEET BELOW LAND SURFACE DATUM MAR 03, 1969.

LOWEST WATER LEVEL 7.5 FEET BELOW LAND SURFACE DATUM APR 18, 1958.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 1979	6.5	MAR 1980	2.90

Turlock area

SITE NUMBER 373001120583201 LOCAL NUMBER 005S009E16H01M

1.9 MILES WEST OF TURLOCK. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 129 FT. ALT. OF LSD 67 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1967 TO CURRENT YEAR.

HIGHEST WATER LEVEL 7.2 FEET BELOW LAND SURFACE DATUM JUL 28, 1977.

LOWEST WATER LEVEL 17.2 FEET BELOW LAND SURFACE DATUM SEP 22, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
OCT 17, 1979	14.00

Newman area

SITE NUMBER 372040121024501 LOCAL NUMBER 007S008E12D01M

0.4 MI NORTHWEST OF NEWMAN. HYD. ROT. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN, DEPTH 425 FT. CASED TO 425 FT. ALTITUDE OF LSD 106 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1974 TO PRESENT.

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
OCT 15, 1979	46.0	MAR 20, 1980	34.00

Tuolumne County

Dos Palos area

SITE NUMBER 365926120422201 LOCAL NUMBER 011S012E07E02M

1 MI WEST OF DOS PALOS. HYDRAULIC ROTARY INDUSTRIAL WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 488 FT, CASED TO 488 FT, PERFORATED 388-488 FT. ALTITUDE OF LSD 109 FT. MEASUREMENTS FURNISHED BY DWR, USBR. 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 15, 1979	1.1	MAR 19, 1980	0.60

Merced County

Atwater area

SITE NUMBER 372030120371301 LOCAL NUMBER 007S012E11G01M

0.4 MI SOUTHWEST OF ATWATER. CABLETOOL. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN 4-100 FT. 14 IN 100-220 FT, DEPTH 220 FT, CASED TO 220 FT, PERFORATED 177-217 FT. ALTITUDE OF LSD 146 FT. RECORDS AVAILABLE 1977 TO CURRENT YEAR.

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
OCT 27, 1979	29.2	JAN 31, 1980	30.3	APR 29, 1980	29.0	SEP 18, 1980	34.21
NOV 27	28.5	FEB 24	29.6	MAY 14	31.44		
DEC 27	27.5	MAR 27	28.8	AUG 11	33.27		

SITE NUMBER 372020120383501 LOCAL NUMBER 007S012E10F02M

0.1 MI SOUTHWEST OF ATWATER. CABLETOOL IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 55 FT. ALTITUDE OF LSD 145 FT. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 25.65 FEET BELOW LAND SURFACE DATUM SEP 18, 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
OCT 02, 1979	27.2	NOV 27, 1979	27.0	FEB 24, 1980	26.8	MAY 16, 1980	26.89
27	27.0	DEC 27	27.0	MAR 03	26.8	AUG 08	27.00
NOV 02	29.6	JAN 31, 1980	27.0	APR 29	27.0	SEP 18	25.65

Gustine area

SITE NUMBER 371523121002801 LOCAL NUMBER 008S009E08E01M

0.2 MILES SOUTH OF GUSTINE. DOMESTIC WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH 60 FT. ALTITUDE OF LSD 105 FT. MEASUREMENTS FURNISHED BY DWR. 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 16, 1979	13.0	MAR 20, 1980	11.50

Volta area

SITE NUMBER 371047120570901 LOCAL NUMBER 009S009E14N01M

1 MI NORTHWEST OF VOLTA. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN, DEPTH 500 FT, CASED TO 500 FT, PERFORATED 100-220 FT AND 360-500 FT. ALTITUDE OF LSD 96 FT. MEASUREMENTS FURNISHED BY DWR. 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	DATE	WATER LEVEL
OCT 16, 1979	58.3	MAR 20, 1980	28.30

GROUND-WATER LEVELS

Merced County

Dos Palos area

SITE NUMBER 370413120394301 LOCAL NUMBER 010S012E09P01M

1.6 MI SOUTHEAST OF DOS PALOS. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN, DEPTH 180 FT, CASED TO 180 FT, PERFORATED 7-150 FT. ALTITUDE OF LSD 105 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1959 TO CURRENT YEAR.

HIGHEST WATER LEVEL 1.8 FEET BELOW LAND SURFACE DATUM MAR 01, 1970.

LOWEST WATER LEVEL 17.5 FEET BELOW LAND SURFACE DATUM NOV 29, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1979	8.0	FEB 25, 1980	5.00	SEP 23, 1980	6.40

Dairyland area

SITE NUMBER 370223120204501 LOCAL NUMBER 010S015E29A01M

0.3 MI NORTH OF DAIRYLAND. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 114 FT, CASED TO 114 FT. ALTITUDE OF LSD 177 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1941 TO CURRENT YEAR.

HIGHEST WATER LEVEL 37.8 FEET BELOW LAND SURFACE DATUM APR 01, 1943.

LOWEST WATER LEVEL 125. FEET BELOW LAND SURFACE DATUM OCT 11, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
JAN 21, 1980	73.00

Madera County

Dairyland area

SITE NUMBER 365533120181301 LOCAL NUMBER 011S015E35P01M

1.7 MI SOUTHEAST OF DAIRYLAND. STOCK WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN, DEPTH UNKNOWN ALTITUDE OF LSD 170 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1959 TO CURRENT YEAR.

HIGHEST WATER LEVEL 32.1 FEET BELOW LAND SURFACE DATUM OCT 14, 1959.

LOWEST WATER LEVEL 163.0 FEET BELOW LAND SURFACE DATUM OCT 03, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 08, 1980	86.00	JAN 23, 1980	78.00

Fresno County

Dos Palos area

SITE NUMBER 365325120391505 LOCAL NUMBER 012S012E16H06M

4.4 MILES SOUTHWEST OF SOUTH DOS PALOS. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 926 FT, CASED TO 926 FT, PERFORATED 770-926 FT. ALTITUDE OF LSD 165 FT. RECORDS AVAILABLE 1960 TO CURRENT YEAR.

HIGHEST WATER LEVEL 142.40 FEET BELOW LAND SURFACE DATUM SEP 22, 1980.

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 13, 1979	148.4	MAR 24, 1980	144.3	JUL 25, 1980	143.30	SEP 22, 1980	142.40
JAN 21, 1980	146.3	MAY 19	142.50				

GROUND-WATER LEVELS

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Fresno County--Continued

Dos Palos area--Continued

SITE NUMBER 365325120391504 LOCAL NUMBER 012S012E16H05M

4.4 MILES SOUTHWEST OF SOUTH DOS PALOS. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 4 IN, DEPTH 720 FT, CASED TO 720 FT, PERFORATED 670-712 FT. ALTITUDE OF LSD 165 FT. RECORDS AVAILABLE 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 116.70 FEET BELOW LAND SURFACE DATUM SEP 22, 1980.

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 13, 1979	120.5	MAR 24, 1980	118.5	JUL 25, 1980	116.80	SEP 22, 1980	116.70
JAN 21, 1980	119.4	MAY 19	117.50				

Biola area

SITE NUMBER 364734120060101 LOCAL NUMBER 013S017E22B01M

1.1 MILES WEST OF BIOLA. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 90 FT, CASED TO 90 FT. ALTITUDE OF LSD 221 FT. MEASUREMENTS FURNISHED BY DWR. 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, 1979	40.9	FEB 01, 1980	41.40

Mendota area

SITE NUMBER 364536120184301 LOCAL NUMBER 013S015E35D05M

4.4 MILES EAST OF MENDOTA. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 4 IN, DEPTH 433 FT, CASED TO 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
OCT 30, 1979	44.3	JAN 22, 1980	34.7	MAY 19, 1980	56.2	AUG 30, 1980	71.10
NOV 13	40.3	MAR 25	48.7	JUN 30	63.4	SEP 22	53.90
DEC 30	39.7	APR 30	62.4	JUL 23	68.3		

SITE NUMBER 364535120184701 LOCAL NUMBER 013S015E35D03M

1.2 MI EAST OF MENDOTA. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 1 IN, DEPTH 735 FT, CASED TO 735 FT, PERFORATED 460-735 FT. ALTITUDE OF LSD 166 FT. RECORDS AVAILABLE 1952 TO CURRENT YEAR.

HIGHEST WATER LEVEL 65.10 FEET BELOW LAND SURFACE DATUM MAR 15, 1951.

LOWEST WATER LEVEL 129.2 FEET BELOW LAND SURFACE DATUM OCT 16, 1962.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
JAN 24, 1980	98.40

GROUND-WATER LEVELS

Fresno County--Continued

Mendota area--Continued

SITE NUMBER 364358120314906 LOCAL NUMBER 014S013E11D06M

7.6 MILES WEST OF MENDOTA. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN. DEPTH 1358 FT. CASED TO 1358 FT. PERFORATED 1133-1196 FT. ALTITUDE OF LSD 284 FT. RECORDS AVAILABLE 1961 TO CURRENT YEAR. RECORDER INSTALLED 1961.

HIGHEST WATER LEVEL 320.7 FEET BELOW LAND SURFACE DATUM NOV 13, 1979.

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 29, 1979	326.8	JAN 21, 1980	323.9	APR 30, 1980	324.8	JUL 26, 1980	328.8
NOV 13	320.7	FEB 27	330.6	MAY 19	327.8	AUG 29	328.40
DEC 31	322.9	MAR 24	324.7	JUN 30	329.5	SEP 22	327.20

SITE NUMBER 364340120361201 LOCAL NUMBER 014S012E12H01M

12.8 MILES WEST OF MENDOTA. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN. DEPTH 936 FT. CASED TO 936 FT. PERFORATED 740-936 FT. ALTITUDE OF LSD 338 FT. RECORDS AVAILABLE OCT. 1964 TO CURRENT YEAR. RECORDER INSTALLED OCT. 1964.

HIGHEST WATER LEVEL 389.40 FEET BELOW LAND SURFACE DATUM SEP 22, 1980.

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 30, 1979	402.0	JAN 21, 1980	396.7	MAY 19, 1980	394.0	AUG 26, 1980	390.50
NOV 13	400.5	FEB 14	398.0	JUN 30	392.5	SEP 22	389.40
DEC 29	398.4	MAR 24	394.1	JUL 26	391.9		

SITE NUMBER 363851120313901 LOCAL NUMBER 015S013E11D02M

10.4 MILES SOUTHWEST OF MENDOTA. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 6 IN. DEPTH 960 FT. CASED TO 960 FT. PERFORATED 900-960 FT. ALTITUDE OF LSD 346 FT. RECORDS AVAILABLE NOV. 1964 TO CURRENT YEAR. RECORDER INSTALLED 1964.

HIGHEST WATER LEVEL 391.70 FEET BELOW LAND SURFACE DATUM SEP 22, 1980.

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 30, 1979	400.2	JAN 21, 1980	398.1	APR 30, 1980	397.3	JUL 25, 1980	402.8
NOV 14	397.4	FEB 29	393.6	MAY 19	392.7	AUG 30	397.50
DEC 31	397.5	MAR 24	392.6	JUN 30	395.9	SEP 22	391.70

Del Ray area

SITE NUMBER 363801119321701 LOCAL NUMBER 015S022E14A01M

0.7 MI SOUTHEAST OF DEL RAY. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN. DEPTH 63.3 FT. ALTITUDE OF LSD 348 FT. MEASUREMENTS FURNISHED BY DWR. 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	DATE	WATER LEVEL
OCT 1979	34.1	FEB 05, 1980	33.90

GROUND-WATER LEVELS

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Fresno County--Continued
San Joaquin area

SITE NUMBER 363425120164202 LOCAL NUMBER 015S016E31N03M

4.8 MI SOUTHWEST OF SAN JOAQUIN. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 595 FT, CASED TO 595 FT, PERFORATED 497-537 FT. ALTITUDE OF LSD 188 FT. RECORDS AVAILABLE MAR. 1967 TO CURRENT YEAR. RECORDER INSTALLED 1967.

HIGHEST WATER LEVEL 85.5 FEET BELOW LAND SURFACE DATUM JAN 11, 1977.

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 30, 1979	91.9	JAN 22, 1980	88.4	APR 27, 1980	87.4	JUL 23, 1980	88.30
NOV 14	90.7	FEB 24	87.5	MAY 20	88.0	AUG 29	90.00
DEC 29	88.8	MAR 25	87.3	JUN 30	89.20	SEP 24	88.00

Cantua Creek area

SITE NUMBER 362913120195601 LOCAL NUMBER 016S015E34N05M

1.2 MILES SOUTHWEST OF CANTUA CREEK. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 4 IN, DEPTH 300 FT, CASED TO 300 FT, PERFORATED 240-300 FT. ALTITUDE OF LSD 334 FT. RECORDS AVAILABLE 1960 TO CURRENT YEAR.

HIGHEST WATER LEVEL 166.20 FEET BELOW LAND SURFACE DATUM SEP 24, 1980.

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 14, 1979	169.30	MAR 25, 1980	167.10	JUL 24, 1980	166.70	SEP 24, 1980	166.20
JAN 22, 1980	168.30	MAY 20	167.30				

SITE NUMBER 362913120195701 LOCAL NUMBER 016S015E34N04M

1.2 MILES SOUTHWEST OF CANTUA CREEK. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 1130 FT, CASED TO 1130 FT, PERFORATED 1052-1112 FT. ALTITUDE OF LSD 334 FT. RECORDS AVAILABLE AUG. 1960 TO CURRENT YEAR. RECORDER INSTALLED 1960.

HIGHEST WATER LEVEL 339.20 FEET BELOW LAND SURFACE DATUM SEP 24, 1980.

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 30, 1979	368.9	JAN 22, 1980	357.2	APR 28, 1980	344.2	JUL 24, 1980	342.30
NOV 14	371.0	FEB 28	353.5	MAY 20	341.3	AUG 30	345.60
DEC 30	358.4	MAR 25	345.7	JUN 30	342.50	SEP 24	339.20

SITE NUMBER 362645120183401 LOCAL NUMBER 017S015E14Q01M

3.8 MILES SOUTH OF CANTUA CREEK. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 10 IN, DEPTH 2315 FT, CASED TO 2315 FT, PERFORATED 1064-1094 FT. ALTITUDE OF LSD 342 FT. RECORDS AVAILABLE 1969 TO CURRENT YEAR. RECORDER INSTALLED 1969.

HIGHEST WATER LEVEL 347.80 FEET BELOW LAND SURFACE DATUM SEP 24, 1980.

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 30, 1979	385.5	FEB 29, 1980	370.1	MAY 20, 1980	355.5	AUG 30, 1980	366.10
NOV 14	390.4	MAR 25	353.6	JUN 30	362.60	SEP 24	347.80
JAN 22, 1980	366.2	APR 29	361.9	JUL 24	364.40		

GROUND-WATER LEVELS
Fresno County--Continued
 Oilfield area

SITE NUMBER 361935120134501 LOCAL NUMBER 0185016E33A01M

7.2 MILES NORTHEAST OF OILFIELD. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 8 IN, DEPTH 1070 FT, CASSED TO 1070 FT, PERFORATED 850-1070 FT. ALTITUDE OF LSD 320 FT. RECORDS AVAILABLE OCT. 1964 TO CURRENT YEAR.

HIGHEST WATER LEVEL 333.20 FEET BELOW LAND SURFACE DATUM SEP 24, 1980.

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 14, 1979	354.4	MAR 25, 1980	339.7	JUL 22, 1980	335.50	SEP 24, 1980	333.20
JAN 22, 1980	349.8	MAY 20	336.40				

Huron area

SITE NUMBER 361334120035101 LOCAL NUMBER 0205018E06D01M

2.8 MILES NORTHEAST OF HURON. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 6 IN, DEPTH 1007 FT, CASSED TO 1007 FT, PERFORATED 720-1007 FT. ALTITUDE OF LSD 324 FT. RECORDS AVAILABLE DEC. 1964 TO CURRENT YEAR. RECORDER INSTALLED 1964.

HIGHEST WATER LEVEL 342.7 FEET BELOW LAND SURFACE DATUM OCT 31, 1976.

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 30, 1979	362.7	DEC 18, 1979	350.4	JUL 23, 1980	386.30	SEP 23, 1980	356.70
NOV 14	361.9						

Westhaven area

SITE NUMBER 361156119585501 LOCAL NUMBER 0205018E11Q01M

2.0 MILES SOUTHEAST OF WESTHAVEN. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 4 IN, DEPTH 710 FT, CASSED TO 710 FT, PERFORATED 650 TO 710 FT. ALTITUDE OF LSD 268 FT. RECORDS AVAILABLE SEPT. 1958 TO CURRENT YEAR.

HIGHEST WATER LEVEL 245.70 FEET BELOW LAND SURFACE DATUM SEP 24, 1980.

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 14, 1979	262.3	MAR 26, 1980	251.6	JUL 21, 1980	247.00	SEP 24, 1980	245.70
JAN 23, 1980	254.1	MAY 20	249.40				

Kings County

Lanare area

SITE NUMBER 362036119555302 LOCAL NUMBER 0185019E20P02M

6 MILES SOUTH OF LANARE. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM, DIAM 6 IN, DEPTH 577 FT, CASSED TO 577 FT, PERFORATED 497-537 FT. ALTITUDE OF LSD 222 FT. RECORDS AVAILABLE MAR. 1967 TO CURRENT YEAR. RECORDER INSTALLED MARCH 1967.

HIGHEST WATER LEVEL 129.5 FEET BELOW LAND SURFACE DATUM MAR 25, 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
NOV 15, 1979	135.0	MAR 25, 1980	129.5	JUL 21, 1980	151.10	SEP 24, 1980	130.30
JAN 23, 1980	142.2	JUN 27	134.80	AUG 30	143.30		

GROUND-WATER LEVELS

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Kings County--Continued
Lanare area--Continued

SITE NUMBER 362036119555301 LOCAL NUMBER 0185019E20P01M

6 MILES SOUTH OF LANARE. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 6 IN, DEPTH 695 FT, CASSED TO 695 FT, PERFORATED 647-687 FT. ALTITUDE OF LSD 222 FT. RECORDS AVAILABLE MAR. 1967 TO CURRENT YEAR. RECORDER INSTALLED MARCH 1967.

HIGHEST WATER LEVEL 131.70 FEET BELOW LAND SURFACE DATUM JUN 30, 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 30, 1979	145.8	FEB 29, 1980	137.6	MAY 20, 1980	133.9	AUG 30, 1980	134.10
DEC 30	139.1	MAR 25	134.5	JUN 30	131.70	SEP 24	131.80
JAN 23, 1980	140.0	APR 30	135.3	JUL 21	132.10		

SITE NUMBER 362035119555203 LOCAL NUMBER 0185019E20P03M

6 MILES SOUTH OF LANARE. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 4 IN, DEPTH 222 FT, CASSED TO 222 FT, PERFORATED 200-222 FT. ALTITUDE OF LSD 222 FT. RECORDS AVAILABLE OCT. 1972 TO CURRENT YEAR. RECORDER INSTALLED SEP. 1972.

HIGHEST WATER LEVEL 117.40 FEET BELOW LAND SURFACE DATUM SEP 24, 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 30, 1979	122.9	JAN 23, 1980	123.6	APR 27, 1980	118.7	JUL 21, 1980	121.40
NOV 15	121.7	FEB 29	121.2	MAY 20	118.6	AUG 30	120.60
DEC 28	121.8	MAR 25	118.6	JUN 30	119.00	SEP 24	117.40

Guernsey area

SITE NUMBER 361610119370501 LOCAL NUMBER 019S022E19A01M

0.9 MI NORTHEAST OF GUERNSEY. HYDRAULIC ROTARY UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 1 IN DEPTH 699 FT, CASSED TO 699 FT, PERFORATED 429 TO 699 FT, ALTITUDE OF LSD 235 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILBLE 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
JAN 28, 1980	85.30

Kettleman City area

SITE NUMBER 360027119574201 LOCAL NUMBER 0225019E18P02M

KETTLEMAN CITY. HYDRAULIC ROTARY PUBLIC SUPPLY WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 410 FT, CASSED TO 410 FT, PERFORATED 309-329 FT AND 356-377 FT. ALTITUDE OF LSD 255 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1951 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
JAN 07, 1980	190.00

GROUND-WATER LEVELS

Tulare County
Ivanhoe area

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 DWR. 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
JAN 25, 1980	50.50	SEP 22, 1980	45.50

Ocotl area

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 DWR. RECORDS AVAILABLE 1974-PRESENT.

HIGHEST WATER LEVEL 62.50 FEET BELOW LAND SURFACE DATUM SEP 23, 1980.

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 30, 1980	70.00	SEP 23, 1980	62.50

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 DWR. RECORDS AVAILABLE 1973-PRESENT.

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 30, 1980	75.00	SEP 23, 1980	64.00

Terra Bella area

SITE NUMBER 355933119062001 LOCAL NUMBER 022S027E30D02M

3.6 MILES NORTHWEST OF TERRA BELLA. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 10.75 IN. DEPTH 1246 FT. CASED TO 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 11, 1979	288.5	JAN 24, 1980	237.1	APR 30, 1980	267.7	JUL 22, 1980	306.00
NOV 15	255.7	FEB 29	226.7	MAY 22	280.7	SEP 25	302.60
DEC 31	245.1	MAR 26	224.7	JUN 27	305.80		

GROUND-WATER LEVELS

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Tulare County--Continued

Pixley area

SITE NUMBER 355523119170602 LOCAL NUMBER 023S025E16N03M

2.4 MILES SOUTH OF PIXLEY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 8 IN, DEPTH 430 FT, CASED TO 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 30, 1979	158.1	JAN 23, 1980	132.1	MAY 21, 1980	143.8	AUG 30, 1980	185.90
NOV 15	155.0	FEB 29	125.6	JUN 30	168.90	SEP 25	172.40
DEC 31	138.0	MAR 26	132.6	JUL 22	195.60		

SITE NUMBER 355523119170603 LOCAL NUMBER 023S025E16N04M

2.4 MILES SOUTH OF PIXLEY. ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 8 IN, DEPTH 250 FT, CASED TO 250 FT, PERFORATED 200-240 FT. RECORDS AVAILABLE JUNE 1959 TO CURRENT YEAR. RECORDER INSTALLED 1959.

HIGHEST WATER LEVEL 77.1 FEET BELOW LAND SURFACE DATUM JAN 07, 1975.

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 31, 1979	79.8	JAN 23, 1980	78.9	APR 30, 1980	79.1	JUL 22, 1980	80.40
NOV 15	79.7	FEB 28	78.4	MAY 21	78.4	AUG 30	79.90
DEC 31	79.0	MAR 26	78.5	JUN 30	79.30	SEP 25	78.10

Alpaugh area

SITE NUMBER 355228119284301 LOCAL NUMBER 024S023E03D01M

0.4 MI SOUTHEAST OF ALPAUGH. HYDRAULIC ROTARY WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 1240 FT, CASED TO 1240 FT, PERFORATED 796-1240 FT. ALTITUDE OF LSD 210 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1973 TO PRESENT.

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	DATE	WATER LEVEL
OCT 10, 1979	200.5	FEB 07, 1980	198.50

Balimart area

SITE NUMBER 355003119173901 LOCAL NUMBER 024S025E17P01M

0.8 MI SOUTHWEST OF EALIMART. HYDRAULIC ROTARY WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 500 FT, CASED TO 500 FT, PERFORATED 240-500 FT. ALTITUDE OF LSD 268 FT. MEASUREMENTS FURNISHED BY USBR. RECORDS AVAILABLE 1957 TO PRESENT.

HIGHEST WATER LEVEL 76.50 FEET BELOW LAND SURFACE DATUM JAN 29, 1980.

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 29, 1980	76.50	SEP 17, 1980	88.80

GROUND-WATER LEVELS

Tulare County--Continued

Jovista area

SITE NUMBER 354805119105701 LOCAL NUMBER 024S026E32G01M

0.3 MI WEST OF JOVISTA. CABLE-TOOL UNUSED WATER-TABLE WELL IN ALVM. DIAM 16 IN DEPTH 470 FT, CASED TO 470 FT. ALTITUDE OF LSD 397 FT. MEASUREMENTS FURNISHED BY DWR. 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
SEP 25, 1980	133.00

SITE NUMBER 354800119090501 LOCAL NUMBER 024S026E34F01M

0.8 MILES EAST OF JOVISTA. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 16 IN, DEPTH 1522 FT, CASED TO 1522 FT, PERFORATED 400-1522 FT. ALTITUDE OF LSD 445 FT. RECORDS AVAILABLE OCT. 1957 TO CURRENT YEAR. RECORDER INSTALLED 1957.

HIGHEST WATER LEVEL 192.3 FEET BELOW LAND SURFACE DATUM MAR 26, 1980.

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 30, 1979	205.7	JAN 24, 1980	194.8	APR 30, 1980	202.0	JUL 22, 1980	201.10
NOV 15	202.9	FEB 28	193.1	MAY 21	201.8	SEP 25	197.80
DEC 31	197.1	MAR 26	192.3	JUN 17	197.50		

Lost Hills area

SITE NUMBER 353216119370401 LOCAL NUMBER 027S022E32H01M

1.6 MI SOUTHWEST OF LOST HILLS. UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 10 IN, DEPTH 468 FT, CASED TO 468 FT. ALTITUDE OF LSD 241 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1949 TO CURRENT YEAR.

HIGHEST WATER LEVEL 13. FEET BELOW LAND SURFACE DATUM DEC 15, 1953.

LOWEST WATER LEVEL 153. FEET BELOW LAND SURFACE DATUM SEP 25, 1975.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
FEB 04, 1980	114.00

Kern County

Buttonwillow area

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. FEET BELOW LAND SURFACE DATUM FEB 03, 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	DATE	WATER LEVEL
OCT 02, 1979	261.0	SEP 26, 1980	263.00

GROUND-WATER LEVELS

425

Kern County--Continued
 Buttonwillow area--Continued

SITE NUMBER 352228119295201 LOCAL NUMBER 029S023E27M01M

0.4 MILES SOUTHWEST OF BUTTONWILLOW. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN. DEPTH 300 FT. CASSED TO 300 FT, PERFORATED 108-162 AND 168-300 FT. ALTITUDE OF LSD 270 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1958 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	DATE	WATER LEVEL
OCT 03, 1979	63.5	JAN 31, 1980	62.00	SEP 25, 1980	57.00

Dow area

SITE NUMBER 352841119101301 LOCAL NUMBER 028S026E21H01M

0.4 MI NORTHEAST OF DOW. HYDRAULIC ROTARY UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN. DEPTH 800 FT. CASSED TO 800 FT, OPEN END. ALTITUDE OF LSD 391 FT. MEASUREMENTS FURNISHED BY USBR. 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 24, 1980	178.50	SEP 24, 1980	152.50

SITE NUMBER 352841119101303 LOCAL NUMBER 028S026E21H03M

0.4 MI NORTHEAST OF DOW. HYDRAULIC ROTARY UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 1 IN. DEPTH 800 FT. CASSED TO 800 FT, OPEN END. ALTITUDE OF LSD 391 FT. MEASUREMENTS FURNISHED BY DWR. 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 24, 1980	239.50	SEP 24, 1980	250.50

Rosedale area

SITE NUMBER 352511119145701 LOCAL NUMBER 029S025E12M03M

1.4 MI NORTHWEST OF ROSEDALE. HYDRAULIC ROTARY UNUSED WATER-TABLE WELL IN ALLUVIUM. DIAM 1 IN. DEPTH 670 FT. CASSED TO 670 FT, PERFORATED 480-670 FT. ALTITUDE OF LSD 331 FT. 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	DATE	WATER LEVEL
OCT 02, 1979	210.5	JAN 31, 1980	203.50	SEP 24, 1980	210.00

GROUND-WATER LEVELS

Kern County--Continued

Lamont area

SITE NUMBER 351653118593301 LOCAL NUMBER 0305028E32B01M

1.3 MI WEST OF LAMONT. IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 14 IN, DEPTH 441 FT, CASED TO 441 FT, PERFORATED 108-116; 300-308; 346-352 FT. ALTITUDE OF LSD 354 FT. MEASUREMENTS FURNISHED BY DWR. RECORDS AVAILABLE 1940-PRESENT.

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 23, 1980	178.00	SEP 25, 1980	148.00

Ford City area

SITE NUMBER 351237119151501 LOCAL NUMBER 0315025E26A01M

3 MILES NORTHEAST OF FORD CITY. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM 16 IN 0-206 FT, 14 IN 206-606 FT, 12 IN 606-1474 FT, DEPTH 1474 FT, CASED TO 1474 FT, PERFORATED 206-1474 FT. ALTITUDE OF LSD 289 FT. MEASUREMENTS FURNISHED BY DWR. 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 04, 1979	83.0	FEB 14, 1980	68.00

Weed Patch area

SITE NUMBER 350720118532401 LOCAL NUMBER 0325028E23R01M

1.7 MI SOUTH OF WEED PATCH. HYDRAULIC ROTARY IRRIGATION WATER-TABLE WELL IN ALLUVIUM. DIAM UNKNOWN DEPTH 815 FT, ALTITUDE OF LSD 387 FT, MEASUREMENTS FURNISHED BY DWR. 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 18, 1979	251.4	FEB 04, 1980	228.80

Wheeler Ridge area

SITE NUMBER 350436119061901 LOCAL NUMBER 011N021W03B01S

9.6 MILES NORTHWEST OF WHEELER RIDGE. HYDRAULIC ROTARY. OBSR. WATER-TABLE WELL IN ALLUVIUM. DIAM 8 IN, DEPTH 1477 FT, CASED TO 1477 FT, PERFORATED 1037-1237 FT. ALTITUDE OF LSD 435 FT. RECORDS AVAILABLE APR. 1963 TO CURRENT YEAR. RECORDER INSTALLED 1963.

HIGHEST WATER LEVEL 359.8 FEET BELOW LAND SURFACE DATUM JUN 30, 1980.

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
NOV 16, 1979	365.7	FEB 21, 1980	361.7	MAY 22, 1980	360.40	AUG 25, 1980	361.10
DEC 31	364.5	MAR 27	361.2	JUN 30	359.8	SEP 26	361.30
JAN 25, 1980	363.5	APR 28	359.9	JUL 21	360.7		

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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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